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Liberecký
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HEALTH IN A BOTTLE

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NOKIAN TYRES
WOC

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WOC

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WORLD ORIENTEERING
CHAMPIONSHIPS
DOKSY, CZECH REPUBLIC 3 – 9 JULY

2021

FINAL REPORT



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I/INTRODUCTION



The 38th World Orienteering Championships took place in the Czech Republic from 3rd to 9th July 2021. The City of Doksy was the Event Centre. The Czech Orienteering Federation was awarded the organisation of WOC 2021 during WOC 2017 in Estonia. The preparation work started at the same time. The vision of the organisers was „Back to the roots“, because they wanted to show the DNA of orienteering - quality courses, challenging terrain and to give first preference to athletes over other elements. The organizers tried to fulfill this motto throughout the preparations and during the championships. However, they had to deal with several changes during the preparations:

- Global pandemic SARS-CoV-2
- addition of two sprint disciplines in 2020
- cancellation of public races, PreWOC etc.

The global pandemic affected not only the preparations, but also the organization itself. Individual teams and organizers were in a special bubble, there were several measures against spreading of the disease and some activities took place only online.

Members of 40 national teams (in all 300 competitors and 81 officials) took part. WOC was carried out entirely according to IOF Rules.

All races took place in various types of terrain. Organizers for Sprint Distance used a former

military fortress composed of a citadel and adjacent walled garrison town, Sprint Relay was in the town centre of Doksy with its irregular street network. Middle Distance took place in the Jizerské hory in challenging mountain terrain with broken ground. Relay and Long Distance were situated in Kokořínsko, in typical continental sandstone terrain with massive rock formations.

Achieving high quality TV coverage, provided by Czech Television (ČT), was a big success for the WOC. Czech Television broadcast all the final races.

WOC was organised in accordance with IOF requests for a high technical and organisational level.



2/ VISION

BACK TO THE ROOTS

We organized the races in really demanding terrain, despite some of the complicated logistics issues (there was basically no mobile signal in the Kokořínsko). After adding sprints, we tried to find a very interesting terrain in Terezín which is not very typical sprint terrain.

SUSTAINABILITY

Education via a mobile app, and we tried to build arenas so that we polluted the environment as little as possible. This is basically what we did. Sustainability is perceived by other aspects as well: new maps have been made for our clubs to use for their future activities, a team has been set up to pass on our know-how, materials purchased and produced will be used further, and much more. We participated in several events for tree planting and garbage collection in the forest, and we cooperated with our project "ČistOles".

LOCAL SUPPORT

This goal has been achieved the most. We have collaborated closely with the Liberec Region and individual municipalities - not only in terms of sports and organization, but also, for example, in support of tourism. We often looked for partners among regional companies and institutions, and we succeeded: the Kitl liqueur, the Konrad brewery, the Czech Mint, the Czech Er-

gonomic Society and the Technical University of Liberec are proof of that. Regional clubs were incorporated into the entire World Orienteering Championships and made up about half of all organizers.

MODERN WOC

In many places it was possible to pay by card, a mobile app was created, and special animations of results and spaces for our partners were created for the big screen.

TRANSPARENT MANAGEMENT

Transparent management of the budget was from the beginning the basis of the organization, which had access to all parts. All stakeholders such as IOF, Czech Orienteering Federation and local clubs were informed.

BENEFIT FOR ORIENTEERING

Covid reduced a number of things such as events for partners and schools. But thanks to WOC, new activities were born. New maps, areas with fixed controls and new partners. Orienteering was shown on a lot of different kinds of mass media. Some activities were postponed to next year such as the series "Běhej s mapou" and school activities.

TELEVISION AS STANDARD

5 live broadcasts were produced by Czech Television and by director Karel Jonák. New jingles,

animations and a studio have been created for television formats. Many activities can be used in the coming years.

KNOW-HOW FOR THE FUTURE

Know-how created within the WOC will certainly be used in organizing other events - World Cup 2023, JWOC 2024 and others. Especially in the fields of marketing, logistics and other activities.

3/ ORGANISATION

WOC 2021 was organised by the Czech Orienteering Federation, which is the organization responsible for orienteering in the Czech Republic.

Six local clubs (OK Chrastava, OK Doksy, SKOB Roudnice nad Labem, OOB TJ Tatran Jablonec n. N, OOB TJ Turnov, LOK-o Liberec, Slavia Liberec orienteering) participated on the technical issues, maps and volunteering.

Organising committee was established in 2018 and no major changes have taken place since then.

Event Director & Economy	Jan Pícek
Administration	Jana Kubátová
Sport	Daniel Wolf
Arena	Matěj Burda
Marketing & Media	David Procházka
HR & Services	Dominika Pachnerová
IT	Jiří Řehoř, Lukáš König
Supervisor	Petr Klimpl

Organising committee was in daily contact via internet or mobile phone. Regular meetings from March 2020 were organised via ZOOM (online), and decided on various issues concerning the overall concept of WOC as well as matters which crossed between more than one section. Individual sections were further structured into sub-sections.

Organizational chart

SPORT	ADMINISTRATION	IT	MARKETING & MEDIA	HR & SERVICES	ARENA	ECONOMY
Maps	Event office	Technology	Partner and VIP care	Accommodation	Arena layouts	Budget
Course Setting	Accreditation	Speaker	Media and PR	Ceremonial	Service	Supervisors
Training camps	Accountancy	Internet	Social networks	Volunteers	Catering	Czech Orienteering Federation
Controllers	COVID doctor	TV	Website	Logistics	Transport	
Quarantine	COVID office	GPS	Public races	IOF clinic	Finish	
Guarding controls	VIP		MIX zone		Medical care	
Forest refreshment			Infotent / fanshop		Antidoping	
Start						

4.1/ The limitations during the preparation

Since the end of summer 2020, we have kept a [regularly updated overview](#) of valid measures within the WOC 2021 website. The reason was that most of the decisions of the Czech government were first communicated only in Czech, so we translated and made them available here. It was really helpful for the Teams.

It was also helpful to save all the previously valid documents and old Bulletins, for the reasons of later questions asked by Czech authorities or Teams regarding rules and precautions.

All training camps organised in the spring 2021 had to be pre-registered in advance according to the local health authority (TC leader contact information, address and date of stay). For compulsory C-19 testing after arriving in the Czech Republic, the teams used a company cooperating with the organizers. All the tests necessary for entering and staying in CZE had to be sent to the local health authority - for this, we had one extra person (part time job). Organising of testing was free of additional charge on the part of the organizer, despite considerable administrative demands.

These turbulent changes and cancellations caused organizational problems, financial costs and a decrease in motivation for some organi-

zers. The entire organizing committee (OC) had to inform both the public and the volunteers briefly but clearly.

Strict lockdowns and precautions for entering the country during the winter 2020/2021 caused:

- cancelling of Euromeeting 2020 2x (September, October),
- closing of training areas due to unequal conditions for EU and non EU countries (between 22.10. - 10.12. 2020),
- cancelling of Euromeeting 2021 for the third time (February),
- cancelling of spectators races WOC-Tour (April).

4.2/ The limitations during the WOC 2021 itself

The organization of the WOC was at the time of a milder regime of measures (respirators inside, social distancing outside, easier arrival rules from most countries, limitation of the number of participants in a mass event) due to the situation at the turn of June / July, when the epidemic stagnated.

Each accredited person had to provide a negative PCR test from a specific date to enter the WOC 2021 bubble.

Throughout the spring, in cooperation with the

IOF, the concept of measures for WOC 2021 was planned, including functioning in the so-called bubble. Unfortunately, we received some suggestions so late that they couldn't be included..

4.3/ COVID Bulletin

We created the COVID Bulletin for the event as a separate document. We wanted to offer this information to participants clearly and separately from the regular content of Bulletin 4, which we see more as a sport's perspective document. From our perspective, this was a good decision.

4.4/ Recommendations for future events

- Anticipating a positive case in advance and having a backup plan for this situation is always better than believing that no positive case will occur. It's not good for the success of a race to hope that Covid avoids orienteering events.
- A person responsible only for Covid matters - a COVID manager - is necessary, who can influence all areas of the event from the beginning of the planning.
- The shorter the event – the safer the event.
- Mandatory PCR test before entering the bubble is the right decision.
- Antigen test – mandatory self-testing of all bubble members every other day, this should have been done during WOC.
- Sufficient space in the arena, each team has

4/ COVID



its own tent, respect the space for the mixed zone, consider not having 'cheering zones' - or have 'cheering zones' with supervision.

- Each team should have accommodation in a different place. It should be a team's responsibility to develop a safe environment (insist on tested staff, dining rooms only for one team).
- Each team declares before arrival where they will be staying in case of isolation or if quarantine is necessary.
- Are shared facilities, especially mobile toilets a risk for the spread of infection?
- Consider using the team bubbles for startlists to reduce mixing of teams. This was successfully used by the Test Race (300 participants, zero C-19 cases). The WRE starting order has to be used inside the Team bubble then.
- Avoid shuttle buses.
- Personal responsibility should not be just an empty concept! Some athletes as well as organizers were not following basic rules despite being noticed.
- Recommending vaccination to all for future events will greatly facilitate antiviral measures.



5/ WOC PROGRAMME



WEDNESDAY 30. 6. 2021

14:00-20:00 Event Office Staré Splavy

THURSDAY 1. 7. 2021

10:00-20:00 Covid Testing Staré Splavy

FRIDAY 2. 7. 2021

9:00-15:00 Model Sprint Distance Terezín
 16:00-18:00 Technical model + model Sprint Relay Staré Splavy
 18:30 TOM Sprint + Sprint Relay On-line

SATURDAY 3. 7. 2021

9:00-10:25 Sprint Qualification Terezín
 14:30-17:10 Sprint Final Terezín
 17:20 Flower Ceremony Sprint Terezín

SUNDAY 4. 7. 2021

18:20-19:30 Sprint Relay Doksy
 19:35 Flower Ceremony Sprint Relay Doksy
 19:50 Opening Ceremony Doksy
 20:20 Medal Ceremony Sprint + Sprint Relay Doksy

MONDAY 5. 7. 2021

18:30 TOM Middle Distance On-line

TUESDAY 6. 7. 2021

9:00-11:50 Middle Distance Qualification Smržovka
 15:50-20:00 Middle Distance Final Smržovka
 20:10 Flower Ceremony Middle Distance Smržovka
 20:30 Medal Ceremony Middle Distance Smržovka

WEDNESDAY 7. 7. 2021

9:00-18:00 Model Relay + Long Distance Tuhaň
 14:00-17:00 VIP and Media race Staré Splavy
 18:30 TOM Relay + Long Distance On-line

THURSDAY 8. 7. 2021

16:20-20:05 Relay Heřmánky
 20:15 Flower Ceremony Relay Heřmánky

FRIDAY 9. 7. 2021

12:50-19:50 Long Distance Heřmánky
 20:00 Flower Ceremony Long Distance Heřmánky
 20:05 Closing Ceremony Heřmánky
 20:15 Medal Ceremony Relay + Long Distance Heřmánky

6/ ARENAS

6.1/ General information

TEREZÍN (SPRINT)

arena in the parking lot, area 8400 m²

DOKSY (SPRINT RELAY)

castle park and castle courtyard 13 700 m²

SMRŽOVKA (MIDDLE)

flat meadow with a well-accessible driveway uphill 19 100 m²

HEŘMÁNKY (RELAY, LONG)

slightly sloping meadow with a poorer surface, only one muddy driveway 25 700 m²

6.2/ Preparation of arenas

All arenas except the sprint relays were built the day before. It was definitely necessary to spend the whole day building the arena. After building the basics of the arena (mostly in the afternoon), some leaders of other organizing sections came to get acquainted with the arena, and gave their comments and got details in their background. The morning before the race, the necessary things were fine-tuned in the arena. When dismantling the arena, the help of volunteers from other sections proved to be very effective, which greatly accelerated the dismantling and the removal of material.

Good to know: During sprint races it is necessary to accurately place the TV vans where there

is enough space not to affect the courses and competitors.

6.3/ Problem in arenas

A missing bag in the event centre of the relay competition was reported at the Event Office on July 8th. The incident was reported to the police. On the next day, the bag was found by an organizer close to the parking area. No contents of the bag were missing. The bag was returned to its owner. Police suspended the investigation.

As a consequence of the incident, the team's area of the event centre was surrounded with a fence and controls at the entrance were reinforced.

6.4/ Security

The arenas were guarded by the security agency only at times when there were no organizers in the arena (participation of two to three employees). During the day, it was always agreed with the local police station that they were available if needed.

6.5/ List of arena equipment

- 31 scissor tents 6x3 m
- 22 scissor tents 3x3 m
- 2 scissor tents 8x4 m
- 2 big tents (10x15 m for media, 10x10 m for VIP)

- 1 dining tent
- 168 chairs
- 79 tables
- 8 VIP tables
- 50 beer sets
- 120 "v" boards
- 40 bins
- 4 flagpoles
- 1 podium 8x4 m
- 1 podium 2x2 m
- 30 mobile radios for communication
- Electricity: 88 kW twin (broadcast), 48 kW (big screen), 22kW (sound system, IT), 22 kW (catering, volunteers, media, VIP)
- 10 pcs disinfection stands
- toilets - up to 31
- metal fences - up to 765 m (425 m for sprint artificial barriers)



7.1/ Maps

7.1.1/ Road map

- December 2018 - Aleš Hejna named chief cartographer
- March 2019 - meeting of WOC mappers - Zdeněk Sokolář, Jan Drbal, Matěj Klusáček, Tom Novák, Jiří Vištejn, Aleš Hejna. 32 km² of demanding terrain to be mapped.
- November 2019 - first half of terrains mapped (incl. areas for cancelled Euromeeing)
- July 2020 - second half of terrains mapped
- Autumn 2020 - additional sprint terrains mapped
- Spring 2021 - revision of maps
- June 19th - 20th 2021 - last check of forest maps and sending to printing company
- June 26th - 27th 2021 - last check of sprint maps and sending to printing company

7.1.2/ Crucial - Chief cartographer

- Prepares, provides basemaps, assembles maps. One symbol set for all!
- Cooperates with Event director, Sport director and course planners.
- Manages the mapping team - mapping schedule, mapping, unified mapping style, generalization, adherence to norms (ISOM, ISSPROM), general quality of maps, revisions.
- Negotiates with the IOF Map Commission and

advisors (via Sport director).

7.1.3/ Challenges

Secrecy of maps - maps, basemaps distributed via Google Drive, zipped with password. OCAD encryption turned out to be useless. It is not possible to edit encrypted files, also mappers work on different platforms (different versions of OCAD, Open Orienteering Mapper) that do not support encryption.

There should be a guideline on how to safeguard maps - there might be a growing risk of hacking of secret data that could affect fair play in future WOCs.

SPRINT Q+F, SPRINT RELAY

- Generally, the aim was to make these maps fully in accordance with ISSPrOM, having also devoted much attention to the legibility check.
- SQ,SF: Entrance into fortress tunnels highlighted using white background to promote the readability.
- SF: One of the tunnels leading under a private olive area was by intention marked slightly against the ISSPrOM – as the top layer was in fact not runnable, it should be marked grey as canopy. However, to keep the consistency the white diagonal stripes were used as everywhere else on the map. The issue was approved by

the SEA and head of the IOF Map Commission and presented in Bulletin 4.

- SQ, SR: Some of the artificially closed parts of streets were marked on maps as common fenced olive private areas – to promote the readability of course overprint.
- Instead of plain white, „semi-open open land“ was extensively used for all easy-runnable park-style forest areas, to indicate that the surface is as fast as on the grass.

FOREST MAPS

- A couple of extremely narrow sandstone passages were „blinded“ on maps and made transparently unrunnable in terrain (filled up with branches and fallen trees).
- All sandstone passages possible to run through were broadened in the map for legibility reasons and optimization into a 1:15 000 scale map. Aleš Hejna: *“Generalization in sandstone areas is tough. There is limited space on the map and the mapper has to balance this all the time. You can’t always enlarge cliffs out of real proportions (into ISOM proportions) because it would block passages between cliffs. If there was a dispute between size of cliff and size of passage, passage was given priority. All sandstone passages on WOC sandstone maps (long, relay) shall have on map at least 2,5 metres.”*
- IOF Map Commission has approved a deviat-

on in colour of buildings - grey on long, middle and relay maps. Aleš Hejna: „Buildings on all WOC maps are in grey colour with a thin black outline. This enhances legibility of maps. You can easily tell the difference between rock features and buildings.“

7.1.4/ Print

All WOC maps were printed by Žaket Praha, IOF certified printer cooperating with Czech high-level events for many years. Offset printing on g-print paper was evaluated as the highest possible quality and used in **all** WOC competitions (incl. test races organised by WOC organisers, 1:15000 scale training maps and both relay competitions). It was the first time we used full offset print for relay competitions as well (= unique printing plate for every variant) to ensure highest possible quality. All WOC maps were sealed into a plastic bag.

WOC forest maps and courses were printed 2 weeks before the event. Sprint disciplines were printed just in the week prior to the WOC to capture as actual state of changing urban areas as possible. During the final check of printed Sprint Qualification maps by SEA, it was discovered that course overprint in one heat had moved a bit, and a shifted purple out-of-bounds area hid an allowed passage. Thanks to Zaket's flexibility, two men's heats were quickly reprint-



Although all sandstone passages possible to run through were broadened in the map, as Daniel Hubmann tested they remained quite narrow in reality. Photo: Lukáš Budínský

ted just before the race.

MEN'S RELAY "WET MAPS CASE"

Men's relay race was unfortunately influenced by heavy clouds and thunderstorms. Two athle-

tes destroyed their map totally during the race with impact on their performance. Plastic bags were torn and wet paper crumbled. Complaint about map and plastic bag quality received.

Plastic bags used were the very same as for

previous IOF high-level and national competitions organized in the Czech Republic, many times tested without any issue. The print quality was even increased for this WOC by using offset print for relay races as well. Unfortunately the weather and terrain was so extreme that it was easy to fall down and break the plastic bag with the map.

The case was discussed with the printing company and some tests were done. No general mistake found. Print was OK and the ink and colours should not blur when just wet. But very wet g-print paper can of course crumble when chafed.

RECOMMENDATION FROM THE PRINTING COMPANY

To avoid any blurring the printing should take place as long before the competition as possible. Maps need enough time to get dry. Printed maps should not be kept just in a sealed bundle, but should be aired to support drying. Maps should not be sealed into the plastic bags immediately afterprinting (it makes the drying process impossible), but instead just before the competition.

RECOMMENDATION FROM US TO FUTURE ORGANISERS

Consider double waterproof protection and print to waterproof paper instead of g-print.

Even though the quality can be a bit lower.

MAP EXCHANGE POSSIBILITY DURING THE LONG DISTANCE

As an immediate corrective measure the organiser offered a map exchange possibility for the long distance competition held on the following day. Approx. half of the runners used this opportunity. But all thrown away maps were neither destroyed nor wet, just dirty.

Note: the weather during the long distance race was much much better: light rain and wet forest just in the beginning of the race.

7.2/ Course setting

7.2.1/ Road map

- December 2018 - first rough course concept of forest disciplines on the old maps to define the mapping scope
- Spring 2019 - first SEA visit to evaluate terrains and planned arenas, forming of WOC 2021 course setting team
- September 2019 - first small parts of WOC forest terrains mapped, first meeting of WOC2021 course setting team: Daniel Wolf (sport director), Jindřich Kořínek (chief control setter), Martin Janata and Michal Horáček (middle distance), Radek Novotný (relay, trainings), Petr Karvánek (long)
- November / December 2019 - first draft cour-

ses on WOC maps (middle, relay)

- March 2020 - long discussion about relay concept and how to avoid long dead running parts => decided to move the arena Heřmánky about 1 km to the north, a meadow with poorer access road, but much better location from sport perspective
- May 2020 - last forest map (long distance) fully mapped
- Summer 2020 - WOC2020 cancelled - two sprint disciplines added to WOC programme, looking for suitable locations (after negotiations with municipalities, Terezín and Doksy were chosen), Radek Novotný agreed to set the sprint relay, Daniel Wolf to cover sprint distance
- Autumn 2020 - first sprint draft courses on old maps to define the mapping scope, urban mapping in progress, concepts of all forest courses finalized, Euromeeting + Training camp 2020 cancelled (both in September and October due to Covid-19), loss of relevant test complicated the winning times estimation a lot
- March 2021 - postponed Euromeeting cancelled again
- April 2021 - finally first training camp including several timed sessions organized (sandstone areas only)
- May 2021 - fine tuning of all courses based on various testing

- June 2021 - last revisions and print

7.2.2/ Course overprint issues

SPRINT Q+F, SPRINT RELAY

- SQ: A piece of a fence was hidden under an uncut control circle overprint. This small error led to time losses, fortunately without any crucial impact on participation in the final.
- SF: According to the maps, it should be possible



Future champion Isac von Krusenstierna made a huge mistake in the very beginning of the qualification course, partly because of this uncut circle. He started early in the final, but it did not influence his great performance.

ble to pass through the arena during the race. In practice this was only possible by running through the corridors with a risk of crossing the finish line. When thinking about the course, this „wrong“ route option was considered as too long to be chosen, while during the competition some runners took it, including later medalists, fortunately without any serious consequence.

- SR: Artificial barriers and forbidden areas were marked using 5 different features, according to the optimal map readability at each of the spots and also according to the importance of the barrier. In principle, barriers with huge impact were made very transparent, while those prolonging running time by several seconds only were drawn usually as common fences without any highlighting. The approach was presented in Bulletin 4 as well as at TOM and at Technical Model Event.
- SR: Following the SEA decision, code numbers were not printed beside control numbers.

RELAY

- Due to the competition area shape the course drawing was rather condensed and thus less readable. Teams were strongly alerted at TOM and it seems that the course drawing was not an issue during the race then.

7.2.3/ Challenges

SPRINT Q+F

- Same arena and same quarantine zone and pre-start area used for both qualification and final. The same area was offered to the teams for resting between the competitions. It was a good decision; much easier logistics for both organiser and teams.
- SQ: Long discussions on how to solve the middle part of the courses. To offer a more tricky fortress or easier urban orienteering was a question. Finally it was decided to let the runners taste a bit of fortress orienteering using artificial barriers in a long moat.
- SF: First concepts considered “fortress” race only, but there was pressure from the SEA team to integrate the urban part as well. It was not easy, as the town did not offer big orienteering complexity. Technical difficulty of this part was increased by making all the grass in the park area “olive green” and using artificial barriers.
- Organisers succeeded in closing most of the area for traffic and for pedestrians / spectators as well. It was very much appreciated by the teams and made the race much safer.
- All uncrossable walls and areas were taped, for fairness and safety reasons. Almost 60 people did all the taping and built artificial fences for many hours. Maybe it was too much

and did not look nice on TV, but the race was fair and there were absolutely no issues and complaints about crossing some uncrossable object, as we face in almost every sprint competition.

- 175 segments of 2.5m wide artificial fence used in terrain, partly wrapped in WOC designed nonwoven

- over 10 km tape
- 200 metal stakes
- SF: Many route choice challenges were offered and almost all variants were chosen (also some totally unexpected where the grass was not cut). In the men's race, picking the correct routes was key to the victory.
- SF: Winning times were 30-40 sec. faster



than expected. Pace was expected to be a bit slower on bumpy grassland. Probably it would be slower when wet. But no impact on the competition.

SPRINT RELAY

- Due to the circumstances the map was available first in September 2020 and courses were developed intensively during spring 2021, having ready the final version in May.
- The aim was to create courses with lots of splitting, many route-choice options and problem solving, but still even and tight. Situations where a small mistake could result in a huge time loss were avoided.
- To get on a sufficient technical level, many private areas were used: school yard, kindergarten yard, museum garden, retirement house yard, and even a selected private garden in a spot where we needed to find a control place.
- To combat the thorough theoretical preparations of teams, it was also necessary to change the common structures using artificial barriers and areas.
- The crucial forkings offered tricky route-choice problems, where a wrong decision resulted in time losses of about 10-15".
- Some controls even worked as a „bait“, to lure the runners on to a wrong route.
- Same control was used as the public control and the last control. Teams were properly in-

formed about that.

- (!) Forking distribution: When all 4 legs are put into the same OCAD course-setting file, it appears that OCAD is absolutely not able to create a desired forking distribution. If we were to use it without any intervention, the race would be completely spoiled. Eventually, this had to be done manually, selecting a set of forking variants which were as different as possible. (Fortunately the neighbouring alternatives generated by OCAD are mirrors of one another, which made that job a bit easier.)
- Expected fastest times were calculated, the courses were never tested by any top elite runner. The estimated winning time was 61', Sweden then won with 62'.
- All features supposed not to be crossed were precisely marked in the terrain and observed during the race.
- The traffic was stopped during the race in the whole area. As usual this decision had to be announced by local authorities, meaning that the teams could find a list of closed streets in local media, as has usually happened recently.
- Originally a final loop in a chateau park was suggested – then erased during the final course tuning as it was not sure if there would be allowed any spectators in the arena due to Covid. Courses were also a bit too long like that, and the orienteering in the park was extremely simple. The decision was right.

MIDDLE

- Wild and demanding area of Jizerské hory was chosen for the middle distance to distinguish from the sandstone but still to offer demanding orienteering. For many athletes it was maybe even more demanding and the race was evaluated as very tough. Terrain was very variable from very fast grown beech forest to extremely slow with high blueberries, fallen trees and rocky ground.
- Same arena and quarantine zone used for both qualification and final. The same area was offered to the teams for resting between the competitions. It was a good decision, much easier logistics for both organiser and teams.
- MQ: Courses were shortened several times, but still were some 2-3 minutes longer than expected. Last 800 metres was just dead-running on the meadows towards the finish, but finishing out of the arena was not an option at WOC.
- MF: Winning times were longer than required. After selection races we felt it might be slightly longer, but times around 36 min were expected. Unfortunately even the best ones made mistakes or did not perform the best route choices. And also tired legs from morning qualification made it very tough.

RELAY

- To be able to offer a real sandstone experien-

ce, the arena of LD and R was moved from the original spot to a location much closer to the sandstones and a new logistic solution was developed (March 2020).

- Still, as the most interesting part of the terrain was the most remote part, one of the biggest challenges was to provide a proper sandstone experience even for women while keeping the course length inside the time frame of TV transmission.
- The expected winning times were calculated using input from recent top events in similar sandstone terrain. Unfortunately there were just a few such races (mainly WC 2018 and Czech team test 2018) and none of them included the relay effect, which always makes courses somehow faster. Estimating the value of the relay effect was the key to the right course-length. At the end, after an impression from selection races, the average kilometer speed was supposed to be set correctly, with open possibility that final winning times of teams can be slightly longer due to possible mistakes in this demanding terrain type. Swedish men won with 113 min (37:40 per leg) and Swedish women with 106 min (35:15 per leg). Best leg times of the day: Kasper Fosser 35:20, Simone Aebersold 33:34.
- Longer winning times of men were partly influenced by the extremely bad visibility due to late start combined with heavy clouds and

thunderstorms. Some of the top teams even used headlamps on the 2nd and 3rd legs!

- The aim was to create intricate forkings, testing autonomous navigation, offering typical sandstone route-choice problems, and still very even. Based on GPS and split times it seems that all forkings were about the same time length.
- In forkings, a special attention was devoted to finding control objects differing significantly from each other, to prevent mispunching.
- Same control was used as public control and as the last one. Teams knew that beforehand.
- A few unusual control sites (e.g. cliff on top) were demonstrated at a model event.
- An artificial fenced forbidden area was created at the bottom of one of the valleys to support the course-setting intentions. This area was marked by double/triple tapes and manned.
- The forking distribution generated by OCAD was considered to be suitable for the race. However, the distribution was properly checked for top-10 teams only. Later when maps were already printed we realized that some strong teams with high start bibs got almost the same variants as top teams (e.g. SWE+AUT). Fortunately the route choice problems separated those teams quite early – but definitely an issue to be handled carefully at next WOCs!

LONG

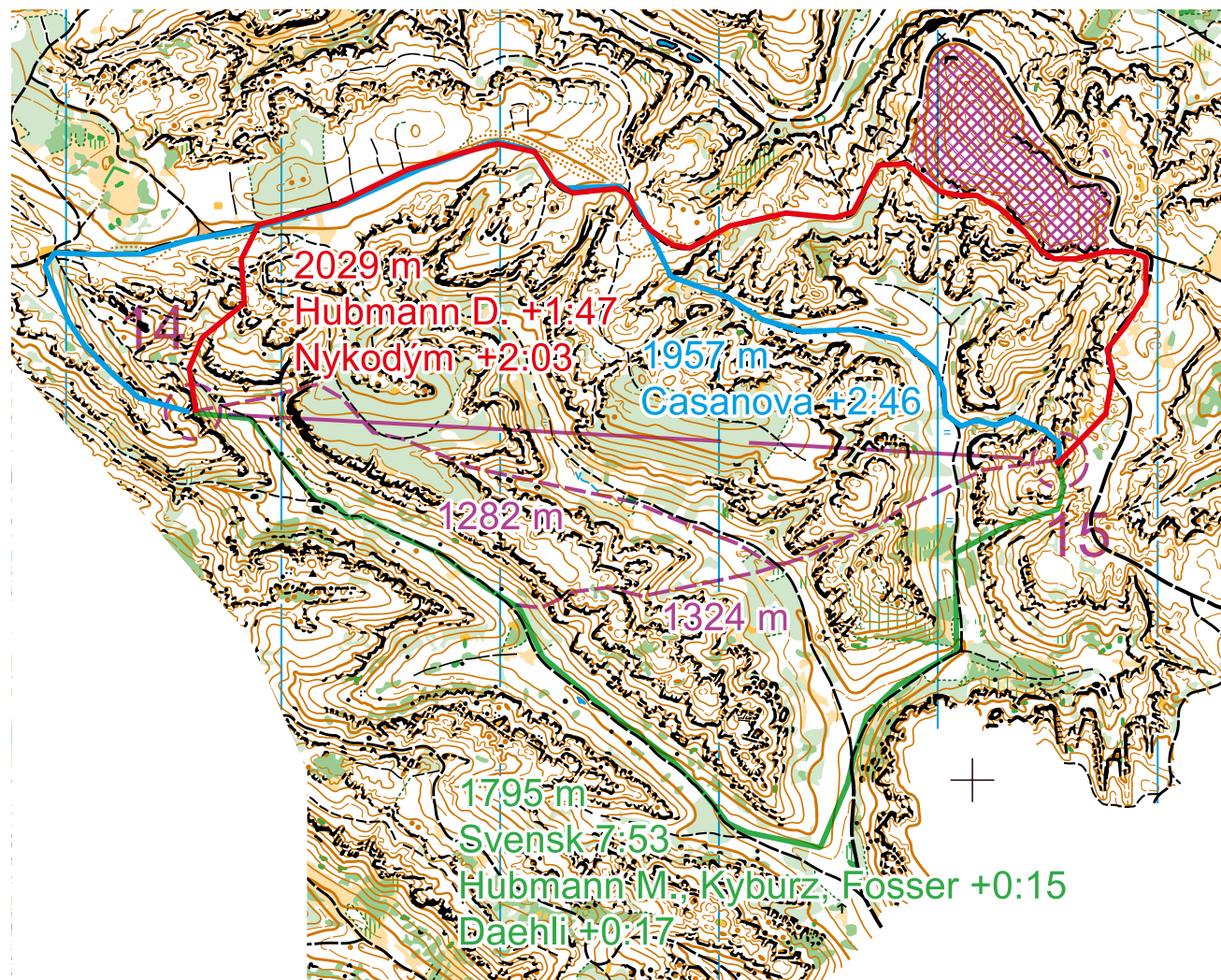
- Area was limited by protected nature reserves (it was forbidden to enter such areas) and other parts of Protected landscape area Kočovnínsko, with higher protection level, where it

was not possible to set controls. But still we succeeded in finding sufficient and demanding pieces of forest for the long distance. Many runners expected the race in different parts of the forest.



Andrine Benjaminsen making a mistake on the southern route choice to cn. 2 which was tested as fastest and probably would be the fastest without this mistake.

- Overlapping with relay area was resolved using longer, easier transfer legs and the last loop offered different kinds of orienteering. Last loop was rather short, but still offered at least two route-choice problems at the very end.
- Tactics of many runners was to avoid rocks and deep re-entrants and to use tracks and roads as much as possible. Many tested and expected route choices were not chosen on longer legs. Therefore fastest leg times were run on variants which were tested as slower.
- Men's start was moved 15 minutes earlier compared to the schedule presented in Bulletin 4 due to bad experience from the relay race and risk of darkness. Fortunately the weather was much better and light conditions were sufficient.
- Winning times were 3 minutes faster than expected in both classes. Both Tove and Kasper performed outstanding runs and dominated the race.
- In the men's class all three medalists finished together. They all met in the first half of the course and formed a very strong group. Kasper Fosser was the strongest that day and performed an incredible race. It started discussions on a longer start interval or splitting method in the second part of the course. This is more to evaluate at IOF level and adjust competition rules accordingly. But the splitting method



Northern (red) variant was tested as 1:30-2:00 min. slower than the southern one. And the race confirmed it and many runners were taken in and lost time here. It seemed too easy just to follow the road, but it was too long this time. Unfortunately nobody tested the straight route choice which was also expected to be very fast.

like a “butterfly” would not solve the problem at all as the 1st and 3rd would still continue together and the 2nd man would probably not lose his position when running a few controls alone.

- Some runners who participated in the race did not have sufficient orienteering skills and were searching for the first control longer than the winning time on the whole course and organisers needed to help them out of the forest. There should be qualification or at least more strict qualification rules to start in the WOC long distance.

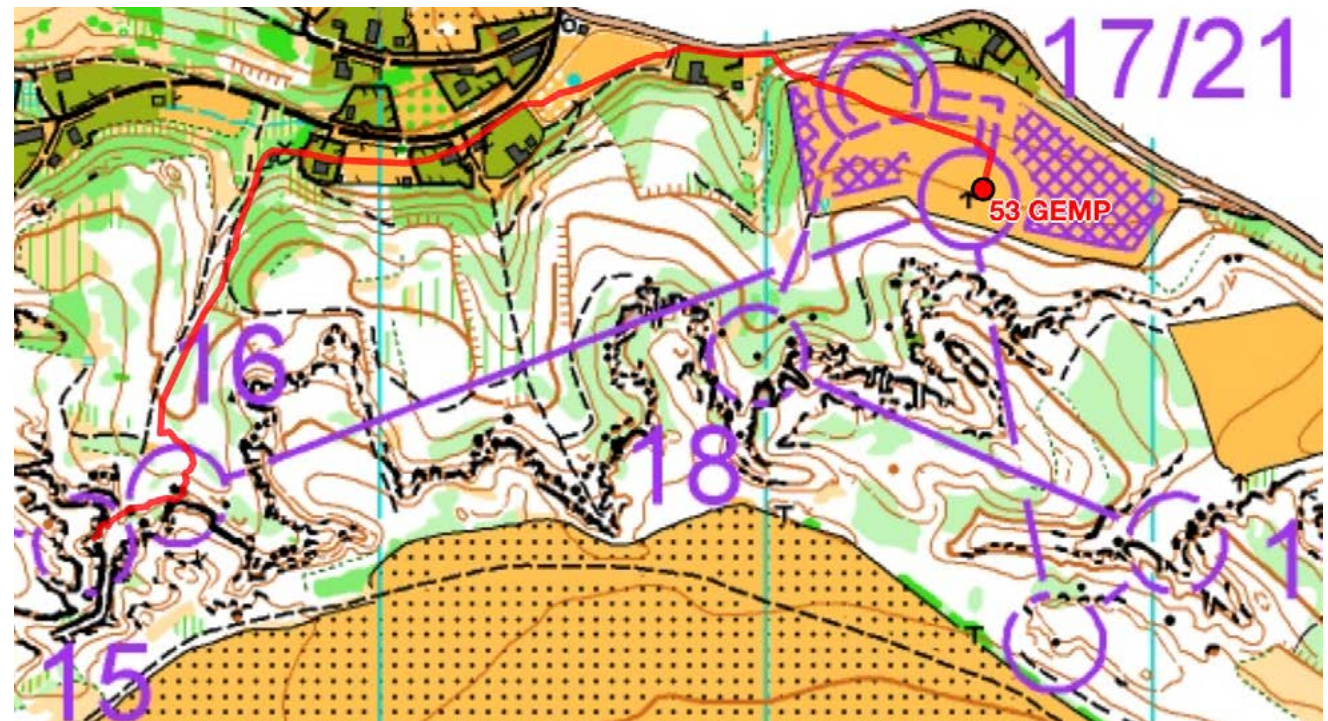
7.2.4/ Good practice and recommendations

- Common arena and quarantine / resting zone when 2 races in 1 day makes life much easier not only for organisers, but for teams as well.
- Urban races: Always try to exclude traffic (incl. pedestrians) or choose areas where it is possible to limit it. All uncrossable features should be taped and manned even when it seems to be obvious. It makes the race fair and safe.
- Relay: Test the forking distribution generated by OCAD beforehand, compare the variants of the best teams, especially in sprint relay and step in when not sufficiently different.
- Late starts can bring higher viewership in TV, but are not comfortable either for athletes or on-site spectators and organisers. Especially

for the WOC relay there was a lot of pressure from broadcasters to move the race as late as possible (between Tour de France and EURO). And in case of bad weather it causes huge issues with impact on a fair race. We already had two examples: the WOC relay in Norway 2019 and Czech Republic 2021. We recommend to future organisers to make the start earlier and consider postponed broadcast or other opti-

ons. Always count with bad weather. Fortunately we were lucky in middle and long where it would have been even more unfair.

- Never think that the route choice is so disadvantageous that nobody takes it. As we saw in sprint and long, there is always somebody who surprises you.



On transfer leg to the spectator control in the long distance Natalia Gemperle chose an unexpected route choice through the village. She crossed the TV compound, steep uphill to the arena and finish facilities and corridor in the opposite direction.

7/ SPORT

7.3/ Model Events

Four official model events were set before WOC 2021:

MODEL SPRINT

Control flags only, opened in dedicated time only as the model was partly organized in private areas. Aim of this model event was to show structure and mapping of the fortress area in Terezín - height of the walls, moats, multi levels.

MODEL SPRINT RELAY + TECHNICAL MODEL

Timed session from the Event Centre opened in dedicated time only. Aim of this model event was to present special control placing for sprint and sprint relay and to show all types of uncrossable barriers.

MODEL MIDDLE DISTANCE

Control flags only in dedicated time, but the model was opened and the map sent to teams some weeks in advance. Teams were offered another small training area in the mountains for the final preparations, it was highly appreciated.

MODEL RELAY & LONG

control flags + organized shuttle transport from parking during the official model event time. It was some 2 km from the parking lot to the start. But the model event map was provided to teams for the whole WOC week as well.

8/ BULLETINS

7.4/ SEA visits

1ST SEA VISIT

Date: 3rd - 4th February 2019

Goals: get together, first plans, visit sandstone terrain.

Participants: Daniel Leibundgut, Péter Molnár, Daniel Wolf, Jan Pícek

2ND SEA VISIT

Date: 23rd - 26th May 2019

Goals: Fix the terrains for WOC, visit to Event Centre, discussions on Bulletin 1

Participants: Daniel Leibundgut, Péter Molnár, Adam Chromý, Jan Pícek, Jana Kubátová (partly)

3RD SEA VISIT

Date: 17th - 19th July 2020

Goals: Discussions on bulletin matters, visits to all arenas and terrains including sprints, short visit to Event Centre

Participants: Jorgen Hector, Péter Molnár, Ádám Lengyel, Jan Fiala, Daniel Wolf, Jan Pícek, Matěj Burda

4TH SEA VISIT

Date: 13th - 15th May 2021

Goals: Course setting and mapping details,

arena matters, collaboration for the remaining weeks until WOC

Participants: Jorgen Hector, Péter Molnár, Ádám Lengyel, Jan Fiala, Daniel Wolf, Jan Pícek, Matěj Burda, Radek Novotný and Michal Horáček (partly)

In addition to the SEA visit, the organizers together with the SEA team communicated at regular online meetings (once in 14 days from November 2020, once a week in June 2021) and also via email.

8/ BULLETINS

In accordance with IOF Rules, four bulletins were issued:

- | | |
|----------------------|------------|
| • 21st August 2019 | Bulletin 1 |
| • 2nd September 2020 | Bulletin 2 |
| • 13th April 2021 | Bulletin 3 |
| • 27th June 2021 | Bulletin 4 |

Bulletins were published on the WOC website and on Eventor. The content of all bulletins was as required by IOF Rules. We created the COVID Bulletin also (see chapter 4).

9/ TRAINING OPPORTUNITIES AND SELECTION RACES

9.1/ Training opportunities

The approach to Training Activities at WOC 2021 was very different from the traditional one.

Our system was supposed to deliver more than just good training opportunities. The aim was to find such a set-up not only able to support our cooperation with anti-Covid and nature reserve authorities, but furthermore also making things more fair, transparent and feasible for everyone – as WOC Training has recently been rather controversial in the international community.

9.1.1/ Goals

- to offer highly relevant training opportunities (traditional one)
- to make it more affordable = more fair for everyone
- to limit the black market
- to be able to give the requested data to local authorities (nature reserve areas etc.)
- to gain control over training areas occupancy to obey the anti-COVID regulations

9.1.2/ Training maps and courses

To provide the most relevant experience, we have provided not only the most relevant training maps available, but we have also asked our **WOC course-setters to set training courses**. These were offered for free along with all OCAD

files. Forest training courses were also marked in the terrain to make it easier for small teams and individuals without any supporting staff on site.

The aim was to provide at least **2 relevant maps**

and 2 relevant courses per discipline. Preferably the maps to be done by WOC cartographers (this principle couldn't be fully followed due to unavailability of fresh Euromapping maps).

List of WOC 2021 Training Courses:

no.	are	area	course type	terrain	scale	print	marked	remarks	course-setter
1	D1	Selská rokle	relay	sandstones	10000	laser	yes	4 forked loops	Radek Novotný
2	D2	Umrličí rokle	picking	sandstones	7500	laser	yes	limited map	Radek Novotný
3	D3	Barbora	picking	sandstones	5000	laser	yes	4 loops	Radek Novotný
4	D4	Modlivý důl	middle+pick.	sandstones	7500	laser	yes		Petr Karvánek
5	D5	Karolína	long	sandstones	15000	offset	yes		Petr Karvánek
6	D7	Supí hora	relay	sandstones	10000	laser	yes	forked loops	Radek Novotný
7	D7	Supí hora	long	sandstones	15000	offset	yes		Petr Karvánek
8	S3	Mladá Boleslav	mix relay	urban	4000	laser	no	forked loops	Radek Novotný
9	S3	Mladá Boleslav	sprint	urban	4000	laser	no		Daniel Wolf
10	S6	Český Dub	sprint	urban	4000	laser	no		Daniel Wolf
11	S7	Turnov	sprint	urban	4000	laser	no		Radek Novotný
12	D1	Selská rokle	long	sandstones	15000	offset	yes	SI timed 3/4, 4/4	Petr Karvánek
13	D1	Selská rokle	middle	sandstones	10000	laser	yes	SI timed 3/4, 4/4	Radek Novotný
14	T1	Kost	long	sandstones	15000	offset	yes	Czech Champs 2012	Václav Zakouřil
15	J4	Červená ruka	middle	mountains	10000	laser	yes		Michal Horáček
16	S9	Pevnost Josefov	sprint	fortress	4000	laser	no	3 loops	Radek Novotný
17	J3	Zvonice SW	middle	mountains	10000	laser	yes		Martin Janata
18	J3	Zvonice NE	middle	mountains	10000	laser	yes		Martin Janata
19	J1	Bramberk	middle	mountains	10000	laser	yes		Martin Janata
20	J5	Maliník SW	middle	mountains	10000	laser	yes		Thierry Gueorgiou
21	J5	Maliník W	middle	mountains	10000	laser	yes		Michal Horáček
22	D7	Supí hora	long	sandstones	15000	offset	no	selection race 30/5	Radek Novotný
23	J6	Tanvald	middle	mountains	10000	offset	no	selection race 29/5	Martin Janata

9/ TRAINING OPPORTUNITIES AND SELECTION RACES

9.1.3/ Pricing

The teams could purchase a general **'WOC licence' for all training OCAD files**. For 5000 CZK (200€) they have received about **25 OCAD files, including all updates and permission to spread these files inside the national team**, so that individuals could legally use them for their camps.

At the same time, a **session fee** of 50 CZK (1,90€) per person/session was applied. This fee was due for athletes only, coaches were using maps for free.

As an alternative, we have also provided printed maps for 30 CZK (1,2€)/session. Most of them were laser printed at short notice right in Doksy. Maps of 1 : 15 000 scale were offset printed in Zaket, the same way as WOC competition maps.

The price of blank maps and maps with WOC training courses was the same, to make it easier and to limit a temptation for cheating.

9.1.4/ Training Registration System (TRS)

To administer the session fee and gain the necessary training areas occupancy data for local authorities, we developed a simple **on-line app**.

Teams were asked to **register all their training sessions in WOC training areas in advance** – day, am/pm, area, number of athletes. This data

(filtered) was shared with various authorities, instead of compulsory off-line reports.

After camps, this data could have been modified into real figures and served as an **input for invoicing**.

The registration was easy and could be done by anyone who has created a personal account under his/her nationality. This way the TRS was used by many individuals.

As a positive side-product of the TRS, the teams could see the plans of other teams, which enabled better **coordination** – either to share courses or, conversely not to meet at the same spot

at the same time.

9.1.5/ Experience

- By 90% of teams, the TRS was smoothly used and thanks to their positive and cooperative approach the system provided the desired output.
- The general WOC licence was purchased by 18 teams = most of the big and mid-size ones. Teams were happy to get all the files at once, receiving updates and not facing any doubts concerning the usage of files by national team athletes individually.
- As a benefit, the system made it completely le-

Mon 6/7	Tue 6/8	Wed 6/9	Thu 6/10	Fri 6/11	Sat 6/12	Sun 6/13
BUL - Selská rokle	FIN - Supí hora	FIN - Selská rokle	FIN - Valdštejn	FIN - Bramberk	FIN - Kost	BAR - Karolína
DEN - Tanvald	BAR - Supí hora	BAR - Selská rokle	BAR - Umříčí rokle	FIN - Český Dub	BAR - Selská rokle	NOR - Bramberk
FRA - Supí hora	BUL - Bramberk	BUL - Selská rokle	DEN - Slovanka	DEN - Český Dub	DEN - Pevnost Josefov	NOR - Bramberk
LTU - Modlivý důl	DEN - Supí hora	DEN - Turnov	EST - Valdštejn	EST - Valdštejn	DEN - Zvonice	UKR - Červená ruka
RUS - Modlivý důl	EST - Valdštejn	EST - Kozlov	FRA - Valdštejn	FRA - Český Dub	FRA - Pevnost Josefov	FIN - Mladá Boleslav
SVK - Umříčí rokle	GBR - Supí hora	FRA - Maliník	FRA - Zvonice	FRA - Český Dub	GBR - Supí hora	FIN - Slovanka
BAR - Barbora	GER - Selská rokle	FRA - Turnov	LAT - Valdštejn	GER - Český Dub	GBR - Zvonice	FRA - Valdštejn
BUL - Umříčí rokle	HUN - Maliník	GBR - Turnov	LTU - Supí hora	NOR - Supí hora	GER - Litoměřice	LAT - Slovanka
FRA - Selská rokle	LAT - Supí hora	GER - Slovanka	UKR - Valdštejn	UKR - Český Dub	NOR - Tanvald	NOR - Bramberk
GER - Supí hora	LTU - Barbora	HUN - Supí hora	FIN - Maliník	UKR - Maliník	UKR - Pevnost Josefov	
HUN - Modlivý důl	POL - Kost	HUN - Valdštejn	FRA - Tanvald	UKR - Supí hora	UKR - Zvonice	
UKR - Slovanka	RUS - Selská rokle	LTU - Valdštejn	GER - Umříčí rokle	FIN - Červená ruka	FIN - Tanvald	
	SVK - Zvonice	POL - Červená ruka	LTU - Supí hora	DEN - Barbora	DEN - Tanvald	
	UKR - Supí hora	RUS - Supí hora		GER - Supí hora	EST - Tanvald	
	BUL - Supí hora	SVK - Supí hora		NOR - Litoměřice	GBR - Maliník	
	DEN - Bramberk	UKR - Tanvald		NOR - Supí hora	GER - Karolína	

9/ TRAINING OPPORTUNITIES AND SELECTION RACES

gal to join other teams sessions even without having officially purchased OCAD files.

- Economic result: The income from training activities for WOC was about as expected (given that due to COVID the training period lasted just some 2-3 months), while the distribution of payments among national teams was much more fair – thanks to low price, all teams had same chances to purchase the WOC OCAD files licence and payment of session fee is then proportional to the number of athletes in the team.
- The level of cheating (illegal OCAD file sharing) is estimated to be very low this time, hopefully thanks to the pricing approach. The transparency of TRS also ensures that the teams can somehow „keep an eye“ on each other.
- To our surprise, the offset printed 1 : 15 000 maps were not used to such an extent as expected. Most teams simply did not consider this feature as significant. Some bigger teams made such prints at home using OCADs.
- Laser printed maps were printed in Doksy, usually at very short notice (1-2 days, sometimes even hours). Teams appreciated this flexibility a lot.
- Most of the training prints were maps with WOC training courses. Blank maps made up only about 3%.
- WOC training courses were very popular and

the teams would welcome new fresh courses each time they came back for training. Our offer was kept the same during the whole spring 2021, just some selection races courses were added.

9.2/ Selection Races

Timed courses were offered to teams on the following occasions:

9.2.1/ Official test races | June 5-6 2021

- Middle distance in Tanvald - a new map by WOC cartographers Klusáček/Vištejn, courses by WOC course-setter Michal Horáček. 104 women and 144 men from 27 national teams entered. Winners Tove Alexandersson and Gustav Bergman.
- Long distance in Srbská Kamenice - map 2020 by WOC cartographer Zdeněk Sokolář, courses by WOC course-setter Petr Karvánek. Spared area, not used for training. Due to the number of participants, the classes were duplicated. 57 + 47 women and 75 + 70 men from 27 national teams entered. Winners Tove Alexandersson, Isia Basset, Kasper Fosser and Lucas Basset.

9.2.2/ Alternative test races ordered by SUI, NOR, AUT | May 29-30 2021

- Middle distance in Tanvald – another part of the new map used for the official test race. Courses by WOC course-setter Martin Janata. 31 women and 46 men entered. Winners Kamilla Steiwer and Eskil Kinneberg.
- Long distance in Dobřeň – revised training map Supi hora (embargoed for all SUI/NOR/AUT athletes). Courses by WOC course-setter Radek Novotný. 31 women and 49 men entered. Winners Andrine Benjaminsen and Kasper Fosser.

9.2.3/ Easter timed sessions | April 3-4 2021

- Middle and long, both in Selska rokle training area. 54 men and 31 women from 7 teams.

These activities were organised in a simple training mode, with respect to all current antiCOVID precautions. Still, the runners could eventually get a highly relevant competition experience they otherwise lacked due to all COVID bans. Moreover, these events have also brought some interesting practical hints to organisers.

10.1/ Media

In total there were 43 accredited media representatives. The decline of journalist interest in arriving on site compared to WOC 2019 is partly due to the pandemic situation which imposed first: travel restrictions (based on communication with some of the non-arriving-yet-interested media) and second: the restrictions on-site that were somewhat harsher than the current 'mood' in the country. And partly due to lower interest in the sport in Czech Republic in general.

Countries represented: Sweden, Switzerland, Norway, Finland, Denmark, Italy, Austria, Germany, Estonia, Czech Republic, Slovakia.

Some of the media representatives chose to stay with the teams and thus were not included in the numbers presented (France, Germany).

The vast majority of the international media were photographers. Only SVT produced live interviews, all of the others were recorded and sent later.

10.1.1/ Experience with media

The general feedback on the services was very good. The interested media were receiving a daily schedule prior to each of the events including the essential information about the event (venue, terrain, a few words from the course planners) via email and there was always a

press meeting held at the beginning of the day. As most of the media were photographers, the main purpose of the meeting was to show the places booked for them. This got a little tricky for the longer events or those with qualification because the time of arrival to the arena varied significantly.

There was a Media Centre only in the race arenas; due to the Covid restrictions there were no other places to meet designed for the media representatives. We offered help to some of those who were experiencing low quality of internet connection at their accommodation. The media tent offered working places with internet connection for everyone, a printer, TV with live broadcast and refreshments.

The event logistics made the media team-work quite tough in several ways. However, given the circumstances, the IT team managed to ensure sufficient internet connection at all arenas. And the arena staff always waited until the media were done with their work before they put the arena down.

PHOTOGRAPHERS

With just a few exceptions, almost all of the photographers were very disciplined and with a deep understanding of the sport. There were enough human resources dedicated to 'guide' them to the controls as well as through the

arenas (due to Covid restrictions and the need to keep them separated from the teams). The organizing team spent a substantial amount of time discussing photo controls in the race areas and had checked all the options that the courses offered several times.

However, there were discussions with the photographers about the attitude towards them and the circumstances in the race area that would actually suit them. All explained in a letter by Rémy Steinegger (on behalf of the photographers) to IOF - though some would have been in conflict with the Covid-imposed rules valid in 2021.

10.1.2/ Presentation of the event in the media

There was very good coverage of the event in the main national media thanks to the broadcasts and news by the Czech TV, Czech Radio and the Czech press office (which the most important news servers used). These brought international orienteering to the Czech public in high volumes.

Before the event, the two main focus areas were active runners (via an extensive cooperation with the leading magazine for runners) and the locals in the WOC region (via cooperation with the local administrative bodies and regional

magazines and bulletins). Also a number of ads in the partner magazines informing about the event were published prior to the WOC.

10.1.3/ Media race

The VIP and media race took part on Wednesday, 7th July at the Event Centre - Hotel Bezděz. There were three different courses prepared for the competitors in a very beautiful area with partly city race and partly sandstone forest. It was a sunny day and the atmosphere was great. Competitors could also refresh themselves after they got to the finish. Over 50 VIP and media personnel took part throughout the day, some of them even ran all the courses.

10.1.4/ Press conferences

We experienced a decrease of journalists' interest in press conferences. We held press conferences after the Sprint with a low number of questions and interest from the journalists. All of them reached the athletes in the mixed zone and got all the information they needed. During the next few days we always asked all the journalists if there is an interest in having a press conference, with negative answers, so we skipped the organisation and focused only on photo-shoots of medalists with their medals. Our experience is that the importance of press conferences increases if there is a higher number

of local and smaller media journalists without access to the mixed zone.

10.2/ Marketing efforts

WOC 2021 marketing had different pillars with the same goal: promoting a World-class sports event in a beautiful environment to show its attractiveness for all stakeholders (athletes, public, sponsors).

Besides **webpages**, **social media** (Facebook, Instagram, Youtube , **WOC app**) and **events** supporting WOC 2021 mentioned below, we have advertised the event in:

- Running magazines
- Magazines with different topics
- Discussion radio on WOC 2021 and orienteering topics
- Leaflets and posters in the region of all competitions
- Big advertising boards in Doksy and Liberec
- Press releases and conferences prior to the event
- Cooperation with our partners on advertising
- Distributing information and important content to Czech orienteering clubs
- Newsletters of Czech Orienteering Federation

10.2.1/ Web Pages

The [web pages](#) were established to cover four

usual primary functions:

1. Competition info for elite athletes and national teams with training possibilities (including WOC Bulletins).
 2. Information for spectators and spectator races (separate web page - WOC Tour 2021)
 3. News
 4. Presentation of our partners and sponsors
- 86 articles + 70 important notes were published.
 - During the WOC week we had 85 thousand unique visitors making 165 thousand visits.

We established WOC 2021 Live Center alongside the IOF Live Center, mainly because of the connection to WOC app and to service the broader public visiting just Czech web pages.

As an addition to standard informative content we came with articles and interviews with organisers, to give as much information as possible to the runners and spectators.

The biggest traffic was clearly during the WOC week and always around the 'specific' orienteering content such as terrain information, maps and especially results (selection races etc.). During the first WOC day we experienced problems with server capacity, so we had to transfer the whole website to another one between Sprint Q and Sprint F to secure smooth processing,

IO/ MARKETING & COMMUNICATION

which was accomplished and all the other days' websites worked well.

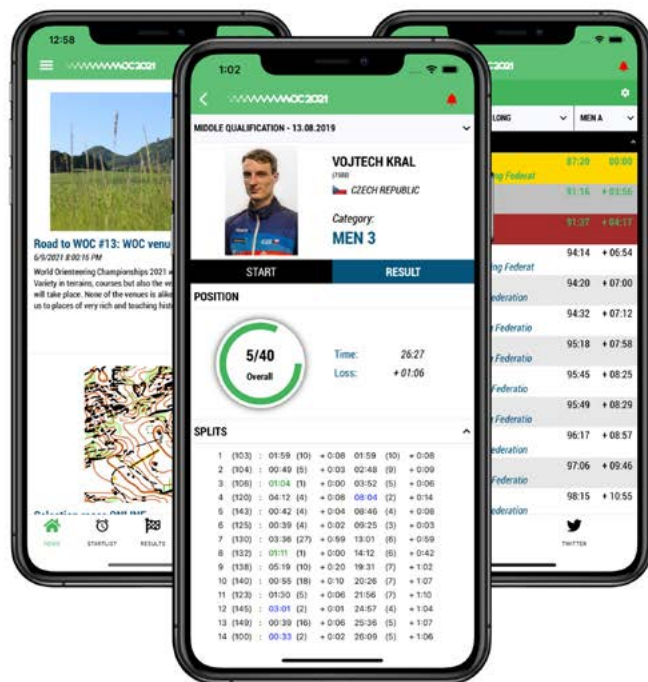
10.2.2/ WOC app

The innovation deepening connection to the athletes and fans was the development of WOC app. The main objective was to bring all the information closer to the runners and public. No need for laptops and computers, all key information and notification in a pocket. Originally

the main focus was on the public, but with many changes we found out how to make it a useful tool for the athletes as well. The biggest advantage of the app is sustainability and portability to our other events in upcoming years.

10.2.3/ Social Media

We have been building the marketing and flow of the information on the two biggest social media platforms in the Czech Republic (Face-



book, Instagram). We started to present through our social media almost two and half years before the WOC 2021, to bring the new followers in decent numbers, soon before getting to the key events and information announced by WOC social media. Social media proved to be an essential instrument in turbulent pandemic years, and helped us a lot with informing the audience promptly when there was any change. From the very beginning we decided to have our own social media so we could plan, post and present partners according to our needs (we are not against joint WOC accounts, but it will need bigger planning and a little bit different structure to fulfill the needs of organizers). In current circumstances we find it as the best way. On side of cons is starting from scratch with zero followers. For planning of posting the content we used Business Suit, working well for Facebook but struggling with losing IG text. It seems that it is currently more reliable, but in case of continuing problems we will have to search for another external platform.

Generally our focus was on strong attractive WOC 2021 brand and interesting and interactive content. We stood on high quality pictures from the WOC environment and we tried to bring innovative features in presenting orienteering. We came up with several formats of video content. First one was an irregular podcast WOC Insight where we presented terrain, preparations and

also the background of our partners. So the **WOC Insight** became a channel bringing multiple information to competitors and spectators as well. Another video tool was a WOC interview where we talked to the favourites from various national teams. The goal was to get orienteering fans closer to the athletes during the time before the event. The **WOC interview** was done online. The most difficult but the most innovative activity in the field of video making was work on **WOC Course previews**. In all it cost a lot of time and money, but according to the feedback from fans and TV viewers they showed orienteering in a way they could not see before and significantly helped everyone to understand the sport.

We have created more than 40 videos all together.

FACEBOOK

Facebook was a channel which mostly suited for posting the basic information, presenting the partners and also for the online cooperation with region and local municipalities. We haven't used paid ads except boosting a WOC teaser a week before the start of the event. Otherwise we aimed to have organic reach thanks to cooperation with our media but also non-media partners.

During the WOC week we reached about 30 to

40 thousand hits per post without advertising the content. To have all the content we planned to present we had 5 people in the social media team, using as well our 5 photographers and video team (6 people) as an important resource. Also the tight cooperation within the social media team played an important role in reaching all the fans around the World.

INSTAGRAM

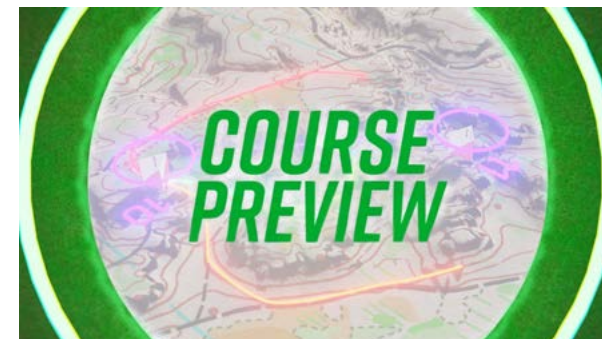
The core of our Instagram presentation lay in top pictures and videos from WOC areas. We got very good feedback on the attractive nature of the WOC 2021 IG channel which helped us to put in more practical information-type content once or twice a week. With the pictures we had support from Liberec region and its sources, videos were made by our WOC video team. Total number of followers reached 3.5 thousand before the WOC week.

10.2.4/ Course Previews

See the whole WOC 2021 Course previews [breakdown](#).

10.2.5/ Logo, branding and the whole concept

See the whole [story](#).



10.2.6/ Fulfilment of our ambition

Our goal was to present WOC 2021 and orienteering as a modern progressive sport which can be attractive also for the non-orienteering public. We believe we achieved to satisfy the orienteering fans with all the information and services we have offered with addition in the form of broader attractive video content than usual. We have also received positive feedback from the public watching TV production. The audience appreciated our efforts to "explain" orienteering with new tools and we believe we

IO/ MARKETING & COMMUNICATION

helped more people to understand what orienteering is about. Thanks to that we believe we can continue with strengthening the position of orienteering in society, even though we believe we could do more for example in the way of online advertising of our selected content so the effect described above could be stronger. In this and almost every other situation the pandemic situation did not help us, by bringing uncertainty about the crucial facts such as dates of the competitions and possibility of having spectators in the arenas. On the other hand the situation placed more attention on online marketing and showed its importance in current years. WOC 2021 also showed that the orienteering community (especially the Czech one) likes to visit big events when they can also perform and try the terrain by themselves. So the absence of accompanying WOC Tour competitions resulted in lower numbers of spectators in the arenas.

10.2.7/ Events supporting WOC 2021

BĚHEJ S MAPOU

Series of orienteering competitions open for broad public presenting orienteering and WOC 2021 - [website](#).

WOC PHOTO TOUR

As a reaction to Covid restrictions, the organising team together with local municipalities created the [WOC Photo Tour](#), an orienteering game based on maps and photo controls.

SPORT EXHIBITIONS

We have visited several cultural and sport events with our WOC 2021 presentation tent.

All the activities highlighted became the most efficient tools in how to present orienteering and inform local communities about WOC 2021.

WOC FOTO TOUR TANVALD

SÁM S RODINOU, S KAMARÁDY, PROČIŇI SE, PROJDI SE, POZNÁVEJ, ORIENTUJ SE VE ZNÁMÉM I NEZNÁMÉM PROSTŘEDÍ

MĚŘÍTKO 1:4 000
EKVIDISTANDE 2 M

WOC WORLD ORIENTEERING CHAMPIONSHIPS 2021

www.kudyznudy.cz www.zacitorientak.cz

SÁM S RODINOU, S KAMARÁDY, PROBĚHNI SE, PROČIŇI SE, POZNÁVEJ, ORIENTUJ SE VE ZNÁMÉM I NEZNÁMÉM PROSTŘEDÍ

WOC FOTO TOUR TANVALD

1 2 3 4 5 6
7 8 9 10 11 12

SPRAVNÉ ODPOVĚDI VYPLŇ I NA WWW.WOC2021.CZ/WOCFOTO A VYHRAZ ZAJMAJÍCÍ CENY! (8) VÝDAL ČESKÝ SVAZ ORIENTAČNÍCH ŠPORTŮ

11.1/ TV concept

The principle idea was to ensure that all medal races were covered by the live TV broadcasting conducted in accordance with the IOF TV manual. As the local producer, the Czech TV was chosen and respected Karel Jonak was hired as the head director. His experience combined with perfectionism was a good guarantee of the high level TV product we were aiming at.

Resulting 5 live products were offered to broadcasting companies - finally TV spectators in 7 countries could watch the live broadcast

- Finland (YLE),
- Sweden (SVT),
- Norway (NRK),
- Switzerland (SRF),
- Austria (ORF),
- France (TV8 Mont-Blanc),
- Czech Republic (CzT).

The final product was endowed with both English and Russian commentary and became a standard IOF live stream available for standard fee on the IOF website. Due to the Covid problems, all foreign commentators were working remotely, only Czech commentators were on-site.

11.2/ Preparation

11.2.1/ On-site meetings

First on-site meetings took place in October 2019, when the feasibility of TV production was one of the aspects for the choice of the arenas. Daniel Wolf, the sport director, was already experienced enough to help course setters employ TV splits that correspond to the TV manual. Some minor comments to the TV splits were given by Karel Jonak already in 2019. Therefore the course setting process was fluent and not disrupted by unexpected change in requirements from the side of TV.

The preparation work then followed the prepared schedule. Karel Jonák lives some 30 km from the Hermanky venue, which made extra visits to the competition area easily possible.

11.2.2/ Clash of perspectives

Since we (as the LOC) were preparing the WOC for three years, whereas for the TV squad, WOC was simply one of many events, some questions were targeted later than we would prefer. Another aspect was that unlike what was originally planned, two big sports events (football Euro and Olympic Games) were held in 2021, which occupied the key TV production personnel during the last preparation weeks and WOC itself as well.

11.2.3/ GSM signal coverage issue

Since the sport quality was put as the most important aspect of WOC 2021, one had to deal with complications with insufficient GSM coverage of the long+relay terrain, which would make the online GPS tracking impossible. Finally, in all competition areas the signal was strengthened by the national provider using a mobile BTS station (even though almost all available BTS stations were moved to South Moravia to ensure basic infrastructure after a tornado hit). Another consequence of giving sport quality highest priority was that in both forest venues, the TV compound was located in rather remote places from the arena. This is another aspect that complicates the TV production.

11.3/ Responsibilities

Czech TV was responsible for the TV production as a whole. Two sets of OB vans and two production groups were used for covering the WOC - squad A covered the races in Terezin and Smrzovka (Sprint F and Middle F), while squad B operated in Doksy and Hermanky (Sprint R, Relay, Long).

Main producer in squad A was already acquainted with orienteering live production, the main producer in squad B was not; at least she had an active orienteer as an assistant. Anyway, it is important to emphasize that most members

II/ TV COVERAGE

of the TV squad are used to more simple productions at more standard venues (football stadiums, sport halls, ...).

The TV compound consisted of 2 OB vans (one for the production of the "international" signal, other one for the Czech version, each associated with own independent SNG).

Karel Jonak was the main director and finally he also engaged some of his co-workers (with experience from previous WOCs) - cameramen, technicians. Radim Hosek was appointed as the LOC coordinator of the TV production. Two running cameramen were brought in - experienced Carl Magnusson and a Czech elite o-runner Jiri Vales, both of them performing a great job.

GPS tracking for the broadcast was operated directly in the OB van by our squad of 5 operators that were trained directly by Pekka Varis, author of the Seuranta program. They were also responsible for the GPS tracking as a whole. The complete agenda of the GPS team is described in the next chapter.

11.4/ New inspirations, new warnings

11.4.1/ Prepared video materials

We wanted to enrich the product with professionally prepared video materials (terrain preview, course preview), which were described in detail in previous sections. This was a big success -

despite the fact that it is always difficult to introduce the orienteering course to a lay spectator, at least we succeeded in transferring the image of orienteering as a fresh, modern sport.

11.4.2/ Cooperation with foreign commentators - risks and advantages

We met the demand of commentators to introduce the courses to them in advance. We organized 3 online sessions where the courses were presented by the course setters or the sport director; all pre-prepared materials for the broadcast were presented and made available

through a shared folder. Of course all of the participants had signed a special NDA.

These sessions were thorough, exhaustive and very much welcomed by their participants.

Nevertheless, one has to warn that a strong sense of fair play by all commentators is necessary to make such sessions possible without threatening the competition. Such a strong fair play attitude may not be standard in some countries that may soon become the broadcasters of high level orienteering events. We recognize this as a huge risk that puts the whole event at stake and the NDA is not much helpful, since in prac-



II/ TV COVERAGE

tise it is impossible to investigate who is the sinner that violated the NDA.

We also had to deal with the fact that for a certain TV company, the announced expert commentator was a WOC accredited athlete. We refused to grant permission to this person, as luckily we were aware of the name. While it is absolutely clear with accredited athletes, some guidelines from IOF would be useful, to unify the standards. It could be that any IOF licensed athlete for a given year cannot be granted this permission and the LOC is obliged to compare the list of commentators with the list of licensed athletes.



11.4.3/ GSM signal issue - practical point of view

Even though GSM signal was strengthened in the arena, not all mobile providers had sufficient signal strength, which complicated the TV production (the director was given a special SIM card just for this two-day operation).

11.4.4/ TV squad COVID bubble ruptures

The TV staff had some extra jobs in the rest days, which resulted in multiple ruptures in the Covid bubble. The ideal situation (where the covid bubble is fully respected also by TV staff and all of them are paid by LOC for these missed

opportunities) is far beyond the possibilities of the WOC budget.

11.4.5/ Drone issues

The drone TV camera was operated by a third party and the quality of their work was unsatisfactory. They failed to fly in Sprint F at all, in other races their approach was too defensive and the shots were less attractive than intended. Special agreements and prior testing are recommended.

11.4.6/ TV coordinator in organizing committee

The LOC TV coordinator was not a member of the organizing committee, since formally, 'TV operations' was a part of the IT section. This decision should be revisited for the future.

11.4.7/ TV squad's interactions

The TV squad should be educated in order that they know that any interaction between them and the athletes is undesirable. We want to emphasize that we are not aware of any incident.

Nevertheless, in discussions with the (even o-experienced) TV squad members we were asked several questions that revealed these deficiencies.

12.1/ GPS tracking

The GPS tracking service was operated in all 7 WOC races.

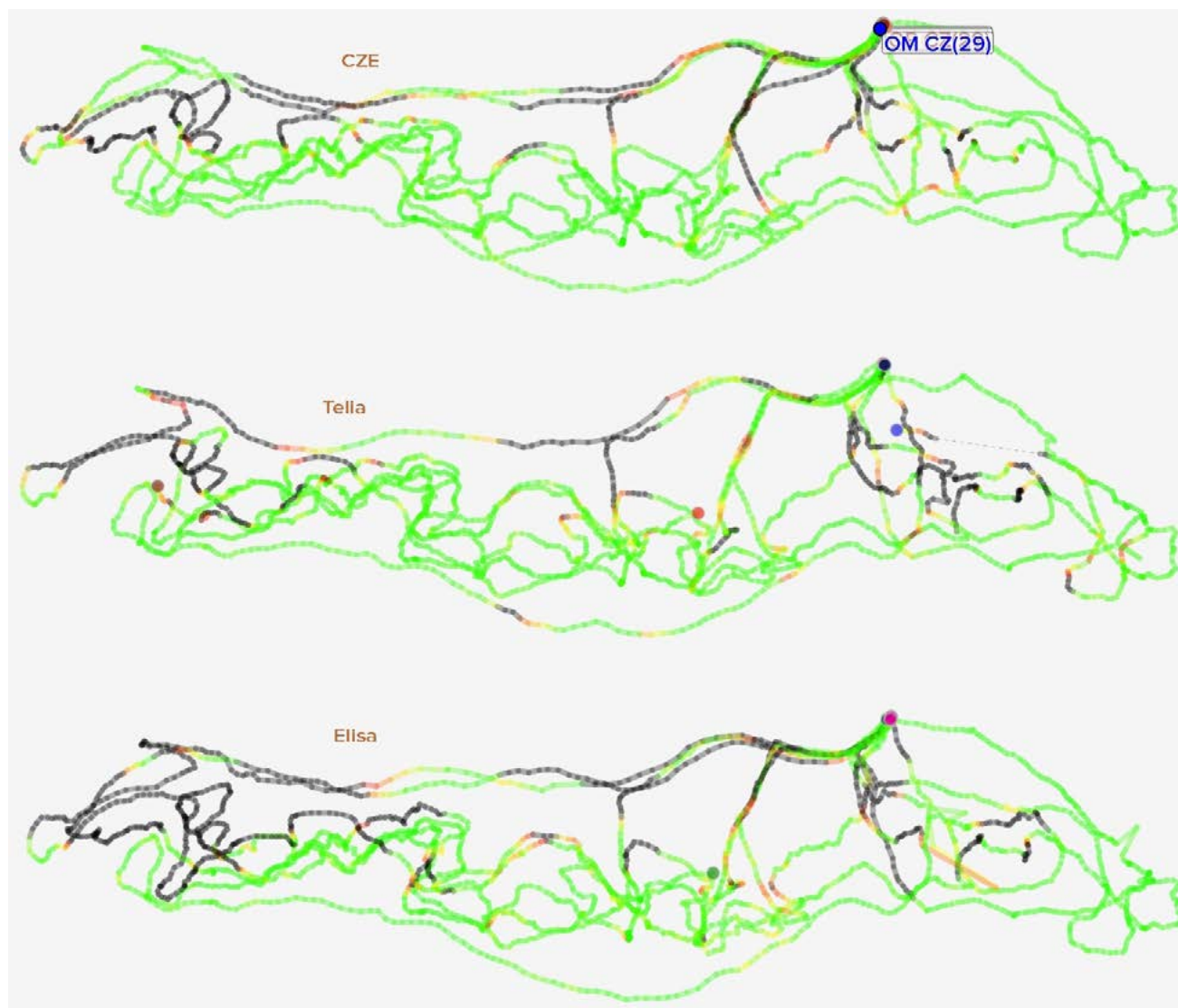
12.1.1/ GPS tracking provider

After rather lengthy discussions we had chosen a GPS service provider from 2 options, GPS Seuranta and TracTrac. Finally GPS Seuranta was selected because of more experience within the IT team with this provider, although TracTrac was cheaper and preferred by the IOF.

12.1.2/ GPS tracking equipment

All runners were equipped with GPS units. The tracking service was provided by GPS Seuranta from Finland (Pekka Varis), who worked in close co-operation with the TV production team (see TV production). Runners should use their own vests; for those who had no own vest, they were able to borrow one from the organizer.

The GPS units Queclink GL300 were used, around 150 with Vodafone CZ SIM cards (equipment of Czech Orienteering Federation) and 40 with Finnish SIM cards (two different providers Telia, Elisa) using roaming. This was the setting for sprint disciplines; for the forest races all the Vodafone CZ SIM cards were replaced with O2 CZ (this was the provider that strengthened the GSM signal in race areas).



The GPS signal was tested in advance, its quality was surprisingly good even in rather deep gorges of the Hermanky area.

Special testing session was performed on Rest day (Monday, 5.7.) in order to compare the quality of the GSM signal for devices with various providers. See above the illustration of the test outcome. All providers had satisfactory results, slightly poorer Finnish SIM cards were used for early starters in Long race.

12.1.3/ GPS tracking team

As has already been mentioned, the GPS team was a part of the TV operations and was subordinated to the LOC TV coordinator, despite the fact that the TV operations covered only 5 of 7 races, while GPS tracking covered all of them (including the qualification races). The activities of the GPS team included:

- Physical preparation of the GPS units,
- handing them over to the start crew,
- taking the units back from the finish crew,
- taking care of the recharging process,
- launching a new race in the Seuranta SW,
- taking care of all the connected security requirements,
- providing data about the tracking to IOF Live service;
- suggesting and preparing the GPS tracking excerpts for the TV broadcast (replay, live, replay to live, sync...),
- playing the tracking excerpts in the broadcast,
- fixing the inadequacies of the GPS tracking for

- the final comparison in the TV broadcast;
- communication with Pekka Varis (GPS service provider) about troubleshooting and suggestions,
- changing the SIM cards in the units (for reasons described above).

12.2/ Timekeeping

As timekeeping software we used OB2000, an old, but very stable and very powerful system. It was used in many IOF competitions before. Card readout and split times print was done on one main computer with real time synchronization to backup computer.

Punching system was from SportIdent. Control stations (BSF8) and radio control stations (BSF-8-SRR) were from Czech federation, as BS11-LA (6 meters long) was used at the finish line. Every control station was in beacon mode and only SIAC was used.

For finish time backup in case of a SportIdent card failure we had 2 cameras at the finish - one with front view and second with finish line view. Both signals were merged into one picture with time and recorded to harddrive. We didn't need to use this backup finish time - every finish time was in SIAC or the runner didn't finish.

After some discussion with IOF and SportIdent (with experience from previous IOF events) we decided to use 2 SIAC per runner. Primary was

borrowed directly from SportIdent to be sure that the battery will be in perfect condition. As secondary card runners should have used their own, or in case they had no SIAC, organizers loaned them one. How to wear SIACs was described in Bulletin 4, Section 11.1 Punching. We notified teams many times via email and web news before the event to check their SIAC for battery strength, or to send them for battery replacement if they have a battery older than 3 years or with lower voltage than recommended by SportIdent.

Only the primary card was read in cases where runners had punching OK. In other cases the secondary card was read and punching was merged and again evaluated.

12.2.1/ Some statistics for backup card readout

SPRINT QUALIFICATION

- 180 runners in startlist
- 21 of them were disqualified
- 2 runners were OK after secondary card readout
- note: we read backup card for 23 runners, but only 2 had all controls in merged punching, so the remaining 21 stayed disqualified

SPRINT FINAL

- 91 runners

- 2 disq
- 2 OK

SPRINT RELAY

- 104 runners
- 3 disq
- 0 OK

MIDDLE QUALIFICATION

- 185 runners
- 4 disq
- 1 OK

MIDDLE FINAL

- 114 runners
- 6 disq
- 0 OK

RELAY

- 162 runners
- 2 disq
- 0 OK

LONG

- 127 runners
- 8 disq
- 0 OK

TOTAL

- 963 runners
- 46 disq
- 5 OK

NOTES

- We asked teams many times to check their SIAC's battery and replace when met with a recommendation from SportIdent.
- As there were no problems with SIAC, we didn't use backup timing solution.

12.3/ Internet

Totally in all arenas we used these internet connection types:

- ISP Starnet (<https://www.starnet.cz/>), local provider, in Terezin and Doksy they had fiber connection near arena, last mile done by wireless, in Smržovka last mile (about 3km) was done by 60GHz wireless); they were able to give us in all these locations 350Mbps/350Mbps
- ISP O2 (<https://www.o2.cz/>), Czech mobile operator; in cities we used their modems and SIM cards; in Smržovka and Heřmánky GSM signal was boosted by mobile BTS; in Heřmánky they prepared fibre optic connection from last fixed point about 400 m away to arena. They supported us with:
 - 200 SIM cards for GPS devices,
 - 3 GSM modems,
 - 20 data SIM cards (unlimited data, 30/30Mbps).
- Satellite connection INTV (<https://intv.cz/>), Czech satellite company, we had 5 satellite

- sets (2 for GSM cameras from forest with public IP (max. 50/10), 2 for media as backup (max. bandwidth 50/10 Mbps), 1 for IT as backup (max. 30/6))
- Own internet connection via mobile ISP (O2, Vodafone, T-Mobile) as backup

We decided to use bandwidth (QoS) per user not per stream (LAN). Reason was we mostly had more than one provider for one stream and it was technically easier.

LAN TV was always done by fibre – connection between arena and TV truck (from 150m to 400m). It was done via VSDL technology through regular CAT 5E cables. In Smržovka (TV truck was 1.6km away) we connected to optical fibers used for sending signal from TV cameras to TV truck (adapters from ethernet to fibre optics needed on both sides).

12.3.1/Internet in arenas

TEREZÍN 3.7.2021

Internet service provider (ISP):

- ISP Starnet – 350/350Mbps
- ISP O2 – 30/30Mbps – GSM (LTE)

LAN separation:

- LAN Media – Media only, QoS 15/12 Mbps per user

- LAN IT – IT section, QoS 20/20 Mbps per user
- LAN TV – for GPS team in TV truck, QoS 10/10 Mbps per user
- Public wifi – realized as separate line from ISP Starnet – total bandwidth 100/100 Mbps

Totally used 108 GB (both down and up), connected about 250 devices (ntb, mobile phone, modems ...).

DOKSY 4.7.2021

Internet service provider (ISP):

- ISP Starnet – 350/350Mbps; we used public IP address for TV stream from GSM camera (primary we want to use satellite, but this was easier way and satellite connection was only tested)
- ISP O2 – 30/30Mbps – GSM (LTE)
- Satellite – 50/10, public IP, only tested

LAN separation:

- LAN Media – Media only, QoS 15/12 Mbps per user
- LAN IT – IT section, QoS 20/20 Mbps per user
- LAN TV – for GPS team in TV truck, QoS 10/10 Mbps per user
- Forest camera – separate line from ISP Starnet with 100/100 Mbps QoS (used only 20/0) used for transfer signal from forest camera connected to internet by GSM module
- Public wifi – realized as separate line from ISP

Starnet – total bandwidth 100/100 Mbps

Totally used 98 GB (both down and up), connected about 250 devices (ntb, mobile phone, modems ...).

SMRŽOVKA 6.7.2021

Internet service provider (ISP):

- ISP Starnet – 350/350Mbps
- ISP O2 – 140/140Mbps – mobile BTS; GSM (LTE) and fibre connection from mobile BTS

LAN separation:

- LAN Media – Media only, QoS 15/12 Mbps per user
- LAN IT – IT section, QoS 20/20 Mbps per user
- LAN TV – for GPS team in TV truck, QoS 10/10 Mbps per user; used ISP O2 connection
- Public wifi – 100/100Mbps, realized as separate LAN from ISP Starnet

Totally used 133 GB (both down and up), connected about 330 devices (ntb, mobile phone, modems ...).

HEŘMÁNKY 8.-9.7.2021

Internet service provider (ISP):

- ISP O2 – 140/140Mbps; fibre optical connection from last mile about 400m away from arena
- ISP O2 – mobile BTS; GSM (LTE); not stable, quite far away, used by public

- Satellite INTV – 2x 50/10Mbps with public IP, 1x 50/10Mbps

LAN separation:

- LAN Media – Media only, QoS 12/8 Mbps per user
- LAN IT – IT section, QoS 15/15 Mbps per user
- LAN TV – for GPS team in TV truck, QoS 10/6 Mbps per user; fibre from arena
- Forest camera – 2x 50/10Mbps; used Satellite INTV 2x 50/10Mbps connection with public IP
- TV Internet – Satellite INTV 50/10Mbps for TV crew
- Public wifi – 2/2Mbps per user; realized as separate LAN from O2 connection

8.7. totally used 107 GB (both down and up), connected about 418 devices (ntb, mobile phone, modems ...).

9.7. totally used 98 GB (both down and up), connected about 516 devices (ntb, mobile phone, modems ...).

NOTES

- 8.7. afternoon we turned off Public wifi for better connection for LAN TV.
- Satellite connection in bad weather is very poor.
- Fibre optic connection from ISP O2 – they deliver and configure their Cisco router, but 8.7. there were problems with full NAT table

(16.000 records) and during night we needed to restart and update firmware for 80.000 records NAT table.

- Internet connection for GPS team was also used by TV crew; so in Heřmánky we decided to use separate satellite connection as free wifi for TV crew – there were about 40 devices connected.
- Media wanted connection very long after end of race – recommendation is prepare spare GSM modem or other mobile device and give it to Media team when IT team need to leave arena (during the race Media will get internet connectivity from IT team).
- Also it is not good idea to fasten network equipment to construction which will be disassembled very early after race.
- For very important lines we used only fibre connections (CAT 5E), for not so important lines (Media internet, Public wifi) we used wireless connection.
- CzechTV sent after every event directly from arena to server shared with foreign productions “production summary from event” in full video quality - about 5 minutes, about 15GB.



13/ EVENT CENTRE AND EVENT OFFICE

13.1/ What was the Event Centre at the time of the covid?

The Event Centre, which was located in Hotel Bezděz in Staré Splavy, had a relatively small function during WOC 2021.

There was the Event Office, some teams stayed in this hotel, also a separate lockable room for online Team Leaders Meetings (TOM) and map packaging was located in this place. Due to the epidemic measures, there was no centre for journalists, nor were there any meetings or conferences that were originally planned.

All the Covid facilities arranged by the Organizers (Covid testing, information point) was placed in the building or it's surroundings.

13.2/ How the Event Office went

Event Office (EO) had two separate groups of organizers - administration team (6 people) and Covid team (3 people). At all times, one member of the administration was always in charge of email info@woc.cz, and one member of the Covid team with covid@woc.cz. There was also a separate phone nr. (SIM card) and cellphone with the WhatsApp application for each section.

EO started its activities on Wednesday, June 30, 2021 - i.e. 3 days before the official start of the event. This day was mainly about finding a routine for each EO member, preparing accreditation

and other material.

On Thursday, July 1, a large C-19 testing took place and most of the Team members were accredited. Due to the fairness issue, it was not possible to train with a map on this day. This was really a long day for EO.

Testing and accreditation continued on Friday, July 2 and lasted until Monday, July 5 to reduce the necessary time of stay in Czech Republic for participants to a minimum. This step was very much appreciated also from a sports point of view (competitors could train until the last moment at home on their own).

In the following days, EO worked on a normal programme (managing entries in Eventor, solving questions and problems of Teams, providing meals in arenas - see point below). On Thursday and Friday, the leaving C-19 tests were organized, covid team helped with the EO work after that. It ended on Saturday, July 10, at noon with the handover of the room to the hotel reception.

13.3/ Event Office agenda in C-19 times

Due to the epidemic measures and the bubble, the competitors could not do many common activities (shopping, cheering with the spectators, food in the arena). For this reason, in addition to the usual tasks, EO also provided a complete service for teams in the arenas. This category

included purchases of sports equipment, carrying lunches from the spectator zone, and preparing fruit and soft drinks in the Team zone.

The Covid team continuously monitored compliance with the set rules, answered questions on the topic, and provided testing in arenas or accommodation.

13.4/ Accreditation Cards

Every team member (athlete or coach), organizer and invited guest had to wear an accreditation card at an event arena all the time. An accreditation card contained information about its holder - name, areas of access and a flag of country in case of a team member. The other side described current Covid rules & restrictions for team members and invited guests, and a list of important phone numbers for organizers (section chiefs). All cards were laminated.

Accreditation cards were created making use of the IOF accreditation tool. A few flaws were identified when preparing the cards - e.g. size of PDF file might be too large to be received via servlet. Nevertheless, the whole IOF team was always ready to support and all accreditation cards were finished right on time. A special thank you goes to Henrik Skoglund, who spent a lot of hours supporting and developing new features of the accreditation tool.

To improve the IOF accreditation tool, the EO

13/ EVENT CENTRE AND EVENT OFFICE

team offers help with identifying flaws and discussing improvements. Therefore we suggest a joint teleconference of the organizers of WOC 2021 and the organizers of WOC 2022 responsible for the accreditation cards, together with the IOF representatives, in the beginning of 2022.

Accreditation cards were printed out only a few

days before the event, because the list of all attendees had been often modified. Therefore it is a good idea to have a few default cards with no information on them so that they can be finalized in an event centre with a permanent marker in no time. There was also a printer and a laminator machine in the Event Centre, so that additional cards could have been printed in a

few minutes.

13.5/ Good practice

- Separate lockable room for online TOM, where all the equipment could remain. Race maps (top secret material) were packed and stored in the same room. The keys were kept either by the national controller or the head of the EO.
- It is very sensible to keep the same EO opening hours throughout the event.
- Free fresh fruit and vegetables available in the team zone. There was also a coffee maker in the EO in arenas available. This was very popular, yet it has not affected the budget much.
- Separate phone number (SIM card) and cellphone for EO. Before the Event the head of EO had the EO SIM card in her private phone. During WOC there was a separate WOC phone with EO SIM card, which was used by different EO members according to actual needs.
- Enable later accreditation if possible, especially for the reunited forest and sprint WOC.



14/ VOLUNTEERS

305 VOLUNTEERS FOR ALL 7 DAYS

- Administration 14
- Arenas - building, parking, catering, service 78
- HR - accommodation, volunteers service, drivers for athletes' transport 45
- Sport 86
- Technology 33
- Marketing + Media 42
- Organising Committee 7

Local clubs as main source of volunteers + others from all regions of Czech republic (99% orienteering runners). Approx. 10% of volunteers cancelled their participation within the final two months (Covid reason, health reason, change of plans, etc.) - it is needed to have some replacements.

Volunteers got T-shirts or O-jerseys (also possible at a reduced price for buying), specially tailored bags from remains of clothing, produced in a sheltered workshop, and some sponsorship products (syrup, ham, magazine, reusable cup, etc.). Volunteers had accommodation, catering and transport paid. Because of Covid-19 no mass transport could be offered.

ACCOMMODATION

All together in one holiday resort (half-board). In the Arenas tent for volunteers - all that volunteers need during the day - catering, accreditation, information, relaxation zone, place for bags,

lost properties, special things - like sun lotions, raincoats, walkie-talkies, Covid protective tools, etc. offered. Catering offered from early morning to night (self-managed, only dinners/soup bought from external catering). All volunteers had their own cutlery, bowl, bottle/cup - ecological reasons.

COMMUNICATIONS WITH VOLUNTEERS

One year before the event - each month mail with

some news, curiosities, then closer to the event more frequent communication. E-mail as main source, secondary sources - Facebook group, Whatsapp groups for smaller groups of people in one section. Two online meetings before the event for all volunteers, two more for heads of sections. Handbook for volunteers - all information together - accreditation, accommodation, transport, food, maps of arenas, important contacts, staff distribution, etc.



15.1/ Accommodation

15.1.1/ Accommodation of competitors during the WOC

Already at the time of the candidacy, the centre of the race was considered with regard to possible accommodation. When choosing the Doksy location, the Bezděz hotel in Staré Splavý is basically the only hotel with sufficient accommodation capacity and conference halls. There are a number of smaller guest houses, several smaller hotels and then two larger hotels, which are more exclusive, and therefore significantly more expensive. The intention of the organizers from the beginning was to offer accommodation that is affordable even for smaller teams with a limited budget. At the same time, the organizers wanted to make sure that in the area around the Bezděz hotel, where there are many other guest houses and hotels, something like an Olympic village is created, where competitors can meet even after races or on days off. Unfortunately, this idea completely disappeared due to the coronavirus pandemic.

Because the WOC took place at the time when the school holidays begin, and there are also two holidays, it is as lucrative a date for the accommodation owners as New Year's Eve in the mountains. Therefore we booked the Bezděz hotel a few years in advance.

For the period before the World Championships (Euromeeeting, training camps), we offered accommodation directly through the organizing team, for the World Championships we chose the Sivek agency as a service partner. They booked sufficient capacity, both in the pre-arranged Hotel Bezděz and in other hotels and guest houses in the area. Competitors were asked to make an early reservation, the unoccupied capacity was then returned in the first months of 2021 to the landlords, who immediately offered it to ordinary vacationers. We assumed that some teams would arrange their own accommodation according to their habits and financial possibilities.

At the beginning of 2021, the capacity of the Bezděz hotel was sold out, including the dependence building. However, due to the coronavirus pandemic and related measures, some reservations were cancelled in weeks and months shortly before the WOC - some teams cancelled their participation in the WOC, some opted for other accommodation only for their team (strict bubble). Another cancellation came from delegates of the IOF conference, which was to take place during the WOC, but was cancelled due to the pandemic.

During the World Championships, food was offered in buffet form (unlike previous stays within training camps), which the competitors

evaluated positively. Some teams lacked a free of charge offer of water jugs during lunch and dinner. However, this service is not a common custom in the Czech Republic.

On some race days, the competitors returned to the hotel very late and at first it was difficult to catch up with dinner. The organizers operationally agreed with the hotel to extend the time for serving dinner, but for many competitors it was not comfortable to eat at such late times (due to the race schedule). The possibility of booking packed lunches was used only minimally.

The hotel also provided meals for the IOF clinic participants, which was originally intended to allow them to meet other competitors from other teams, but at the time of the Covid pandemic, this was not desirable.

The organizers tried to compensate for the weaker internet coverage in some parts of the hotel by offering an open conference hall with stable internet.

This hotel also provided facilities for an Event office, Covid testing, technical model and IOF Family and Media race.

In addition to the hotels contracted by the Sivek agency, the organizing team also provided short-term accommodation according to the requirements of the teams in the Jizera Mountains or Terezín.

15.1.2/ Accommodation of competitors before the WOC (Euromeeeting, training camps)

The original intention of the organizers was to use the Bezděz hotel for accommodation of teams also during Euromeeeting and training camps. As these activities were planned outside the main recreational season, very favourable prices were negotiated.

Unfortunately, the coronavirus pandemic did not allow us to organize the Euromeeeting in the original or on alternative dates. It should also be noted that accommodation services for recreational stays were banned in spring 2020, dismantled for the summer of 2020, and from autumn 2020, most hotels and guesthouses were closed until spring 2021. We thus negotiated an exception for accommodation within training camps, when their accommodation was legal on the basis of a confirmation of preparation for the WOC. However, the problem was to find a working accommodation, because until the government's dismantling, it was not worthwhile for accommodation providers to put their facilities into operation to be able to accommodate a small group. Initially, for example, it was not possible to use the Bezděz hotel, which was very expensive to operate due to its size. However, based on the requirements of the teams, we always managed to arrange accommodati-

on, although it was sometimes just before the planned stay (either because the teams decided only at the last minute whether to come or not, or because the accommodation providers were waiting for a change in government Covid measures to re-open their facilities).

However, this difficult situation allowed us to find new local accommodation providers and, for example, the accommodation in one large apartment house with higher standard in Staré Splavy was evaluated very positively by the competitors, where they had the opportunity to create microbubbles within the team and thus minimize the risk of infection. We managed to secure better prices here and many teams took advantage of it.

We provided other smaller accommodation capacities in the localities of the Jizera Mountains or the Bohemian Paradise.

15.1.3/ Accommodation for volunteers

Accompanying WOC Tour races for several thousand competitors were originally to take place during the WOC. Unfortunately, we were forced to cancel these races again due to the coronavirus pandemic. Accommodation in the large recreational area Poslův Mlýn in Doksy was provided for the participants of these races several years in advance. Volunteers were then to be housed in two adjacent smaller areas.

After the cancellation of the WOC Tour and in a situation where one of the planned facilities for volunteers was closed and the owner was forced to sell it in a difficult economic situation caused by the Covid, it was decided to move the accommodation of volunteers to the Poslův Mlýn complex. Last but not least, this should minimize the financial loss of the organizer for the unused area.

After the limited participation of spectators in the World Championships was allowed, the capacity of the complex was also offered for the accommodation of spectators. However, only a small number of spectators arrived from outside the region, so the capacity was used only to a very limited extent.

15.2/ Logistics

There were several key issues for the successful logistics of the entire WOC.

One of them was the provision of a sufficient amount of material that was either provided by our partner Suninvent or borrowed from the clubs involved in the participation. This was possible with a reserve, because the clubs have sufficient material facilities.

Of course, in addition to the material provided by the partner or clubs, it was necessary to purchase a lot of other material. And this material was provided on the basis of the requirements

set in advance by the heads of each section. In some cases, the requirements were considerably undersized, so it was necessary to procure some material operatively (e.g. tapes for attaching banners or tapes for marking an entry ban).

Another challenging task was to ensure a sufficient number of vehicles for the transport of material to each of the event arena. These vehicles were quite easy to secure thanks to the partnership of TUKAS. A bigger problem was securing the necessary capacity of minibuses for the IOF Clinic and especially for the transport of competitors from the quarantine to the pre-start points. The minibuses were managed to be provided literally at the last minute, both by renting from commercial car rental companies, but also by using the private vehicles of members of the logistics team.

The third key factor is the composition of the logistics team. The entire logistics team harmonized to near perfection in a short time. They all worked very selflessly and in more difficult moments they were able to substitute each other very quickly in all activities performed. Thanks to this, it was always possible to get all the material to the arenas in time, and after the end of the race to pack everything again very quickly and transport it back to the warehouse.

The schedule of transport of competitors was

also carefully prepared in advance, the minibus drivers always drove the transport routes on time, so there was no problem here either and the drivers managed everything without the slightest problem; it was not necessary to use the prepared backup drivers even once.

The logistics team also provided transport of lunches and, in some cases, dinners for volunteers to the arenas.

Two of the vehicles were slightly damaged during the WOC and although the organizers had taken out insurance, these damages could not be covered. This is certainly a lesson for us for the next event.

15.3/ Banquet

Organizing a banquet is one of the sad chapters of WOC. Although everything was prepared until the last detail, in the end everything became useless. The location was chosen from very prestigious places – Bezděz castle, ship, sailing on the Mácha lake or Houska castle. In the end we chose Doksy castle, mostly because of an important partnership with the town's government and the castle itself during the Sprint relay race. Its origin, Renaissance age, contributed to a theme of the banquet selection. Together with catering company KNL Liberec, we planned to offer traditional Bohemian meals. Performance of one of the most praised Czech

renaissance bands, Bohemian Bard, was arranged and as a midnight surprise, dancers with fire should have arrived. Generally, our plan was to make it different from classical banquets, so we thought about unconventional entertainment as well. Guests would have had an opportunity to try middle-ages disciplines like for example archery. Few numbers to sum it up: 50 organizers (about half of them volunteers) were supposed to take care of around 250 guests. Our budget was supposed to be around 150 000,-CZK.

What we regret the most, is not appreciating people's wasted energy. According to IOF, having a banquet was inconceivable from the very beginning. Our organizing team did not receive this kind of message, so we kept the preparation going until the final decision on 17th June, only 21 days before, where almost everything was already prepared. Reasons for the cancellation were of course serious. The risk of COVID-19 spreading among runners was obvious, but on the other hand, according to the Czech government, this type of event, outdoor and under 500 guests, was legal and an interest from runners was not marginal. The decision came from IOF presidium directly and our prepared scenario with bigger gaps between guests and other preventive measures went unheard.

But all the preparation brought to our three-person team at least several new and interesting

15/ SERVICES

experiences. We planned the budget, dealt with catering company, planned an entertainment programme and so on.

15.4/ Transport

A special team responsible only for competitors' logistics was set up for WOC. This team was involved in both logistic and also sport sections, to have all needed information and to be able quickly react in case of any problems during WOC transportation. This set-up seems to be useful and recommended also for future events.

Team responsibility was focused only for competitors' (and coaches') transport during races. Main tasks were to provide transports:

- quarantine - prestart
- prestart - arena (coaches)
- arena - quarantines (and back after the race or between Q and F races)

This was the standard for all individual races. At relays (both sprint and forest), all the flow was held only in the competition centre and the transport was managed without cars, only by carrying luggage between quarantine and team zones.

All the transport was provided via small teams working on their line with detailed information about their routes and times:

- quarantine - prestart / arena - quarantine: provided by vans (9-person cars), 6 vans in the schedule + 1 back-up van + 1 back-up personal car
- prestart - arena (coaches and baggage transport): provided by 3 cars, mainly 4x4 personal cars able to travel on terrain tracks, also in a wet conditions
- 1 extra car for Covid transport if needed

For each race, a detailed time schedule was prepared, also with special rules for replacement by the back-up car in case of any problems. All drivers were briefed in a detailed programme every day and all the courses between quarantine, prestart and arena were tested by the whole team the day before the race.

Approx. half of the cars in this section were private cars of volunteers, the second half was ensured via car rental. In the future, all cars (vans for people transport) should be ensured via car rental to have the same standard and one image-line of WOC transport.

The requested Covid rules (face masks for everybody in the car etc.) were followed during the whole WOC.

There were no major issues during WOC in the competition transports.

15.5/ Ceremonies

First of all, we would like to thank the spectators for enduring and creating a great backdrop for all the ceremonies, despite the late time of their holding!

Only official IOF medals and diplomas were presented during the medal ceremonies. During the flower ceremonies, in addition to flowers that were grown organically, unique medals were presented, which carried the tradition of glass and metal typical of our region, and the prizes from WOC 2021 partners. The prizes and flowers were handed over during the ceremonies by representatives of the IOF, representatives of the Czech government, local governments, partners and also guests who were former successful representatives of the Czech Republic at previous championships. Thanks to the improvement of Covid's situation, the opening ceremony was held with a traditional flag display.

Flower ceremonies must be tuned to the television in advance if they are to be part of a live broadcast - accurate timing is very important here, but this did not always succeed, for several reasons.

15/ SERVICES

CEREMONIES SCHEDULE:

July 3rd - Sprint Q+F, Arena Terezín	5:20 p.m. Flower Ceremony
July 4th - Sprint Relay, Arena Doksy	7:35 p.m. Flower Ceremony
July 4th - Arena Doksy	7:45 p.m. Medal Ceremony Sprint + Sprint Relay
	8:00 p.m. Opening Ceremony
	8:45 p.m. Concert
July 6th - Middle Q+F, Arena Smržovka	8:20 p.m. Flower Ceremony
	8:30 p.m. Medal Ceremony
July 8th - Relay, Arena Heřmánky	8:15 p.m. Flower Ceremony
July 9th - Long, Arena Heřmánky	8:00 p.m. Flower Ceremony
	8:15 p.m. Medal Ceremony Relay + Long

The original plan was somewhat different, as it was planned to combine the WOC and WOC Tour ceremonies. For example, the Middle Medal Ceremony was originally considered for a day later (rest day) with an accompanying concert in the park of the castle in Doksy. After the cancellation of the WOC Tour, the programme was modified.

15.6/ Medical care

Medical care was coordinated with the regional hospital who knew the information about the races. During the sprints, first aid was provided by 2 paramedics from the organizing team and a total of 15 treatments were performed (mostly wound treatments). An ambulance with a doctor and an ATV for off-road driving were also present in the arenas for the forest disciplines. 24 treatments were performed on the middle distance, 22 treatments during the relay and the long distance. A total of 61 treatments were performed for WOC 2021, 3 wound sutures, 2 infusion therapies. Two competitors were sent to the hospital for examination. Competitors appreciated the scope and quality of care provided.

15.7/ VIP

In the VIP section (big tent with wooden flooring) organisers installed several bar tables, 5 big tables

and around 40 chairs. 2 functional TV screens were enough for the GPS tracking and live results. Also there was a variety of snacks: different kinds of sandwiches, muffins, pies, dried meat and syrups from the sponsors, fruits, coffee machine, hot water and tea. During the day there were a maximum of 30 guests (sponsors, IOF family, delegates) and 3-4 people were enough to serve all of them. Unfortunately, Covid restrictions were not kept properly by some of the delegates, especially the IOF President, even though the organisers had provided masks, respirators and disinfection right next to the entrance.

16/ SUSTAINABILITY

During the races, the organizers tried to carry out as many activities as possible in a sustainable way and the spectators were also motivated to behave in a sustainable way. **Waste** was sorted (paper, plastics, biowaste, residual waste), returnable **back-up cups** were used for refreshments, and vegetarian and **vegan dishes** were also offered. Many printed materials were printed on **recycled paper**, many of which were only available in **digital form** (web, mobile application WOC 2021). Drivers were asked to fill their cars, and the possibility of using public transport was offered. A number of **reusable materials** were used during the races (signposts, tent marking, advertising). Flowers from an **organic florist** were handed over at the flower ceremonies, and the volunteers received back-packs made from **old fabrics**, which were provided to us by Czech orienteering runners themselves and which were sewn in a local sheltered workshop. After the races, everything was always perfectly tidy to the satisfaction of us and the landowners.



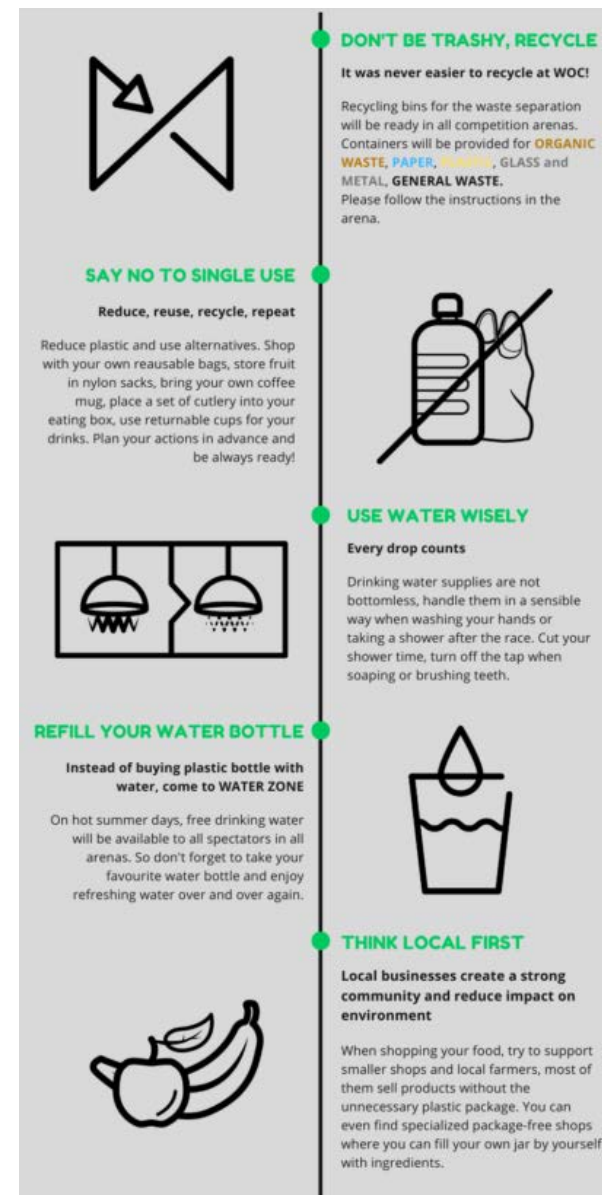
WASTE NOT, WANT NOT
Think before you buy, waste and trash
Our life is full of choices. Make them consciously and consider consequences of your behaviour before another print, purchase or waste. It's the little things that matter the most.

TRANSPORT YOURSELF SUSTAINABLY
Crowded car, happy nature
Commute together by bus, strengthen your muscles riding a bike, go on foot, or give other orienteers a lift to the competition arenas and your carbon footprint will decline rapidly.

USE WOC2021 APP
And get all information needed straight to your phone
The original mobile app invented for WOC 2021 with useful information and latest updates will help us to reduce the amount of unnecessary printed materials and you can check split times easily wherever you are. In case of technical obstacles, our volunteers will be ready to help you.

MAKE YOUR NEXT MEAL PLANT-BASED
You and the planet are what you eat
Reducing your meat consumption and choosing a plant-based food is a good way to lower the level of greenhouse emissions. Our buffet will offer delicious fresh meals containing locally grown ingredients and fair trade products. Rich in nutrition, sustainable, healthy and plant-based if you want.

PAY BY CARD
Using modern technologies
Apart from paying by cash, also payment by card will be available in WOC buffet, fan shop, etc. Furthermore, we are discussing sending online-based bills, so stay focused!



DON'T BE TRASHY, RECYCLE
It was never easier to recycle at WOC!
Recycling bins for the waste separation will be ready in all competition arenas. Containers will be provided for **ORGANIC WASTE, PAPER, PLASTICS, GLASS** and **METAL, GENERAL WASTE**. Please follow the instructions in the arena.

SAY NO TO SINGLE USE
Reduce, reuse, recycle, repeat
Reduce plastic and use alternatives. Shop with your own reusable bags, store fruit in nylon sacks, bring your own coffee mug, place a set of cutlery into your eating box, use returnable cups for your drinks. Plan your actions in advance and be always ready!

USE WATER WISELY
Every drop counts
Drinking water supplies are not bottomless, handle them in a sensible way when washing your hands or taking a shower after the race. Cut your shower time, turn off the tap when soaping or brushing teeth.

REFILL YOUR WATER BOTTLE
Instead of buying plastic bottle with water, come to **WATER ZONE**
On hot summer days, free drinking water will be available to all spectators in all arenas. So don't forget to take your favourite water bottle and enjoy refreshing water over and over again.

THINK LOCAL FIRST
Local businesses create a strong community and reduce impact on environment
When shopping your food, try to support smaller shops and local farmers, most of them sell products without the unnecessary plastic package. You can even find specialized package-free shops where you can fill your own jar by yourself with ingredients.

17/ WOC CLINIC

The WOC Clinic is a project of the IOF to help smaller and newer orienteering nations with participation at the World Championships, to teach them how to achieve excellence and the necessary steps to provide support services to athletes during peak events.

The WOC 2021 clinic was attended by 10 participants from 8 nations. Some of them with none or limited experience with forest disciplines.

Zoran Milovanović was the head of the WOC Clinic, while the organizers provided a women's coach Martina Čečková, who was in charge of the agenda of IOF coach Ingrid Okkenhaug.

17.1/ Division of tasks and responsibilities

Before the event: Julie Mokra (WOC team), was responsible for all communication with Zoran Milovanović from IOF and on-site arrangements, including accommodation selection, transport and mediating communication with authorities (visa invitation).

Zoran Milovanović (IOF) was responsible for organising the selection of candidates, communicating with them and assisting with the preparation and application of the visa and the necessary administrative procedures in Eventor.

The years 2020-2021 were heavily impacted by local and international restrictions due to CO-

VID-19. Impact on the preparation of the IOF Clinic:

Two selected candidates from Colombia were unable to enter the Czech Republic.

Complicated transport and additional costs for several participants and organizers (testing).



17.2/ During the IOF Clinic and WOC event

The group arrived on 29 June and stayed in Jestřebí near Doksy. They attended various training sessions, often twice a day, and evening sessions with coaches throughout the two days before the official WOC events.

17/ IOF WOC CLINIC

The IOF clinic programme is the subject of a separate IOF report.

From 3 to 9 July, all athletes participated in all WOC individual events. They left Jestřebí in the morning hours of 10 July.

The WOC IOF Clinic team had three members throughout the event, as several participants had no previous experience in forest disciplines and for safety reasons the organisers provided

assistance during the training sessions. In addition, the team provided general assistance (first aid, laundry, equipment purchases, etc.) throughout the stay due to the restrictive measures of COVID 19.

The organisers of the 2021 WOC were obliged to cover the basic costs during the stay in Jestřebí, namely food, transport and half of the accommodation costs. The WOC IOF Clinic organisers

were also responsible for communicating newly emerged issues throughout the event with the other WOC sections.

The original idea of the organizers was that they would provide accommodation, food, transport to training and event arenas for the participants of the IOF clinic. However, we did not anticipate that we would have to provide coaching supervision, analysis after training, etc. We originally expected this from IOF representatives. However, we responded to the situation and provided everything necessary for the participants.

The participant evaluation questionnaire is the subject of a separate IOF report.

Recommendations for future WOC organizers where simple preventive measures can be taken:

- Pay attention to the different experience levels of the participants. Every athlete has a different main discipline and the performance in other disciplines can vary significantly.
- Be prepared to provide basic equipment for injury prevention - taping, minor injuries, etc.
- Be aware that some participants cannot use credit cards and are only able to use cash, which they occasionally need to exchange. The same applies to mobile phone communication - no roaming or limited services were available for several participants.



18/ SPECTATORS

Originally, the arenas were planned for the participation of 5,000 spectators, of which about 2,500 would be participants in the accompanying WOC Tour races. Due to the need for li-

imited entry to the arenas (1 spectator per 4 m² agreed with the Regional Hygiene Station in Liberec, which corresponded to the capacity of 1000 spectators for sprint and 2000 spectators



for other races), the entrance fee to the arenas was introduced at CZK 100/spectator/day (children up to 6 years free). The TicketPortal.cz sales portal was used for this purpose, where we were able to follow the current development of ticket sales well.

At the entrance to the arena, the validity of the ticket was checked using a mobile app, and for each day, the spectator received a marking bracelet of a different colour so that he could return to the arena without having to check the ticket. Total sold:

- 443 tickets for sprint
- 719 tickets for sprint relay
- 549 tickets for middle distance
- 641 tickets for relay
- 344 tickets for long distance

The spectators could cheer right next to the race corridors, watch the big screen with a TV broadcast. Catering was available, there was a fan shop with souvenirs, other sellers of sports equipment, orienteering maze, WOC photo frame.

19/ PARTNERS

The title partner of WOC 2021 was Nokian Tyres, which is an IOF partner. The organizers collaborated with two different partners and partnership:

- state institutions
- commercial partners

19.1/ State institutions

State institutions were essential partners for organizing WOC 2021. Their support was not only financial, but absolutely crucial in organizing the race in technical matters, cooperation with the police, permission to race or providing an accompanying programme. The main state institutions were:

- National Sport Agency
- Czech Tourism
- Liberec Region
- Towns: Doksy, Dubá, Terezín, Smržovka, Jablonec nad Nisou
- Other: Technical University of Liberec

19.2/ Commercial partners

The commercial partners cooperated in securing various activities - arena production, logistics, media activities, ensuring a drinking regime, but also in the promotion of the entire championships. The aim was to work with companies in the region, which in many cases happened.

MAIN PARTNERS

Kitl, Konrad, Czech Mint, Czech ergonomics association

MEDIA PARTNERS

ČT sport, RUN, Deník.cz, O-News.cz, Svět běhu, Čtyřlístek, Český rozhlas Sport, Český rozhlas Liberec

OTHERS

Tukas, O2, O-RUN, OCAD.com, Sportobchod.cz, Lucifer, Mountent, Starnet, ČEZ Foundation, SportIdent, Minerals 70, NoVinárna, Sivek Hotels, Toi-Toi, SunInvent, Žaket and Dřevodělci.



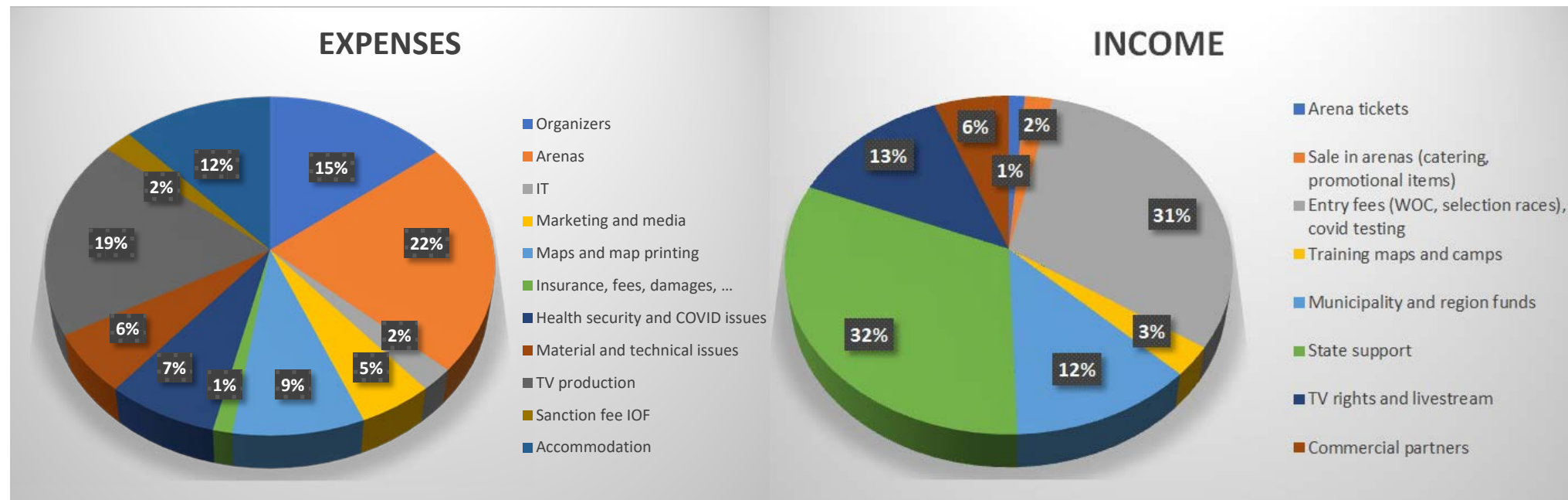
20/ ECONOMY

The budget has been changed several times. This was caused by several important factors:

- adding sprint disciplines
- increased costs of Covid measures
- cancellation of Euromeeing
- cancellation of WOC Tour
- increased costs for providing accommodation and meals for the organizers

All items were refined during the years 2019 - 2021. The biggest intervention in the budget was the Covid and everything related to it (especially the cancellation of the WOC Tour).

Expenses	20,50 mil. CZK
Incomes	18,28 mil. CZK



21/ FEEDBACK

Most teams very much appreciated the possibility of training camps and especially reasonable prices of training maps. We think that this step greatly reduced the „black market“ with OCADs. The vast majority of teams bought them, extremely small teams usually participated in training camps of larger ones.

A big thank you from the teams was also given to the Covid team, which all the time tried to reduce the organizational difficulty of the preparation of training camps and the arrival of the selection races and WOC 2021 itself. All the procedures connected with the arrival to CZE were demanding, however according to the participants it was realistic to come and do quality training almost without limitations (from the sport perspective) even in times of hard lockdown.

The online Team Officials meetings, which saved the coaches time, were rated as comfortable. According to the responses, the number of questions were the same (sometimes more) than usual. When looking for a solution for a question, the organizers could simply take a break, consult with the microphone turned off and immediately announce the agreed answer.

The sprint race was found to be very nice. The unusual area of the military fortress with the absence of traffic and people was especially appreciated by the competitors, who could run at full speed with the certainty that there would

be no collision. However, it is clear that not in all sprint terrains can this be ensured.

One of the few issues to which we received negative feedback was the quality of the plastic cover of the maps used for the relay and long distance race. See the more detailed explanation in Sport section.

Another point that is at least questionable for

the future is the evening time for relays. It's possibly an interesting time for the TV viewer. On the other hand, the men's race in particular was affected by bad weather combined with night-fall. A large proportion of the competitors ran with a headlamp, which is not ideal for the World Championships. A lot of competitors complained about this.



Title Partner



Main institutional partners



Main partners



Media partners



Institutional partners



We support



Official suppliers



Main organisers

