Acknowledgments

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Disclaimer

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1) Purpose of the Guidebook

The purpose of the guide is to provide the main users of the project: children, young adults and teenagers with useful learning material both for self-study and experimentation and for educating themselves in subjects and themes such as:

- Social cohesion and racial-ethnic co-existence
- Empathy, ethics and vulnerable communities
- Creative and socially responsible photography
- Social (interpersonal) relationships
- Sustainable urban and rural development
- Photographic skills for shooting images of people
- Creative approach and independence
- Managerial skills and entrepreneurship
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2) About the Sense of Light Project

The project aims to benefit from the worldwide passion for photography, to use this growing hobby as a tool and resource for creating opportunities for education, sensitising people on the negative social and environmental phenomena in society, but also to use the interest of people in photography so as to contribute to the development of creative economy, of important areas of tourism and culture, to the conservation and protection of the environment and to the promotion of rural development.

The ultimate goal of the project is to improve local sustainability in all three areas (economic, social and environmental). This improvement should be done through the shared and acquired knowledge of project consortium partners and their trainers, target group teachers and local stakeholders from 7 countries. The project seeks to contribute to local sustainability through visual arts, a multicultural approach and a creative environment. This will be done through mobile workshops, which will test the initiatives and activities proposed with respect to the intellectual outputs of the project (manuals, training courses, pilot testing startups in the creative economy and networks). One of the objectives of the project is to develop and test an innovative learning process based on the development and verification of effective and tried out tools in the field of creative economy, culture and craftsmanship. The project mainly informs, motivates, encourages and trains target groups and project participants in such a way as to change their attitudes and, on the other hand, to encourage and motivate the vulnerable and often excluded societal groups and enable them to acquire basic skills and advanced experience in the fields of communications, development of urban and rural communities, self-respect, self-esteem and dignity, as well as to gain practical skills in the areas of creative economics, environmental protection and management (simple project preparation, management, accounting, monitoring and evaluation).

The project is based on inclusive, transnational, best practice and creative collaboration, enabling process, access and social innovation in all areas of sustainability.

The main target groups of the project are teachers, trainers, youth workers and children. They are recruited from different institutions approached by consortium partners. Together with experts and qualified trainers they develop the planned outputs and use them in their home environment. The main beneficiaries of the project are students, young unemployed persons, who are open to new ideas and to innovative ways of creativity. The project brings together stakeholders from different sectors and social groups: from formal education (students and teachers in secondary schools), through non-formal education (environmental and rural NGOs and local communities) to unemployed individuals, ethnic minorities and immigrants (including refugees). Therefore the project seeks to contribute to addressing the numerous challenges facing the current EU. It builds on previous trustworthy and good relationships between the project consortium partners and their shared visions and missions of serving their communities. Furthermore, the project is based on the multi-sectoral approach, on dialogue and on the diversity of cultures and traditions of European countries.

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2.1. Project Partners

Local Action Group (MAS) Sdruzeni SPLAV is a non-profit organization established in 2004, which operates in 31 municipalities and towns of Rychnovský region in East Bohemia. The total area is 480 km² and there are around 36,000 inhabitants. At present the organization has 52 members representing local governments, non-governmental organizations, farmers and entrepreneurs.

The BORA 94 Borsod-Abaúj-Zemplén County Development Agency Nonprofit LLC is a non-profit organization, 100% owned by the regional government of Borsod-Abaúj-Zemplén. The Agency is an umbrella organization with established strategic partnerships between public and private actors in the region, such as local governments, professional organizations, associations, NGOs, research institutes, businesses.

Civil Association Legend Photo was founded in 2011 as an association of photographers, youth leaders, musicians and NGO activists to meet the desire of their members to help their communities. The mission of the association is to help make full use of human potential, abilities and creativity in art, culture and self-realization, thereby contributing to a more efficient, dynamic and sustainable development of society and meaningful use of the free time of children, youths and adults.

Agora - Working Group on Sustainable Development is an environmental NGO established in 2001 by biologists, ecologists, geographers and sociologists working in the field of nature conservation, ecotourism and rural development.

The main goal of the organization is to contribute to improving the quality of the environment and nature conservation through concrete activities and environmental education in the spirit of sustainable development.

Its focus on the Odorhei area included several projects in the field of environmental protection, nature conservation and sustainable rural development.

The No Frontiers 21 Century Association was founded in 2005 in the city of Kyustendil in South West Bulgaria. It is a non-profit organization. Its activities cover the whole territory of the country. The main efforts of the association include the creation of contacts and permanent relations between Bulgarian and foreign associations, societies, cultural and educational institutions, and rendering support for the development of small and medium-sized enterprises and their partnership with similar organizations abroad.

The Regional Development Agency in Rzeszow (RRDA) is a public institution (non-profit association of the regional government) established in 1993 by the Region of Podkarpackie to develop cooperation at regional, national and international level. RRDA aims to support the development of the Sub-Carpathian region in Poland, to improve the quality and living standards of its inhabitants, to promote the opportunities offered by the region, including its excellent natural landscape, and to promote the new image of the Sub-Carpathian region as a modern, innovative and economically developed region. RRDA is one of the key regional institutions supporting the social, economic and technological growth of the Sub-Carpathian region in Poland and it has a significant impact on the national and international development in these areas through the implementation of diversified initiatives and projects.

The JAP was established in 2006 as the Leader Local Action Group (LAG) in order to create a balanced and sustainable local life in the region of Järva. The aim of JAP is to help preserve and revitalize rural life by improving the environment and expanding social cohesion as well as by developing the rural economy and increasing employment. JAP is active in the central part of Estonia (Järva district) and assists eight municipalities: Albu, Ambla, Järva-Jaani, Kareda, Koeru, Koigi, Paide and Roosna-Allik. JAP has 73 members: 8 municipalities, 42 non-governmental organizations and 23 enterprises.
3) Basics of Photography

This section of the Guidebook focuses on the practical side of taking images. In the first part we discuss the image taking devices used currently in photography. The section describes the functions, benefits and limits of mobile (smart) phones, mirrorless compact cameras and single lens reflex (SLR) cameras. We intentionally quit using the so-called compacts as most of the smartphones have already reached and often exceed the capabilities of this type of cameras. Based on this section the learner will be able to make informed choices about their selection of appropriate tools for specific photographic projects.

Smartphones

In the past few years the smartphone market has grown widely worldwide.

Thanks to the enormous competition and aggressive pricing smart mobile devices are now available worldwide not only for managers and wealthy dealers, but also for the main target group, for ordinary users and their families.

A smart cell phone with a decent camera is used today not only by young people but also by people born earlier and by schoolchildren, and we can often see mobiles even in the hands of preschool children.

With fast and relatively cheap internet and a host of modern, sophisticated social networks taking pictures and instant online photo sharing is a widespread worldwide phenomenon.

Basic settings and functions

Clearly the most common camera setting in mobiles is definitely “Auto”. In reality you will not find a person who would be looking at camera settings in their mobile. The automatic shooting mode in clever mobile phones is smart, at that smart enough that even an experienced photographer must recognise the tremendous progress and accessibility of photography functions in smartphones.

The vast majority of people have no idea of ISO sensitivity, the diaphragm is not set on the mobile (it is fixed at the factory) and the time is set very precisely by the machine itself.

No one’s mind is focused on focusing when shooting from a cellphone. At such a minimum focal length (cell thickness) the depth of the sharpness from a few centimeters to infinity is guaranteed. When trying to compose, we just click on the desired display location. The cell phone instantly focuses and sets the correct sensitivity and shutter speed. It is practically impossible for a little educated user to make a bad photo. Personally, I like to take images with a mobile and I do so quite often. It is small
and always ready in your pocket. I like to let the machine think instead of me. It is quick and comfortable.

For more demanding compositions, in cases of fog, backlight, when doing so-called "macro" and the like, I choose the "Pro" mode (probably a professional mode). This allows me to fully adjust all parameters: The less light I have, the more I need to set the sensitivity of the sensor (ISO) or to reduce the shutter speed. Or I do not have to. It is better to admit the true twilight. Admit real fog. Shots from the automatic machine are definitely clear, brilliant, exciting. However, they sometimes lack atmosphere.

In poor lighting conditions, autofocus fails, but manual mode can be used to focus. Manual focus setting is required especially when capturing video sequences. By the way, I turn off auto focus while shooting with a great camera. It is easy to see the video from the slot machine (both from the cell phone and the big camera), because the automaton is looking for contrasts (also for faces) to focus on. This quick, intense search is called "pumping." In the finished video one can see how the lens "pumps".

The universal mobile setting is therefore the Auto function, which takes care of everything you need and the photographer can only deal with the correct composition of the picture and capture the best time to take the picture.

Modern mobiles offer a great "Zoom" feature. Approach. But watch out. It is a lie. It is just a fake trickery for buyers. In fact, it is just a cut. With each so-called zoom, the image quality is noticeably reduced. What we see on the screen as an approximation is actually just a snapshot of the original image. With extreme zoom the slideshow is hardly usable.

For real-size cameras with true large lenses it is different. There 13 or more optical members in six or more groups are involved in the magnification of the image and the image in the sensor (formerly the film) becomes larger by the optical path. Not just its enlarged cutout. The image is therefore good even when zooming. This is the main difference in optical or digital zoom.

The advantages and limitations of mobile photography are obvious:

The biggest advantage of the mobile I most appreciate as a longtime professional photographer is the fact that the mobile is small, light and always in my pocket. No heavy bag with a great dish. Whenever I get my cellphone and I have a solid photo, I can immediately share it with editorial staff and via social networks with friends around the world. You can conveniently view and edit the photo object and then the finished photo on a large, high-quality "live" mobile phone display. Such a display has no professional, let alone amateur SLR.
In today's mobile there are also highly sophisticated photo editors that allow basic fast editing of captured images such as cropping, orientation change, contrast, brightness, saturation and color temperature, clarity of shadows. They do not have big cameras. There we have to wait until we get to the computer.

Another indisputable advantage is that everyone now has a cellphone, and no one is afraid of the cellphone anymore. Today mobile photography is so widespread that it is applied to take pictures of everyone and everywhere and everything. And those "selfish" ones! In fact, mobile capture cannot be disabled. However, when I pull out a large mirror with a portrait lens and a sun visor, I often see the back of my face.

Restrictions on mobile photography include lower output quality and lower contrast dynamics. This is due to the miniature lens, entry lens and to the mini chip. Yes, the screen image is great. On tablet and laptop as well. But for print purposes, or even for professional printing, the outputs from your mobile are weak.

A relatively large mobile limitation is the impossibility of zooming (optical zoom). This is due to the extremely small focal length (distance between the plane of the input lens and the chip before the film). There is hardly a mobile phone that is thicker than 5 mm. But the focal length of the lenses of classic cameras is 50 mm, i.e. 10 times more. Zoom lenses are well over 100 mm.

In practice this means that the lens of your mobile at such a small focal length is working with a huge depth of sharp field (depth of field) and virtually everything in the images. At the same time such a lens captures a very wide angle. When compared to the standard lenses of classic cameras with a focal length of 50 mm or more, we receive images with a smaller image angle (in popular terms: it is not enough). With a longer focal length the depth of the sharp field drops considerably and requires careful focus. It can be said that the longer the focal length of the lens (for the classic cameras), the more sensitive the image to the correct focus.

However, this seemingly unfavourable phenomenon is used in creative photography, where, thanks to a small depth of field, we can choose what is to attract the viewer's attention, and let the picture be left unmarked, blurred (off the depth of a sharp field). Achieving a sharp object on the slide from a cell phone is out of a blurred background, and it is very difficult, even almost impossible for an amateur.

Short summary:

The benefits of taking pictures with a mobile phone are many for the average user: The mobile is small and light, it is always ready to go, everything is done automatically, easily and quickly, without the need for a complicated set-up. The user may not be
burdened with knowledge of exposure parameters (ISO sensitivity, aperture, time, white balance, exposure compensation, focus). Large, high quality display with instant live preview, instant sharing on the Internet and its social networks.

Restrictions on mobile photography are generally negligible: Lower image quality for larger print sizes, impossibility to zoom, inability to make serious creative photos, high battery consumption, inability to connect accessories (external flash, external microphone), worse ergonomics.

Despite the above limitations, the advantages of convenient and fast taking of pictures from the mobile phone clearly prevail. Virtually no cell phone can be bought. And so mobile people are taking pictures of people of all ages, from small to retired children. Still, anyone who wants to have really good photos without a classic camera cannot do it. Do you want proof? It is a wedding. Or graduation ball. Or graduation. Do you invite a person with a big photo bag, large mirrors, system lightning and many lenses, or do you have a guy who holds a cell phone in one hand and a glass of beer in the other?

How to make smart use of the camera in your smartphone

In previous chapters we discussed the main advantages and limitations of taking pictures with a mobile phone. If we want to take up photography as a creative art, we cannot be satisfied with limited possibilities of fully automatic exposure without the possibility of inspection, without the possibility to intervene in the setting of the exposure parameters. Let us look at the basic manual settings of your mobile when taking pictures in different modes.

Probably everyone has already experienced the desire to take pictures of a beautiful landscape, a colourful arched rainbow, a sunset. Automatic mobile phone setup in landscape photography is very popular and very widespread. And also safe. Auto in landscape mode has nothing to go wrong with:

FOCUSBING

The focus of mobile phones is (from the minimum focal length of all mobile phones) from less than a meter to the so-called infinity (it stands for a lazy eight). There is no involvement of automat on in setting the focus of the landscape. The "infinity" parameter is already set in the factory. The automatic function does nothing.

SENSITIVITY (ISO)

Whichever automat on evaluates ISO sensitivity as best it can, a good photographer tries to set the ISO value as low as possible. Regular mobiles have the lowest and therefore the highest quality of 100 ISO setting. Like the vast majority of large cameras. Better and more expensive mobiles offer a wonderful
sensitivity value of ISO 64. As well as expensive large sized mirrors.

The latest, very expensive mobile phones already have such high-quality lenses that manufacturers can afford such low sensitivity as the fabulous ISO 50. Frankly, as a longtime user of large professional mirrors, I am thrilled with these new mobile phones. Not only because I always have a mobile phone in my pocket, which has a great high quality display with a live image, but also because it allows for the full manual setting of most exposure parameters. When shooting landscapes and distant subjects, we choose "infinity" and in the daytime we opt for the lowest ISO.

**LIGHT AND CLONE**

The luminance of the lens is an indication that tells us how much light passes through the lens to a sensor, or a chip, or a film earlier. The less light we have when shooting, the lighter the lens must be. Those who have a high-quality lens (not only for mobiles but for all types of cameras) do not need to increase the sensitivity of the sensor, and may use shorter shutter speeds to avoid motion blur and/or regular blur.

But the production of high quality lenses is technologically very demanding. This, unfortunately, is noticeably reflected in the price of such lenses.

**TRIPODS AND MONOPODS**

At the beginning of photography, as well as at the beginning of digital photography, when films and chips were not as sensitive as the recent ones, it was necessary to use either very expensive light lenses, or let the light come to the film/chip for a long time. In cases of hand-held shooting we can avoid knocking for 1/30s at most. If it is not enough and the picture is too dark, we need to protect the camera against movement. Therefore, there are photographic tripods. For studio work and serious work in the exterior, different and very heavy tripods (with three legs) are used. For quick reporting and hiking, lighter and more comfortable monopods (with a single leg) are recommended. While each camera has a tripod thread, I have not seen a tripod thread yet on mobile phone. That is why you need to buy a small tripod with a special mobile holder.

**SENSOR SENSITIVITY**
Old celluloid films with sensitive photo emulsion have now been fully replaced by the so-called sensors, also called sensors and chips. Whoever has a high-quality light lens, even in the worst light conditions, will suffer with a lower sensitivity of the sensor and his images will not be of high quality. Easier and cheaper than buying light lenses and tripods is to increase the sensitivity of the chip so that it does not need as much light. This was not possible with films. There were different film sensitivities but always one sensitivity for the whole film. I remember ISO 100 films, ISO 200 films and amazing ISO 400 sensitive films.

That was already something! The film featured 36 pictures, all with the same sensitivity. Today the SLR has a sensitivity of 12800. On a state-of-the-art mobile phone I have even sensitivity of ISO 24000. The possibility of instantaneous sensitivity change of the sensor was literally a breakthrough in digital photography. Today we take it as a normal thing. Today we can set different chip sensitivity for each single shot. The visitor will comfortably photograph the panorama of a church in full sunlight, the interior of the church in the dark and then an interesting night shot. Recently he would have needed three films, each with a different sensitivity, each with 36 frames. Professionals had three cameras.

**APERTURE**

All common inexpensive and expensive cameras have a great advantage over mobile phones: their lenses can handle clutter. If lights are too high, large lenses are immediately automatically or manually obscured. Mobiles cannot clone. They have a single aperture (the best the manufacturer can do). The camera aperture on the cellphone is factory-set and cannot be changed. An option to change it would be complicated from a technological and manufacturing point of view and in massive competition mobiles would be expensive.

So, what will happen, when a cellphone cloning does not know how to avoid overexposed images? Cleverly, it will first instantly reduce the sensitivity of the chip itself. That is why we prefer mobile phones that offer the lowest sensitivity of the chip. As we have already explained, the common sensitivity for high-quality images is ISO 100, better ISO 50, or something in between. Crazy high sensitivity like ISO 24000 is extreme and I have never used it so far.

Here is another powerful trick to check the right exposure: **EXPOSURE DURATION, CLOSURE TIME.** A low ISO sensitivity value means high image quality, but at the cost of higher need for light. If we do not have enough light when shooting and if we do not want to increase the ISO sensitivity, it will help, if we keep the weaker light on a less sensitive chip for a longer time (it is only a fraction of a second). The term "exposure time" or "shutter speed" has been used. It is measured in fractions of a second.
For example: 1/30s (about thirty seconds) is about the last shutter speed of the camera or mobile, a time length in which the instructed photographer can keep the camera or mobile in hand (without a tripod) without shaking it. 1/30 is twice as long as 1/60. Similarly, 1/250s is twice as long as 1/500. The 1/1000 and 1/2000 and 1/4000 times are also used.

Just for the idea: when one second is divided into 2,000 equal pieces, one of them will create our picture. That's amazing! Large cameras and mobiles with so short times work normally. Mobiles even choose interesting non-standard intervals to get the most accurate exposures. We use these short shutter times if there is a lot of light or if we want to capture fast movement (usually some sport) sharply without motion blur.

Long shutter speeds are used in worse light conditions or if you want to visualize motion (motion blur). A well-known example is that of water rays. Virtually everywhere a sharp photo of flowing water creates the impression that it has stopped, the so called "dead water". A shot taken at a shutter speed of 1/10th is much nicer, as due to the flickering one can see directly how the water flows live. Similarly, you can work with night city images. A short shutter speed will make everything look sharp but stiff. During the exposition, for longer time, it is enough to draw the lights of passing cars into the picture, and the picture will acquire creative dynamics.

**PORTRAIT**

Everybody has many portraits of their loved ones. A professional would have a special portrait lens, the so-called "long glass". The best-known and most used one is about 135 mm. No distortion and beautifully blurred background. But be careful: Mobiles usually have wide-angle lenses, a focal point of about 26 mm. This can easily cause distortion. If we do not want a big nose in the picture, we should not take a close-up with a smartphone camera.

It is different, when I want to use the distortion of a wide-angle lens intentionally.

**GPS**

With new mobile phones it is commonplace now that altitude information is included in the picture and GPS coordinates could be also available. When you later want to travel to the place where you took a photo from your cellphone, just click on the photo and the mobile navigation will make you safely there, be it on foot, while cross-country skiing, by bike or by car.

**HDR**

Another great snapshot can be captured by a mobile phone in a very well-functioning HDR (High Dynamic Range) mode, which is the "composing" of the resulting photograph from several differently-exposed (differently "light" and "dark") sub-frames. A mobile in HDR mode scans the same three images: very dark, right and very light. They are stacked on it as a sandwich. From a dark frame the program uses details that are missing in the light of the bright one. From the bright image it uses the details that are drowned in the shadows of the dark picture. HDR allows you to take pictures even when it is impossible or difficult to do so in a traditional process.

So, remember: The advantage of taking pictures with ordinary mobiles is a fully automatic mode without the need for any camera intervention. I point and click.

The advantage of advanced mobile phones is the ability to manually adjust important exposure parameters. We determine how precise the resulting image should look. Of course, more advanced mobiles also offer fully automatic mode. However, their algorithms are much more sophisticated.
Compact system cameras

Until 2009 you had 3 options for your image taking: cheap, point and shoot cameras that are currently almost totally replaced by smartphones oriented for average consumers and the so-called super-zooms or compact cameras with full manual control and zoom lenses (so called “bridge” cameras). Professionals and devoted amateurs used SLR or DSLR (digital single lens reflex) cameras that used interchangeable lenses. In the year 2009 Olympus launched the very first camera without flopping mirror (mirrorless) and this camera changed the market. Without mirror there is no need for optical viewfinder, the cameras are therefore lighter and smaller. They use either an electronic viewfinder or a rear LCD screen for focusing. So what are the differences and benefits of mirrorless (CSC) cameras over the popular DSLRs?

1) Image Quality

CSC cameras use the same sensors as DSLRs, but there are also smaller formats like Micro Four Thirds format used by Panasonic and Olympus for even smaller cameras. The brand new Sony Alpha A7R III uses 42.5 MP resolution and in the DXO sensor mark system is ranked among the best sensors for all kinds of photography, thus beating the full frame and much more expensive DSLRs. Many new CSC cameras use full-frame sensors that enable them to reach the highest achievable image quality.

2) Viewfinder

CSC cameras use mostly electronic viewfinders. So they display the image directly from the sensor without using the optical mirror systems. Because of this CSC cameras still have a little lag if you move the camera quickly. The advantage of electronic viewfinders is that they can display a lot more information than an optical viewfinder, including live image histograms. Some cheaper CSCs and almost all compact cameras have no viewfinders at all, so you have to use the rear screen to compose photos. In tricky bright light and direct sun situations you cannot use the LCD at all. Electronic viewfinders can also display the pre-shot situation (how the image will probably look like) so you can see the result of your work in advance.

3) Size and weight

Due to the absence of the optical mirror system the CSC cameras are definitely more compact, lighter and smaller. This can be a big advantage over DSLRs in your travel adventures. The dimensions and weight are among the biggest reasons for a decision to buy a CSC camera. However, similarly to DSLRs in cases of sports or bird photography, you need bulky, heavy, big lenses. Thus the body with the lens can represent a same challenge like in DSLR combinations.

The Micro Four Thirds sensor format of Panasonic and Olympus cameras is smaller and the lenses used there are
smaller and lighter, too, so they represent a more portable system, however at the expense of image quality (sensor size).

4) Price
The high end mirrorless cameras (e.g. Sony Alpha A7R III) cost as much as the best prosumer or semiprofessional Nikon or Canon DSLR cameras. The cheapest ones often lack any viewfinders, which limits their overall use in any light situations.

5) Lenses
The number of new lenses produced by CSC system companies is growing. The leader in this area is Sony, which also offers genuine, excellent but pricey Zeiss lenses. Olympus and Panasonic use the same lens mount for their Micro Four Third system and produce a growing number of new lenses. Another option is to use the lens adaptors (Canon to Sony mount conversion) produced by Sigma. You lose the perfect autofocus and subject tracking. However, you can use a wide range of Canon lens systems. Generally, CSC cameras still do not have the same range of lenses as that of the leading DSLR companies (Canon, Nikon).

6) Autofocus
CSC cameras use sensor contrast based autofocus. The most advanced CSCs have developed more advanced hybrid autofocus systems that combine the contrast autofocus with phase-detection pixels on the sensor. The accuracy and speed of the autofocus in these cameras are in conformity with the recent DSLRs. Besides that, most CSCs have much better performance in Live View autofocus mode when they use the LCD screen for focusing.

7) Continuous shooting
The CSC mirrorless design makes it easier to add high-speed shooting partly because the mirrorless system has fewer moving parts and partly because many models are now pushing ahead into 4K video. This demands serious processing power, which helps with continuous shooting, too. Mirrorless cameras like Olympus OM-D E-M1 Mark II can shoot 60fps and Panasonic is pioneering the use of 4K video to capture 8-megapixel images at 30 frames per second from it.

That is not quite the full story though. While the Canon will blitz away at this rate with continuous focus tracking in action, the Olympus will use an electronic shutter to achieve this and the focus will be fixed. That said, activate the mechanical shutter on the Olympus and 10fps is possible with full focus tracking.

8) Other features
Due to the ICT technology development the 4K video is becoming more common in CSC systems. It also leads to better live view autofocus.

As regards photographic features and controls, CSCs are
in pair with DSLR cameras. They all offer full manual control over exposure and focusing and can shoot raw files as well as JPEGs, allowing you to get the best image quality possible. In any one sector, such as entry-level cameras, enthusiast or pro models, the control layouts and capabilities are pretty similar. Entry-level DSLRs tend to hide away the manual controls under a layer of automation, but it is the same for CSCs. Keep in mind the point about viewfinders, though: all DSLRs have viewfinders, but often cheaper compact system cameras do not have them.

Concerning battery life, CSC cameras tend to shoot half or even just one third of the images taken by DSLRs with a single battery charge.

Digital single reflex cameras (DSLR)

Contrary to the two lens optical system cameras used in the first half of the 20th century and after World War II, the single lens reflex cameras use optical pentaprism for focusing and viewfinder functions. The system (before the appearance of mirrorless systems in 2009) remained the same for film and digital cameras for more than 50 years. The DSLR feature an interchangeable lens system using specific mounts for every brand. They feature TTL (through the lens) viewfinder so you can see what the lens sees. DSLRs are bulky and heavy: in addition to the optical system, they are more and more often weather sealed and have a battery grip for extended battery life and quicker shooting. All DSLRs can mount an external flash on top and other accessories into hot shoe and all offer complete manual control over the photographic and image processing or size quality functions.

In case you want to take high quality images and have full creative control over the image taking process, the DSLR is your choice. So what are the basic features of the DSLR?

1) Price

The prices of the DSLR are constantly dropping. Why? The leading camera companies face competition in the camera market where new technologies and models are quickly presented and they want to sell their expensive range of lenses primarily produced for DSLR cameras. A beginner DSLR camera (in most brands) starts around EUR 400 (body only). They are usually marketed with basic, cheap kit zoom lenses of 17-55 and 70-250 mm for additional EUR 2-400. So, if EUR 1000 is too high a price for your photographic hobby, look for a compact ultra-zoom or cheaper mirrorless system. Photography is an expensive hobby and depending on your preferences and topics in the future you need to invest in specific lenses and related equipment (tripods, flashes, filters, or even a studio). Currently, the best available cameras of every brand would cost you around EUR 5500 for a body, and if you add a prime lens and two high quality zoom lenses (Nikon, Canon, Sony), the cost will be equivalent to that of a small car.

2) Lenses
One of the biggest reasons you want a DSLR camera is the option to interchange lenses. The more costly the camera (e.g. with full frame sensor and high resolution), the better and more expensive lenses you need. Depending on your photographic topics or areas of interest, you invest your resources into appropriate lenses. The most popular lenses for skilled enthusiast amateur or semi-professional photographers are described below.

Which lens is right for you?

It depends on what you are shooting. Some common subjects include landscapes, portraits, nature, sports and action, wildlife. Different subjects require different lenses. One helpful aspect to consider is focal length. Focal length is the distance between the lens and the image sensor when the subject is in focus. Generally speaking, close-up shooting requires lenses with shorter focal lengths, and distance shooting requires lenses with longer focal lengths.

Subjects and the lenses most ideally suited for them:

For landscapes, skyscapes and wide panoramas – an ultra-wide angle or (fisheye) lens with a focal length range between 8mm – 24mm. Most popular for this is the prime (single focal length) 8mm “fish eye” lens. Photographers’ all-time favourite ultra-wide zooms are the 16-35mm f/2.8 or 17-40mm f/2.8 lenses (all around and above EUR 1000) or their cheaper f/4 equivalents (EUR 400-800).

For interiors, architecture, and landscapes – a standard wide angle lens with a focal length range between 24mm and 35mm, however most photographers use the ultra-zooms for this purpose.

For general purpose shooting – a standard lens with a focal length range between 35mm and 85mm (50mm is the most common). The 50mm lens is definitely among the most popular ones. The best (fast) constant aperture lenses have f/1.2, however they are very expensive. A far more affordable option is to buy 50mm f/1.4 lenses. These classic lenses with a fast maximum aperture are ideal for everyday shooting, perfect in low lighting situations and great for shallow depth of field control. They produce images with beautiful bokeh (background blur). The 50mm f/1.8 is nearly as “fast” as the f/1.4.

Another very popular “basic” all-purpose zoom standard lens is the 24-70mm f/2.8 lens. It is sufficiently fast, sharp and suitable for daily shooting in low light situations. They come weather sealed, stabilised with smart optical formulas. Their cheaper siblings are the f/4 lenses for a half price.

For portraits and candid (glamour) shooting – a short telephoto lens with a focal length range of 85mm – 135mm. Professionals use ultra-fast and very expensive prime lenses (85mm f/1.2) or their cheaper equivalent 85mm f1.4 and f/1.8 lenses. A smart solution for portraits and close up photography can also be a
100mm f/2.8 macro lens, and for candid portraits the 135mm f2 is suitable as well.

For close sports and action – a medium telephoto lens with a focal length range of 135mm – 300mm is recommended. However, the most popular and used medium tele-photo zoom lens is the 70-200mm f/2.8. It creates nice blurry bokeh and is often used for tele-photo portraits as well. The price is around EUR 1300 and EUR 800 for the slower f/4 versions.

For wildlife, for sports, and astronomy – a super telephoto lens with a focal length above 300mm is recommended. The cheapest and most affordable super tele-photo lens is the 400mm f/5.6 or 300mm f/4 lens. For professional sport, wildlife and particularly bird photography fast and extremely costly “prime” stabilised lenses are most suitable. However they are affordable only for well paid professionals, agencies and rich devoted amateurs (the 200-400mm, 500mm, 600mm and 800mm). Their prices start around EUR 3000 and currently finish around EUR 15000.

For specific purposes there are several lenses in the market that can fulfil your creative needs. Landscape photographers enjoy the so-called tilt and shift lenses that enable them to produce amazingly sharp and focused images or special 5:1 macro lenses for true macro images that help one explore the micro-cosmos.

What should you buy for your creative approach?
Answer the following questions and figure out.
1. Do you want to change lenses in your camera?
2. Do you want to have greater control on the settings in your camera?
3. Do you want to create HD or 4K home videos?
4. Do you want to blur the background in your portraits?
5. Do you take many images in the dark or inside?
6. Do you want to take more professional looking images?
7. Do you want to increase the speed of your camera?
8. Do you want to control external flashes and use a studio?
9. Do you want to utilise special effects (infra, macro)?
10. Do you want to take images of wildlife and birds?

If you answered YES to every question above, get a DSLR system. If you answered NO to more questions, get a compact or mirrorless system.

3) Size and weight
DSLR cameras are made of sturdy plastics or metal alloys and the more expensive ones are weather sealed. They use efficient large batteries (3 x more power and images taken than in mirrorless systems). They use an optical viewfinder and have many control buttons on their bodies. Altogether it means that they are heavy and bulky. The body only (without battery grip) is around 750 to 1300 g. The lenses, particularly the fast ones
4) Viewfinders and focusing

All DSLR cameras have optical viewfinders. This means that you focus through the viewfinder in the rear through the mirror in the top of the body. The focusing itself is done by turning the focus rings on the body of the lens (manual focus) or through autofocus systems. You can also use the electronic viewfinder and compose and focus through the rear LCD screen. The Live View option is much better in the CSC systems. However, the recent developments (touch and articulated LCD screens) in DSLR cameras have improved the Live View controls in them. Electronic viewfinders can display more useful information than an optical viewfinder.

5) Autofocus

DSLRs currently utilise the best autofocus systems that permanently increase the number and sensitivity of focus points (from 9 to more than 300 points in couple of years). They use new “phase detection modules” or contrast detection systems and enable one to efficiently track fast moving subjects. In recent years several brands have invented and utilised dual pixel CMOS autofocus systems (phase detection pixels) arranged on the sensor body. This is designed to give faster autofocus in live view mode to close the gap on CSCs. Most DSLR cameras however are still weak in Live View mode. The Live View mode is used in video recording and in macro or infrared photography.

6) Other features

Due to their fast tracking autofocus and continuous shooting DSLR cameras have been used in sports events (dozens of big grey and black ultra-zoom lenses have been covering the big global sports events). They can shoot up to 14 fps (frames per second) and thus capture the right moment of the event. The rapid developments in CSC mirrorless systems however have beaten the DSLR cameras in this area and have made it possible to either increase the speed (60-300 fps) or use the 4K video stream to “separate” single images from the video recordings.

Since Canon introduced the 5D Mark II camera in the market, small movie makers started to use DSLR cameras with interchangeable lenses to record high quality HD videos. The quality is very good and the price of the equipment is a fragment of the professional video camera systems (EUR 3 000 to 30 000). DSLR cameras benefit from the wide range of already available lenses, sensitive and high resolution sensors (50 MP). However they lack advanced video control. They use the Live View mode in the rear LCD screen for videography.

All DSLR cameras have a full set of manual controls over the important features of image taking. In most expensive and
advanced cameras (using battery grips) you can shoot vertically and horizontally, have important control buttons on the body and in ergonomically comfortable places. The entry level DSLRs tend to hide the manual controls inside the software and you need to make several steps to set up the camera.

7) Image quality

DSLR cameras use full frame or smaller sensors. These are several times larger than in compact cameras and influence the image quality. The full frame sensor is identical in size with the 35mm film frames. The resolution and quality of these sensors is rapidly increasing, DSLR cameras have already reached the former resolution of the medium format (over 50 MP). They have introduced a dual pixel structure in the sensors and improved the low light sensitivity of the sensors as well. Currently the best sensors are made by Nikon and Sony, however the technical quality (in terms of pixel level) of the images of various brands is just marginal.

All DSLRs produce much better pictures than compact cameras when the light is dim. Even the best compact cameras struggle indoors without flash, giving blurry pictures.
3.2. Elements of Appropriate Exposition

a) Exposure triangle (ISO-Aperture-Shutter speed)

What exactly is exposure?

Simply speaking, exposure is a record, it is an image. More precisely, it is the amount of light that falls through the lens (through the aperture), at a certain time (exposure time), to the light sensitive material (SD or CF card for digital cameras or photographic film for analog photography). Thus, the exposure triangle is nothing different than the relationship between time, aperture and ISO sensitivity.

Listing them in order, what are the parts of this triangle?

Trying to explain and illustrate them as some parts of everyday life we can say that:

* an aperture is a window with shutters;
* exposure time is the speed of opening and closing of those shutters;
* sensitivity is a human wearing sunglasses that becomes our camera array.

An aperture is an element situated in the middle of the lens, consisting of blisters, the so-called aperture leaves. By moving the lens ring or using the rotary knob in the camera we can open or close the shutter lids. Thanks to such procedures the opening or closing of the aperture causes a different amount of light giving to the matrix, so that we are able to regulate correct exposure / correct brightness of the image.

This is not the only merit of the aperture. It is worth mentioning that the aperture is marked with “f” and is a number from f = /1.2 (very large aperture, very bright lenses) through f/1.4: 1.8; 2.8; 5.6; 8, up to f/22 or more (where at f/22 there is very narrow shutter aperture, the opening is small and it gives much less of the light). Thanks to its opening, we might get a depth of field, such as f/2.8, and smaller values, so that when the aperture is large, open, we can better distinguish one frame from another and drown the background. When the shutter is closed, for example at f/22, the aperture of the opening becomes tighter and the image becomes sharper in its whole frame, each plane of the image is just as sharp as all others.

As an example for better understanding of the shutter opening and shuttering dependency: if the other parameters (time and ISO) are not changeable, then if we set the aperture to f/1.8, the picture will be much brighter than when we set the f/11 shutter.

When we talk about lenses that we might find in the market, the most common focal lengths (e.g. 18-55 mm) have f/3.5-5.6 aperture, that is, if the lens will operate in a wide range of 18 mm, the aperture may have the lowest f/3.5. At the focal length of 55 mm, the lowest aperture will unfortunately be f/5.6.

EXPOSURE TIME is exactly the lightness time. During a
snapshot the mechanism is moving, it is closing and opening, so we can decide at what time we want to take our photos. The shutter speed determines the amount of light that is going to fall on the array. Using the manual settings of the camera, we might decide which aperture value of those mentioned above is going to be worthwhile, we also indicate how much exposure time the camera requires, in the simplest explanation, how long the shutter will be open. It can be said that if the time of lightening is longer, the picture should be brighter. As a good example we might indicate night shots, where the exposure time is always set as long, in the order of 10 seconds or even more, because the light is low and it takes more time to illuminate the matrix or photographic film. Such images where long time is needed should be made from a tripod, because if executed with a handheld camera, the images will be raised and might not be as clear as desired.

One important thing to note is that the exposure time should not be longer than the focal length. What does this mean? This means that if you use a 35mm focal length lens, the exposure time should be no longer than 1/35 of a second. Similarly, if we use a longer focal length, e.g. 200 mm, in order to get a “steady” image with a handheld camera, the exposure time must be shorter than 1/200 of a second. When the exposure time is set as short, that is, the time is in the order of 1/250 of a second or shorter, and the subject is photographed as flowing water, the movement of such a river will be frozen.

ISO sensitivity is the last element of the exposure triangle. This parameter determines how the matrix of our camera reacts to light. In the era of digital cameras this task is much easier, because each frame can be set to a different sensitivity. In analog photography, each 36-shot film has the same sensitivity. In case of worse weather conditions, you should remember to raise the ISO, if you want the image to be undisturbed and not blurry. Currently in the higher ISO digital SLRs we can raise it quite high without a risk of loss of image quality. In standard cameras an ISO value of more than 800-1200 produces some noise in the image and results in its lower quality, such as worse contrast.

Remember! In order to get a good quality picture, it is better to fasten the camera to a tripod and increase the exposure time without raising the sensitivity to higher values.

As you can see, each of these three parameters has an impact on the quality of the pictures and on the other two. To achieve the same quality and brightness of the image, but in different conditions (lighter, darker) we must remember the relationship between the aperture, the exposure time and the sensitivity of the sensor. That will make it possible to select the appropriate parameters. In this triangle of dependencies we need to know that as we change one parameter, we need to compensate for it by altering one or two others. Of course, in addition to the manual mode, we also have modes for preset aperture and time. If we use the aperture priority and set the focus by opening or shutting down the camera, the camera automatically selects the shutter speed. However, keep in mind that in low light conditions, even when you open a wide aperture (e.g. f/2.8), you have to raise the ISO sensitivity, so that the time will allow the equipment to be handheld, while the picture remains undisturbed. It is essential to remember the relationship between the parameters in order to be able to work consciously with the image. It is very important when we want to get ourselves in the image in order to have the final effect. Maybe we care about the image blurring? It is only up to us to be creative and to use the device with our “smart” triangle of exposure.

An example is the dependency triangle in the following drawing:

A photographer is some kind of a painter, but instead of a canvas of a certain size and shape, he has to use the matrix of his camera or photographic film cage. Instead of brushes and paints, there are huge numbers of elements and mechanisms in the
camera and lens that allow the photographer to save a given image, as he invented and created it in his mind. In addition to the technical knowledge about the dependencies of the triangle of exposure, we need the equipment for the execution of the frame, primarily the knowledge of painting and art in general. Each shot should be the result of a series of decisions on the elements we have to use. We choose what is to be included in the frame and what is to be left out. We decide from what perspective we want to show something and at what moment we press the shutter release. We choose the camera settings. We choose the frame. So if we make all these choices, we need to know some golden rules of composition. In some sense, we must know them as a sacred book, so that they can be consciously refined and broken.

The most important choice is the choice of the cadre. So, what exactly is a cadre? It is a conscious choice of the elements that we want to put in the image and the conscious rejection of the unnecessary things that spoil it and the selection of the right settings of optics for the photographed scene.

The following are important elements of composition:

* cadre orientation and its proportion
* tripartite division and strong points, gold splits and gold spiral
* the point of view, the depth
* the line and spot, texture, rhythm.

The first thing is to choose the orientation of the frame. We can choose either horizontal or vertical orientation. Each of them determines the way and direction of reading of the photographs. We look at a horizontal image differently than at a vertical one. Horizontal cadres are read from the left to the right. Horizontal cadres represent pretty well the cadres of life, because we feel the world in this plane. Vertical shots are read from top to bottom. This is the main orientation mostly for portraits.

**Horizontal cadre**

Another important element of the composition that we need to pay attention to is the proportion of the sides of the picture. We have pretty big choice in this respect. The most common occurrence is the aspect ratio of 2:3 of the picture sides. We also have a square 16:9 or another type of 4:5 frame. Of course, modern matrices are made with proportions of 2:3 or 4:3. The choice of the square must be made at the stage of photography taking, but the process of cutting off unnecessary parts of the photo is done in the digital darkroom, because the proportions of the digital camera matrix make it impossible for us to take a picture with the square shape. Cropping and proportions have a huge impact on the perception of the picture. Images with a horizontal orientation of a 2:3 rectangular frame are more static than the images with a vertical orientation with the same proportion of the sides. Vertical 2:3 ratios are certainly more dynamic, especially when we use them for landscape photography or for highlighting some element in a landscape, such as trees. The same sample tree in the 2:3 horizontal frame will be static, it will be isolated against the landscape, and in front of all the frame will be read from the left to the right. Our tree in the vertical frame will be in a more dynamic reception, still using the right perspective, will take size and height. We will read those pictures from the top to the bottom or from the bottom to the top. In proportion to the square our model will be exceptionally
balanced. The square proportion will allow us to calm the horizontal and vertical elements in the image, emphasizing that the horizontal line level is as important as the vertical one. Remember that the changes made in the proportion of the frame affect the entire photograph and its individual elements inside the frame by means of what is known as visual weight.

Another important element for the correct composition of the photograph consists of the thirds and strong points. The thirds is dividing the frame into three equal parts horizontally and vertically (this is a simplified version of the so-called golden division). Here is an example: if a frame is half-centered in a photo with a horizon, it will be more difficult to capture more than a 1/3 split of the sky and 2/3 of the height, for example of a meadow. By splitting the frame into three with intersecting lines, we create the so-called strong points, nodes where these lines intersect. That also creates a balance inside the frame. If we place an object that is relevant to a certain photograph, let us say in the sky and in a meadow, for example a tree and a house (in one of the house points, and in the opposite corner of the tree) we obtain a cadre that is not static, but allows the viewer to move between one and the other, which gives a sense of a dynamic image.

b) Rule of thirds and other composition aids.

The pictures composed in that way will, on the one hand, give you a sense of balance and, on the other hand, the composition will be interesting and addictive. Threesome is a very important principle to be aware of and apply, but citing David DuChemin (“Language of Photography - Considering Making Stronger Pictures”): “If you use this rule wisely, you will achieve more captivating images. But is it mandatory? No, it’s just a principle that can be applied or ignored when looking for a composition that will show real intentions.”

Due to the ability to split the picture into three, you can decide yourself what is most important in the frame that the viewer is to pay attention to. This is the so-called visual hierarchy. That might be reached in two ways. In the first way, already mentioned a moment ago, we place the most important elements in places where the lines of the thirds cross. There, of course, human eyes are caught in the picture and we emphasize the essential elements that we want to show to the audience. In the second method of accentuating the important parts of the frame, it is the filling of the entire surface of the frame with the
motifs. An example is a picture of a vertical meadow full of flowers. To dramatize and emphasize that for us these flowers constitute the main motif, we will not position the horizon through the center of the photo. Here you have to apply the principle of dividing the photograph into 3 parts, where the sky/forest will take 1/3 of the frame and the rest will be filled by the meadow. This change of composition introduces dynamics, emphasizes what the recipient is paying attention to.

One thing that has to be remembered is the importance of the visual hierarchy. In the horizontal image when the object, for example a human being or animal, is placed centrally, the picture will be boring, difficult to remember, and the observer will quickly switch to the next picture. That is because nothing outside the central element is to be seen inside the frame. Just move the silhouette of the human figure to the lower left corner at the intersection of the horizontal and vertical lines and immediately the person starts to correspond with the background. When we place another element in the opposite corner, the body becomes dynamic and both elements work together and complement each other in the picture. When we memorize and consolidate the principle of division of a plane into three horizontal and vertical parts, it will be easier for us to understand that it also applies to the third dimension, namely to the depth of the image.

The picture depth is one of the most important features of photography especially in the case of landscapes, but it must be kept in mind in every kind of photography. Landscape photographs without depths are flat and boring. The easiest method used by photographers is to create a perspective with a line. Show in the photo the road running through the whole frame. If you keep 3 planes in the landscape, where the first, the main one, is the closest, while the second is the middle one, and the third one is the background, then you give depth to your picture and create the illusion of the third dimension.

Where does the rule of thirds come from?

The origin of this principle in painting is a simplification of the technique called golden division. Golden division and what is known as golden spiral, are often found in the world of nature. Graphical representation of the golden division is a rectangle whose ratio of sides is 1:1.618. (Remember that the 1:1 ratio is a square). The grid created by the golden frame distribution is similar to that of the thirds, but it is different. Hence, with the golden split, there are differences in the balance of the image. Thanks to the tripartite division we can introduce some symmetry into the frame, but this golden division creates lightness, elegance and subtlety in the frame.

Let us discuss briefly the golden spiral, which is based
on the same ratio of sides. It is asymmetrically curved, starting with a gentle curve and bending into an ever-tightening spiral. The golden spiral has been fascinating for centuries. It is attractive because it is visually aesthetic despite its asymmetry. Golden spiral compositions captivate with their harmony and capture the view in a hypnotic way. They are neither easy to detect nor correct, but the difficulty of finding and capturing them is certainly worth the effort.

c) Depth of Field and how to use it

Depth of acuity is connected to the discussed triangle, and above all it is an important element of picture building. It allows you to direct the viewer’s eyes to specific elements of the frame. I focus on building — the already described aperture. Depth of acuity depends on three factors: lens focal length, aperture size, and distance from the subject.

First, the longer the focal length of the lens, the lower the depth of acuity is. Another parameter that affects the depth is the size of the relative aperture of the lens. The higher the aperture (e.g. f/2.8-f/4-f/5.6), the greater the depth. Thus, when we reduce the aperture (e.g. f/22), the sharpness increases, which means that the number of elements sharpened on the frame is increased. The opposite situation occurs when the aperture opens, the depth of field will decrease, it will be shallow. Then in the picture, apart from the main element we are framing, the rest will be unstable, fuzzy, as if imperceptible and without details. The third factor affecting the depth is the distance from the subject. The closer we are, the more unclear the picture is. It is very accurate in macro photography, where the photographed flower stalk or insect have depth at the fraction of millimeters. Thanks to such treatments the photo may look different and may be seen in a different way. It depends mostly on you.

Because you, as the author, decide what is important in the frame and what is not. If you are taking a family photo, especially with an f/1.2 aperture lens, where you have a grandmother with a grandson, and if you focus on the grandson, the grandmother will be fuzzy in the photo. Then this photo may be taken badly. You need to remember how to create a photo in such a way that nobody feels offended. We can focus on concentration, focus our eyes on details, and give thought to the story told in photography. The depth affects the expression of artistic pictures.

Distorting a sharp object makes an observer focus on it. The most classic examples in this respect are portraits made by using long telephoto lenses. A sharp face against a blurred background. Also, with very bright telephoto lenses you can even sharpen only the lips or the strands of hair. Low depth of acuity should not be used only for portraits or family photography. We can use it also in landscape photography, because thanks to a well-adjusted depth we can get interesting pictures, e.g. we can draw (attention to ?) a sharp branch, a leaf, a blade of grass or a single stone.
d) Prime and zoom lenses (Wide and tele-lenses)

Going into photography once more, you already know that the camera is a powerful tool, and knowledge of the artwork gives you great opportunities to create your own image and express your own feelings and thoughts. In addition to the camera body, you still have to operate the lens and it is the most important tool for the photographer.

By looking at a picture experienced photographers can determine the focal length that was used when it was taken. This is an important skill due to which you can see a certain cadence before the camera is lifted to the eye. Also, looking at specific photos one can judge what optics were used when taking them, because there are different effects. We must remember one of the most important rules, namely that lenses do not change the perspective. On the other hand, depending on the width, they can increase and dynamize or flatten the image. The main task of lenses is to create illusions.

How can you divide lenses and what effects do they create?

Lenses can be divided according to their use (see also the basic information in the section on DSLR).

**PRIME LENSES**

- macro lenses – most often very bright, the apertures are in the order of f/1.2 or brighter. The focal lengths may vary: 28 mm, 90 mm.
- standard prime lenses - the flagship lenses in this field are 35 mm and 50 mm. They often have small aperture values such as f/1.2 or f/1.4. They serve for street and documentary photography, but also for sociological portraits. They are universal lenses.
- portrait lenses – the most common lenses have focal lengths of 85 mm, 105 mm, 135 mm. They have very high brightness and quality, their visuals are very soft.
- fisheye lenses - these are very specific short-focus glasses. Their field of view is very wide: from 100 to 180 degrees. They provide very large distortion and redraw.
- tilt-shift lens - this is a specialised lens, thanks to which you can get unusual visual effects. In these lenses the design allows shifting of the optical axis, so that you can correct the perspective. They are lenses without autofocus. Sharpening is set manually.
- supercell lenses - at and above a focal length of 200 mm: 200 mm, 600 mm, but also 1000 mm. These are very expensive lenses for sports and nature photography.

**ZOOM LENSES**
- universal lenses, also called kitty lenses – these are lenses sold complete with the camera. Most often with a standard focal length of 18-55 mm and portrait focal length of 70-135 mm. The quality of the kit lenses is average. Also, the brightness of the lenses is variable.

- wide-angle lens – the focal length in this case is usually 12-24 mm or 10-20 mm. However, there is no distortion as in the case of fish-eye. The image of this lens is very wide, but there is no distortion in the shape of a ball.

- telephoto zoom lenses – these are mostly used by reporters in their cameras. The focus range is 24-70 mm or 70-200 mm. These are all-purpose lenses, with good optical quality. They are very often fast and might stabilize the image. They is said to be reporter’s lenses, but currently most photographers use them.

- superzoom lenses – these offer a very wide range of focal lengths, such as for example 28-300 mm, but often this causes loss of brightness because they have variable brightness: f/3.4-5.6. On the one hand they offer versatility, because they are relatively small, they can be taken on a trip, they have a variety of focal lengths in a large range, so that we can take only one lens, but on the other hand their quality is poorer, they are made of worse materials and have worse optical parameters.

Each of these types of lenses causes different effects. Using a wide angle or short focal length, we will enhance the impression that we come closer to the object that is photographed. Remember that when using wide-angle glasses, we will have a lot of elements in the frame to fit into a good composition, but at the same time the viewer will feel like an element of the photographed scene. On the other hand, in the case of long focal lengths, the picture becomes flattened, creating an illusion of flattening the perspective. Longer focal length results in isolation, giving the impression of shortening the distance between the foreground and the background.

So lenses are “wizards” because they create our imaginary world and translate it into a camera matrix. We are always about to take a picture that looks good and makes a good impression on the viewers. People who look at the picture do not think about the lens that we used to take it. They are concerned with the perception of the photographs, with the emotions they feel when looking at them.

e) Aperture and Shutter Priority (when and how to use them)

AN APERTURE is an element occurring in the middle of the lens, consisting of blisters, known as aperture leaves. By moving the lens rings or using the rotary knob in the camera body, we might open or close the shutter lids.
EXPOSURE TIME is exactly the lighting time. During a snapshot the mechanism is moving, it is closing and opening, so we can decide at what time we want to take our photographs. This is the length of the shutter that determines how much light will fall on the screen. Using the manual settings of the camera, where we decide which aperture value of those mentioned above is going to be worthwhile, we also indicate how much of lighting time the camera requires or how long the shutter will be open. It might be said that when the imaging time is longer, the photo should be brighter.

If we already know the concepts of aperture and time, and we know how to use them properly, we can go into our experiments with photography. Thanks to these two elements we can create a photograph in different ways. What can we do with an aperture and the lighting time?

We can freeze the action. Let us use examples, because they are easier to visualize. We have a scene where dolphins jump out of the sea. To freeze the movement, so that the dolphins and water droplets are sharp, we have to set very short exposure time, because the scene is so fast that in the long run the subject would be blurred. If you want to freeze a moving object, you need to have in your mind the following factors that affect the freezing process: the distance from the object towards which it is moving and the selection of the lens. As far as the distance from the lens is concerned, the principle is that the closer to a subject we are, the less lighting time we need. The second thing is to determine whether the object is approaching us or going away from us and which lens is best to be used for this scene. To illustrate the scene, let us use an example from Bryan Peterson’s book Unrestricted Exposure: “... if we were to photograph a wild riding horse from three to six meters standard lens to stop the action, we would have to use the shutter speed at least 1/500 s. If we were thirty meters away and had a wide-angle or standard lens, the size of the moving subject and its movement would diminish considerably, so 1/125 shutter speed would be sufficient. If the distance was fifteen meters, for a 200mm lens it would take 1/500 s (it was as if we were three meters from the object). Lastly, if the rider moved parallel to us and (we ?) wanted to fill it with a long lens or approaching it, we would need 1/1000 s.” Another effect achieved with a shutter speed, an aperture, and the right choice of the lenses is panning. It is also shooting motion, but in this technique the camera is moving. The camera in the photographer’s hands follows the same
direction at the same speed as the subject in motion. The times most often used are in the order of 1/60 s to 1/8 s. You can try to do it yourself using for example cars going down the street. Photographs made by this method will freeze the car sharply, but the whole background will be blurred. The picture that we take is going to be very dynamic. Motion effects can also be obtained when the camera is placed on a tripod, but time is extended to produce a motion or blur effect. This can be used for example on a flowing river. Then the water will become softer and this is known as a soft effect of flowing water. You can even bring the frame to an abstract image. The next creative way to show the world and use the shutter speed is zooming. We can do this when we have a zoom lens. While pressing the shutter button, rotate the lens ring (change the focus). You will then have an interesting effect, as if the light on a given object is radiated. Play with the shutter speed and you will discover how good and interesting results you might obtain. Combine with your head ?. Same as we use a stop? Due to its opening, i.e. setting to f/1.4, if your lens has the ability to do so, you can completely eliminate the unnecessary background and focus on a small part of the frame.

When we are in a meadow full of flowers and focus on one of the flowers and set the aperture to f/8, we will not get any interesting effect. On the other hand, if we get closer to the flower, we will set the f/1.4 aperture. We will get a beautifully separated element against the background, despite the soft focus of the meadow.

f) WHITE BALANCE AND HOW TO USE IT.

White balance is a process of colour control and always obtained in white photographs, despite the different conditions and climates of the photographed scene. The camera white balance function of the camera allows you to reproduce colour accurately. Different light sources create different coloured glows, candle light gives orange glow, moonlight gives bluish colour, meadow and a sunset will be seen with a yellow or even orange-red colours.

Our eyes are accustomed to different types of light, so every time the white card is white, whether it is lightened by candlelight or the moon, or the sunset. The camera does not work like a human eye and writes those glows, giving the colours of a dominant warm or cold colour.

It is important to understand what is going on with the white balance. Each light source has its colour temperature. The colour temperature determines whether the light is warm or cold. This temperature varies from red to blue. Candles, sunsets and incandescent light emit light that is near red, i.e. the colours in the picture will be slightly warmed up. A clear blue sky emits a blue, cool glow. By ensuring that the white elements are actually white, you assume that the rest of the colours will also be properly reproduced. The white balance of the camera allows you to adjust it to the prevailing conditions. It can be switched in the camera menu. There are a lot of white balance settings in the camera. First, it is best to use the automatic mode, because it really works in present-day digital cameras. However, in extreme situations, use dedicated settings. The number of these settings varies by camera and manufacturer, but most cameras offer options: incandescent, sun, cloudy, shade, flash. Each of these different settings corrects the colour glow from the corresponding light source. The incandescent light will have an orange glow, warm glow in the photos cooling them lightly to neutral colours, while in the shade it will remove the cool glow, which shadows have on a sunny day?. Without going into the secrets of physics, in simple language we can say that the higher the temperature, the colder the light and the lower the warmth will be. In more advanced digital SLRs, in addition to cloud, sun, shadow, or incandescent lighting, you can find the white balance option marked as “K”.

Daylight and flash light is approximately half (half of what?) (5300-5000 K (Kelvin) for daylight and 5900 K for flash). Most bulbs glow at about 2800-3800 K. In the shade and in cases of overcast skies the daylight has a colour temperature of about 6500-8000 K, and when it gets dark it becomes almost blue and then the colour temperature of the light is about 8000-10000 K. So we have a huge gap between 2500K and 10000K per day.

Therefore, the best way to deal with this is to take pictures in RAW format. Naturally, the RAW images will be assigned with a specific white balance, but we will be able to change it in the digital photo darkroom without any problem and above all with no loss of quality.
3.3. Disturbing and Unwanted Elements

a) Focusing issues

There may be several reasons why your images are not sharp enough and blurred. Among them are: poor or mis-focus, unintentional motion blur and camera shaking. Let us discuss these phenomena and their reasons.

• **Poor Focus** – the most obvious way to get images that are ‘unsharp’ is through having them out of focus. This might be the result of focusing upon the wrong part of the image, being too close to your subject for the camera equipped with a specific lens to focus, selecting an aperture that generates a very narrow depth of field or taking an image too quickly without checking if it is in focus. The majority of the photographers (except macro and still life or specific artistic purposes) use autofocus. The camera focuses instead of us in several ways. Cheap point and shoot cameras therefore always focus properly unless you (by mistake) use an inappropriate mode. DSLR cameras have several ways of focusing and you have to learn the way to deal with them through proper study of the manual and practice. If the entire frame is out of focus, you probably used the wrong DOF (depth of field - the zone that is in focus) or you reached the minimum focus distance for a set lens.

**Minimum focus distance**

• **Minimum focus distance**

Most lenses have a minimum focusing distance. It is one of the reasons why macro lenses exist. Small “point and shoot” sensors mean equally small lenses, with very short focal lengths which equates to very large DoF, and very good near-focusing capabilities. When you jump up to an APS-C or full frame sensor, and your lenses get bigger, so does this minimum focus distance. The 18-55 cannot focus on anything closer than 25 cm. Your fuzzy close-up portrait demonstrates this. You would need a macro lens, or the poor-man’s macro methods (close-up filter, extension tubes, reversed lens) to shoot closer.

• **Misfocus**

This is not actually as common a cause of fuzziness as most people assume. The first assumption most beginners make whenever something is fuzzy is that it is a focus issue. But when you let the camera’s autofocus system take over, the problem is that the camera is not smart enough to know what the subject of the image is and direct the focus there. Learning the different autofocus modes, how to select autofocus points, and how to half-press and recompose are your solutions and answers here.

If it is an issue of misfocus, check the rest of the frame to see if anything else was in focus. With your wave shots, you will notice that sections of the waves are crisp and in perfect focus, while other parts outside of your depth of field are not. If you had stopped down to a
smaller aperture (say, f/11), more of the wave would have been in focus.

Also, do not expect miracles in low light. Cameras need more light to “see” by than your eyes do. It is normal for autofocus systems to hunt in dark conditions. Your flash can send out more light for focus assisting, or you can use live view and 10x magnification (if your camera’s is on a tripod) with manual focus when the autofocus fails you. Pay attention to the autofocus confirmation "green dot" in the viewfinder.

b) Blur and camera shaking problems

One of the reasons of blurry and fuzzy images is the camera shake. When I pass my DSLR camera to someone, in most cases the person both holds the camera poorly and fails to compose through the viewfinder. Due to the weight of DSLR bodies and lenses it is a challenge to balance and not shake the 2-3 kg heavy equipment in your hands. You need to use your left hand to support the lens in such a way that you can still use your thumb and pointing finger to handle the lens focus and zoom rings. The right hand holds the body of the DSLR using your thumb for specific buttons and pointing finger for shutter release. If you stand upright, keep your arms tight and control your breath, then you can use slower shutter speeds in your camera. Some brands have stabilisers inbuilt in the camera body (Sony), the others use stabilised lenses (Canon, Nikon) for a higher price and battery energy consumption.

Shutter speed too slow

One of the significant reasons of blurry images besides the camera shake is the slow shutter speed. The slow shutter speed affects you more if you are using a longer lens, but even with IS, there is still a lower limit, and this implies that you have good handholding technique to begin with. If you are shooting single-handed, if you do not know how to brace your feet or time your breathing, you will need a higher shutter speed. 1/30s is a typical threshold, and there is a rule of thumb about 1/focal length or faster. Some folks would multiply that by 2, or throw in the crop factor as well. For 55mm lens that would mean using a shutter speed around 1/100s or faster. And that is with a stationary subject. With a moving subject, to "freeze" the motion and avoid blur, you may need an even higher shutter speed, and how high depends on how quickly your subject is moving.

Consider using physical stabilisation as well for very slow shutter speeds: a tripod, monopod, or beanbag can make a big difference. Also, for macro shooting, everything is magnified, camera shake or subject motion included.

Subject movement or motion – another type of ‘blur’ in shots is the result of your subject moving – this is generally related to shutter speed being too slow. Particularly if you take portraits (e.g. wedding photos) always take several shots in order to avoid those where people blink.
Lens sweet spot

Lenses have spots in their aperture ranges that are sharper than others. In many cases this ‘sweet spot’ is one or two stops from the maximum aperture. So instead of shooting with your lens wide open (i.e. where the numbers are smallest) pull it back a stop or two and you might find you get a little more clarity in your shots.

c) Noise and grain

In the film era there were rolls of 24 or 36 exposures with varying sensitivity. According to the American Standards Association (ASA) their values were 100, 200, 400 and rarely 800 ASA. In Europe they used the range of the International Standard Organisation (ISO). If you wanted to change the ISO sensitivity you needed to finish the film in your camera and wind up a new one.

Nowadays you just turn a dial on your camera to instantly switch between ISO values from 50 to almost 104 500. Together with this previously impossible sensitivity comes the issue of digital noise. Even the newest cameras produce pictures with noise and grain when shooting at high ISO values, and only image editing software like Photoshop or Lightroom can help mitigate some of the effects of this noise.

Luminance noise

This kind of noise affects the brightness, but not the colour, of individual pixels. If you had a picture of a dark grey piece of paper with a great deal of luminance noise, it would appear similar to old-school television static with lots of light and dark fuzz.

Chroma noise

This shows up as oddly-coloured pixels, scattered throughout an image, almost like someone has tossed a handful of red, blue, and green grains of sand at it. Lightroom calls this “Colour” noise, but it is just another term for Chroma noise.

Both types of noise are byproducts of how digital image sensors capture data, and while they can be corrected somewhat in Lightroom and other post-processing software, it is almost impossible to completely remove noise from a picture while still ending up with a usable image. Lightroom does give you some tools to get your digital noise under control, and if you know what you are doing you can get some fairly decent results. Using separate controls for luminance and chroma noise, in combination with some sharpening adjustments, can help you salvage what you may think is a useless picture.
3.1. Camera types and set up for image taking

3.2. Elements of Appropriate Exposition

3.3. Disturbing and Unwanted Elements

3.4. Graphic Elements of the Image

3.4.1. Lines and their significance in the image

Lines are basic graphic elements that separate shapes, objects and other graphic elements in the photographic scene or composition. They provide visual strength and expression and contribute to the overall message of the image. Basically we have straight and curved lines, their position in the composition can strengthen (lead) or disperse the attention. Similarly to other graphic elements the lines contain powerful symbolism. Curved lines bring harmony, peace, jagged and broken or zigzag lines bring tension and may represent danger. Horizontal lines represent peace, calm and absence of motion. Vertical lines may represent growth, diagonal motion. Lines also carry visual weight – a thin line has less impact than a thick one. It is important to recognise the importance and meaning/function of lines and learn how to use them in photographic compositions.

d) Distortion, vignetting, aberration, diffraction

- Aperture extremes

Aperture is a balancing act. On the one hand, the wider the lens is open, the more light you get, and the lower your ISO setting and the faster your shutter speed can be. However, any lens used wide open is at its weakest point. Most lenses perform markedly better stopped down 1-2 stops from wide open (the EF 50mm f/1.8 II is especially guilty of this). Chromatic aberration, vignetting, and softness can all be improved simply by not using the lens at its maximum aperture. A ton of your shots with the 18-55 are at 55mm, f/5.6. Stop it down to f/8, and you will see a bit more sharpness. And using too small an aperture – especially with today's pixel densities – can see diffraction making things softer, too. So, probably it is not good to use apertures smaller than f/16 unless you have got a good reason to. Also, not shooting wide open gives you more depth of field, which in turn gives you more leeway with the autofocus accuracy. A 50mm f/1.8 II at some subject distances, if wide open, yields a DoF that can be measured in millimeters. Any slight movement of the subject or camera could throw the focus off. Trading off some background blur for better focus is often worth it.

e) “Artefacts” and dust

Most of the disturbing “artefacts” in digital images (except for those caused by distortion, vignetting, aberration, diffraction) are dust and dirt particles glued to the sensor surface. They concentrate particularly on the corners of the sensor and represent unwanted and disturbing lines, spots and points in an image. It is necessary to clean the camera sensors at specialised services where the dust and dirt particles are removed in vacuum chambers. The remaining spots can be removed in image editors (Photoshop, Lightroom) using the cloning and healing tools.

3.4.2. Graphic Elements of the Image

- Lines and their significance in the image
**Horizontal lines**

Horizontal lines often separate the colourful areas (sky, sea, fields, forests, shorelines) and when properly situated and placed in the image (e.g. following the rule of thirds) can strengthen the visual impact of the image. Horizontal lines are used to create images that represent a tranquil, peaceful and calm mode. Except mirroring surfaces, horizontal lines are rarely placed in the middle of the frame (resulting in boring or too static images). Minimalistic photographers often use horizontal lines to create calm and relaxing images with great balance of colours and shapes.

**Horizon**

The presence of the horizon in the image divides the composition into two parts. Unless properly justified and intended, avoid placing the horizon in the centre. Try to place the more important part in the larger section of the image and thus define the visual emphasis of the image.

**Vertical Lines**

Vertical lines express growth (trees, plants, grass, cornfields, architecture - columns, towers, houses). They often express height (waterfall, buildings) strength, order and power.

**Diagonal lines**

Diagonal lines express energy. The thicker they are, the greater the impact. They lead the eye rapidly from one corner of the image to another. They often represent movement, ascent or descent and can divide the image into two or several parts. Similarly like the horizontal and vertical lines they divide the scene. This division can be a great benefit for the image or it can damage the desired message, though.

**Curves**

Part of the landscape images are very often curved lines (meandering rivers, winding roads,). Curved lines very often represent the nature or natural art. Curves represent peace, rest, calm scenes. In landscape images you need to let enough space for the unfolding curves and not break the curved lines.

**b) Shapes, forms and their meaning**

Shapes possess strong symbolism and can influence the delivered message or impression from the image. Square and geometric rectangular shapes often represent stability and solidity. Square and rectangular shapes are rather rare in natural environment, except for rock formations and crystals. They can most often be found in man-made environment: in housing and urban areas. Triangles frequently represent strength and stability (e.g. pyramids). Pyramidal peaks, mountains in landscape images can dominate the picture. Square shapes can be very useful
in abstract compositions and in geometrical scenes represented by complementary colours. Round shapes and unbroken circles often represent wholeness. The most powerful circular structures are the sun, moon, fruits, flowers. The sky itself, depending on the cropping and composition, can represent a geometrical shape as well. You can modify the shapes, their size and positions through careful composition of the scene. Tilting the camera you can determine the dominant shape of your images (sky or land). It is a good exercise to explore, find and use various shapes in your composition. It will enable top control of the balance and dominance of various subjects of your composition. The position of the light can influence the strength or the shape. Front lighted shapes can be very flat and thus boring. Backlight often creates a silhouette that can positively influence your desired message.

The three dimensions, depth and structure of shapes can be highlighted by sidelight. As stated before, strong and intense front light can have flattening effect on forms and limit their three-dimensional characteristics.

c) Patterns, texture and repetition

When basic elements like lines, shapes, forms are repeated within the scene, they create a pattern. The greater the number of the similar elements in the images, the stronger the pattern identification. Typical patterns are represented by a number of elements (flowers, crops, leaves, plants, animals, rocks). The pattern has stronger impact if it fills the frame. The image of patterns can be boring, so photographers, in order to avoid monotony, frequently include something to break up the pattern. The anomaly can provide a point of contrast and rest for the eye. Repeated patterns appear as if they are moving and thus create a rhythm in the composition.

d) Colour and its use in photography

Contrary to some species in the animal world, humans can distinguish colours. The colours around us can evoke great emotional response. Many people have their favourite colour in their clothes and textiles and on the walls of their rooms and houses. The emotional influence of the colour spectrum is from calm to energy and aggressive moods. Usually green and blue colours represent melancholy, calm. Bright green leaves in spring evoke thoughts of new birth and freshness. Colour is the element of your image similar to lines, shapes and forms. You can use colour to express harmony or tension. The colour spectrum recognises the so-called complementary colours. In the colour wheel they are situated opposite to each other: blue-yellow, red-green, pink-violet. The brightest of the colours is the yellow. It can dominate in your image even if it occupies just a small part of it. Red can have an effect similar to that of yellow: it represents energy, danger or power. Blue and green are calm, quiet colours. Green often represents natural environment, growth.
4) Portrait Photography

1) Introduction to issues and topics

The existence of portrait photography dates back to the invention of daguerreotypy in 1824. Since then it has been the most common photographic discipline. Everyone who has a cell phone takes a portrait. Mobiles also brought a new portrait genre, the selfie.

In portrait photography, the photo is about capturing a person on a medium-sized photo camera in a certain composition line, and from the correct layout of the graphic elements in the image field of the device. The portrait photographer's aim is to capture the form, personality or mood of the portrait person. Portrait sets can be organized outdoor, indoors, and in studios. Each place brings its practices and technical solutions. We can portray people using natural light or artificial lighting. In a studio we can use the help of fixed lights or flashing professional technology with a pilot light and a lot of reflectors, whose application is to be learned.

A photo portrait may not always display only a portrait person. In a social, documentary, or reportage photo about a certain person or thing the portrait person's portrait would be boring and dull and we would not know more than the form of a man or things. Otherwise, we are looking for a luminous mood, distributed personal things that can tell more about his person. We are trying to make a personality medallion and alert and highlight the visual value of the image.

With the influx of photographic imaging devices and the affordability of professional photographic devices that are currently at a high technological level, portrait photography can be easily devalued.

First, it is in contradiction with the technological level, as today's mobile phone and photocopier resolve all the technical issues encountered by the photographer. The mobile phone correctly measures the time, assigns the aperture and automatically adjusts the sensitivity of the sensor. The software developer evaluates the light conditions and compares them to the solutions of professionals whose results are available to him.

The option is comprehensive and as I wrote the technical level very high. It does not matter whether we portray a mobile phone, a compact camera, or a mirror. But let us talk about the various complex lighting situations we are not familiar with in our equipment, because they do not know what we are looking at. Consider the difference between the vision of the camera and the human eye, and it will be easier to come up with the correct camera setup.

But let us learn to look around a portrayed person and point to the correct layout of the individual elements found in the image field and save them in a logical graphic layout. We need to learn to make an interesting composition.
The 5-day photographic course will address the following topics through photography:

1. From Daguerreotype to Digital Photography:
   a) Scenario and story design:
   The goal of photographic intervention is to foster the sensitive perception of children, young people and photographers, to give them a hand in the vision and show by comparison the true value of the image media, to point to the power of the image material and the ability to improve the company’s vision.
   - Portrait of a portrait photo
   - Types of portrait genres
   - Technical specification of the selected portrait genre
   - Techniques to create by selecting a portrait genre
   - Modern approaches to portrait photography
   - Postproduction software

2) The objectives of the lesson

   a) in the wider context of the photographic genre since the birth of the photographic portrait to the current situation in visual perception;
   b) in involving the spectators’ emotional response to the difference between the true value of the visual display and the value of the subsumption of visual and non-cultural media production in both digital and print media;
   c) improving children’s and youths’ photographic skills in the areas of intervention;
   d) increase the portrait photographer’s awareness of portrait person’s privacy. The law specifies the conditions under which people can be photographed. It states that photographs (the law calls them “pictorial images or portraits”) relating to a natural person or his personal expression may be made or used only by his or her affiliation with his or her consent?.

3) Methodology

   a) Scenario and story design:
       - Due to the many technical possibilities of exposure, supervisors will address the issues arising from the practical part. With real practical experience and constant change of light conditions in the exterior (climbing cloud behind the cloud, or strong light in a small part of the image field and consequent negative impact on the resulting image) help will be provided for trainees to understand how to use camera settings and their broad technical possibilities.
   - In the atelier practice, light technology will be introduced and the technical difference compared to using natural light will be pointed out. In
In studio photography, we do not need natural light, and if we want to have the same result, natural light cannot play a role in the resulting image.

- Prepare a list of necessary equipment and tools (tripods, filters, props, light bodies, spotlights and backgrounds).

5) Photo settings

Portraits with soft drawing with 80 mm zoom and as high as possible (what?) can be used for portrait photography, but in practice any lens with a zoom of 50 to 150 mm can be used. The exception, however, is the portrait medal of the personality.

In this case we photograph everything that connects a portrayed person with his natural surroundings.

Everything should fit in. The entire series tells us more about humans and we do not even do it without a wide-angle lens.

The main factors of the shot are: appropriate light, composition, and an interesting moment that portrays a portrait person.

Light characteristics:

- Light conditions are the key to a good portrait. It is better to use a hard light to photograph a man. Otherwise, a soft and swollen light is appropriate for women.
- It is possible to use an external flash for the facial rendering, even in the exterior, which will help to render the dark parts.
- White balance is simple nowadays. Present-day photography devices are very accurate, and automatic features as well as white balance provide satisfactory results. Exceptions are portraits in ad creation where there is no possible color shift. In this case we set the white balance or photograph to raw-u, which allow us to adjust the settings in the editor.

Composition:

- The most common composition for portraying one person in a studio is the central composition. Any composition can be used for portraits in the exterior.
- The portrait person will take up the most of the composition.
- In particular, it would be disturbing elements that are located outdoors. For example, there are lamps that grow from the head, and the like.
- The angle of the photo portrait is suitable for the best results. So, I set the model in a certain position according to the light that illuminates them and add the graphic order to the element in the picture by looking at the viewfinder.
- The suitable depth of field is either very small (full hole) or high, for example f/11 or f/16. Basically, we do not use the lowest aperture number for artwork. Each lens "draws" differently, so it is best to make your own test on your own lens and then use those numbers in practice.
- For portraits it is appropriate to shoot static shots at 1/80 and above due to motion blur.
- There is no need to use a tripod on the portrait, but exceptions also confirm this rule.
- The filter requires each lens to scratch? (A filter is required to eliminate scratches from each lens?). However, for a portrait photograph a filter is not substantial.
Image Dynamics:
- A horizontal portrait will be in the first third of the image from above.
- Falling lines are suitable only in some exceptional cases. Otherwise, they are inadmissible.
- Composition center, triangle.
- The form of an image may be both in width and in height. It is appropriate to position the portrait in height and the portrait aspect ratio is 3:4.

In a portrait photo we look for a perspective for every person. Someone looks better from above, someone from the ceiling. It depends on the space, the person and the light conditions.

d) Sources and locations

The location of the portrait is wherever the person is. It depends on the story and on the picture we want to communicate about the person.

6) Terms of Reference and tasks

Specify: Shoot the person at different focal lengths and compare it to the portrait lens. We will see many undesirable elements that make it difficult for us to portray portraits naturally due to lens defects. A wide-angle objective strikes out.

Task: Take 10 portraits in one style that combines something.

7) Rights of the photographed person:

In addition to the general protection against privacy, the law specifically provides for the conditions under which people can be photographed. It states that photographs (the law called them "pictorial images or portraits") relating to a natural person or his personal expression may be made or used only by his or her affiliation with his or her consent? (this text is repeated on page 34 above).

However, the privilege is not necessary in cases of the so-called "legal licenses":

1/ if the photographs are used for official purposes provided for by law (e.g. in criminal proceedings to identify a person, for registration purposes).

2/ Photographs may, without the permission of a natural person, be made or used in an appropriate manner as well:

- For scientific purposes
- For artistic purposes
- For press, film, radio and television news.

However, such use must not be inconsistent with the legitimate interests of the individual. According to the cited provisions, therefore, two questions must be answered for the lawful creation and use (e.g. sale or publication) of photographs:

(a) if the creation and use of a photo interferes with a person's privacy;

(b) whether it is necessary to design and use the photograph.

Interference with privacy

The basic criterion for judging whether a photographer can take a photo is whether or not he / she creates the photographer's privacy? (affects the privacy of the photographed person?). Although the law does not precisely state in what cases the privacy of individual persons is breached, courts
rule on such cases (the Constitutional Court of the Slovak Republic, the European Court of Human Rights).

The right to respect for private life is automatically reduced depending on the extent to which an individual himself puts his or her private life in contact with public life or in close association with other protected interests.

Private persons

In the case of private individuals, making a photograph is a breach of privacy and of the right to the appearance of the person being photographed. So, it is always necessary to assess whether a photo can be created without permission. This is true regardless of whether it is in private or in public.

However, if a person is not identifiable in a photo, then it cannot be said that the privacy of the person is breached and the photo can be created and used indefinitely.

If the photographer considers that taking or using the photo does not interfere with the privacy of the person being photographed, the photographer can make and use the photo without any limitations. However, if the photograph was compromised in terms of the person’s privacy or the form of the person being photographed, it is necessary to assess whether the consent of the person being photographed is necessary.

Privilege for photography

It follows from the above that if the privacy and the image of the person being photographed is interfered with, it is possible to make or use a photograph only with the consent of the person concerned. Consent can be obtained in writing or only orally: just a gesture of consent (annoyance). Given the circumstances of the case, unauthorized consent, that is to say the taking of photographs, may be considered to be a prize, unless it casts doubt on whether the person has agreed to have his picture taken.

In public places it is necessary to assess the circumstances of the whole situation, i.e. whether a person (public or private) has to count on it that they can be photographed and knowingly went or performed a certain activity at this place (e.g., a fashion show in the square, where the model of their dress will be photographed and taken to a fashion magazine, or the person will attend a televised event or concert in the open air). In such cases it is accepted that the person has given tacit (silent) consent to be photographed by his participation.

If a person attends a concert or another public event, it cannot be inferred that he gives tacit consent to any use of the photographs of that concert but only to those related to the presentation or information about that concert. Using a photo in a different context is an unauthorized interference with the person's privacy (for example, if a photo of two young people taken at a concert is used as an illustration of an article on marital relationships). If a prize is given, it is necessary to know what the photograph is being given to (how the photograph was taken?). If the person has given an explicit permission for a photo to be taken.

Legal Licenses

If a photograph is created for news or for scientific or artistic purposes, it can be created and used without the permission of the person in the photograph.

Design and use of such a photo:

· It must be adequate (the form, extent and content of the work and the use of such a photograph are justified);

· It must not conflict with the legitimate interests of the person being photographed (such as the obvious interest in protecting privacy or the photo taken by the person looks like the publication of the photo may ameliorate (this is not clear) or the photo is inappropriate).
Shooting for artistic purposes

The photo, though it is the author’s and a unique piece of work of his, is not always created for artistic purposes. A photo can be considered artistic, if it is not primarily intended for commercial purposes (it does not sell or present anything) and is supposed to present the author’s subjective artistic perceptions. An ad or photo intended for creative purposes, is not created for the family album.

Photography for news purposes

Reporting means a presentation of events related to society and social life issues. It has to be a matter of public interest, not just an interest in sensation, scandal, or superficial entertainment. However, the law also sets limits on these statutory licenses.

Shooting other objects

Taking pictures of objects other than an individual, is not, except for some exceptions, regulated in the Slovak legal order. Therefore, one should consider it when shooting (for example, in cases of publication of a photograph of the home of a person, who does not want people to know where he is for his own safety, the publication of photographs of the interior of the house captured by the lens) and should not interfere with the privacy of the owner of these objects.

When judging whether to create a photo, you need to follow criteria such as those for photographing people, as object photography may be related to interference with the privacy of individuals. If the photo of other objects is not associated with a particular person, or with some fact that can identify this person, it is not possible to talk about privacy, so the photo can be created and used without limitation.

Prohibition to take Photographs

Signs prohibiting photo shooting can be found even in buildings and places where there is no reason for such prohibition for defense and state security purposes (e.g. in shopping centers). By visiting a shopping center, we enter a property owned by another person and a private relationship is established between us and the seller (or the shopping center owner). In order to protect their property and the rights of others, the seller may establish certain rules for entering his/her business premises. These conditions, however, must not be discriminatory, thus excluding certain groups of persons (e.g., mothers with boys or Roma). In case of such a ban, photography in a shop or shopping center cannot be a reason for the police to intervene. It is not a violation, not a crime; it is only a breach of private law.

Violation of this prohibition cannot be a reason to expose a person from the store or for an order to delete photos. The owner of a shop or SBS has the sole right to ask the customer to stop taking pictures or to ask him to leave the store. If the ban is not explicitly specified when entering the property, photography cannot be banned and the ban on photography is not applicable (e.g. in public transport or at the swimming pool).
10 Ways to Take Sharper Images: Tips for Beginners

Here is a list of 10 basic things to think about when shooting to get sharp images (Note: there is also a lot you can do in Photoshop after taking your images).

Getting your digital images perfectly sharp is something that most photographers want. However, clean, crisp, sharp images can be difficult to achieve.

Perhaps before we start exploring how to improve sharpness, it would be good to talk about the main causes for lack of sharpness:

• **Poor Focus** – the most obvious way to get images that are 'unsharp' is through having them out of focus. This might be a result of focusing upon the wrong part of the image, being too close to your subject for the camera to focus, selecting an aperture that generates a very narrow depth of field or taking an image too quickly without checking whether it is in focus.

• **Subject Movement** – another type of 'blur' in shots is the result of your subject moving. This is generally related to shutter speed being too slow.

• **Camera Shake** – similarly you can get blur if you as the photographer generate movement while taking the image. This often relates to shutter speed and/or to the stillness of your camera.

• **Noise** – ‘noisy’ shots are ones that are pixelated and look like they have lots of little dots over them (get up close to your TV and you’ll get the same impact).

1. **Hold Your Camera Well**

A lot of blur in the photos that we see is a direct result of camera shake (the movement of your camera for that split second when your shutter is open). While the best way to tackle camera shake is to use a tripod (see below) there are many times when using one is impractical and you will need to shoot while holding your camera. Hints in brief: use both hands, keep the camera close to your body, support yourself with a wall, tree or some other solid object etc.
2. Tripods

Tripods reduce (and even eliminate) camera shake. While not always practical, the result you will get when you do go to the effort of hauling one around can be well worth it.

3. Shutter speed

Perhaps one of the first things to think about in your quest for sharp images is the shutter speed that you select. Obviously, the faster your shutter speed, the less impact camera shake will have and the more you will freeze any movement in your shots. As a result you reduce the likelihood of two of the main types of blur in one go (subject movement and camera movement). Remember the ‘rule’ for handheld shutter speeds: Choose a shutter speed with a denominator that is larger than the focal length of the lens.

So some hints:

• if you have a lens that is 50mm in length, do not shoot any slower than 1/60th of a second;
• if you have a lens with a 100mm focal length, shoot at 1/125th of a second or faster;
• if you are shooting with a lens of 200mm, shoot at 1/250th of a second or faster.

Keep in mind that the faster your shutter speed is, the larger you will need to make your aperture to compensate: this will mean that you have a smaller depth of field which makes focusing more of a challenge.

4. Aperture

Aperture impacts the depth of field (the zone that is in focus) in your images. Decreasing your aperture (increasing the number, say up to f/20) will increase the depth of field, meaning that the zone that is in focus will include both close and distant objects.

Do the opposite (for example moving to f/4) and the foreground and background of your images will be more out of focus and you will need to be more exact with what you focus your camera upon.

Keep in mind that the smaller your aperture, the longer your shutter speed will need to be, which of course makes moving subjects more difficult to keep sharp.
5. ISO
The third element of the exposure triangle is ISO which has a direct impact upon the noisiness of your shots. Choose a larger ISO and you will be able to use faster shutter speed and smaller aperture (which as we have seen help with sharpness) but you will suffer by increasing the noise of your shots. Depending upon your camera (and how large you want to enlarge your images) you can probably get away with using ISO of up to 400 (or even 800 on some cameras) without too much noise but for pin sharp images keep it as low as possible.

6. Image Stabilisation
Many cameras and lenses are now being released with different forms of image stabilisation (IS) which will not eliminate camera shake, but can definitely help reduce its impact. I find that using IS lenses gives me an extra two or three stops (i.e. I can use slower shutter speeds by 2-3 stops) when hand holding my camera. Keep in mind that IS helps with camera movement but not subject movement as it allows you to use slower shutter speeds (not good for moving subjects). Also – do not use image stabilisation while mounted to a tripod.

7. Focus
Perhaps the most obvious technique to work on when aiming for sharp lenses is focusing. Most of us use 'Auto Focusing' with our cameras but do not assume that the camera will always get it right.

Always visually check what part of the image is in focus before hitting the shutter and if it is not right, try again or switch to manual focus mode. This is particularly important if you are shooting with a large aperture (small depth of field) where even being slightly out can result in your subject being noticeably out of focus.

Most modern cameras have a range of focus modes you can choose to shoot in – choosing the right focusing mode is really important (learn how to do that here).

8. Good lenses
This one is for DSLR owners: if you have the budget for it, invest in good quality lenses as they can have a major impact upon the sharpness of your images. There is a big difference in sharpness between Canon EF 28-135mm and a Canon EF 24-105mm ‘L series’ (the professional series of lenses from Canon) lenses.

9. Diopter adapter
The diopter is a little adjustment that you can make to how your viewfinder works – it is particularly useful for people with poor eye sight – it is usually a little wheel next to your viewfinder.

10. Clean equipment
Keep it clean and you will eliminate the smudges, dust and grime that can impact your shots. Similarly, a clean image sensor is a wonderful thing, if you have a DSLR, as getting dust on it can produce noticeable blotches in your end images.

11. Lens sweet spot
Lenses have spots in their aperture ranges that are sharper than others. In many cases this ‘sweet spot’ is one or two stops from the maximum aperture. So instead of shooting with your lens wide open (i.e. where the numbers are smallest) pull it back a stop or two and you might find you get a little more clarity in your shots. Learn more about identifying the sweet spot of your lenses here.
How to Shoot Engaging Travel Portraits from Start to Finish

A Post By: Ben McKechnie

I love travel portraits. Not only do they test your photography skills but also challenge you to interact with people in unfamiliar environments. The end result directly reflects your subject’s personality along with your ability to make them feel at ease, read the light, select optimal settings, and compose a great shot.

Every photographer has a slightly different approach, which evolves with every new person you meet and country you visit. Join me as I walk you through an encounter from start to finish and share tips on how to shoot engaging travel portraits.

1 – Approach the person and get permission

As a photographer, it’s up to you to develop your own code of ethics. However, I implore you to seek permission and not just stick a camera in someone’s face. The initial approach can often be the hardest part; taking the shot is comparatively easy.

Aim for a consensual, mutually enjoyable exchange from which you can both walk away with a happy story to tell. Be open, smile, and pay people compliments.

If it’s a firm no, you can smile warmly, tell them it’s absolutely fine, and ask them if they would like to see photos you’ve taken of the local area. This way, you can both still walk away having had a pleasant experience, and sometimes, they even change their mind.

2 – Communicate for a meaningful experience

Your challenge now is to make your subject feel at ease. The best portraits come when people are relaxed and open to you. Most crucially, don’t rush the photo, say goodbye, and walk away. Show genuine interest in their lives.

Ask questions if you can speak a mutual language. If not, remember that much of your intentions and warmth can be communicated through body language, facial expressions, and gestures.

3 – Read the light and use it to your advantage

With permission granted and your subject warming to you, the next step is reading the light. Whether it’s day or night, look at the lighting conditions around you. Consider asking your subject to turn their body or move completely to seek the best light.

4 – Select your settings

Ideally, you have a fixed focal length (prime) lens with a wide aperture attached to your camera body. However, if you’re traveling, you may have an all-purpose zoom lens attached. I like portraits that I’ve taken with both types.

With my fixed focal lens, I often shoot portraits at f/2.8 or slightly above. If you shoot any wider, the focal plane can be so thin that you risk your subject’s eyes being in focus but having their nose out of focus. For a zoom lens, I recommend selecting your widest aperture but standing further away from your subject. Zooming in on their face will accentuate the shallow depth of field effect that works so well for portraits.

For engaging portraits, the most important element requiring sharp focus is the eyes. I suggest setting your camera to spot focus on the center AF point. Next, aim the center point at one of your subject’s eyes. Use the focus and recompose method – or even better – the back button focus method to lock in on the eyes. This will ensure they’re in sharp focus in the finished photo.

5 – Choose a strong composition

Numerous compositions can work for portraits. The rule of thirds can work incredibly well but try not to wear it out or all your travel portraits will look the same.

Another one to try is placing one of your subject’s eyes directly in the center of the frame; a study proved that portraits composed this way appeal to viewers on a subconscious level. I promise I’m not making that up. This can be applied in portrait or landscape orientation.

6 – Come down to their eye level

Try not to stand above your subject if they are sitting. This is intimidating and works against your goal to relax them. Positive psychological things
happen when you come down to someone’s eye level. Take a look at the example below.

7 – Shoot different styles of portrait

Posed versus candid portraits

Posed refers to approaching a person and asking them to sit for a portrait, whereas candid portraits refer to catching a person in an unguarded moment. This doesn’t have to mean without permission.

For the image below, I’d already gained this lady’s trust and permission but waited until she’d forgotten that I was there to continue shooting. Later, I showed her all of the photos, which she seemed happy with.

Headshot versus environmental portraits

A headshot refers to filling the frame with your subject’s face. The background is not important for setting the scene, although you might consider finding one of a complementary color to your subject’s clothing, skin tone, or eye color. Environmental portraits are zoomed out to allow your subject’s surroundings into the frame to add to their story.

8 – Shoot a series with the same subject

When you have someone’s permission and have bonded with them, consider staying with them a while and shooting a series of images. This is what I did when I met one man in the Philippines recently. I directed him gently for a series of shots after telling him how interested people would be to learn about his culture. He was happy to oblige.

9 – Always remember aftercare

Aftercare means bringing the encounter to a close in the best possible manner. I believe an extra layer exists as to why the verb is to “take” a portrait. You are taking something from them, but what are you giving in return?

Make sure you show the person their image on the back of your camera, pay them a compliment, and thank them sincerely. So much joy can come from this simple act.

Six Ways to Capture the True Character of a Subject in Portraits

A Post By: Andrew S. Gibson

Broadly speaking there are two types of portraits. The first is where you try to make the model look as beautiful as possible. You may need a make-up artist or stylist to do it properly. Most commercial photographers are paid to make their models look beautiful, and there are many links with the world of fashion photography.

The other is where you try and capture somebody’s essence, create character portraits. One interesting thing about this style of portraiture is that it opens up your range of models beyond people that are considered conventionally beautiful. It’s less complex because you don’t necessarily need make-up artists, stylists, or complex lighting.

Capturing character is a more simplistic, honest approach to making portraits. The techniques and principles behind it are simple but may take a lifetime to master.

1. Focus on the eyes

This applies to all types of portraiture but even more so when trying to capture their character. This idea goes beyond focusing your lens on your model’s eyes and making sure they are well lit and have a catchlight.

Eyes should be a focus conceptually as well as literally. They tell you a lot about a person. Eyes convey emotion, vitality, and life. The saying, “The eyes are the windows of the soul” has a lot of truth to it. Older people have wrinkles around their eyes that speak of experiences lived and wisdom gained.

2. Ask the model to wear their own clothes

Choice of clothing can say a lot about an individual, particularly if they have a quirky fashion sense. This is the opposite approach to fashion, where the model often wears clothes that don’t belong to them. When capturing character ask the model to bring along clothes that are meaningful to them.

3. Shoot the model in their environment

A common component of the type of portrait
photography where you try to make somebody look beautiful is to place the model in an unusual or striking environment.

When capturing character you should try and do the opposite. Look for links between your model and the environment. If your model is the outdoorsy type, look for a place to take the portrait that reflects that. Or maybe their home or garden are decorated in a way that reflects their character. Or perhaps they have an interesting hobby or profession.

Think about how you can use these elements to create a portrait that tells a story about the model’s character.

4. Use prime lenses

Prime lenses are the secret weapon of the portrait photographer. Part of that is because of the practical advantages. We all know you can select a wide aperture to blur the background and create compositions with bokeh. But you can also set the aperture to f/2.8 or f/4 knowing the results will be sharp (compared to the softer performance expected from zoom lenses at those apertures).

Being restricted to a single focal length means you have to get creative with your compositions. You can create variety by changing the distance between you and your model, and by utilizing different points of view.

But most of all, the minimal approach to gear enforced by prime lenses lends itself to a more honest approach to portraiture. I often take just one camera, one short telephoto lens, and no lights to a portrait shoot. I prefer to rely on natural light (and reflectors). Eliminating distractions helps me concentrate on the next step – making a genuine and meaningful connection with the model.

5. Build rapport

The success of the shoot depends on the relationship you create with your model. You might only have a short time to do this. I’ve turned up for shoots with people who I’ve never met before, having communicated only by email or text message. It helps that I’m a naturally curious person and enjoy learning about other people and their lives.

Part of building rapport is getting the model genuinely interested in the photo shoot. If it is part of an ongoing project (and it should be, because projects are the best way to help you develop creatively as a photographer) let the model know about it so they can take pride in being part of your project.

Use conversation during the shoot to provoke animated expressions. Read the story about Yousuf Karsh photographing Winston Churchill for an extreme example of this!

6. Post-process appropriately

Think about your style of post-processing. For example, a portrait that expresses character probably needs far less retouching than a portrait that is trying to make the model look as physically beautiful as possible. A light touch is often best, when working in color.

You should also consider converting your best portraits to black and white. There is something timeless and special about a good black and white portrait. It’s ideal for expressing character and emotion.

Conclusion

Capturing character, rather than (but not necessarily instead of) beauty poses a challenge to the creative photographer, but the results are often more satisfying.

I find that an interest in capturing character rather than beauty marks an evolution in a photographer’s thinking, a shift from photographing the superficial to looking for deeper themes and human connections. But what do you think? What techniques do you use to capture character? Let us know in the comments below.
How to Create a Center of Attention for Better Storytelling Images

A Post By: Kevin Landwer-Johan

Drawing the viewer’s attention to the main subject in your photographs will help them understand your story more clearly. If you have a busy scene with no clear focus point it will possibly give your viewers an overall idea of what you were photographing, but they may not scrutinize it for long. Adding a clear center of attention will help you create better storytelling images. Particularly when you are photographing a locality with a lot going on you can seek to isolate or draw the viewer’s eye to one main subject within your composition. By using this technique, you can develop a style which may become easily recognizable in your photographs.

Lessons from documentary photography

I first learned to make photographs like this while working as a newspaper photographer. My task was to illustrate and support the journalist’s story with my pictures. Making photos that compelled people to stop and look was always my priority. We wanted people to take notice, look at the photo, and read the story.

Photos of broad, general scenes will not achieve this so well as people will typically just flick past them. Creating a photo essay to tell of your travel experience, an event you attended, a parade, etc., you will be aiming to convey what you saw and how you felt to best engage your audience. By creating a series of images where you have focused on one main subject in each image you can build an overall illustration communicating to the viewer what it was like to be there. That is storytelling at its best.

Techniques

There are various techniques you can use to draw attention to one part of your composition. Using a shallow depth of field to isolate is one method. Using the contrast in light between your subject and the background, and various composition methods you can obtain pleasing results.

Play with the background

All of the photos I am using to illustrate this article are from a street parade in Chiang Mai, Thailand. With a lot of people, often cluttered backgrounds, and no real control or means of setting up photos, it’s a challenging situation in which to shoot. Finding a dark background to help isolate your subject is not always so easy, but when
you can it will produce some great photos. In this photo of the boy playing a large drum, I positioned myself so the background was totally in shadow and therefore underexposed.

This has achieved isolation of my main subject and you easily focus your attention on him. My timing to capture a smile and interesting positioning of his drumstick also helped. On its own though, this photograph does not do much to illustrate the parade.

Coming in close to the French horn player (with a 35mm lens on a full frame camera and a wide aperture) I was able to isolate him and at the same time convey more information about his activity and location. Making him the center of attention and at the same time leaving him in context helps tell the story.

Had I used a longer lens it would have included less background and it may have been even more blurred, further distorting the detail and therefore the context of the story would be lost.

**Using compositional elements**

Using different composition methods such as framing or converging lines you can help draw your viewer’s attention to your chosen subject.

Often during our workshops, I find people want to include too much in their photos. I encourage them to include less and take more photos build up a story that way.

While it is good practice to create a photo essay which has a varied selection of wide, medium and close-up photos, trying to capture too much of what’s in front of you can often produce rather uninteresting photographs. Bringing one part of your composition to the foreground as the center of attention is a more effective means of holding a viewer’s focus.

**Single or multiple photos**

At the newspaper most often each story was accompanied by a single photograph. So the challenge was to produce one image supporting the narrative of the story. Not always so easy, especially with an event like a parade.

I often encourage people to photograph as if they are shooting to cover a story for a magazine. The aim being to come away with a series of photographs that together will tell the story of their experience. To finish up with 6-10 photos having a clear center of interest in each one and conveying the overall experience of the day. If you produce a small collection of photos most social media and photo sharing sites have means to display them together in an album or gallery so it’s a great way for you to share your stories and your experiences.

**Your turn**

You can see some of these tips in action in the video below. Please share your tips and thoughts on creating more storytelling images by having a center of attention in the comments below.
Noise and grain

One of the most significant advantages that modern cameras have over their film-based counterparts of days gone by is their ability to change how sensitive they are to light with the touch of a button.

Back in the days of film you had to decide ahead of time whether you wanted to shoot at ISO (then called ASA) 100, 200, 400, or in extreme cases, 800. If you were going to take pictures outdoors, a roll of 24 or 36 exposures, 100 or 200 film would work fine, but woe betide the unsuspecting photographer who wandered inside a dimly-lit building with that same film still in his or her camera. To change sensitivity, and shoot in the new lighting conditions, you had to shoot the rest of the pictures on a given roll of film, remove it from your camera, and hope you brought some ASA 400 or 800 film with you.

Nowadays you just spin a dial on your camera to instantly switch between ISO values like 100 or 200 that work great in broad daylight, to ultra-high values like 6400 or 12,800 that would be positively unthinkable with film. It’s not all sunshine and roses though as one of the biggest issues with high ISO values is that of digital noise. Even the newest cameras produce pictures with noise and grain when shooting at high ISO values, but thankfully Lightroom can help mitigate some of the effects of this noise.

Luminance noise

This kind of noise affects the brightness, but not the color, of individual pixels. If you had a picture of a dark grey piece of paper with a great deal of luminance noise, it would appear similar to old-school television static with lots of light and dark fuzz.

Chroma noise

This shows up as oddly-colored pixels, scattered throughout an image, almost like someone has tossed a handful of red, blue, and green grains of sand at it. Lightroom calls this “Color” noise, but it’s just another term for Chroma noise.

Both types of noise are by-products of how digital image sensors capture data, and while they can be corrected somewhat in Lightroom and other post-processing software, it is almost impossible to completely remove noise from a picture while still ending up with a usable image. Lightroom does give you some tools to get your digital noise under control, and if you know what you are doing you can get some fairly decent results. Using separate controls for luminance and chroma noise, in combination with some sharpening adjustments, can help you salvage what you may think is a useless picture. As an example, here’s a picture that I took at ISO 6400 without any noise reduction applied. Not bad, right? If this is what ISO 6400 looks like, you might as well shoot like this all day long! Well, before you go and spin your ISO dial all the way up to Ludicrous Mode, you might want to take a look at the same 24-megapixel image zoomed in to 100%.

Much of the black and white static has been removed, but there are still splotchy patches of colour scattered throughout the image, which can deal with using the colour slider next. Before you start thinking that this is a magical cure-all for your noisy images, take a closer look at the picture. Much of the
details have been lost, or blurred, such as the lines on the side, and the patchwork of the figure’s tunic.

You can mitigate these effects somewhat by using the detail and contrast sliders, but again the results are not going to be ideal. Detail acts as sort of a threshold control, allowing you to tell Lightroom what should be treated as noise and what should be left in. I usually leave this slider at 50 but you can experiment with it to get the results you need. The contrast slider helps bring back some of the edges that have gotten blurry, thanks to the noise reduction algorithm, and even though I have set it to 25 in this example, you can clearly see that much of the edge contrast is not as good as the noisy original. Move this slider too far though, and your photo will start looking fake and artificial, so you’ll have to find a good balance depending on your needs.

To continue with the noise reduction, the colour slider can be used to get rid of the weird splotches of red, green, and blue, but again you are going to see some tradeoffs.

The results look fine at first, and you may notice that Lightroom automatically applies some degree of Colour noise reduction (value 25) to every photo by default. This is because low-grade Colour noise reduction is almost always good to have, and generally will not result in too many tradeoffs for the image as a whole. In this case I used a value of 40, to show the effects a bit more. Even though the result is decent, you might notice something else that is missing, if you look at the soda bottle label on the right-hand side. Compare it to the original picture and you will see that along with removing some of the colour noise Lightroom has actually removed some colour from the whole photo. The Detail slider, similar to its counterpart in Luminance noise reduction, acts as somewhat of a threshold so you can tell Lightroom what is, and is not, noise to remove. The Smoothness slider is a fairly recent addition to Lightroom, and can be used to control what is known as “low-frequency” colour noise. Basically, slide it to the right to remove larger splotches of noise or to the left to keep these more intact.

Every time you use Lightroom’s noise reduction tools you will deal with tradeoffs, and one of the most significant of these is the overall sharpness of the image. Photos with more noise reduction will almost always be softer, particularly where there are sharp contrasting edges, and you can bring a bit of this back by using the sharpening tools.

Here is yet another 100% crop of the image above with the same noise reduction employed in the previous image, but with added sharpening. After a bit of sharpening, the detail in the lines on the left side has returned, and so has the texture of the tunic, but the lower-left corner is still a muddy mess of grey, whereas in the original noisy picture it was more defined. Here are
both the original and the edited image side-by-side which might help you get a macro view of how these noise reduction and sharpening tools can affect a picture. At first glance you might not notice too many differences, but one of the most glaring problems with the edited picture is the complete lack of texture on the wall behind the scene, as well as a smoothness to the plant that is almost unnatural. Here is a side-by-side zoomed in to 100%.

Is it worth these tradeoffs to get a photo with less noise? That question can only be answered by you, but one rule of thumb I like to follow, is that a noisy image can be corrected and edited in postproduction, albeit somewhat imperfectly. A blurry image cannot be fixed.

So, if there is a situation in which I find myself having to choose between a faster shutter speed and higher ISO (i.e. more noise), or a slower shutter speed and lower ISO (i.e. less noise) I will usually err on the side of noise, if the slower shutter speed would result in an image that is too blurry.

I also make liberal use of my camera’s auto-ISO feature, which allows me to set a minimum shutter speed and a maximum ISO value. That way I can concentrate on adjusting the aperture to get the composition I want, and always know that my pictures will be free of blur, even if it does mean that there will be a bit of noise I have to clean up in Lightroom.
6) Introduction to issues and topics

There are numerous opportunities in the human society to have business chances for creative photography and photography assignments. In the past 10 years photography has become a phenomenon that participates in our daily life. Image capturing cameras are inbuilt in our communication devices and are able to capture images that not so long ago where the domain of SLR cameras. Current opportunities to make profit or living from selling images rank from changing documentary photography environment, through fashion and social life photography to social network internet phenomena like Instagram, Flickr, Facebook and numerous others. The development of technologies and new products has led to the production of smart phones that can capture high quality images and within seconds upload them to web-pages and distribute them worldwide. There are hundreds of millions of images in the Internet that are downloadable and available for million various purposes. Among the areas where images are sought and needed are:

- Consumable and commercial product images
- Fashion and modelling
- Social events (weddings, celebrations, arts music, sports)
- Documentary, printed and online media related images
- Tourism
- Industry and various business
- Games and movies, cultural services
- Agriculture and forest economy, natural area conservation

a) Scenario and story design:

The goal of photographic intervention is to create opportunities to earn income from selling images. The opportunities can occur in many various areas of commercial and social life of society. The possible areas of work opportunities are:

Commercial (product sale related) services

Social services
- Documentary and news
- Society and cultural life
- Lifestyles and living in specific environment
- Fine art photography
- Advertisement related /product photography
- Vulnerable and disadvantaged communities
- Human activities (religion, sports, education, celebrations, arts and crafts)
- Architecture and immobility market
- Digital collections
- Aerial photography - drones

b) Planning:
c) Photo settings

The basis of the desired message can concern various topics from social life (exclusion, poverty, disasters, war, crime, life in streets and in society, in communities, rural life, etc.) For these situations you can consider to use a variety of lenses. Wide-angle lenses of 12-24mm, 16-35mm or 17-40mm are suitable, but so are also telephoto lenses of 70-200mm or typical portrait lenses such as 85mm, 100mm, 135mm. The basic factors affecting the image are: light, composition, dynamics, interesting moments - situations, or elements.

Light characteristics:
• Is the light (scene light) suitable for the intended purpose? (sharp, scattered)
  • What direction does the light come from? (front, rear, side)
  • Will additional flash be needed?
  • What is the range of light (extremely dark with bright spots)
  • What white balance do I use?

Composition:
• What is supposed to be dominant?
• What should be involved?
• What should not be in the frame?
• Where do I stand for a good angle?
• What depth of field/aperture do I need?
• Do I need short or long time?
• Do I need a tripod?
• Do I need filters?

Image Dynamics:
• Where is the horizon?
• Will the horizon be oblique?
• Where and what will the lines be? (horizontal, vertical, diagonal, curved)
• What is the shape? (square, triangle, circle,)
• What is the form?
• What is the texture pattern?
• What will be the prospect?

d) Sources and locations
  - fields and cultivated areas with monoculture crops

e) Term of reference or tasks
  Specification: Use large areas of monocultures to create a strong message about the current social life and its impact.
7) Case Studies
Home Bakery

Subject / Covered Topics

The owner, fed up with her previous employer’s policy which forced upon her unfavourable employment solution, decided to retrain herself in a different field.

Przemysl, a town situated in the vicinity of the EU - UA border, is currently struggling with economic difficulties. Olga Hrynkiw, a journalist working for a local newspaper “Zycie Podkarpackie,” gained much fame and respect for her upright articles which very often touched the so-called “difficult topics.” In 2012, the owner of the newspaper gave her and her colleagues an ultimatum: either they become self-employed and work on the basis of a fee-for-task agreement, or they get fired. Olga rejected the offer and said, jokingly, that if she was to start her own business, she would prefer to bake bread rather than write articles. And so it began. The beginnings were difficult but a good idea, hard labour, word-of-mouth marketing and hype in local media did the trick.

Location

Poland, Podkarpackie Region, Przemysl

The above-mentioned problem shows a person protesting against bad practices in business which intend to maximize profits at employees’ cost, uneasy process of retraining in a new field and solidarity among journalists nationwide who wanted to help a respected and liked colleague.

The first professional photo session, which was meant to promote a home bakery, was taken at Olga’s old working place, namely her own house, where she managed to build a bread stove (the first location of the bakery was in the suburbs of Przemysl). As she admits, not all loaves were edible in the beginning, but hard work, getting up at 3 AM, working away until late night, workshop-like methods of baking bread and cooking talent started to bring effects. A crucial element was also solidarity among Olga’s friends to buy her bread. However, the location of the bakery and distribution were still a challenge. Nevertheless, Olga managed to raise funds for a new start-up and extended her company’s offer by moving it to the market square. Her story got a substantial media coverage, not only due to a feeling of solidarity with a colleague, but also because she created an atmospheric interior which looked attractive in photos (which later on were used a lot in many articles).

Home Bakery became a must-see for many tourists as well as a popular selfie spot. It is a challenge to show a middle-aged woman, who did not give up after losing a job, did not accept a clear violation of the Labour Law and created a new product which rapidly became a well-recognized brand among tourists. The bakery is a place where health and safety standards are maintained. A relatively small place, high temperature and early-morning working hours are an additional challenge.

photo: Waldek Sosnowski tel 604 11 33 50 e-mail sosfot@gmail.com
Subject / Covered Topics
- Assisting young people in mission areas
- Professional health care, education, and nutrition for poor indigenous children and orphans

Short Summary
The Transnational Independent Society, the Papal Missionary Works, helps the needy people on the five continents, regardless of their religion, race, sex, or social origin. It teaches people to manage missions, leads them to participate, support the care of the poor, the weak and the abandoned, respect their dignity.

The main activities include:
- Helping children in missions
- Rescue children suffering from hunger
- Rescue of abused children
- Caring for AIDS-infected children
- Ensuring health care for children in missions
- Helping children in Africa
- Rescue missionary orphans
- Support for the most basic education of children

Locations
Asia, Bangladesh, Mymensingh

THE MISSION OF CHILDREN supports high quality schools and out-of-school assistance to the poorest families, catechetical and community support in remote areas, basic health care, saving malnutrition, orphans and others. We help thousands of children every year from the Czech Republic. India is the second most populous country in the world, a country full of contrasts and hardly imaginable differences for Europeans.

It is a country where Christians make up only three percent of the population, but their presence and activity are well visible. Christians are in favour of others, especially the poorest, in recent years being attacked by militant Hindus, who have been questioning many people’s conversion to Christianity and “aggravation” for centuries of the traditional caste system. Perhaps that is precisely why it is important that missionary assistance in India should not be continued, but could continue to develop. There are places where there is total lack of quality drinking water, and thousands of people die every day. More than a billion people in the world have no access to a good source of drinking water, which means that basically there is no other water to drink but water that can kill. Every day more than 4000 children die in developing countries just because they do not have access to clean drinking water. Diarrheal diseases such as cholera and dysentery caused by drinking contaminated water are the most common cause of serious illnesses and deaths of newborns and children in the developing world. More than 1.8 million children die annually. This number is even higher than the number of deaths due to HIV, AIDS and malaria altogether.

It has been shown that providing better hygiene at the local level will reduce the incidence of severe diarrheal diseases by up to 65% and associated mortality by up to 26%. Better hygiene is then reflected in higher labor productivity, regular
The problem is often not in the lack of water but in the lack of clean and drinking water. There are inexpensive technologies that address this problem locally.

An estimated 25% of people in cities in developing countries buy water from traders at a much higher price than the water from the water supply system. In some cases, at a price that represents more than a quarter of their household’s income. We learn not to waste water!

Project benefits

Experienced health care, vaccinations, high-quality nutrition, vitamins and supplementation are provided to very poor indigenous children and orphans in 14 parishes. The project covers the care of 12,000 children and is run by a local bishop in the following areas:

- health care
- vaccination
- vitamins
- a supplementary diet for very poor indigenous children and orphans.

Our Czech children have been organized in many cities in the so-called Mission Clubs. The idea of “Children helping children” is not new, and we are pleased to see its spread and growing popularity. Similarly to a widow, whose pennies are more valuable than the heavy pouches of the rich, our children, by their small effort, build a solid bridge with children in poor missionary areas. In the eyes of our grown-ups, it is maybe a little bit of a bit: Instead of sweet lemonade, drink tea or water, instead of a bag of sweets, chocolates and ice cream, put a few coins into the treasure chest for friends in Africa. Children produce rag dolls, small gift items, hand-drawn postcards and biscuits with their mums. All of these are sold in popular mission markets. For many people the mission market is a convenient way to contribute to the needy and to appease their conscience. All proceeds are always for missions.

Why is this all happening? The answer will be given directly by a missionary, Bishop Ponen Paul Kubi, whose activity is supported by young people from the Czech Republic.

Missionary testimony:

“Many locals live in remote mountain areas and rely solely on herbs and natural healing because there are no nursing homes or hospitals. For many years it has been normal to have devastating floods, tornadoes and famine, and we still suffer from childhood mortality and various diseases such as jaundice, liver inflammation, dysentery, typhus, malaria, diabetes and, of course, malnutrition (also AIDS and avian influenza). In our villages we organize meetings and seminars on basic health care, provide medicines and salt to sick people. It is also necessary to educate people about the right nutrition and how to get the most out of food rich in proteins (such as eggs, nuts and fish) that we have here. The results of our programs brought a lot of good and we would like to repeat these meetings. Our sisters have encouraged us. Mother Teresa. They are much engaged in medical care, food and nutrition programs for children, and want to work in new (still almost untouched) rural areas of our diocese. In addition to new professionals, we also need to reinforce our financial resources. That is why we hope and pray that we will be financially supported and able to continue our projects reaching out to the remote places of our diocese. Many thanks to you, God bless you! Bishop Ponen Paul Kubi.”

Photographic documentation from all missionary activities is published and regularly uploaded on the Internet, for example www.missio.cz

In order for donors (businesses, entrepreneurs, citizens and children) to be generous, for their donations to make sense, we bring lots of photographic and film materials from the mission areas. We use them to create publications, posters, traveling exhibitions with large-format photographs, lectures with dia projections. Each year we publish a number of prints and, traditionally, a mission calendar with photographs of life in specific mission areas. Sales money returns to missions.

With photos from mission areas, more and more people are involved in international assistance to the most needy. Looking at the misery of local people, especially children, leaves few people cold. Fortunately!
Budget
As far as the budget is concerned, it is always a voluntary collection of our donors and these are six-digit numbers.

What Went Wrong? Risks? Challenges?
Earlier, when financial and material gifts were sent by post and other delivery agents, local missionaries reported heavy losses due to the burglary of parcels or the so-called obligatory bakish for local customs officers. Nowadays, assistance to missions around the world is unitedly organized and coordinated by the multinational Papežská misijní společnost v Římě. Since then, frauds and losses have been ruled out.

Personal experience of the photographer:
One day I photographed, from a safe distance by telephoto lens, about ten and twelve-year-old black boys with large machine guns stopping all vehicles. They checked if someone was killing (transporting?) cocaine. I’m sure none of them could see me at the shoot. Still, our car stopped at the next checkpoint, all the cars were thrown out (searched?), my camera tossed far into the bushes and they seriously wanted to shoot me. The main submachine gun was stabbing my head, I had to lie down on my stomach and stretch my arms and legs. The locals saw me, they told the young soldiers, and they called over the radio the next checkpoint where we were going. I had never been so scared in my life! Luckily, we had a local missionary in our car who had a good command of their language. The missionary recognized in one of the soldiers the son of a man he had taught to read and write. Missionaries around the world are highly respected personalities. The missionary was standing between me and the machine gun. The boy calmed down, but still wanted an explanation why I had been photographing the soldiers.

I showed him on the display a lot of beautiful shots from the plane: white clouds in the sun. I lied that where we lived we did not have such clouds. The boy was content with this explanation and I started to look for an expensive camera that had landed in dense vegetation before destruction.

When we were back in the safety of the off-road car, I asked the missionary:
“Would he really shoot me?”
“Yes, sure enough. Otherwise it is not possible to cope with the smugglers. By the morning there would be nothing left of you. Beasts, vultures, termites ...”

Suggestions
Whoever is not indifferent to the fate of people who have not been lucky enough to be born on a rich continent, can get involved in the work of Mother Theresa and offer a helping hand. The materials we, photographers and cameramen, make are quite telling.

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Cultural Photography in a Region Full of Art

Subject / Covered Topics
Historical and human heritage

Short Summary
The project KUFOR was funded by the Interreg A cross border HUSK EU programme in Kosice, Slovakia. It was proposed by the Cultural Centre of Kosice self-governing region to establish cooperation with Northern Hungary. The idea was developed because of the initiation of the new “Terra Incognita” regional programme that aimed to support cultural cohesion and promote sustainable tourism.

The participants were regional development agencies and Legend Foto, a photography related NGO.

The project had several activities:
1. Cross border photography competition
2. Cross border summer photography camps
3. Amateur image exhibitions;
4. Six training photography workshops
5. Six cross border photo safaris
6. Travelling large format exhibitions
7. Trilingual image and cultural heritage promotion books

Locations
Kosice region and countryside and Szabolcs-Szatmár-Bereg County in Northern Hungary

Challenges and Problem-solving
The biggest challenge was the unclear financial situation and co-financing and project financing on the Applicant side. It caused significant delays and budget cuts that made the other partners' lives difficult. The publication of the final books was also delayed and the use of Hungarian names of villages in the English version of the book raised sensitive political questions as well. Due to the problems with the financial management, some outputs were provided with lower expectations. One of the negative consequences was also the enormous delay (2 years) of reimbursement of the project costs that had an impact on the small non-profit project partners. Thanks to the efficient event management the above listed project activities were well organized generating high interest on the part of the project participants.

Target Audience and Beneficiaries
The project target beneficiaries were amateur and professional photographers, tourism and destination management organisations and operators that would benefit from original images made by project participants in the planned events. A total of 240 people participated actively in the project events and other 700 individuals visited the project related exhibitions held in both countries. We experienced great interest of trainees to participate in the six training workshops organised in Northern Hungary and Eastern Slovakia. The surveyed satisfaction of the participants reached 95%.

Narrative – Activities
The project organised a range of participatory events. It started with a cross border photography competition that was promoted through printed and electronic media. More than 200 participants supplied 850 images. The selection committee
selected 30 of the best images in 3 categories:
1. crafts and cultural heritage of ancestors on Terra Incognita cultural routes
2. Snaps from interesting events on Terra Incognita cultural routes
3. "Living Objects" — images from the most interesting events related to historic monuments and destinations of Terra Incognita. A similar competition with similar themes was announced in Hungary covering the "Fairyland". The final exhibition of the rewarded winning images was held in a popular shopping mall in a Kosice suburb. The following training workshops covered a really wide range of topics, themes and photography techniques from underwater photography to infra-red and macro photography. On the Slovak side more than 120 amateur photographers participated in trainings that consisted of presentations and practical challenges in the streets of Kosice. In Hungarian Nyíregyháza the workshops covered a range of events from animal portraits to heritage folk museum promotion highlighted by the presence and presentations of costumed folk dance groups. The highlight of the project were the 7-days long summer photography camps that brought together 20 young amateur photographers and students from Slovakia and Hungary who during training days learnt and practiced nature, macro, infra-red and cultural photography in a range of settings from natural parks to medieval time churches and heritage centres. The participants took several hundred images that were provided for the benefit of beneficiaries from tourist agencies and destination management organisations. The project organised on the Slovak side three photo-safaris for amateur photographers that connected the destinations of the Terra Incognita cultural routes. The participants took several hundreds of images that were used for the final printed books and are currently used for tourism booklets. The project also organized several large print (poster size) image exhibitions displayed in cultural centers throughout Eastern Slovakia and Northern Hungary. The last project activity was the preparation of the trilingual (English, Slovak, Hungarian) image and history books mapping the history and architecture of the target regions.

Results and Benefits

* Catalogue of winning images from the initial photography competition

* Best images booklet from the photo-safaris
* Image bank of hi-res images for destination management organizations
* From Fairyland to Terra Incognita (traveling through history of art from Szatmar county to Kosice region) - three language variants of the book
* Large-size images of the best photographs of the project

The experience and training with the active participation of several hundreds of amateur and professional photographers was most important. The feedback collected proved that the participants declared very high satisfaction and expectation for a further and follow up project. The project established the base for the future creation of a Regional Photography Centre that would continue the initiatives and activities of the project. The participants learnt new techniques, improved their skills and capacity to make appealing and artistic images for benefit of preservation of cultural and natural heritage and promote the regional tourism development programmes. The regional tourism destination organisations and the cultural department of Kosice regional self-government
obtained an image bank of high resolution images to be used in future tourism and information promotion materials. Actually many of the produced images are currently used and published in regional tourism booklets of the Terra Incognita program. The project created a hub, a group of amateur and professional photographers that are interested to establish a regional creative art and photography centre.

**Budget**

The total project costs reached EUR 160,824 covered from the HUSK Interreg A EU programme and from 5% contribution by the project partners. The lead partner had a budget of EUR 71,000, the cross border partner had EUR 56,000 and the Legend Foto NGO had EUR 22,970. Some EUR 20,000 was spent for equipment, EUR 40,000 for project events, and around EUR 30,000 for salaries.

What Went Wrong? Risks? Challenges?

The institutional changes and budget shift policies of the Applicant significantly delayed the project implementation. Besides that the reimbursement character and delayed certification of the programme further made the life of project partners more difficult. The biggest risk therefore was the cash flow problem and the extremely long period of final reimbursement and project financial termination (2 years). Further, the proofreading of the final book did not reveal the failure of the Hungarian authors to properly name the settlement in the English version of the book thus potentially misleading the foreign visitors. As with most collaborative endeavours, a project has to be very carefully prepared with full information, awareness and active participation of all project partners. The project partners must actively contribute to the definition of project activities, outputs, budget and responsibilities. The project must have political support and raise the appropriate own funds for both implementation and co-financing. The project must focus more on impact, results and not on outputs (measurable products). If possible, involve the beneficiaries and the target groups in the preparation phase to avoid unrealistic activities and workshops. As there is no “free lunch in this world”, introduce participation fees and in-kind contribution of beneficiaries. Employ a skilled professional and a skilled manager and project accountant and get in touch with program managers (establish friendly relations with certification and monitoring persons) to avoid delays and financial problems.

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Project Carpathian Tourist Road

Subject / Covered Topics
Crafts and tourism

Short Summary
The Carpathian region has high potential for many forms of sustainable tourism. Among high mountains there are fertile valleys, orchards, lakes and streams offering ideal environment for rest. The cultural heritage combined with rural hospitality is another feature that improves the touristic potential. The Carpathian Tourist Route 2 project aimed to improve the cooperation among interested stakeholders and tourism operators from Ukraine, Hungary, Slovakia and Romania. The project built on a previous project that had set the base for cooperation and prepared the soil for further development of committed partners. The overall objective of the project was to strengthen the position of the Carpathian region in the tourism sector within Europe.

Specific objectives:
1. Harmonise tourism development process on local/regional and cross border level.
2. Increase the competitiveness of the Carpathian tourist industry on the EU market.

Main Outputs:
6 training workshops for tourist operators and interested institutions
1 Cross border tourism festival

Locations
Eastern Slovakia, Northern Hungary, Maramures county and Zakarpaty region.

Challenges and Problem-solving
The biggest challenge of the project was to establish a sustainable form of tourism creating new collaborative structures and instruments. This ambitious goal was not fulfilled at all due to the lack of support on the Ukrainian side and missing partnerships established in the 4 target countries. As many similar projects, this project reached its outputs (organised events and produced publications). However, it did not achieve its specific objectives.

Narrative – Activities
The project tried to involve development agencies, regional cultural institutions and rural tourism operators. They actually participated in training workshops and study tours, which were well organised with real impact. The participants visited many interesting tourism sites and small tourism service providers and facilities.

The project had a smart Action plan starting from the identification of local and regional stakeholders, through training workshops and study tours of beneficiaries up to the establishment of a common portal (www.carpathianroad.sk) and new touristic information products. The investment part of the project was the purchase and introduction of information kiosks and audio guides to cultural institutions (museums) in Kosice and
Zakarpatya regions. One of the interesting parts of the project was the publication of the brochure that focused on natural and cultural UNESCO sites of four countries combined with local gastronomy. The image based publication was distributed to regional information centres and spread during tourism focused workshops and events.

The highlights of the project included:

- Establishing a beautiful garden on a brownfield site near the historical buildings of the nearby château
- The physical outputs: amazing vegetables, herbs, flowers and goods such as herbal salt, herbal teas, soaps, chutneys, mustards and many more.
- The contribution made by all people participating in the project.
- The friendships made and relationships established.
- The international conference and the opportunity it gave us to talk about the benefits of horticultural therapy and community gardens.

Results and Benefits

As stated above, despite the fact that the project did not reach its objectives and sustainability, it contributed to the information and best practice dissemination throughout Zakarpatya and Kosice regions. In case of continual support and meaningful follow up activities the project has the capacity to further develop the touristic potential of the target territories. For the purpose of this publication however the publication of the information booklet represents a good example of the use of images and photographs to promote the natural and cultural heritage and tourism destination including the promotion of local gastronomy. The booklet, despite its moderate magnitude of 32 pages, may significantly tease the incoming tourists to visit the destinations featured.

Budget

The total budget was EUR 408 754. The costs of the image-based brochure was around EUR 8500 including the multiple license to use the images for a tourism focused non-profit project of the development agency.

As concerns the CTR project itself, the specific objectives were not reached due to the unrealistic expectations and lack of political and financial support on the Ukrainian side. The network was not created and does not have any institutional support other than the continuous work of other stakeholders of the project active in tourism business. The publication is however effectively disseminated presenting a good example of support of local attractive tourist destinations through images and gastronomy recipes.

What advice would you give to someone who wants to start a project like this?

- Have realistic expectations and appropriate planning when trying to start a network
- Achieve appropriate political support and
involve all stakeholders

- From the very beginning plan the follow up activities and sustainability
- Try to ensure the project is sustainable and will run even when funding finishes.
- Get a Strategy or Business Plan.
- Get inspiration from abroad.
- As concerns the booklet, involve great photographers from target areas
- Pay attention to the selection of best, appealing images
- Plan ahead the dissemination and marketing of the brochure and information in it.

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Paralyzed Mom Hangs off Cliff for Mother’s Day

Subject / Covered Topics

Inclusion/exclusion

They live with us; physically handicapped people

Short Summary

In recent years Benjamin Von Wong’s photography has taken a turn for the altruistic—photography with a cause. Whether he is raising awareness about plastic pollution or helping fight shark finning, he looks for projects with purpose. Epic pictures only as epic as the impact they might someday have. His recent photo shoot with the Heart Project—an Australian community venture to inspire and help others through photography—fit the bill. Photoshop Artist Karen Alsop reached out to Von Wong to see if he would be up for some friendly competition and would participate in the Heart Project to tell the story of Sarah-Jane (SJ). After a routine surgery that went wrong, SJ woke up paralyzed, which changed her adventurous life. Von Wong could not refuse once he learned more about her. Unable to take her son to many wonderful experiences, Von Wong and team set out through the Blue Mountains of Australia to give her some of those experiences back and capture that amazing moment so her son could remember for years to come.

Target Audience and Beneficiaries

General public and people living with physical disabilities.
Narrative – Activities

Together with an awesome team of volunteers and professionals from the Blue Mountain Adventure Company, Karen and Ben took SJ and Hamish into the Blue Mountains where they proceeded to dangle the duo off a rock face for the sake of awesome photography... but not before Von Wong himself stepped in as guinea pig. “Blue Mountain Adventure Company, our safety riggers, wanted to test the rig out on someone that was able bodied first,” he writes. “That someone was me.” To Ben’s delight, the rig held and the crew were soon lowering SJ, Hamish, lighting equipment, and Von Wong off of the side of a cliff to capture just two frames. The weather wasn’t cooperating, making it a bit more challenging than it might have otherwise been, but in the end Von Wong delivered the goods.

Results and Benefits

2 photo series:

Von Wong: http://blog.vonwong.com/mother/ (2 photos: 1 shot on the Sony A7r-ii, 16-35mm | ISO50, 35mm, f/5, 1/200 with Broncolor; 1 shot on the Sony A7r-ii, 16-35mm | ISO800, 14mm, f/2.8, 1/30 with Broncolor)


Von Wong: https://petapixel.com/2017/05/08/photographer-dangles-paralyzed-mom-off-cliff-epic-mothers-day-shoot/

Alsop: https://www.youtube.com/watch?v=0m8SQNRDIQw


The best thing about projects like this is the final results and the reactions from those involved. “The most rewarding thing about this project was seeing SJ’s reaction to the final results,” said Von Wong. “It’s a memory that she would never normally have.” For her part, SJ is taking this Mother’s day project and the publicity it is generating, and trying to put it to good use. With help from Karen and Ben, she has started a GoFundMe campaign that seeks to improve the accessibility of the Blue Mountain community where SJ and her family live.

“Crowdfunding money will go towards making the community more wheelchair-friendly and accessible. From installing ramps and bumpers to creating custom furniture,” reads the page. “The cost of ramps can range from $1000 - $10000, so this goal is just a start, but we hope to far exceed it and enable SJ to make huge improvements to accessibility in her community.”

Photography, video, editing makeup, locations are sponsored and usually volunteers are involved in the shootings — most of the costs were just personal food and transportation. The weather was challenging at the time of the shooting, but it did not stop the adventure; the team persisted through all the preparations and safety checks for the shoot to continue. With the cold temperatures and the freezing rain, Von Wong sat in the wheelchair himself to test the safety of it being suspended off the cliff due to SJ’s conditions. After a few amazing shots with Von Wong, it was time to continue the competition and for Alsop to take her turn and change reality for a moment.

Von Wong’s portion of the project spanned across two days and Alsop’s portion was just one day. Hiking up in the mountains with equipment can have its own challenges and as always there is a need to have some safety measures in place,
not to mention the weather. With SJ’s condition and having the wheelchair being suspended over a cliff, this added in extra safety measures so it was a bit curious to see what was on Von Wong’s mind throughout this process. “I didn’t have many concerns personally, but the safety rigging crew was really worried about making sure the wheelchair was well balanced so it didn’t flip over”, Von Wong said. It sounds like he was not too worried, but I am sure with a safety team present and all the planning and precautions in place, it takes away some of the worrying. He was not given much of a choice in being the test subject for the safety of the dangling wheelchair, but he was “totally fine with it.”

This photoshoot required a very special topic, an extraordinary team and an artist (Von Wong), that took his photography to the outer limits. The main goal of the two photographer-artists was to make a difference with their works; to tell stories hoping to bring change to our world.

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Beggar in Germany

Subject / Covered Topics
A woman who begs with her husband in Germany arrives back home to a village near the city of Pitești.

Short Summary
A German newspaper traced a family of Romanian beggars “working” in Hamburg. The material consisted of two parts, the first one about their life in Germany, the second part about the wife returning home and about the living conditions of the rest of the family who stayed in Romania.

Locations
Sibiu, where the bus arrived from Germany, Pitești, where we did one overnight together, and Țițești, a village near Pitești, where the family lives.

Challenges and Problem-solving
The most serious issue with the topic is that it is a huge cliché, that hoary chestnut, the Gipsy beggars in the West returning home and we all wonder what they might be doing when at home. An extremely photogenic subject, very easy to photograph, impossible to spoil and let us admit: rather boring. Many Romanian fellow photographers working for big foreign agencies had received such orders. Normally I would have said “Thanks, but I’m not interested”, yet, the publication in question being Der Spiegel and 1,700 euros offered for two days of work, I thought to myself, I must try this one, too, once in a lifetime, so I got up to it.

Target Audience and Beneficiaries
The photos had been ordered by the German weekly Der Spiegel’s printed edition. Subsequently, I was also asked for a larger selection meant for an electronic version, together with the story of our little adventure written from the photographer’s perspective.

**Narrative – Activities**

In Sibiu I met the German reporter Katrin and aunt Lizica, our photo model. They were just getting off the bus. When lady Lizica found out that I speak Romanian and I can translate, she instantly started an endless negotiation with Katrin to get her money because they arrived. This Gypsiad of “give me the money for we arrived” kept on going for at least ten minutes and also dominated our whole relationship till the end.

You might have already figured out that Katrin had promised money to lady Lizica so that she would let Katrin accompany her on her trip back home. I am going to discuss the ethical and practical issues of this problem in the chapter dealing with risks and challenges.

We changed buses in Sibiu and in the evening we arrived to Pitești where we had hotel rooms booked by the newspaper up front, so that we would not get to the gypsies in the dark. In the Ramada everything was nice, perhaps a bit too luxurious for auntie Lizica, who really wanted home and was reluctant to understand why she had to spend the night in a hotel when her home was just ten minutes away, and she was anyway slightly scared by all these little technical wonders she found in her room. It took me almost an hour to persuade her that it was safe to take a shower and she would not flood the entire hotel, I assured her that the water would drain through that little hole and she did not need any basin.

The evening passed somehow. I translated “Give me the money so that I can go home” until I was blue in the face, but I survived, and the next day we took a cab to aunt Lizica’s place. We stopped on the way because she wanted to do some shopping. After all, she could not turn up at home without food or presents, could she? Then she turned to begging again, asking us to pay for her shopping. Katrin gave in and paid the bill.

Eventually, we reached aunt Lizica’s place, two family members met her there. Once in, she threw the crutch in the back of the gate, a gesture that subsequently impressed the German editors and chose a photo of it. Relatives and neighbours started to flow in. Not necessarily for greeting aunt Lizica but rather to ask us for money. Every single visitor brought a baby or at least a smaller child and demanded money either for the treatment of the child or for milk for the baby. Or for diapers.

Katrin, being kind-hearted, gave them all, de-
severe threats. I raised my voice and gave the hoard of beggars the boot and reminded lady Lizica that she had promised that she would cook “mămâligă” (Romanian polenta) for us using the ground corn we had bought, so that Katrin could taste a real “mămâliguță”. I assured Lizica that we would leave after that.

The mood settled slightly, aunt Lizica probably began to see the light at the end of the tunnel and she cooked the polenta. We could discuss in a relaxed way, we shot a couple of more photos for memories with her and Katrin, we paid – actually Katrin did – and we left.

Aunt Lizica escorted us as far as the end of the street and she held us back from making photos of her on or even of the street itself. Katrin found out later – from an anxious member of the clan – that aunt Lizica had not taken us to her house but instead to a wretched house and in fact she owned a much bigger house at the end of the street, so that explained why she did not let us walk around freely in the neighbourhood. Katrin would have liked to return there later but she did not manage to, and, in the long run, I believe that this little detail would not have changed anything in this whole story.

Results and Benefits

Most likely, the article did not change a thing for the Romanian Gypsies begging in the West.

In my own life, however, a little change occurred: with the money I got I bought an off-road for getting to and from my orchard. This car caused me a lot of trouble so at the end I sold it after three years for half of the original price. From this whole story I have also gained an ounce of experience and I realised how good it is working for a small newspaper and being left alone to do your own projects as you wish.

Budget

I believe that the entire adventure cost at least 10 thousand euros, if not more, with the two trips of Katrin’s to Romania, plane tickets, hotel bills etc. The newspaper honoured my work with the amount of 1’700 euros, out of which the agency held back 30-40% (I cannot recall exactly), plus all expenses paid by them.

What Went Wrong? Risks? Challenges?

Many readers would now probably pinpoint an ethical issue with regard to giving money. Indeed, I dislike this idea myself too, even though, I can’t blame Katrin: she wouldn’t have any chance to do her report without offering money to lady Lizica. I cannot help mentioning, though, that it was money that spoiled this project, too, more precisely, the money Katrin dispensed on site. I would not say that this action put us into a major danger but surely it was not a pleasure photographing this subject, moreover, I did not feel too secure while on site, considering that I also had to protect a German female reporter – and I did not even know how fast she could run.

Suggestions (do’s and don’ts)

If you are not fully prepared about how to handle a scandal, a Gypsiad, do not shoot photos of Gypsies. Do not set off with a foreigner in a Gypsy neighbourhood. The majority would consider the foreigner a source of money only. Instead, try to make friends with the Gypsies in other ways, because giving money only causes problems.

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Digimania

Subject / Covered Topics
Visual and electromagnetic pollution – parabolic antennas everywhere.

Short Summary
The photo-project “Digimania” borrowed its name from the first Romanian company to offer cable TV services through satellites: DigiTV. People started to call their antennas digis regardless of which provider they had subscribed to. These antennas can be found virtually everywhere, proclaiming a Kingdom of TVs in the world of poor Romanians.

Locations
The photographs were taken to over 50 locations throughout the entire territory of Romania.

Challenges and Problem-solving
Sometimes it was difficult to track down these places decorated with antennas, sometimes I could hardly make any photos without a scandal. Predominantly these were the areas of localities most hit by poverty where people did not go to work daily but all the time they stayed at home or even in the street. The moment a cameraman turned up there, people excitedly huddled around the person – some friendly jumping at a chance to be shown on TV, some anxious to eventually spill out all their bitterness cumulated over time.

Target Audience and Beneficiaries
At the time of working on the reportage, between 2006 and 2010, I used to work for the portal manna.ro. Yet, this project had become something personal and it had not been made for the sole purpose of publishing it on the portal. At the end, the whole project got published on manna.ro in episodes but it was also taken over by a foreign news agency, later it won prizes at various contests – it had a rich life, after all. Despite all that I still do not know who or what the target audience could be. Most likely I did these series just for myself.

Narrative – Activities
Back in 2006, while I was working on a material about Bucharest just before joining the European Union, a friend of mine, Fane, recommended a weird place to see. It was in Rahova, close to the main road, an area with blocks of flats freshly painted multicolour, yet, it looked as if it was from a completely different world. The folks took their water from a hydrant just next to a building painted black by smoke, as if it was bombed, rats were running around the trash thrown through windows and everywhere those parabolic antennas, a proof of the poor’s television dependence. I got surrounded by a pack of vagabond dogs
while I was taking photographs and some local kids helped me out under the condition that I “film” them. They told me they would like to become TV stars. After explaining that I was only taking pictures they disappointedly left me. There is no Romanian who has never come across that sort of a building with way too many parabolic antennas. They are everywhere: in poor suburbs, on main roads and boulevards, in the most hidden village of the country’s smallest county or even in the heart of Bucharest. We are television-dependent, our grey everyday life turns colourful just as we sit in front of the screen and dream that we are the stars whose brightness overwhelms us instantly.

We immediately forget about our eternal problems, illness, low wages no longer matter, we do not care anymore that the kid got low marks in Math, that we do not have running water in the flat – the only important things are that feel like we were Andreea Raicu (Romanian TV star, model and fashion icon) or Adrian Mutu (former Romanian professional football player). For the time spent watching TV we are celebrities, we are rich, we are famous. It is a sensational feeling provoking dependence and giving birth to such weird creatures as the blocks of flats decorated with parabolic antennas. In those years, between 2006 and 2010, I used to travel all around the country on various assignments and projects often branching off my route for the sake of photographing “parabolised” zones. I had visited over 100 locations in at least 60-70 different settlements, occasionally returning to some of the locations more times. I had taken so many thousands of photographs that at some point I lost control over their systematization and archiving. I had done tens of selections based on different criteria with different people and even today there are at least ten different versions of this very same project.

**Results and Benefits**

Most likely this is my only project that makes me feel that I could not change anything and neither will I cause any change. Seeing this phenomenon, I feel too small, too unimportant. Millions of Romanians are dependent of the virtual world’s shine on their idiot boxes, and all these people fall exactly into the category that is immune to argumentation. As I have not had a TV set for about 20 years now, I have difficulties to truly understand the case. I cannot really figure out what emotions these folks may experience that make them lack the time to take their garbage to the waste container, so they have to simply throw it through the window just because another episode starts, where people are rich but suffer from love. How could I ever explain to such miserable wretches that they are drugged by the system, drugged from somewhere so high they cannot
possibly know? How could I explain to them that the building they live in looks so horrible, whereas they, noticing that are being photographed, ask me what I see so interesting in the building. If one shows to an arsonist a photograph of a conflagration being extinguished or a woodcutter sees pictures of an exploited forest – they would probably get the message. Why are the inhabitants of such buildings reluctant to understand what the issue is?

Budget

If I had not had duties taking me to these places or if I had travelled with purpose to photograph these locations, I would have burnt at least 1000 Euros worth fuel. Thus, travelling with different goals through these zones anyhow and doing only small deviations off my tracks, 10-20 kilometres the most, my total costs were definitely below 100 Euros.

What Went Wrong? Risks? Challenges?

Sometimes I felt miserable photographing the dirt others live in. Even though friends tried in vain to persuade me that it did make sense documenting this phenomenon, there were moments, though not too many, when I felt as if I was a disgusting hunter who misused the living conditions of these people, moreover, who even made fun of them but in exchange could not help them, could not turn things to something good. That feeling of helplessness is terribly annoying and can burn you out, especially in the more sensitive moments. For example, a girl from the neighbourhood of Apărătorii Patriei (a quarter in Bucharest) desperately asked me not to publish photos with her anywhere because her classmates had not been aware that she was from Apărătorii Patriei and if they found that out her whole life would be ruined. Besides such ethical problems I had real conflicts with real aggressive people, too, the sort of folks to be found in large numbers in such areas. In Ferentari, another Bucharest quarter, I was close to getting seriously beaten by neighbourhood guys insisting that I leave and make no photos. I would not have stayed longer anyway as I was shocked by the scenery – drugged junkies on the streets all day long, syringes and needles thrown all around, just like in the movies.

Suggestions

When working on these kinds of subjects the most grueling part is finding the places where the phenomenon occurs. Approximately one third of the locations are usually found by chance, simply walking your path and discovering a subject on the side. The other two thirds must be searched for. You may seek help from friends from all around the country, asking them whether they happen to know such places in their area; you can also enquire within photo communities if you are member of such groups – which was my case for the next third of the locations. I found the last third by looking at others’ photos. Whenever I spotted out a picture with antennas I could immediately judge whether it was worth going there. If the answer was yes, then I contacted the author of the photograph to ask for the location. With this technique I managed to save a considerable amount of time by avoiding searching in the field. With the aid of Google Maps, I could also decide upon the time of the day to go to a certain place in order to have the best lights.

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The Advent of Residential Areas

By Zoltán Egyed Ufó

Subject / Covered Topics
The rise of a new residential area type.

Short Summary
The first decade of the 21st century brought a new fashion to the Romanian real estate market: the residential quarters, some sort of urban villages with horizontal blocks of flats. It is the sensation of living in the countryside that is sold, while one cannot break wind in their own courtyard without being heard by the whole neighbourhood.

Locations
The photographs had been shot on more than 25 locations throughout the entire Romania, from Iași to Arad and from Oradea to Bucharest.

Challenges and Problem-solving
The hardest thing was deciding how I would tackle the problem. We all have our prejudices towards these kinds of neighbourhoods and their habitants and I would have liked not to show these prejudices. Yet, I felt tempted to, but then my heart would not let me, albeit I felt I would fail not showing them all. And so had I swung between these feelings, suffering, I eventually finished the series with prejudices and all. The photos are as they are, with prejudices, but that's how it is: I must assume that even today I cannot think of these residential areas without smiling.

Target Audience and Beneficiaries
At the time of working on the reportage, between 2006 and 2010, I used to work for the portal manna.ro. Yet, this project had become something personal and it had not been made for the sole purpose of publishing it on the portal. At the end, the whole project got published on manna.ro in episodes but it was also taken over by a foreign news agency, later it won prizes on various contests – it had a rich life, after all. Despite all that I still do not know who or what the target audience could be. Most likely I did these series just for myself.

Narrative – Activities (what has been organised)
I had been seeking for and visiting residential parks. By that time I used to travel around the country on various projects and whenever I was due to visit a certain locality, I immediately started looking for rows of very similar terraced houses on Google Maps or I called my friends in the area
to ask them whether they happened to know of anything like that in their area.

Once I reached such a place, I used to stroll around, getting acquainted with the local atmosphere – and taking pictures. I must admit that I was looking for funny pictures in the first place, such that would support my theories that these row houses were in fact flattened, horizontal blocks of flats. The only difference compared to the vertical ones would be that the elevator is replaced by the car, but your neighbour is still always around, you cannot let yourself wear only your underwear in your garden and there are twenty windows pointing right to you just in a ten meters radius. Yet, you still feel you are a king simply because you paid for your house double the price of a regular flat in a block of flats and for that money you also own a 50 sq m garden with a frustrated dog hated by the entire neighbourhood as no one can sleep because it barks all night long.

My prejudices had been mostly confirmed, with a small exception of 2-3 cases. Moreover, I had seen with my own eyes the human misery of this consumer market segment. Real-estate developers are capable of almost anything for the sake of profit. They build on top of former waste landfills, between two cemeteries or even on wetland and promote selling during time of drought, so that in springtime you may wake up and find out that you live in a swamp. They are capable of building houses under high-voltage lines or of leaving behind your courtyard with power tower in it. Committed to get rich, they are ready to clear forests that once had served an entire city's community for decades, or to sell houses with absolutely no infrastructure, no proper access roads. A pal of mine from Bucharest bought such a house in such a setting and he ended up buying an unregistered off-road car, too, just to make his way to the main road where his regular car
was parked. While I have seen many residential areas with regular roads, I have seen many more quarters built on ring roads with an immense cargo traffic day and night. I have also seen neighbourhoods closed with barriers, guarded as if they were prisons. I have seen happy habitants, but I have seen very displeased people too. I have met people compensating the mood of this ambience with hundreds of dwarfs placed in front of their doors, plastic storks or deer planted in their napkin-sized gardens. I have seen dogs let free in the courtyards and dogs tied gnawing their cages. I have seen people behaving as if they lived in the countryside and I have seen people being angry because their neighbours behaved as if they lived in the countryside. The basic problems of these people are identical with the problems of those living in tower blocks.

**Results and Benefits (what changed, differences made)**

Something may have changed, perhaps 2-3 people made their decisions not to move to such neighbourhoods based on my photos. Anyhow, it was not the goal of the series to change something but rather to document this phenomenon so that in ten or twenty or even fifty years we could see that once such a movement existed.

**Budget**

If I had not had other duties taking me to these places or if I had travelled purposely to photograph these locations I would have burnt at least 1000 Euros worth of fuel. Yet, travelling through these zones anyhow with goals in mind and having done only small deviations off my tracks, 10-20 kilometres the most, my total costs were definitely below 100 Euros.

**What Went Wrong? Risks? Challenges?**

There were some residential quarters, in Bucharest, especially, being guarded where I had difficulties entering or I could not even go in. There were places where the habitants did not seem to be too happy being photographed; they might have taken me for a thief, but these people were not more aggressive than the usual.

Generally speaking, this was a low risk topic. My only serious concerns had been related to finding a good angle of view from top in order to catch better overall images of the neighbourhoods. I had to climb deserted buildings and poles, but not even that risk was greater than the usual. The most critical challenge was to get rid of my prejudices regarding these types of residential quarters, but at the end I could not defeat them, even more, my prejudices got reinforced while visiting more and more locations of this kind.

**Suggestions (do’s and don’ts)**

Never move into a flat of row houses built on a narrow land between a cemetery and a European road. For that money you can buy a decent house in a beautiful and quiet area. If you would prefer just photographing such neighbourhoods, I would recommend spending as much time as possible with your subject in the area so that you can take your time to study the phenomenon and catch the best moments on-site. You may try to be as objective as possible and not let yourself be driven by prejudices – as I did. You might succeed. Good luck!

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Project Cooperation in Cultural Heritage

Subject / Covered Topics
Cultural Heritage. Photography and youth. Exploitation

Short Summary
A transnational cooperation (TNC) project between local action group (LAG) areas from the Czech Republic, Estonia and Slovakia based on learning from each other how to make wise use of their heritage resources.

Locations
Estonia and the Czech Republic

Challenges and Problem-solving
Europe’s countryside contains a diversity of culture which presents many opportunities for heritage tourism and traditional skills are needed to maintain the cultural assets in the rural areas. The participants in the TNC project were aware of this and the LAG areas wanted to learn useful lessons from each other in how to make wise use of their heritage resources. The project aimed to help improve the heritage conservation capacities of each territory, highlight the role of heritage as an economic development tool and promote cooperation between LAG territories.

TNC funds were used to organize demonstrations of heritage conservation techniques from Estonia’s Järva region for entrepreneurs involved in Czech architectural restoration work, and vice versa. Young people from the LAG territories played a big part in documenting the heritage resources of their areas. Training in photography skills was provided to help the young citizens record the condition of cultural sites and produce inventories that could be used for restoration or tourism purposes.

Activities
Trainings, study-tours, exhibitions, contacts between participants.

Results and Benefits
The value added benefits were evident in the new skills that were learnt in heritage management. The international cooperation was very valuable, because we were able to learn about new ways in which we could preserve our cultural heritage by conserving our architectural assets and protecting our local landscapes.

Budget
EUR 90 000, the Estonian part was EUR 10 800

Suggestions (do’s and don’ts)
The preliminary work is very important, if you want to establish good synergy in the project. We
took a year to get ready for the project before we started. It took us this time to get all the approvals in place from the RDP (Rural Development Programme?) managers, but it was worth the wait because our cooperation was so fruitful. Monitor the application process in different countries, because the situation may arise where the partners’ project activities begin at different times.

Unexpected benefits: We found that we had a prehistoric camp in Kiruvere (www.kiruvere.ee) and the partners had the Šdružení Villa Nova in Uhřínov (www.villanova.cz). They both carried out a weekend of archaeological technology.

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Youth Health Promotion

Subject / Covered Topics

Quality of life. Bad habits: alcoholism, violence, drugs, smoking. Health education. How can photography help fight bad health habits and promote health among young people

Short Summary

“Youth Health Promotion” was a joint Bulgarian-Serbian cross-border project. It was prompted by the disturbing trends of deteriorating health status of young people in the neighbouring border region and of the quality of their lives. The project sought to raise the awareness of young people about health risks associated with bad habits, such as alcoholism, violence, drugs, smoking, unsafe sex, eating junk food, etc. and to draw attention to the need for better and more effective health education in schools and among high-risk groups of youths. Photographic images were widely used as illustrations during the thematic trainings and the awareness raising campaigns.

Locations

Districts of Kyustendil, Republic of Bulgaria and Jablanica, Republic of Serbia.

The project addressed the following problems and challenges:

Shortage of knowledge and skills of young people to recognize health risks and build protection against them; insufficient awareness and professional capacity among teachers and
experts regarding health promotion in schools; insufficient commitment of the community to the establishment of sustainable models of health-related conduct.

The target groups of the project were youths from the districts of Kyustendil and Jablanica aged between 15 and 25, parents and school board members, teachers and educators, experts from educational, health care and social services. The final beneficiaries were all, who benefited from the products and impacts generated by the Project: children and young people from the border region, parents, teachers and educators, experts from the local education, health care and child protection offices, journalists, entrepreneurs and sponsors.

Narrative – Activities

The project was implemented by two NGOs: No Frontiers 21st Century Association and Resource Centre Leskovac. A cross-border youth network for health promotion was established in the form of Youth Volunteer Clubs for Health Initiatives. Their task was to organize public health campaigns, distribution of information materials, seminars, promotions, cleaning actions, sports competitions, games, etc., seeking to promote youth health. A thematic training on prevention of diseases among the youth population was conducted in both countries. Attractive and highly informative promotional materials provided advice to young people in a direct and simple way how to act in situations endangering their health. An exhibition was organized with over 30 movable human-size boards with impressive images and information about the essence and consequences of drug abuse, alcoholism, smoking, domestic and school violence, unsafe sexual relations. The young people were particularly struck by the actual human organs deformed or otherwise badly affected by the drugs or alcohol used by their owners. Another powerful photography related tool in the fight for young people’s health was the documentary film “A Wasted Life”, featuring former drug addicts telling the stories of their devastated lives. It had a huge psychological impact on the young audiences.

The trained students held “open lessons” with their peers, parents and teachers to disseminate the knowledge they had acquired.

Popular European practices were demonstrated, such as: "Peer School", “School for parents”, and “School for teachers”. Numerous health campaigns were held in over a dozen schools. They were accompanied by sports events and volunteer actions showcasing models of positive behaviour and healthy lifestyles.

Two round tables were held: “School Policy for Health Promotion” in the town of Kyustendil and “Youth Health Prevention by Developing a Supporting Environment” in the town of Leskovac. They discussed the issues of promoting health education in schools.

A dedicated website disseminated the messages of the project. It is still active at www.youth-health.net.
The project was widely covered by local and national media.

**Results and Benefits**

The following countable outputs were produced under the project:

* A Youth Health Code containing short and clear rules for the behaviour of young people and for their protection against health risks - a printed edition in 3 languages;

* A promotional brochure of the “Initiative for Health” Youth Club – a printed edition in 2 languages

* Information leaflets and posters;

* Promotional postcards, outfit and badges for the young participants;

The budget of the project allocated to the Bulgarian partner was EUR 48994.21. Out of it 90% was a grant from the EU Neighbourhood Programme and 10% was national co-financing.

There were no insurmountable risks or challenges in the implementation of the project.

Numerous photos were taken in the course of the multiple events during the project, which were then used for creating promotional materials and for organizing an exhibition.

As many of the events took place outside, here are some tips on outdoor photography.

Whenever possible, shoot in the light of day and in the open. Daylight is your ally, if you know how to use it. The camera will capture details much better, if you shoot outdoors. Even the best cameras will not be able to achieve the same good image in the dark, as in daylight. But be careful with the sun, because it creates dark shadows. Also, it may create an unpleasant glare, which you can avoid by shading the camera with your hand. And when you let the sun shine in the eyes of a person, the reaction is an unpleasant scowl and the skin looks rougher than it actually is. So, when taking pictures of people, it will be better if you do it on a cloudy day or in the shadows of buildings. Everything is even in the shade.

On the other hand, when shooting an object or a person that is back lit by the sun, the effect can be very interesting. When you are outdoors and in the sun, try this: Position the person in the sun, with their back turned to the light, but in front of a building, which is in the shade. See the pleasant hair-light.

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7) Glossary

A – aperture priority is a mode offered by semi-professional and professional cameras that automatically calculates the other parameters such as shutter speed and ISO after you set up /choose the aperture value.

Aberration – an optical phenomenon that causes an unsharp and blurred image or an image with unwanted colours in the edges. The higher the aperture number, the smaller the influence of aberration.

Aperture – a system of metal or plastic lamels that control how much light enters the light sensor.

Apochromatic lens – a type of a lens where all colours (wave lengths) have a focal point on the same level of a sensor.

Aspherical lenses – lenses with corrected optical parts that enable one to correct the optical issues of the lenses and simplify their construction.

Autofocus – a camera feature that allows you to focus on the subject automatically.

AE – Auto exposure – the camera mode; while considering the optimal lighting conditions the camera sets the shutter speed and/or aperture automatically.

AF – autofocus – a camera mode in which the camera focuses (when half pressing the shutter release button) instead of the photographer.

Autofocus lock – a camera mode that allows the photographer to hold focus on a selected subject and thus enable the recomposition of the scene.

Locking the mirror – several SLR cameras enable one to lock the mirror after the focus. It removes the vibration caused by the mirror movement, particularly in macro photography.

Aperture – A metal or plastic lamella system to control the flow of light into the lens

Aperture number – the size (opening) of the aperture marked “f”. The smaller the aperture number (e.g. f 1.2 or f 2.8), the larger the aperture (light transmission) in the lens and the sensor.

B exposure mode – a camera setting that allows the photographer to keep the shutter open as long as they want. This setting enables one to make night photography, fireworks, lightnings, night traffic, etc.

Camera shake – subtle movement of the camera caused by the photographer when the shutter button is depressed resulting in blurry images.

Candid images/photographs – pictures of people or groups of people that are less formal than portraits.

Card reader – a digital device that enables one to read and transfer images from camera memory cards through USB cable.

Catchlight – tiny reflections of light in the eyes of people or animals photographed.

CCD (charge-coupled diode) – a type of phototchip that records the image in digital cameras – sensor

Cloning – a technique used in image editors (e.g. Photoshop) to cover up imperfections (e.g. dust spots, dirt, small scratches)

Close-focusing distance – the minimum distance you can move the camera to a subject before the lens cannot focus properly.

Close up – a photographic technique that enables one to make details of the subject (less than 1:1)

Compact camera – A point and shoot type of camera enabling less control over the camera functions.

Compact flash card – a bulky type of memory cards used in recent years by mostly professional SLR cameras.

CMOS-Complementary metal-oxide-semiconductor (CMOS “see-moss”) is one of the main types of integrated circuits.

CMOS technology is used in chips and also in a wide range of analog circuits, image sensors, data converters.

Additional flash – additional flash controlled by the camera or flash control unit to properly light the scene.

DPI (dots per inch) – a term that expresses scanner or printer resolution. The more points per inch (= 25.4 mm), the higher the sensitivity of printing.

Spacer rings – optical rings without lenses placed between the camera and lenses in order to increase the focal length and thus increase the size of the captured subject.
Fish eye – a type of lenses that enable an extremely wide angle (180°) of framing and barrel distortion.

Tilt and shift lens – a special type of a lens that enables one to control the orientation of the plane of focus (PoF), – tilt and hence the part of an image that appears sharp; it makes use of the Scheimpflug principle. Shift is used to adjust the position of the subject in the image area without moving the camera back; this is often helpful in avoiding the convergence of parallel lines, as when photographing tall buildings.

Macrorails (also macro rails) – rails enabling extreme focusing of the macro lens.

Spherical distortion – optical phenomena occurring when wide angle lenses are used with small aperture and different wave lengths of light do not have focal length in the same point. It causes unsharp edges of the image.

Sunblind – a blind used to protect the direct access of sun rays into the front of lenses that reduces the unwanted reflexions.

Lightning number – expresses the available power of the flash. It relates to the ISO sensitivity.

Multiple exposure – several exposures made on the same field of a film or photopaper.

Aperture Priority – a camera preset setting that manually selects the aperture value (reduction -magnification of the light flow aperture) and automatically calculates the shutter speed for optimum exposure.

Saving – the activity of storing digital images on a data medium (hard disk, Blu-ray, USB disk or memory card).

Artifacts – unrelated and unbiased objects and phenomena occurring in frames due to dirty sensor, lens, compression and other interventions.

Autoexposure (AE) mode – sets the camera when the camera automatically adjusts aperture and shutter speeds for optimal viewing for a given amount of light.

Autofocus (AF) – sets the camera where the camera automatically focuses on the scene.

Autofocus lock – a feature that lets you focus on the selected object or scene and alter the composition of the scene.

Exposure Blocking – (Autoexposure lock – AE-L) is a feature of the camera that enables one to avoid the previously set exposure (shutter speed and aperture) changes in order to re-compose the image.

Backlight – illuminates the scene from behind (if there is sun or lightning behind the back of the subject or scene).

B-mode – setting the camera to allow the shutter to be opened as needed.

Camera tampering – unfortunate breakdown of the camera as a result of triggering the trigger or holding the camera in the hand resulting in blurred and distracting resulting image.

Fury in the eyes – tiny reflections of light in the eyes of photographed subjects.

CD – compact disc for laser recording and reading of digital data (usually in the range of 650-700 Mb).

DVD – a digital video recorder that enables laser recording and reading of digital data (typically in the range of 4-7 GB)

USB key – recording equipment for storage and transmission of data, in the range of 8 Gb - 4 TB).

Cloning – technology used in Photoshop to remove artifacts and unwanted objects in engagement.

Focal length – the minimum distance from the subject where the lens can still focus properly.

Chromatic aberration – an effect resulting from dispersion in which there is a failure of a lens to focus all colours to the same convergence point.

Sensitivity – sensitivity to light measured by various numerical scales (e.g. ISO). A closely related ISO system is used to describe the relationship between exposure and output image lightness in digital cameras.

Compact – a snapshot camera that provides instant photo capture, which usually does not allow manual adjustments to the digital SLR camera.

Compact flash – a type of memory card that uses digital SLRs to store data and images.

Composite - Digital shot combining two or more photos.

Compression – volume reduction – data size
for faster handling of images at the expense of quality.

Preview images – set up your computer to view small pictures of a photo.

Conversion – The process of changing image formats, usually from "raw" to a format that can be handled by various photo editing software.

Rice (crop) – changes in the image composition caused by the splintering of the edges, either in the machine or in the computer.

Curves – a Photoshop tool to allow color and brightness correction.

Depth of Field (DoF) – range or area in the shot that remains blurred. Low depth of field means that only some of the main parts remain focused. A great depth of field means that everything in the image (near and far) looks sharp.

Diffuser – a device that enables one to diffuse or spread out or scatter light in some manner in order to achieve soft light.


Digital zoom – the digital zoom artificially enlarges a part of the image by electronic cropping (simulated zoom). In general, using digital zoom decreases the image quality.

DVD burner – a device that uses a laser writer to save (burn) images onto CD/DVD disks.

EXIF data – information electronically attached to each image about the image setting conditions (shutter speed, aperture, ISO, lens length, white balance).

Exposure – the amount of light that is allowed to hit the sensor or light sensitive film. Too much light results in overexposure, too little light leads to underexposure.

Exposure compensation – a camera function that enables one to adjust exposure to compensate a failure of a metering system.

Exposure meter – a device that measures the brightness (amount of light) in a scene.

File format – a format in which the camera or computer stores the image data (e.g. JPG, RAW, TIFF, NEF, etc.)

Additional flash – a flash with lower power whose function is to soften the hard shadows without being the main flash.

Filter – a colour or painted piece of glass or plastic which is mounted in front of lenses. Filters modify the colour or intensity of various colours or create special effects (e.g. stars,)

Primary lens – prime lens is either a photographic lens whose focal length is fixed, as opposed to a zoom lens, or it is the primary lens in a combination lens system.

Flare – Flare is particularly caused by very bright light sources. Lens flare refers to a phenomenon where light is scattered or flared in a lens system, often in response to a bright light, producing an undesirable effect on the image.

Flashing lights – studio lights that provides stable and artificial flash light to a scene.

Focal plane – the point in the image that is in focus, along with everything that is the same distance away from camera.

Focus indicator – a function of the camera to show the situation when the focus of the desired scene was achieved.

Frame – the view through the camera viewfinder.

Framing – a photography technique that enables one to use an element within the image to frame the main subject of composition.

Front light – a type of light that occurs when the light source is behind the camera and in front of the captured subjects.

F-stop – a number in camera setting that indicates the size of aperture (adjustable hole in a lens).
transforming or altering a photograph using various methods and techniques to achieve desired results.

Edit an image – alter and manipulate an image using editing tools in image editor computer programs.

Infinity – a camera setting that enables one to lock focus on subjects that are farthest from the camera.

Exchangeable lenses – lenses that are produced for SLR cameras and can be changed in the camera bodies.

Interpolation – an artificial way of increasing or decreasing the dimensions of an image file by adding or removing pixels that often leads to lower image quality.

ISO – (International Organization of Standardization). Definition of sensitivity based on the 35mm film light sensitivity. More sensitive or fast ISO cameras/films react quickly to light. Images captured in higher ISO however often produce worse image quality.

Colour temperature – the temperature of a light source expressed in Kelvins. Warm light (at sunset) has low colour temperature, while blue light on a cloudy day has high temperature on this scale.

Layers – a Photoshop function where one element is placed on top of another. It allows the photographer to work on one element in a picture without affecting other parts of the image.

LCD (Liquid Crystal Display) – an imaging device (monitor) that allows one to review images immediately after capture.

LED (Light Emitter Diode) – an electronic display on the camera body used to provide information about the camera settings.

Levels – a function in Photoshop for correcting the colour and brightness of images.

Light meter – a device that measures the brightness in a captured scene to help the camera to get appropriate exposure.

“Long glass” – a telephoto lens (usually above 100mm of focal length) that magnifies distant objects.

Macro – a term for close-up photography. A macro mode or specific macro lens enables one to capture small or tiny objects (usually 1:1 to 1:5 magnification).

Manual focus – a camera function that allows one to adjust the focus on a chosen subject.

Original – an image captured and downloaded straight from the camera without alteration.

Megapixel – one million pixels, also a unit of measurement used to identify the pixel dimensions of sensors and camera resolution.

P – Program Mode of the camera where the camera automatically calculates both aperture and shutter speed.

Memory – space where images are stored in the camera or in the memory card.

Memory card – an electronic device of various formats (e.g. CF, SD, xD or MS) that store images or data.

Noise – texture in the image that is made up of tiny dots. Usually a side effect of low ISO, noticeable in large image enlargements.

Optical viewfinder – a viewing window in the camera located in the top part of the body that helps to frame and compose the image.

Optical zoom – mechanical movement of optical parts of the lens that alter the focal length of the lens.

Underexposure – a technique or undesired result when the image looks too dark.

Overexposure – a technique or undesired result when the image looks too bright.

Panorama – expansive, very wide view of a scene.

Parallax – a camera issue when the viewfinder no longer represents accurately the captured scene when you get too close to your subject.

Position – a place from where you capture a scene and take an image.

Polarizer – a type of a filter that enables one to polarize the light (best results at 90° angle to the light source) and enhance the surface or color of clouds or water. Useful to penetrate into the reflecting surface of water.

Portrait – a picture of person; a term used also for vertical formats.
Pre-focusing – a camera function that allows one to hold focus on a selected subject while moving the camera to recompose the photo.

Red eyes – a red glare effect in a subject’s eyes. It can be reduced or eliminated with a pre-flash or treated in post process in Photoshop.

Selection – a technique in Photoshop for isolation of one part of the image from the rest.

Self timer – a camera function that enables the photographer to delay the moment when the camera captures the image. Self timer enables you to get into a picture yourself or to shoot without moving a camera and thus avoid camera shake.

Sensitivity – a term to describe the ISO. Sensitive ISO (higher number) reacts more quickly to light.

Sensor – an image sensing device that consists of sensitive photo diodes (CCD)

Sharpeness – the degree of clarity and crispness in the image.

“Short glass” – a wide-angle lens

Priority of time, shutter priority or shutter mode – a camera setting where the camera automatically calculates the aperture after you set the shutter speed.

Shutter speed – the amount of time the shutter stays open to light or how long the camera takes the image.

“Slow ISO” – an ISO setting with lower ISO number (e.g. 50 or 100) that produces brighter, less noisy images.

SLR (single lens reflex) camera – a camera that enables one to use interchangeable lenses, with sophisticated settings and flash systems that require users to look through the lens to see the scene.

“Soft” – a term used to refer to photographs that are slightly blurry and out of focus.

Telephoto lens – a magnifying lens that enables one to take images from far away.

Insight – a live view mode when the scene is displayed in the rear LCD screen of the camera in order to select the subject on focus or better composition.

TIFF (Tagged Image File Format) – an image format suitable for photography using 16,8 millions of colours. The compression of an image in lossless regime does not lead to quality decrease.

Mask – a program tool that enables one to increase the sharpness of the image used particularly when we want to have a scanned image that is as sharp as the original file.

Finder – an optical system that enables one to determine the crop of the scene that will be captured in the sensor. The finder of SLR a camera sees through the lens that captures the image.

White balance – a camera setting that enables one to correct the subtle colour shifts in an image that occur in various kinds of light. The white balance can be set by the camera from pre-set modes or manually by the photographer.

Wide glass (wide-angle lens) – a lens that enables one to capture a wide, expansive view of the scene. The object often looks smaller through such a lens than in reality.

Zoom – a lens that offers more than one focal length. It enables you to change the magnification before the shot. You can zoom in to make far away a subject appear closer or zoom out to get more of the scene into an image.

Storage speed – a camera or memory card function that records the captured images into memory. The higher the storage speed, the better for taking a series of images without a break.

Vignetting – darkening of the corners and edges of the image caused by the construction of the lens system where the light that falls into the border parts of the image is not enough.

Angle of view – the crop/part of the scene that the lens can capture expressed in grades. If the focal point is shorter, the angle or field of view is larger.

Grain – the image is recorded to the film through light sensitive particles of silver that are visible in big magnification. The more sensitive the film and the greater the magnification, the more visible is a grain.
8) References

References and literature, useful links, resources, books, webpages, etc.

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