



Foto: Jan Simonsson



Nokian Tyres World Orienteering Championships

August 20 - 27th 2016
Strömstad - Tanum, Sweden

FINAL REPORT



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Foto: Mats Blom

Organising Partners



Title Sponsor



Exclusive Partners



Main Partners



Partners



2. Introduction

Where it all began...

The thoughts of arranging WOC in Bohuslän-Dal was in the minds of a person after O-Ringen in our district back in 2003. This idea and dream he tried to sneak into more people's minds.

- This we must do this again, but then even bigger – the World Championships of Orienteering! Next time Sweden applies we will be ready and we will be the organisers!

Seeds are sown randomly; thoughts of the future are set in people with the willpower to make things happen, viable thoughts growing stronger and stronger. It's in this spirit the preparations start without really knowing when or where to fulfil them. A group starts by looking at championships organised around the world from different angles. They travel as participants, run public courses, follow bulletins and home pages to be prepared.

Those thoughts set nearly two decades ago have now become reality. Imagine what the power of a small seed sown in the minds of people can create. Sweden and Bohuslän-Dal have brought the sport of orienteering into the future in a way no one would think possible so long ago...

WOC 2016...

The 33rd World Orienteering Championships were held in Sweden from 20th to 27th of August 2016. The Event Centre was situated in Strömstad and the competitions were held in the municipalities Strömstad and Tanum.

The WOC 2016 organisers were host of two World Championships, FootO (WOC) and World Trail Orienteering Championships (WTOC).

Swedish Orienteering Federation (SOFT) assigned the responsibility for the organisation to the club WOC 2016 Bohuslän-Dal, that had been formed just for the WOC event. This club are 19 clubs from the district Bohuslän-Dal. WOC 2016 Bohuslän-Dal carried out the event with great support from the municipalities Strömstad and Tanum. Additionally, the organisers could count on competent help from orienteers from clubs from other places in Sweden.

2.1 The objectives, targets and vision of the organising committee

- **Winning the organiser's championship of championships**
- **Wild Open Challenge**
- **Effective budget control**
- **Environment diploma**
- **50 or more participating nations.**
- **Live TV-broadcast in Nordic countries**

Winning the organiser's championship of championships

-The participating athletes, leaders, spectators and representatives of international federations will feel that they had an experience far beyond all expectations..!

This was our ambition in all our work, in all communication with our volunteers and providers. Perhaps the ambition was too high in such a huge project as WOC, but we certainly tried. It's not easy when there are so many people involved, so many wishes and the whole world is watching - then nothing can go wrong. WOC 2016 really did their best to achieve the vision where we have had the opportunity to influence.

Wild Open Challenge (WOC slogan)

- **Wild** is merely an acronym for the exciting nature inland and along the Bohuslän coast. Taming the wild is what competitors will need to do to be successful in their goal of winning the gold here
- **Open** represents the hearts and minds in the towns of Strömstad and Tanum welcoming competitors, spectators and officials to this beautiful corner of Sweden. But open also represents the visibility to be achieved for the sport of orienteering globally.
- **Challenge;** isn't that what we all strive for? Challenging terrain and challenging orienteering, but also our own challenge to make this the best world championships ever both in and out of the forest

Effective budget control

WOC economy responsibilities have had very good cost control all over time for the project. WOC financial statements ended with a small profit. We had difficulty getting bigger sponsors with cash to the event, what however helped in a big way was all material sponsorship. WOC costs a lot of money and we had not been able to make ends meet if we had not arranged the Rocky orienteering circus. Rocky Orienteering Circus - open orienteering races for spectators.

In the preparations for arranging WOC organizers volunteers went on a study visit in which they themselves paid about 1.5 million SEK out of their own wallet.

Environment Diploma

As organisers we tried to reduce the impact on the environment and climate. However, an event of this size always effect the environment due to the amount of people coming to the event, the increased travel, food and waste management etc. WOC 2016 was certified in accordance with the environmental diploma, Svensk Miljöbas.

50 or more participating nations

The program for the championships was published in Bulletines and the finalized program here in Final Report. Start and result lists for WOC are found in IOF Eventor.

Live TV-broadcast in Nordic countries

WOC 2016 could be seen on TV in 91 countries. In Sweden there was approx. 1 million who viewed the competitions on TV during the WOC-week. All Nordic countries had live TV-broadcasting from WOC.

Final Report

The championships were held in accordance with the IOF rules. The competition rules for IOF Foot Orienteering Events from 1 January 2016 applied.

The areas were chosen and courses planned to conform to the technical requirement of each competition format.

The goal for the choice of competition venues was to show good arenas both for the competitors,

spectators and VIP/media. The competitions took place in selected venues around Strömstad and Tanum. The sprint final race took place in Strömstad, with a different start and finish location. The finish was on the "Skeppsbroplatsen" nearby Strömstad center. The middle distance race took place in Tanum. The Relay and the Long distance race took place in Buar, Strömstad East.

202 km² of terrain/maps was used for training and 48 km² were mapped for the WOC/WTOC-races and tests.

The terrains for the sprint were previous mapped. The terrain for middle, long and relay races were never mapped. For WOC, all maps were newly drawn. Two sets of maps with course details were submitted by surface mail to the IOF secretariat after the championships.

Objectives for the accommodation were to create good conditions for athletes (Athletes Village), media, VIPs and spectators. These would be located close to the competitions with short distances to the arenas.

The program for the championships was published in Bulletines and the finalized program here in Final Report. Start and result lists for WOC are found in Appendix 7.2 and for WTOC in Appendix 7.3 (links).

The purpose of the final report is to summarize the workload involved and to give advice to future organizers based on the experiences that were gained.

Thanks...

WOC 2016 Bohuslän-Dal would like to take this opportunity to thank the IOF and its member Federations for appointing them to organise this premier event in Orienteering. They hope that they have lived up to expectations, at least we believe in it for ourselves...

We also especially want to thank the advisors from IOF and SOFT and all others who made this possible, you all helped us in a positive way to make our dream a reality- WE MADE IT !

3. The Events and the Results

3.1 Programme

The official WOC were accompanied by a number of other events. There were 21 different competitions during the WOC-week. The details are later in this chapter.

WOC/WTOC/ROC-week Aug 20-28 2016

Date	WOC Events	WTOC	Rocky Orienteering Circus	Other events
Wed 18-27 aug				WOC SILVA Clinics
Saturday 20 aug	am pm pm	WOC Sprint Qualification Sprint Final Opening ceremony	ROC 1	
Sunday 21 aug	am pm am	Sprint Relay	ROC 2 Teomp0 Qual ROC 3	
Tuesday 23 aug	pm	Middle distance	Teomp0 Final	
Wed 24 aug	am pm		Pre01 ROTC Pre01	Pre General Assembly VIP/Media Race
Thursday 25 aug	am pm	Long Distance	ROC 4	
Fri 26 aug	am pm		WTOC Pre02 ROTC Pre02	General Assembly
Sat 27 aug	am pm pm	Relay	WTOC Relay ROC 5	Closing Ceremony
Sun 28 aug	am		ROC 6	

This programme was designed with the following specifications:

- The best possible spread of events for the athletes.
- To allow the Rocky Orienteering participants to conveniently watch all the WOC finals.
- To give media the best possibility to cover all WOC-events.

3.2 Venues and terrain | WOC

SPRINT QUALIFICATION:

Arena Strömsvallen, Saturday August 20th

Map scale: 1:4000, Contour interval: 2 m

Mapper: Maths Carlsson

Course planner: Göran Olsson

Terrain summary:

Urban area with some narrow streets, small forested areas and some areas of grass and lawns. Also hilly parts. Approximately 80% of the course lengths were on hard surfaces. Altitude 0-40 m above sea level.

Courses

	Lenght km	Climb.m	Controlls	Refreshment controls	Winning time	Maximum	Description size, mm
Women	3,1-3,2	60	16-18	-	13 min	50 min	110x45
Men	3,5-3,6	70	19-20	-	13 min	50 min	120x45

SPRINT FINAL:

Arena Strömsvallen, Saturday August 20th

Map scale: 1:4000, Contour interval: 2 m

Mapper: Maths Carlsson

Course planner: Göran Olsson

Terrain summary:

Urban area with some narrow streets, small forested areas and some areas of grass and lawns. Also hilly parts. Approximately 80% of the course lengths were on hard surfaces. Altitude 0-40 m above sea level.

Courses

	Lenght km	Climb.m	Controlls	Refreshment controls	Winning time	Maximum	Description size, mm
Women	3,6	80	20	-	14 min	50 min	124x45
Men	4,1	100	22	-	14 min	50 min	135x45

SPRINT RELAY:

Arena Strömstad City, Saturday August 21th

Map scale: 1:4000, Contour interval: 2 m

Mapper: Maths Carlsson

Course planner: Göran Olsson

Terrain summary:

Urban area with some narrow streets, small forested areas and some areas of grass and lawns. Also hilly parts. Approximately 80% of the course lengths were on hard surfaces. Altitude 0-40 m above sea level.



Courses

	Lenght km	Climb.m	Controlls	Refreshment controls	Winning time	Maximum	Description size, mm
Women	3,4	70	14	-	13 min	-	-
Men	3,7	90	17	-	13 min	-	-

MIDDLE DISTANCE

Arena Tanum,

Tuesday August 23th h

Map scale: 1:10000 Contour interval: 5 m

Mapper: Bo Herdersson

Course planner: Göran Olsson



Terrain summary:

Undulating terrain with a lot of areas of bare open rock. Detailed contours with both larger and smaller cliffs and reentrants. Marshes of varying size. Coniferous forest, mainly pine on the hills with stands of spruce and oak in the valleys. Mostly very good visibility and runability. Some areas of thicker vegetation and younger spruce forest maybe reduced running speed. There were only a few paths and smaller roads in the competition area. Altitude 40-150 m above sea level.

Courses

	Lenght km	Climb.m	Controlls	Refreshment controls	Winning time	Maximum	Description size, mm
Women	5,1	220	21	2*	35 min	120 min	125x45
Men	6,3	290	25	2*	35 min	12 min	150x45

LONG DISTANCE

Arena Strömstad East,

Thursday August 25th

Map scale: 1:15000 Contour interval: 5 m

Mapper: Maths Carlsson

Course planner: Göran Olsson



Terrain summary:

Undulating terrain with a lot of areas of bare open rock. Detailed contours with both larger and smaller cliffs and reentrants. Marshes of varying size. Coniferous forest, mainly pine on the hills and spruce in the valleys. Generally older forest with very good visibility and runability. However, the area includes a lot of heather and some logged areas and younger spruce forest which maybe reduced running speed. Some larger and smaller roads cross the competition area and a network of larger and smaller paths. Altitude 40-200 m above sea level.

Courses

	Lenght km	Climb.m	Controlls	Refreshment controls	Winning time	Maximum	Description size, mm
Women	11,2	540	18	4*	80 min	3 hours	115x45
Men	15,5	650	30	4*	95 min	4 hours	175x45

RELAY

Arena Strömstad East,
Saturday August 27th

Map scale: 1:10000

Contour interval: 5 m

Mapper: Per Bengtsson,

Maths Carlsson

Course planner: Göran Olsson

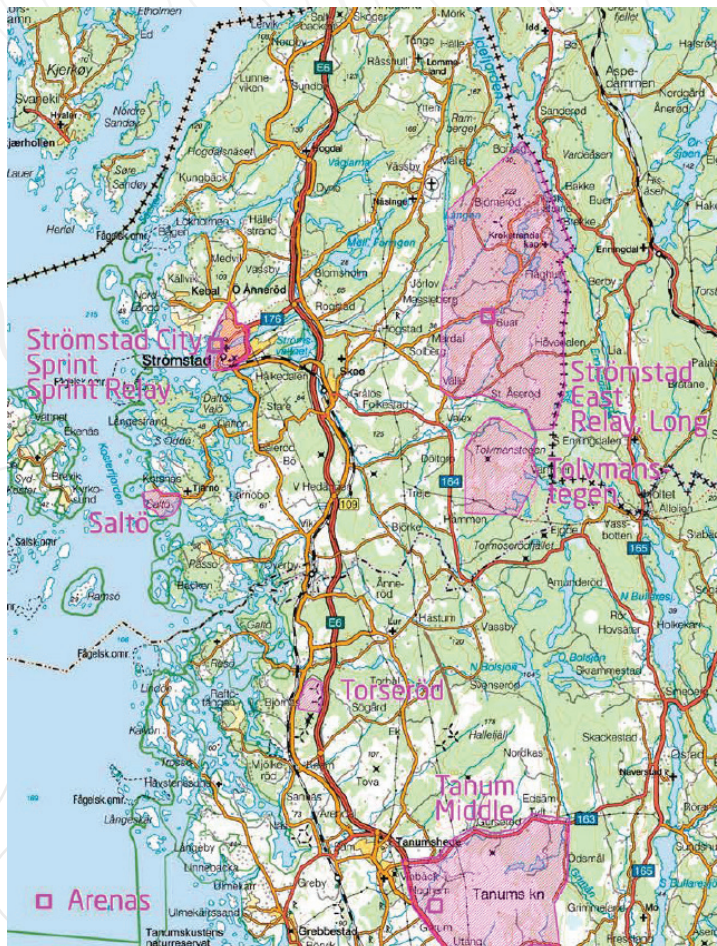
Terrain summary:

Undulating terrain with a lot of areas of bare open rock. Detailed contours with both larger and smaller cliffs and reentrants. Marshes of varying size. Coniferous forest, mainly pine on the hills and spruce in the valleys. Generally older forest with very good visibility and runability. However, the area included a lot of heather and some logged areas and younger spruce forest which maybe reduced running speed. Some larger and smaller roads cross the competition area and a network of larger and smaller paths. Altitude 40-200 m above sea level.

Courses

	Lenght km	Climb.m	Controlls	Refreshment controls	Winning time
Women leg 1	4,7-4,8	225	13	2*	33 min
leg 2	4,7-4,8	225	13	2*	33 min
leg 3	5,0-5,1	250	15	2*	34 min
Men leg 1	6,0-6,1	260	15	2*	34 min
leg 2	6,0-6,1	260	15	2*	35 min
leg 3	6,3-6,4	285	17	2*	35 min

Venues WOC and WTOC



© Lantmäteriet MS2014/05706

3.2.1 Venues and terrain | WTOC

Venue of Model PreO 1 including model for TempO was Saltö, a Nature Reserve in the Kosterfjord National Park. Same arena was also used for PreO 1. The terrain was pine forest with detailed curve lines and the finish of the course was shore terrain with bare rock. The PreO Model had 10 controls, and TempO Model had two stations, one with five tasks and one with six tasks.

The competition had originally 21 controls, but due to complaint the course setter and SEA decided to cancel one, because of not 100% accurate map.

The venue of TempO competition was Strömsvallen, sporting center of Strömstad. Qualification in the morning had two heats with four stations each, with five tasks on every station. The Final heat in the afternoon, to which the 18 first of the two heats was qualified, had five stations with six tasks on every station. The terrain was mixed forest and urban.

The venue for second Model, was Torseröd Windmill Park, the same venue as for Nordic Match previous year. There were 13 controls divided into two parts.

The venue for PreO 2 and Relay was Tolvmanstegen Windmill Park, terrain was mostly open with scattered pine trees, with bare rock and marshes and heather. The course of PreO 2 had 28 controls, and was divided in two parts. Part two, and also the Relay had more vegetation.

Relay was a three leg competition, with 21 controls, and every leg had to solve 7 controls each. First leg could choose which ever controls he/she wanted, second leg could choose of the remaining 14, and last leg would solve the remaining 7. Every leg had a TempO station after each leg. TempO station had five tasks.



3.3 WOC

Bulletins

The four bulletins that are specified in the IOF Rules were issued in the necessary time frame.

Bulletin 1, 2 and 3 appeared in internet version – bulletin 4 in internet and printed version.

The production of these bulletins (especially bulletins 3 & 4) required a tremendous amount of work and needed very good planning.

Participation

Representatives from 49 nations took part at WOC. Details are given in the table in Appendix.

Volunteers

WOC 2016 Bohuslän-Dal had approx. 800 volunteers during WOC-week.

Study Visits were made to WOC/WTOC in France, Switzerland, Finland, Italy, Croatia and Scotland.

Participants for these study visits invested 1,5 million SEK from their own wallet, to see and learn.

Start lists / Result lists

WOC: <https://eventor.orienteering.org/Events/Show/4865>

WTOC: <https://eventor.orienteering.org/Events/Show/4864>

The list of medal winners is found in the table below

WOMEN WOC

	Gold	Silver	Bronze
Sprint	Maja Alm	Judith Wyder	Anastasia Denisova
Middle	Tove Alexandersson	Heidi Bagstevold	Natalia Gemperle
Long	Tove Alexandersson	Natalia Gemperle	Anne Margrethe Hausken Nordberg
Relay	Russian Federation	Denmark	Finland

MEN WOC

	Gold	Silver	Bronze
Sprint	Jerker Lysell	Mattias Kyburtz	Daniel Hubmann
Middle	Mattias Kyburtz	Olav Lundanes	Daniel Hubmann
Long	Olav Lundanes	Thierry Gueorgiou	Daniel Hubmann
Relay	Norway	Switzerland	Sweden
Sprint Relay	Denmark	Switzerland	Sweden

WTOC

	Gold	Silver	Bronze
TempO	Lars Jakob Waaler	Marit Wiksell	Pinja Mäkinen
PreO Open	Martin Fredholm	Martin Jullum	Janis Rukšans
PreO Paralympics	Michael Johansson	Pavel Shmatov	Ola Jansson
Relay Open	Slovakia	Portugal	Finland
Relay Paralympics	Sweden	Ukraine	Finland

Jury WOC

Nermin Fenmen	TUR
Vincent Frey	FRA
Helge Lang Pedersen (Sprint)	DEN
Urs Hofer	SUI
David Rosen	GBR
Aron Less	HUN

Complaints and protest WOC

One protest on a missing punch in the Sprint Relay. The runner was disqualified by a unanimous jury.

Jury WTOC

Hannu Niemi	FIN
Anne Braggins	GBR
Karen Dennis	USA

Complaints WTOC

WOC had to cancel one control of 21 in PreO 1.

This was done because of not 100% accurate map.

Decision taken by WOC, the jury was not involved.

3.4 Other Events in WOC/WTOC

3.4.1 Rocky Orienteering Circus (ROC)

ROC was arranged during WOC week. There were 6 competitions in conjunction with the championships. These competitions are mandatory for a financial outcome for a high level event as WOC.

See the ROC stages in the programme below:

ROC | SPECTATORS EVENTS

Program for Nokian Tyres World Orienteering Championships and Rocky Orienteering Circus

20-28 Aug. Strömstad - Tanum, Sverige

Saturday aug. 20. WOC Sprint:

ROC 1, Strömstad, sprint held directly after WOC sprint qualification and in the same area. Walking distance to the opening ceremony and sprint final arena.
First start: 11.30

Sunday aug. 21. WOC Sprint relay:

ROC 2, Strömstad, middle distance in a wilderness area close to the town. Walking distance to the WOC sprint relay arena.
First start: 11.00

Tuesday aug. 23. WOC middle distance:

ROC 3, Tanum, middle distance adjacent to the WOC middle distance terrain.
First start: 09.00

Thursday aug. 25. WOC long distance:

ROC 4, Strömstad East, middle distance adjacent to the WOC long distance terrain.
First start: 10.00

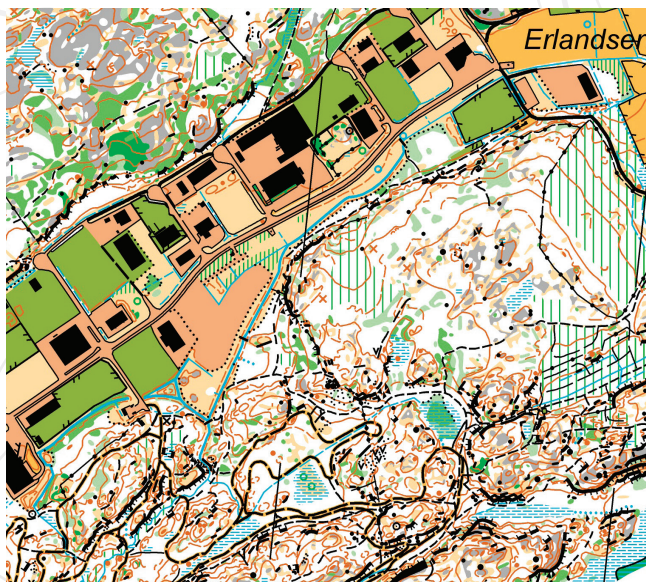
Saturday aug. 27. WOC relays:

ROC 5, Strömstad East, long distance in WOC long distance terrain. Follow the WOC-week's highlight: The relay final. **First start: 10.00**

Sunday aug. 28:

Rocky Orienteering Champion

ROC 6 och -final, Tanum, long distance in WOC middle distance terrain.
First start: 09.00



Map sample ROC 2 wilderness close to the town

Enter youth, elite and competition classes via Eventor by 10 Aug or recreational classes spontaneously on the day. More info:

www.woc2016.se/en/competitions/roc



Terrain photo ROC 2

The 6 stages of ROC had 12 290 starts during the whole week. The Open classes had 2 244 starts (including in the overall numbers above). Almost everyone of the competitors in ROC was also at the arenas, creating a fantastic party for the runners in WOC. We estimate 35 000 spectators at the arenas for the whole week.



Foto: Terje Berget

3.4.2 WTOC ROC

WTOC also had spectator races in conjunction with Pre0 1 and 2. They were arranged as mass starts after the WTOC Pre0 were finalized. 207 starts were made with competitors from 10 different countries



Foto: Mats Blom

3.4.3 General Assembly

The XXVIII IOF Ordinary General Assembly was held Friday 26 August, 2016
Venue Strömstad, Sweden, Laholmen Hotel

Election of the IOF Council

Leho Haldna	EST	President
Astrid Waaler Kaas	NOR	Vice President
Mikko Salonen	FIN	Vice President
Michael Dowling	AUS	Vice President
Owe Fredholm	SWE	
Vincent Frey	FRA	
Tatiana Kalenderoglu	TUR	
Niklaus Suter	SUI	
Maria Silvia Viti	ITA	
Ting Wang 'Dominic' Yue	HKG	
Laszlo Zentai	HUN	

Leho Haldna was elected President of the IOF and Leho Haldna proposed to the General Assembly that Brian Porteous be appointed Honorary Life President of the IOF. The General Assembly approved the proposal by acclamation.





Foton: Lasse Hogedal

3.4.4 IOF WOC/SILVA Clinics

Organising team

WOC: Lars and Gunilla Hogedal

IOF: Blandine Astrade with family and Jaroslav Kacmarcik

Conclusions and thoughts ...

Important that IOF and WOC-organizers clearly make up the direction and responsibility and who bears the costs. For WOC this was a cost we not were prepared for.

- The idea of supporting and helping small and emerging nations during the WOC is very good. It is otherwise difficult to participate in WOC if you do not have management resources etc.
- Participants should have reached a certain level of skill and achievement to participate.
- The Clinic should have a clear top level focus.
- Exclude TrailO of this activity. TrailO has very little with foot orienteering to do.
- A good idea to let coaches attend. They get an understanding of what creates top level orienteers.

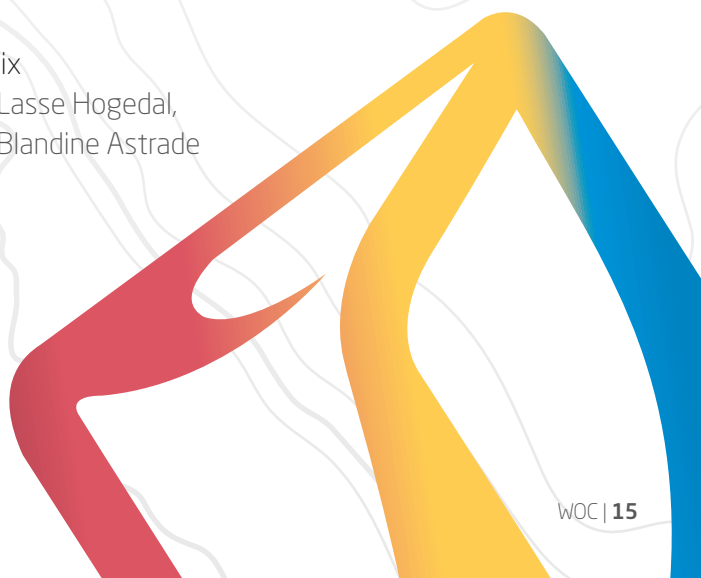
Our WOC officials were pleased with the outcome.

The accommodation at Daftö was great for accommodation. The program was fully subscribed but they felt that time still existed for rest and recovery. They felt that the group became a team despite different backgrounds and cultures. WOC have received very positive feedback and response from all participants. The date for IOF WOC/SILVA Clinics were 17-28 aug 2016.

Appendix

Report Lasse Hogedal,

Report Blandine Astrade



4. The Organisation

4.1 General Organisation

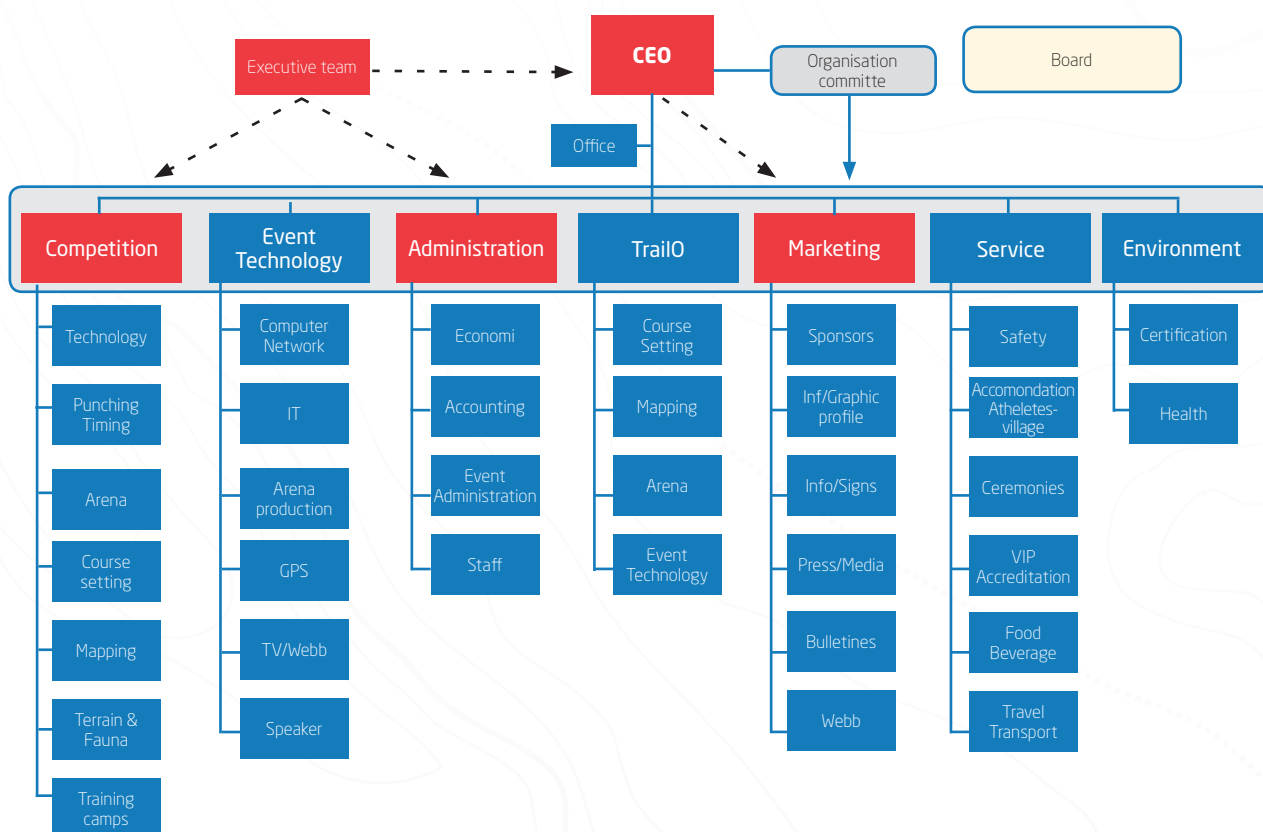
The organisation was formed and registered as a non-profit association.

Swedish Orienteering Federation assigned the responsibility for the organisation to the WOC 2016

Bohuslän-Dal that had been established just for that purpose. The operational level of the organisation was led by the Secretary General Mats Blom.

The WOC/WTOC and ROC competitions were united in WOC 2016 Bohuslän-Dal and lead by the Excecutive team. Each had their own organisation with different tasks.

Organisation WOC 2016



Board WOC 2016 Bohuslän-Dal

Björn Winberg	Chairman
Gunnar Persson	Secretary
Göran Sandberg	Treasurer
Eva Karlsson	Member
Gustav Wennberg	Member

Substitutes

Stig Niklasson
 Rune Sandin
 Beginning of work: February 2013
 1 meeting every 3 months
 24 meetings over time

Executive Team, 4 members

Mats Blom	Secretary General
Carl-Göran Strutz	Event Director
Lennart Börjesson	Economy Manager
Magnus Danielsson	Marketing Manager

Beginning of work: 2010

- 1 meeting every 3 months 2010-2014 (memorandum minutes)
- 1 meeting every 2 month 2015-March 2016
- 1 meeting per month: March 2016-June 2016
- 1 meeting every fortnight July-Aug 2016
- 2 meetings autumn 2016
- 26 minuted meetings

Organising Committee, 14 members over time

Mats Blom	Secretary General
Carl-Göran Strutz	Event Director
Lennart Börjesson	Economy Manager
Magnus Danielsson	Marketing Manager
Göran Berggren	ROC Event Director
Tomas Karlsson	TrailO Manager
Erland Svensson	Environment and Health Manager
Göran Olsson	Course planning WOC
Bengt Bivrin	Technology Manager
Torbjörn Hansson	Service Manager
Ann-Sofie Karlsson	TrailO Manager
Carina Reichenberg	VIP and Event Centre Manager
Bosse Sandström	Course planning WTOC
Anders Wassblad	IT coordinator

Beginning of work: 2011

- 1 meeting every 3 months 2012-2013 (memorandum minutes)
- 1 meeting every 3 month 2013-February 2016
- 1 meeting every 2 month February Aug 2016
- 2 meetings autumn 2016
- 24 minuted meetings

WOC2016 Bohuslän-Dal

Bohuslän-Dal Orienteering Federation formed the club WOC2016 Bohuslän-Dal.
Members of this association were these 19 clubs:

ORGANISING ORIENTEERING CLUBS:

Brattås CK
Bullarens Golf
Eds SK
Herrestads AIF
Idefjordens SK
Kvillebyns SK
Ljungskile FK

OK Gipen
OK Kroppefjäll
OK Roto
OK Skogsmunken
OK Skärmen
Stenungsunds OK
Stigsökarna

Stångenäs AIS
Svanesunds GIF
Uddevalla IS
Uddevalla OK
Åmåls OK

4.2 Mapping

Areas suitable for the WOC had been searched and investigated long before the WOC application. Both IOF and the national advisers visited the actual terrains and small samples of maps were produced for this purpose. When the areas finally were decided a quest for mappers was made and, after going through the offers, contracts were signed with the following mappers:

Maths Carlsson Sprint distances, Long distance
Per Bengtsson Relay (and some minor parts of Sprint Relay)
Bo Herdersson Middle distance

The time table for mapping was a matter of discussion all the time; mappers want their maps to be as actual and up-dated as possible, while course setters and organisers need time for preparations according to the maps. This was sorted out gradually, and in the end the maps were delivered with very high standard and in accordance with the standards. It should be pointed out that mappers, advisers, controllers and organisers must agree completely upon questions concerning dates for test samples, standards etc before the mapping starts – this was not entirely done this time and it caused delays, discussions and extra controls.

Map printing

The printing was not good enough, as pointed out in the SEA report. Precautions were taken out by the organiser, saving especially the Long distance from being a complete failure. A new printing was made for the Relay and no further problems occurred.

Map printing problems

The printing company has, due to new regulations for environmental protection, used a new colour since January 2016. Former, cobolt was used in the printing colours to reduce the drying time, but now there is no use of cobolt. Newly printed maps are more sensitive for folding and moist before they are completely dry. The theory is that the WOC maps had to short time to dry between print and use. This caused the problems with colour getting lost when the map was folded and more or less vanished when the map was wet. According to the Event Plan, the maps should have been printed earlier, but due to delays in the controllers work the print was made one week later than planned. In addition to this, it might also be the chemical structure of the paper that does not fit completely with new colour formula which also

makes the drying time longer. No other printers have reported this kind of problems so far. This new kind of colour, without cobolt, is now used by all Scandinavian printers who have the environmental protection license called Svanen.

Conclusions

- Make a strict and detailed agreement with mappers and controllers, including a time schedule for controls. Delays' in map controls might put a whole competition in danger.
- When a small area of typical terrain is mapped by the mapper, make sure that mapper and controllers have the same opinion about how the area should be mapped.
- Have a close cooperation with the printer; nothing in the printing procedure should be changed after the test prints have been approved. Pay attention to drying time and storing of the newly printed maps, require that the printer have tested and checked these parts of the procedure before printing the WOC maps.

4:2.1 Mapping | WTOC

All maps had equidistance of 2,5 meter and the scale was 1:4000.

The mappers were:

Göran Olsson Saltö, Tolvmanstegen and Torseröd

Maths Carlsson Strömstad City

4.2.2 Mapping surfaces

WOC-test middle	2,4
WOC-test long	9,2
Strömstad sprint, incl ROC 1	2,9
WOC middle	9,7
Strömstad East, incl ROC 4 and 5	18,5
Grebbestad sprint	0,5
ROC 2	2,3
PreO Nordic Match	0,4
PreO Saltö	0,5
Tolvmanstegen	1,4
Total WOC and WTOC (incl tests)	47, 8 km²



Foto: Stina Loman

4.3 Course Planning | WOC

Terrains for the WOC 2016 were in fact selected and planned (mainly by the course planner) several years before the WOC application. Also the main features about the courses were more or less clear long before the actual work begun. It was important that WOC 2016 should present terrains and challenges typical for this part of Sweden, but without using the most extreme parts.

A challenge for the organiser was to use best possible terrains for the WOC course and, using the same areas, giving the ROC competitions as good circumstances as possible. Many different solutions were tested and rejected before the final decision was made. In some parts the ROC competitions suffered from WOC taking the best areas, but this priority was made clear from the beginning.

Almost all of the course setting was made by Göran Olsson. He had a lot of conversation and cooperation with the advisers/controllers and he was also assisted all the way from idea to the final courses by test runners and some experienced ex elite runners, both Swedish and Norwegian.

The main idea for the WOC courses was to present different types of challenges, all origin from the typical west coast terrain. Referring to the competitors, this was made very successful.

It must be a matter of discussion for future events how to make the Long distance fair and yet exciting for spectators and TV viewers. Types of forking, changed starting order, start intervals – there are several objects that could have been changed to avoid groups of competitors performing the race together.

Conclusions:

- Long distance – fairness v/s excitement and TV-production, see above
- Course setting – it is advisable to have a group of course setters and a very strict time table for controllers and test runners
- It is essential to have elite (or ex elite) runners in the course setting organization

4.3.1 Course Planning | WTOC

Bosse Sandström was the sole course planner for all competitions and Model events. To his help he had one assistant Bengt Karlsson, whose role was to organize helpers when visiting the terrain. The planning started four years before the competition, which gave the SEA Libor Forst (CZE) and NC Bernt Gustafsson (SWE) time to check the courses properly. To his help he also had Knut Ovesen (NOR) as mentor. But still, to be the only course planner for all events is not to recommend, the stress level was too high, on the other hand the SEA had only one planner to discuss with.

The planners intention with the PreO courses was to give the competitor's two different terrains and problems, in fact it were three, because the course at Tolvmanstegen offered one part with no vegetation and little curve detail, and the other part had more vegetation and more interesting curve reading.

One short course with very detailed curve reading and fewer controls and short amount of time, and one long course with many controls and longer time.

The intention with TempO was, in contrast to previous WTOC, to have seemingly easier controls to fasten the time of answer, which led to wrong answers where the controls were trickier. This was something the competitors appreciated.

WTOC | COURSES AND CLASSES

Event	Map	Length	Climb	Controls
Model 1, PreO 1	Saltö	700 m	10 m	10 + 1x3
Model 1, TempO	Saltö	300 m	0 m	1x5 + 1x6
TempO qual.	Strömstad City	2000 m	30 m	4x5
TempO final	Strömstad City	2000 m	40 m	5x6
PreO 1	Saltö	600 m	10 m	21 + 1x3
Model 2	Torseröd	8 00 m	20 m	13 + 1x3
PreO 2	Tolvmanstegen	1700 m	40 m	28 + 1x3
Relay	Tolvmanstegen	1800 m	15 m	3x (7+1x5)

All courses are set by Bosse Sandström.

4.4 Training | WOC

The training opportunities prior to WOC 2016 were presented as two different offers: Official training camps (no 1-5) and maps with relevant terrains. The training camps were organised by the WOC-organisation in co-operation with local orienteering clubs. The WOC organisation also administrated sales of maps released for WOC training.

Official training camps:

No 1	August 2014	Strömstad-Tanum
No 2	June 2015 (W Cup)	Lysekil - Munkedal (also training opportunities in Halden, Norway)
No 3	August 2015	Strömstad - Tanum
No 4	April 2016	Strömstad
No 5	June 2016	Lysekil-Strömstad (including test competitions)

Training maps:

The organiser presented 7 different maps for training in relevant terrains, including all disciplines. In addition to this several OL-clubs in the Bohuslän-Dal district had maps for training, valued as relevant for WOC by the course setters.

Conclusions:

- The importance of offering relevant maps and terrains for pre-WOC training cannot be over estimated. As soon as the up-coming WOC organiser is decided by the IOF the interest from domestic and foreign competitors is significant. This includes national teams, OL-clubs and, not least, individual competitors. An early plan for training offers is essential, including officials taking care of contacts, organisation, sales etc.
- When possible, organize the training camps in conjunction with major events. Training Camp no 2, 4 and 5 were held directly after elite competitions (WC, Elite tests and test races) and the number of participants shows that this is favorable for the competitors. O-camp no 4 had 200 participants and no 5 had 300.
- Have test races as a part of the last official training camp before the WOC. Our test races, organised to be as similar to the WOC as possible, showed to give very important experiences for both competitors and organisers!



Foto: Stina Loman

4.5 Accommodation

Teams Athletes village Daftö Resort

VIP / IOF Laholmen

Media Källviken Holiday Village

Accommodation categories A, B, C and D were provided within the Daftö Resort, Laholmen and Källviken.

Level A €110-160

Level B € 60-90

Level C € 40-60

Level D € 20-40

Athletes Village

Daftö Camping Resort had the pleasure to provide the Athletes' village during WOC 2016. They provided excellent housing in houses just 5 km south of Strömstad, in a beautiful setting close to nature and the sea. You could also bring your caravan or mobile home, they also had plenty of space on their camp ground.

IOF/VIP Hotel:

Laholmen Hotel Strömstad City was the official IOF/VIP hotel and the venue for the IOF Congress

Media Hotel:

Källviken Holiday Village

Strömstad Spa

This hotel was outside embargoed area and therefore a hotel for both teams, media and VIP.

Latest date for booking through the organizer was March 31st 2016

At this date and time there was unfortunately not many teams and officials registered.



4.6 Arenas | WOC

The location and set up of arenas are one of the most important decisions of all in order to organise a High Level Event. So many different demands and wishes should be fulfilled; access to the best terrain, spectator areas with best possible views, infrastructure, parking places and lots more.

Finding suitable locations for the arenas was in fact the first subject and the first decisions taken by the WOC 2016 organisation, as this is crucial to all future planning. We wished to have the best possible arenas but also minimize the work – this finally led to the decision to have four different arenas for the six competitions. This also included the spectator races, extremely important as we wanted to have as many spectators at the WOC races as possible.

The Sprint Qualification arena was a large sports arena, with lots of space and within walking distance from the quarantine. No complicated constructions were needed, and most of the effort from the arena organisation could be spent on the Sprint Final and Relay arena. Yet the Sprint Qualification arena offered very good spectator services, and a large crowd followed the qualification races.

The Sprint Final and Sprint Relay arena was very spectacular, offering a beautiful view over the sea and yet proposing a demanding sprint area. This arena was very exposed to bad weather conditions, and considerable precautions were taken in case of hard winds.

The arena, being situated in the far end of the competition area regarding the Event centre and Sprint Final quarantine, created some difficulties with infrastructure and the solution was a bit complicated – though it worked out very well.

The Middle distance arena (Tanum) was even more spectacular with the very big antennas giving the place a certain atmosphere. The limited space created difficulties and several different solutions were discussed before the final decision was made. It proved to very successful, giving the spectators unique opportunities to follow the competitors without interfering with the course setting.

At last, the arena for Long distance and Relay was a common sight for orienteers; a large grass area. The lower part, place for the finish area, was to

wet to take the weights of heavy vehicles, and a considerable work was done to drain and strengthen the surface before building up the finish, podium, big screen etc. It was also a challenge not to make the arena too large (even if there was space enough), in order to have a tight and “close to the event”- feeling we tried to keep it as tight as possible. Even so, from some of the TV/photo-angles the spectators seemed to be too far away from the runners.

The arena organisers acted together as a group, though the arena managers had the main responsibility divided into three: Sprint, Middle and Long/Relay. This cooperation was essential for minimizing the efforts, use of equipment and transports. The number of skilled and cunning volunteers was big and this also added to the very successful arena concept.

Conclusions:

- Include speakers and TV producers in the arena planning from the beginning – they have a lot of experience and, above all, know what it will look like for the TV viewers.
- Don't take the final decisions about course settings (last controls, arena passages) until all matters about TV-productions have been settled – otherwise you will most certainly have to reconsider the course setting.
- Make a very detailed plan for material and transports – it will certainly save the organiser from a lot of troubles and panic actions on the event days.
- Have a sufficient number of arena volunteers, and put effort in finding special skills (constructors, electricians, heavy vehicle drivers etc).

4.7 Event Centre

The Event Centre was situated at Strömstad Gymnasium (Strömstad Upper Secondary School).



Foto: Strömstad Kommun

Opening hours was as below:

Wed 17 Aug	11-20
Thu 18 Aug	11-20
Fri 19 Aug	11-20
Sat 20 Aug	08-12 + 19-21
Sun 21 Aug	09-12 + 19-21
Mon 22 Aug	11-18
Tue 23 Aug	09-12 + 19-21
Wed 24 Aug	11-18
Thu 25 Aug	09-12 + 19-21
Fri 26 Aug	11-18
Sat 27 Aug	09-12 + 19-21
Sun 28 Aug	09-12

- Distance from Strömstad city centre: 1, 5 km.
- At the Event Centre two separate information desks, one for teams and one for Media/VIP.
- Team Officials Meetings and other meetings/ conferences were at the Event Centre.
- There was a sufficient internet capacity for visitors and organizer.

During the WOC, 10 volunteers were working in Event Centre to man the various reception desks and to accomplish the very many unplanned tasks that had to be undertaken.

The facilities for meetings during all WOC-week were very good. IOF/SOFT and WOC had a lot of seminars and meeting rooms suitable for these meetings.

The quarantine was also situated here in the schools sport hall.

Conclusion

- We hope that future organizers will have better conditions to manage accreditations than we have had.
- Nations that not had ordered various services took up too much time to manage, but with good will, positive attitude and joyful volunteers we fixed it, sometimes even far beyond our competitors expectations.
- It is important to have an Event Centre that is easy to reach to all who have reason to come here. Our school was perfect with all the facilities that existed here.

- There was a café at the Event Centre.
- Outside Event Centre a large space for free parking.
- Team leaders got their team bags at Event Centre, and collected GPS vests.
- Quarantine for the individual races were located at the Event Centre



Foto: Terje Berget

4.8 Anti - Doping

Doping tests WOC 2016 and WTOC 2016

Doping tests was ordered from Svenska orienteringsförbundet, SOFT (The Swedish Orienteering Federation) to the doping commission of Svenska Riksidrottsförbundet, RF (The Swedish Sports Confederation). The fee 140.000 SEK was paid by the SOFT. The tests were affected by persons certified by the RF.

The samples was sent to the doping laboratory Karolinska University Hospital Huddinge, one of the leading doping laboratories in the world at and the only one approved in Sweden according to the standard of WADA - World Anti-Doping Agency.

It was ordered 34 urinary analyses and 8 blood analyses. The competitors chosen to tests were decided by IOF and competitors chosen were decided at the day of each competition.

The doping tests were done on all the WOC competitions apart from the sprint qualification, concerning WTOC only the relay. The test was equally distributed men and women.

- Sprint Final: 7 urine samples and 3 blood samples
- Sprint Relay: 4 urine samples
- Middle: 9 urine samples and 3 blood samples
- Long distance: 6 urine samples and 2 blood samples
- Relay 4 urine samples
- WTOC relay: 2 urine samples

The doping areas were, aside from the WTOC, 100 -150 meters from the finish area. At the sprint final and relay and middle the doping area was in adjacent buildings. We had some problems not discovered until the competition days that the areas in the buildings were not strictly possible to close, but the problem was solved in an acceptable way. In the long distance and relay the doping control area was built by two tents and a separate toilet and it was a better solution. WOC recommend this solution for organizers of similar competitions. There was no doping area in the WTOC relay. The two participants from WTOC were transported by chaperones 20 minutes to the WOC relay area.

We had some trouble to find enough chaperones each

day as many volunteers was occupied by other tasks during the competitions, but we worked it out. It is important to consider that it could be a long stay for the chaperones, especially if the competitors must do blood samples. These competitors may rest at least two hours before testing. The chaperones found it unexpected interesting to meet and talk to the competitors.

All the tests were done in a correct and friendly atmosphere. There is a lot of bureaucracy and forms to fill in and juridical procedures. WOC are sure that both the doping commissioners and chaperones made a very good work in this important work to prevent doping in our wonderful sport, especially in the light and debate what is happening today in similar sports.

4.9 Safety - Security

WOC 2016 had a Security chief, whose task was to prepare and evaluate security before and during the World Championships in orienteering 2016.

The most important task for those who have security responsibilities for a major event, is that through the authorities and other stakeholders, who have knowledge of the security situation, create interfaces to work together to make a solid assessment and analysis.

WOC 2016 took the help of the police authority, where we provided information on the size and scope of the competitions. WOC gave the Police authorities information about how many and which different countries would be represented, and the expected spectator influx. With this information was provided a threat and risk assessment which was given from the Police to WOC. Based on this information, we together agreed on how we could handle the given information. In our case WOC judged the different assessment levels as low or no risk of interference.

Within the affected municipalities Sweden also have various forms of crisis groups that can be activated if any serious interference would occur. These groups were informed by WOC Security chief Torbjörn Hansson.

Before and during the competitions we hired a security company to guard the arenas and the facilities there. This was written in agreements with some of our providers.

4.10 Medical Care

The medical advisor of IOF proclaimed the necessity to have ambulance resources at the arenas during all the WOC competitions. In Sweden, voluntary organisations like Red Cross don't have these resources. To fulfil these demands we would have had to buy these services from private enterprises and we had no economic resources to fulfil this demand. We considered the medical security could be solved safely by the public organisation of urgency. The ambulances in Bohuslän is operated by the region of the Västra Götaland and in the north of Bohuslän in cooperation with the Norwegians rescue team, ambulances from Norway and the nearest acute hospital 30 km from the border. We had good cooperation with the rescue teams and ambulance from Strömstad and Tanum who could arrive to the arenas within 15-20 minutes.

During the 8 days of WOC competitions and the ROC (public races) we had no single need to call ambulance or the rescue units.

The First Aid was established in a mobile recreational vehicle, a convenience to have heat and beds if needed. We had full medical equipment, drugs and medical devices making for example to give intravenous injections, fluid if needed, defibrillator etc. The first aid unit was operated by volunteer physicians during all the 8 days. The first two days the mobile care unit was at the arena of the sprint qualification and ROC in the morning until 2 pm and in the afternoon, was moved to the arena of sprint final and sprint relay.

During the middle race, long race and relay the first aid was situated about 100 meters from the WOC finish. ROC finish area was located not in the same area but we decided not to have an extra First Aid at their finish.

As was said before there were no serious injuries neither in WOC nor in the ROC. In the sprint final and sprint relay we took action to avoid accidents between public, residents and runners in the city of Strömstad. We had volunteers guarding the streets especially in corners at strategic places in the city. Nevertheless, a woman was pushed to the ground by a WOC runner causing a wrist fracture but our medical

aid team was not involved in this accident.

In the sprint relay a steep bridge was built at the arena followed by a sharp turning and many relay runners felled down and causing some wounds but luckily no serious accidents. We find it important in the future to avoid similar structures in the arena where many runners are fighting side by side. At the arena of long distance and relay there was also a risky slope of the bridge but it was fixed by the arena group and prevented serious accidents.

All volunteers guarding the controls in the forest had some elementary medical equipment in case of accident.

The medical aid had much more work to do on the WOC and ROC days on Thursday, Saturday and Sundays. Most of the injuries were wounds for cleaning and dressing and some deeper wounds was sewed and some of these wounds needed antibiotic treatment and prescription to the pharmacy. We treated distortions of ankles and knees. We had many crutches available and could give to the injured. We had two suspected fractures sending to x-ray, handled by orthopaedic doctors but we have no response if it were fractures needed to plaster. One of WOC competitors in the middle race had a distortion of her ankle but it was handled by the medical doctor of the Swedish team and she was sent to the nearest hospital for x-ray or MRT.



Foto: Stina Loman

4.11 Information Technology | WOC

The following areas will be covered under this heading:

- Entry administration and accreditation
- Start list drawing
- Punching system
- Time management system
- Intermediate time reporting
- GPS tracking
- Speaker systems
- IT support to TV and radio commentators
- Data communication networks and internet connection
- Mobile telephone coverage
- Printer support
- Results management system

Entry administration and accreditation

IOF Eventor was used for all entry administration, including athletes, team officials, VIP and media. There were a number of bugs in the system with regards to the fee calculation, which caused some extra work for the organisers and IOF's Eventor support officer.

The setup of the data in IOF Eventor is more complex than a standard national event. A series of telephone conferences and good support from IOF were key to the success in this area. The production of accreditation cards was a major concern in the organisation. The official system (IOF Eventor) only gathers the data, but does not fulfil the complete needs of an organiser. We were unable to find a person inside the organisation with the competence to solve the problem. Åke Larsson from SOFT in the end built a basic tool in Excel to take care of the data from IOF Eventor and production could be done before the event with some manual interaction. The same tool was also used to produce accreditation cards in the event centre during the WOC.

Start list drawing

When the final date for submitting all names of the participating athletes was passed all entries were exported from IOF Eventor to an Excel database, "the Master database". The Emitag numbers were added to the database, so that it contained all the necessary information for the event administration. All start list drawings were done by means of macros in Excel, based on the entries in IOF Eventor for each

event. The macros were provided by IOF. We also used an alternative macro designed by Dimitri Miller. Start lists were exported to the punching system and the time management system.

Punching system

Emit touch free punching system from Emit AS was used for all events. Two numbered emitTags were allocated to each athlete for all events during the WOC. Every control had two punching units, which had to be placed at least 70 cm apart. This created larger control sites than a standard punching system would have done, which needs to be considered by the course planner. All punch units were verified by pre-runners before the first start. The punching was checked by means of the Swedish system OLA. The punching system was on the whole flawless. A handful of emitTags needed to be changed before the race due to malfunction. A small number of athletes were disqualified due to missing punches, but the majority of runners did not have any problem in performing and present correct punching.

The supplier Emit provided very clear guide lines on how to organise every step of the process. The punching system was used at some real events and test events during Spring of 2016 in order to train the organisation.

Time management system

The time management system used was SSF Timing from EQ Timing in Sweden. In the Sprint final a gate start was used to meet the time keeping requirements of IOF.

Intermediate time reporting

Twin-paired cabling was used to connect from the punching unit at the TV controls. During the long distance it became necessary with a workaround as the distance was too long (> 8 km). For all other controls GPRS was used. All equipment, except from the cables, was provided by Emit.

All connections were verified by the pre-runners prior to the first start.

GPS tracking

All runners were equipped with GPS units. The tracking service was provided by GPS Seuranta from Finland, who worked in close co-operation with the TV production team.

Speaker systems

The PA system was delivered by Ola Fransson (Ljud-OLA), the main supplier in Sweden for events like O-Ringen, Tiomila and 25-mannakavlen.

The speaker support system was CIS, included in the time management system from EQ Timing. The speaker also had access to the GPS tracking, as well as a monitor with the IOF TV production.

IT support to TV and radio commentators

The speaker support system CIS from EQ Timing was used. They also had access to GPS tracking.

Data communication networks and internet connection

The telecom company Telia was contracted to supply internet connection at all the arenas, except for the Sprint Qualification. Broadband fibre connections were available at all the arenas. We also contracted them to supply Wifi networks for the organisers, for media and for the general public. The media centres at the arenas were also allocated dedicated high speed data links from Telia, to be used to upload large files. The event centre at Strömstad gymnasium had a wifi network open to the public. Dedicated wifi networks for media and the organisers were set up, without the streaming restrictions in the open network.

Mobile telephone coverage

Telia was contracted to increase the capacity of the mobile phone network at the Tanum middle distance arena and at Buar (long and relay). Central Strömstad was considered to have sufficient capacity, given the number of visitors that visit the town in July each year. In the end, also Telenor added capacity to their network, at no additional cost for the organisers.

Printer support

Three large printers were hired for the event centre. One was allocated to the media centre and two were used by the organisers. Double-sided colour printing, both A3 and A4. One printer was allocated to the media tent on each of the arenas.

Two black-and-white printers were used on the arena for start list and result list production. Appr. 500 copies were printed of each start list per event.

Results management system

On-line results, including intermediate times from the TV-controls, were provided by means of an Emma client, provided through EQ Timing.

Result lists from the OLA system were printed every 10-15 minutes during the event and stapled to a wooden board for the spectators. Very few persons were actually using this service. Most likely they relied on the on-line results and/or the big screen. Official result lists were produced by EQ Timing based on the data in the SSF Timing system. They were then printed and handed out to the media. Official results were also uploaded to IOF Eventor. Split times were available on Winsplits.

Final words on IT

The IT organisation had the intention to use the World Cup event in June of 2015 as the full dress rehearsal for the WOC. Having experienced the problems that lead to the cancellation of the sprint event it was decided to open up for tender of a complete delivery of a system that would include punching, time management and intermediate times delivery to the TV production. This resulted in a change from SPORTIdent to Emit punching system, and from O-Ringen AB to EQ Timing for the rest. This was a key factor for the success of the event, as well as the support from SOFT in this area.

The IT organisation was not allocated to a specific organising club, as most of other areas in the organisation was. This meant that the team had to be recruited from many clubs and from many geographical locations. And this calls for a dedicated leadership with sufficient time and good management skills. This also calls for a clear definition of the area of responsibility and the interfaces to other parts of the organisation.

4.12 Ceremonies

The overall vision for ceremonies was to make them exiting and be remembered in a good way for all participants.

Opening Ceremony:

This was the “grand opening” of WOC-week. Our vision and goal with the first day was that both all the orienteers and locals would be surprised in a good way and excited for the upcoming WOC-week. In our thoughts WOC planned and booked a good entertainment band, The Haaks. WOC knew they would bring the heat up to max before the Sprint Finals. Haaks was really successful and the first part of the Opening Ceremony turned out to be even better than we hoped for.

The formal part of the Opening Ceremony was strictly held by the IOF Protocol Guide.

In order to do this correct WOC planed all the ceremonies in a minute schedule, where we wrote all names in the order they would have their speeches and followed the IOF Protocol Guide.

To represent all Nations WOC asked local children if they wanted to be in the ceremony. The children had one flag each and walked in in alphabetic order to WOC 2016 song “We made it”

WOC really underrate the fact of finding the right flags in right size. Finding flags to each country was harder than we thought. WOC borrowed the most

part from Norwegian Orienteering Federation (NOF), the local municipality and rented from a company.

Flower Ceremonies

All ceremonies was planned before, where WOC had IOF's guidelines as a template. The Flower Ceremonies was held at the arena after each finished race. This ceremony was the most hectic part of the ceremony job of all week.

It was always a lot of time pressure as it was supposed to take place as soon as the race was over. So there was an continual contact with TV, speaker and some people who was responsible for mixed zone, as they had all the interviews at Mixed Zone with the Winners/ athletes as soon as the race was over, doping Control as they wanted to test the runners directly after the race.

Lesson learned - you need to be strict and hard if the time schedule should work. TV is the most important and they want to show the flower ceremony in time for their feed, all the others will come afterwards.

The schedule was made including who's handing out flower, podium prizes and what Music is played. The minute schedule in guidelines was very helpful with planning all the ceremonies



Prize Giving Ceremonies (PGC):

The Prize Giving Ceremonies was held at the days there was no WOC competition, except for the last day. WOC planned the PGC according to the IOF's Protocol Guide and gave it to all involved. WOC had a pre-PGC that was held 45 minutes before the formal PGC, with some entertainments and interviews. It was appreciated with music and entertainment before the official ceremony started and it also attracted locals who were passing by.

For the medal athletes and those who were handing out the prizes WOC had the possibility to rent the lobby in a restaurant nearby. Here WOC had some fruit, snacks and drinks before the formal Ceremony was held. This was so the medal Athletes would feel good treated and a special moment taking a medal in WOC. And we could see that all athletes were there in time. WOC have had very good response for handling the ceremonies and it was much appreciated as well!

WOC had two Medal Plaza, one in City Park in Strömstad on Monday for Sprint distances. On Wednesday in Grebbestad for Tempo and Middle distance. On Friday it was held again in Strömstad City Park for Long distances and PreO. It was appreciated to have both FootO and PreO at the same time for PGC.

Saturday, the last day for the competitions, WOC had PGC and Closing ceremonies at the arenas for the event.

Athletes Party:

WOC had the Athletes Party in a gymnastic hall. We hired a Company that did all the lightning, the sound, a DJ who was playing all night and a restaurant that was in charge of the food. We build our own bar and had permission to sell alcohol. We started with the hall filled with tables and chairs, and as soon as people was finished eating we picked the table and by 11.00pm half of the hall was a dance floor. The party was supposed to finish at 2am but people was having so fun that by 2.30pm we had to turn the Music off and ask people to leave.

For the security there were 6 guards and 6 hostesses that had it all under control. The price for the party was 25 EUR and it included food (buffet) and a drink.

Conclusions:

Some extra tips from responsible Lisa Reichenberg and Frida Johansson:

- The same Group in charge for all ceremonies, it will be easier.
- Have it all planned so in case of something unexpected happening you all know how to handle it.
- You might be two (as we two) planning everything. But as closer you get, you need more help than you think.
- Try to plan and decide as much as to can as early as it's possible.
- Might be good to have younger people planning the Athletes Party so they know what the athletes want to have and not want to have.



Foto: Stina Loman

4.13 VIP-race

IOF/VIP/Media race

The "IOF/VIP/Media race" is an important event during a WOC and if the organiser together with IOF put enough effort into this event it can be an important showcase of our sport for the many interested partners. This event should include people from IOF, from media and from cooperation partners. Due to so many different target groups the organiser of the "VIP race" needs to offer courses for all kind of experiences. This year the "VIP race" was one part of a half day activity, including lunch, orienteering race, Swedish "fika" and the prize giving ceremony of the Middle Distance.

The goals with the VIP race were to give the participants a nice experience of orienteering for everyone in a lovely terrain and to give them some ideas of the future in orienteering. We chose Tanumstrand as venue thanks to an excellent restaurant to host VIP and the beautiful coastal terrain on courses with similar challenges as the WOC athletes experienced.

We offered five different courses with short and medium distances provided to suit all levels of experience. These courses the participants could download from the website of WOC 2016 and use the map in the smartphone or in the tablet. There was also a possibility to use the new app POP-IN to run one of the courses (Green 4 km). In the beginning and in the last part of each course the participants had to go through a maze built by fences and banners. All courses have one "Maze map" (1:200) and one normal Orienteering map (1:5000).

We also used the same punching system as WOC (EMIT touch free) and all results were showed live on a big TV screen. Split times were showed on the web site of WinSplit. In total 147 runners took part distributed as Green 2 km (16 participants), Green 4 km (1), Red 3 km (20), Black 2,5 km (35) and Black 4 km (75).

A short description of the courses

Green Courses, 2 and 4 km

Simple check points such as track junction, corner of open land, a clearing, a bigger hill or a house. A clear route choice between the controls, mostly along paths, tracks or roads.

This was a course for a person with none or very little experiences of orienteering.

Red Course, 3 km

The check points are usually beside the paths and roads into the terrain. One or two route choices between the controls, one of which can be straight through the terrain, while the other is a little bit longer on tracks or roads.

This was a course for a person with some experiences of orienteering.

Black Courses, 2,5 and 4 km

Small check points, such as a small re-entrant, a cliff, a small boulder or the foot of a hill. The route choices between the controls are usually straight through the terrain.

This was a course for an experienced orienteer.

Appendix

Bulletin IOF/VIP/Media race

All courses

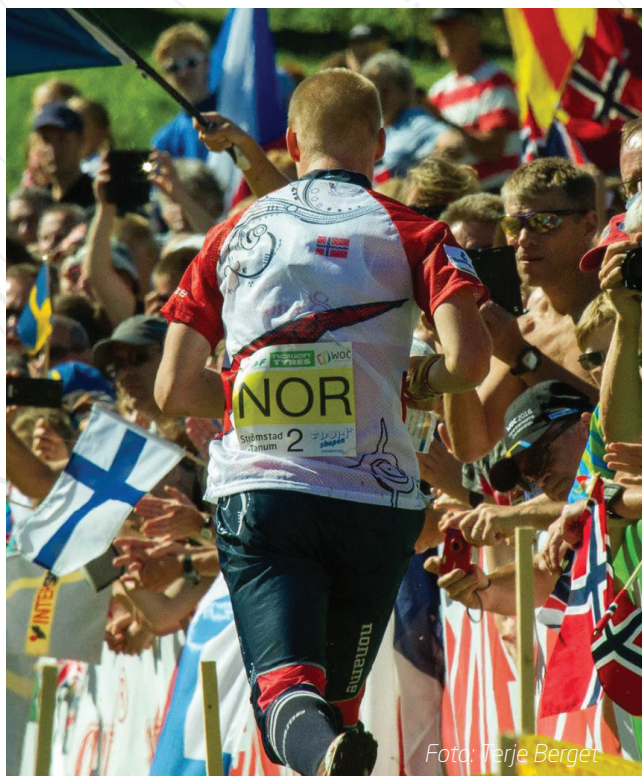


Foto: Terje Berget

4.14 WOC Office

A permanently staffed WOC-office was set-up 4 months prior to WOC. Apart from the normal work of an office, its initial tasks were to be the central contact for WOC. The office managed the entries for the teams with great support from volunteers in Economy staff. Office also helped teams to find accommodation. This was a particularly time consuming task. WOC Office was manned by two persons, Secretary General Mats Blom and clerk Malin Reichenberg



Foto: Carina Reichenberg

The office was situated in the middle of Strömstad. WOC had here very good facilities and was easy to reach for guests and volunteers. Also many persons living in Strömstad was visiting the office asking for information and how they could be a volunteer.

The office was the place for all meetings for the organisation committee and other meetings within the organisation prior to and during the WOC, and also the storage place for materials to be used during the WOC-week

Immediately prior to WOC the office prepared the accreditation badges and set-up the main Event Centre for teams in Strömstad Upper Secondary School. During the WOC, 10 volunteers were working in Event Centre to man the various reception desks and to accomplish the very many unplanned tasks that had to be undertaken.

4.15 Accreditation

All entries for accreditation were done by using IOF Eventor.
These were the instructions on IOF and WOC webpage.

- 1 If you do not already have a login for IOF Eventor, create that at:
<https://eventor.orienteering.org/register>
- 2 Upload your photo (passport size), follow the instructions given here:
<http://eventor.orienteering.org/MyPages/EditProfilePhoto>
or in the menu under My pages > Edit photo.
- 3 Fill in the application form for WOC 2016 at:
<http://eventor.orienteering.org/Events/Show/4865>

Event information: Nokian Tyres World Orienteering Championships 2016 and World Cup 2016 Round 3

Export to calendar Back

General information	
Name	Nokian Tyres World Orienteering Championships 2016 and World Cup 2016 Round 3
Organising federation	Sweden
Organising club	Bohuslan Dals Or
Status	entries opened
Date	20 August 2016 - 27 August 2016

Entry

All entries

VIP and media entry

Next entry deadline in 27 days.

Enter and/or order services

- 4 To achieve the right access, choose a category from the list on next page. NB: The organizer have the right to change the access if the application proves to be wrong.

ACCREDITATION CATEGORIES:

- | | |
|--|---|
| A VIP Officials: Member of IOF Advising Team, Event Advisers, Jury, Antidoping, IOF Sports director, National Controllers. | D VIP National Federations: National Federations president, National Federations Secretary General |
| B VIP IOF 1: IOF President, IOF Secretary General, IOF Assistant Secretary General | E VIP Guests: Organizers Sponsors |
| C VIP IOF 2: Member of IOF Council, IOF Honorary President, IOF Honorary member, IOF Commission member, IOF employee, IOF Partner and Sponsor, IOF Invited Guest, IOF Accompanying Guest, Future WOC organizers | F Media Photo 1 With international press card |
| | G Media Photo 2 No press card |
| | H Media Writing |
| | I Media Writing + Photo 1 |
| | J Media Writing + Photo 2 |
| | K Media radio |
| | L Media TV Team |

Conclusion

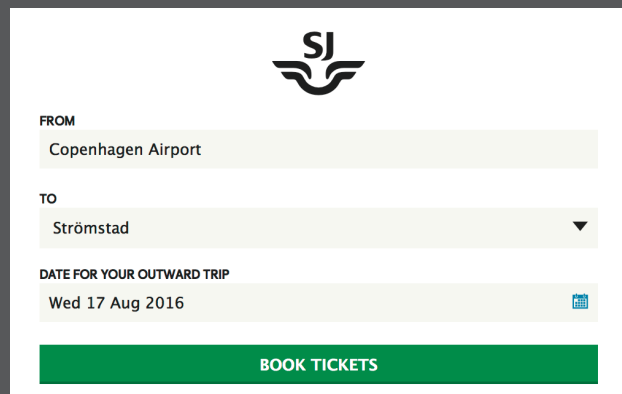
- The handling of accreditation for VIP/media takes a lot of time and caused us as organisers a lot of work.
- If possible, appoint a person solely responsible for this task and have good communication with IOF Office

4.16 Transport and parking | WOC

For travellers to WOC

WOC had a special offer for all spectators and competitors for traveling to Bohuslän and Strömstad-Tanum

Book train tickets with up to 10 % discount



FROM
Copenhagen Airport

TO
Strömstad

DATE FOR YOUR OUTWARD TRIP
Wed 17 Aug 2016

BOOK TICKETS

Use the form on our web page:

www.woc2016.se > Stay & Experience > Get here

... and you will be able to book train tickets with up to 10 percent discount via SJ (Swedish Railway Company).

NOTE! The local trains Gothenburg-Uddevalle-Tanum-Strömstad have fixed prices. Ticket prices for SJ Snabbtåg Copenhagen-Gothenburg and Stockholm-Uddevalle/Gothenburg starts at SEK 195 for 2nd class and SEK 295 for 1st class.

For competitors and team officials:

The quarantine for all individual races was situated at the Event Centre in Strömstad. All Relay quarantines were at the arenas. Teams could use their own transportation to the relay arenas and quarantines, mandatory routes were shown at WOC web-page.

The use of organizers' transportation from quarantine to drop off was mandatory (IOF Competition Rules 10.4) for Middle and Long Distance (time-table below), the competitors could choose departure time but it was the competitors' responsibility to choose a bus in time to reach the start in time.

Team officials could travel from quarantine to drop off, but were not allowed to return to the quarantine. At the drop off Team Officials should inform the organizer whether they wanted transportation to the arena or to the parking place at Event Centre.

Luggage and bags were transported to the Team Area at the arena continuously.

Transports:

(NB: no spikes shoes on the buses!)

Distance	Quarantine opens	Quarantine closes	Departure	Trevelling time to drop off	Departure intervall
Sprint Q	07.30	08.30	No transport		
Sprint F	14.30	15.30	No transport		
Sprint R	15.00	15.30	No transport		
Middle	09.00	11.30	09.40	45 min	20 min
Long	09.30	12.00	10.00	30 min	15 min*
Relay	12.00	13.45	12.00	30 min	Just on dep.

*10 minutes in the period of overlapping start-times woman and men

During the entire WOC-week we had good parking facilities at all venues for competitors, VIP/Media and spectators. For ROC 1-2 we also had bus transport to the arenas.

4.17 Environment, Climate and Sustainability

WOC will first introduce the ambition and overall policy for the event as presented to the public. Then we will report the items failed in the implementation and finally we will give suggestions what is needed to fulfil the impact orienteering sports important role in these issues.

Orienteering may be one of the sport activities that is best adapted to the environment. We are respectful of nature, where we train and compete. Orienteers are known to be engaged in protecting in the environment. This was our call to all competitors and guest and spectators during the event:

Please participate in a climate friendly way!

- Use public transportation and/or when driving a car, travel together.
- Use the bus between your accommodation and the arena.
- Don't buy bottled water.
- Bring your own bottles, cups, plates and cutlery.
- Please follow the waste separation instructions at the arenas and at your accommodations.
- Support climate carbon compensation by supporting Vi-skogen:

WOC | EFFORTS TO REDUCE CARBON FOOTPRINT

- There are special offer for train connections to Tanum and Strömstad from many places in Sweden, and from Copenhagen.
- At the car parking you will be offered carbon offsetting through donations to Vi-skogen, supporting tree planting in African Countries.
- The organizers will climate compensate all our journeys and the proceeds from cash deposits on cans and bottles will be donated to Vi-skogen.
- The event will use 100% renewable energy from hydroelectric, wind and solar power plants.
- At the arenas we will offer organic drinks, meals and vegetarian alternatives. The cups, plates and cutlery are compostable.
- Swedish tap water is of such a high quality that we will offer that in the arenas instead of selling bottled water.
- At the arenas, waste will be separated for recycling, and for composting to make biogas.
- Only biodegradable products are allowed in the showers.
- We offer free guided walks in nature preserves by the coastline and will hopefully also be able to show examples of how to combine forestry and preservation biodiversity

The most negative impact of environment and climate in our sport is the transports of people to the arenas by cars causing the rise of carbon dioxide. We failed to give useful public transport by buses. We had regrettably no support from the regional transport system - Västtrafik. We had no register where people coming to the events were staying. All accommodations for ROC were organized by the Tourist organisation, for WOC we had buses from quarantine to start and arenas. To estimate the need of public transport we could use Eventor for order and payment but we discovered this solution far too late.

We had an ambition to climate compensation by extra fee for parking of cars and this fee should be collected to "Vi-Skogen" in Africa. This arrangement was not implemented. We proposed to have climate compensation of all transports of the WOC organization but this ambition failed because of the WOC economic outturn coming to that the personal and volunteers was not given full economic compensation.

We should have worked much harder especially in the implementation, education and information to all members of organisation. We will especially accentuate that IOF, SOFT and the orienteering movement to consider the environment efforts in marketing instead of a burden and an economic expense. We find it similarly important that our partners and sponsors also have a serious ambition in this issue. The WOC had sponsors and partners with doubtful ambitions on environment and sustainability but also the aspect of fair trade.

IOF has very detailed instructions and rules of WOC and similar competitions, i.e. the bulletins. In these days with climate debate there is a threat to our forests and landscape, the very fundamental prerequisites of our sport, therefore we claim that IOF should have more ambitions in the issue of Environment, Climate and Sustainability. The cooperation with the title sponsor Nokian Tyres should contain environment aspects. We couldn't see any of these aspects at the Nokian exhibition at the arenas.

4.18 Hosting IOF and VIP Guests

Laholmen Hotel was the official for IOF and VIP-guests. This hotel was situated in the middle of Strömstad and had very good facilities for the General Assembly and good accommodation for all guests. Not all VIP chose to stay and live at the hotel, they did find their own living in the neighbourhood.



4.19 Catering

Before plans for food and beverages service at the arenas are made the organiser have some decisions to make: is this subject for a considerable economic outcome, or is it merely a good service for competitors and spectators? Could the work be done by our staff, or should we hire someone? What will we offer in terms of food and drinks?

For WOC2016 it was a clear decision that we should have an economic benefit from selling food and drinks. Volunteers were a big issue, but with about 35 volunteers at each event it all worked out well. The suppliers were a bigger problem, the main supplier failed to deliver in accordance with the orders and this caused very much trouble and extra transports for the organiser.

The menu was decided with the intention to offer good nourishment with as little effort as possible. Barbeque, cold meals, salads, wraps and baguettes were the main food, and upon this people could buy sweets (just a few different offers), ice-cream, sandwiches and home baked pastry.

It is very hard to estimate how much could be sold; this is very dependent on the weather. Our impression is that competitors and spectators trusted that they could have complete meals at the arenas; few people brought their own food.

Transports and handling the food requires very detailed plans. Most of the food must be kept refrigerated, and this means good electricity supply. A close cooperation with the arena volunteers is needed, as well as transport cars/trucks. For WOC2016 transportation was carried out by volunteers, using cars provided by a sponsor. It had been useful to have better storage possibilities at the arenas, now we had to have many transports from Event centre to the arenas.

We had a separate tent (not available for anyone except those who worked there) for sandwiches and putting the meals together. This proved to be very useful and ensured that we could offer meals with high quality.

The meals for 600 volunteers and the VIP (150) area was a very big challenge per day. A majority of the volunteers had to get their meals early in the morning, and the VIP-tent must be served continuously. It had been wiser to have separate organisations for volunteers and VIP.

In the end the economic outcome of food and beverages service at the arenas was very good, indeed one of the most profitable parts of the competitions. This was due to detailed plans, flexible volunteers and, most important, a lot of hard work.

The food and beverage service had very different circumstances according to where the competitions took place and it is hard to give advice about how it should be handled. From our point of view, these conclusions are worth considering:

Food and Drinks

At the arenas it was possible to buy hamburgers, hot dogs, wraps, baguettes, salads, fruit, chocolate and ice cream. Vegetarian alternatives were also offered. You also found "Swedish fika", which means coffee/tea and sandwiches or sweets.

The cold meal for athletes and coaches could be ordered in Eventor (consisted of a salad).



Foto: Terje Berget

Conclusions:

- Decide from the very beginning if you can/want to do this within your organisation in order to make money, or if it's better to hire someone for catering
- "Less is more" - have few options to choose from, saves time and increases the sale
- Involve the arena team in the plans, the infrastructure at the arena is crucial for a successful sale
- Try to have refrigerators and storing spaces at the arena, transports takes time and could fail
- Don't underestimate the need of litter boxes and waste/deposit/recycling stations, otherwise you have a lot of work to do after the event

4.20 Control | WOC

A close and reliable cooperation between organiser and the EA-team is absolutely essential to secure a successful High Level Event. The EA-team have recent experiences from similar events in a way that very few organisers have, and the EA-team acting as advisers and not controllers makes the organisers work both easier and more positive.

The EA-team for WOC2016:

Jörn Sundby	SEA
Unni Strand Karlsen	Assistant SEA
Lennart Smedenmark	National Controller
Lars Forsberg	National Controller
Göran Andersson	National Controller
Åke Larsson	SOFT
Oskar Berg	SOFT

The EA-team worked as one unit, but they focused on different subjects. Jörn Sundby was mostly concerned with TV/media/arena matters, while Unni S Karlsen concentrated on organisation, structure, plans and rules. The National Controllers also had different focus:

Lennart Smedenmark was dealing with IT-matters, together with Åke Larsson and Oskar Berg.

Lars Forsberg with mapping and course setting for forest event and finally Göran Andersson who focused on the sprint event, including mapping and courses.

This specializing from the EA-team made the organisers work a lot easier as questions and problems could be discussed with one person instead of five. The fact that the EA-team lived more or less close to the WOC area was also important, meetings and conferences could be arranged with short notes.

From the organisers view, there was no situation during the planning period or the WOC-week when we felt any hesitation or contradictions in communication with the EA-team. It was also very easy to have contact, any kind of questions was answered prompt and distinct.

In situations when the organiser's skill or knowledge was insufficient the EA-team never hesitated to act

and work side by side with the organiser, no matter what the subject was.

Conclusion

A close and reliable relationship between EA-team and the organiser should be created from the very beginning.

EA-team and organiser must focus on the competitions, not on internal communication.

The organisers work becomes much easier when the EA-team member specialize on different subjects.

It should be considered in the future that at least parts of the EA-team lives not more than 3-4 hours from the WOC organisation. Live meetings can solve problems much faster than e-mail/ telephones, and it is important that the EA-team get a feeling of the organisers atmosphere and way of working.

4.21 Control | WTOC

The EA-team for WTOC 2016:

Libor Forst	IOF SEA
Bernt Gustafsson	SOFT NC



Foto: Stina Loman

5. Marketing, Media and Communication

5.1 Marketing

- Our main channels for the marketing of the World Orienteering Championships in general – and our spectator races (ROC) in particular were:
Cooperation with other major competitions such as Tiomila, Nighthawk, the O-Ringen and the O-Festivalen in the form of banner exchanges and distribution of leaflets, etc.
Advertising in “Skogssport” and “Skogssport Tävlingsprogram” (Swedish orienteering magazine and competition program) as well as the O-Ringen magazine.
Advertising in foreign Orienteering magazines; Switzerland, Norway, Finland and Estonia.
Cooperation with the local advertising magazine “Veckovis”.
Entrance signs in Strömstad and Tanum (pictures).
Internet distribution of films, WOC 2016 song and editorial content
Website and social media (see below).
Press Releases that had primary interest in local media; Strömstad Tidning (local newspaper), Bohuslänningen (local newspaper) and SR P4 Väst (Swedish public radio – West Sweden).
Participation in “events” – Sportshopen anniversary, inauguration of Nordby Supermarket--hallen (local super market) and promoting local speciality “räkfrossa” (prawns) at the O-Ringen in Sälen 2016.
- Important with both local and national’ partnerships. Win-Win if added value can be created for both parties. Also our sponsors helped with marketing, especially Sportshopen / Swedemount. They marketed in their social media, film on big screen TV in their stores, posters and articles in their magazine several years before. We’ve had great help from our cooperation with the advertising agency MGNS who helped us with the graphic identity, website, promotional material, advertising layouts, layout of printed material etc. MGNS is part of the same group as Radio Prime (local radio station) and Veckovis (local advertising magazine) that also helped with local marketing.

5.2 Sponsoring

We did not achieve the objectives of sponsorship sales. We tried to involve a number of people who had an interest and skills in sale. We were prepared to pay them a commission but did not succeed with any sales this way. All sponsorship sales took place through personal contacts within the organization and with the help of the marketing manager.

Sponsorship sales demand a lot of patience and take long time. It takes time and a lot of work to find the right contacts at a company. We often get contacts which in the end turns out not to have the right position in the company.

5.3 Internal and external communication:

- Internal communication. Good internal newsletter with regular reports from our Secretary General (a total of 15 mailings from 2013 to 2016). The internal newsletters were then adapted for external mailings and translated into English. Number of subscribers:
Internal: 160
External, Swedish: 400
External, English: 400
- Other internal communications were handled primarily by mail / phone, as well as common and organisation functional physical meetings. We also had different solutions to store confidential material and large files.
- Web publishing. During the years leading up to the WOC 2016 we had a pretty “heavy” website with the functionality that was primarily designed for marketing. This meant that we the WOC 2016-week chose to launch a separate “live site” in the form of a blog with separate tabs for each WOC-distance, as well as tabs for WTOC and ROC. (Image each homepage)

Having two different sites (www.woc2016.se + live.woc2016.se) during the WOC 2016 week had both advantages and disadvantages. With hindsight, however, we should have launched the live site already for the pre-WOC 2016 in June 2015. Because then the regular homepage crashed for different reasons. It's important to prepare all of the web pages used live in connection with each competition respectively for example with "caching", i.e. that a copy of the whole site is on a separate server to increase capacity.

- In addition to our own websites we linked to external services from the live page:
 - Liveresults.woc2016.se = EQ Timing page for medal league and live results for WOC.
 - Livecenter.orientering.org = IOF payment services for GPS tracking, and Web TV.
 - Eventor.orientering.org = Competition information and official results for the WOC.
 - Worldofo.com = GPS analysis for each WOC-distance.
 - Live.orientering.se = Live Results of the ROC.
 - Eventor.orientering.se = Competition information and official results of the ROC.
 - Livelox.com = Route analysis of the ROC.
 - + Extended Start lists (was developed in collaboration with Jan Kochbach, Worldofo.com)
 - + Photo Album (external, ad-supported service with space for around 1000 images)

- Social Media. In our external channels, we put much emphasis on communication and marketing of our spectator races (ROC) since the entry fees from there constituted our primary source of income. In principle, all news published on our website also spread through our social channels, with an emphasis on Facebook. We even bought some advertising through Facebook (sponsored posts), a total of about 1 200 SEK during the last six months before the WOC 2016. Number of followers:

Facebook: 4 900

Twitter: 1500

Instagram: 1500

- During the WOC 2016 the week, we also made the Daily WOC NEWS in the form of a double-sided A4 which spread through notice boards at the Event Centre, publishing on the Live page (like blog posts) and the regular home page (in an archive with all the 9 editions) mailings to 800 newsletter subscribers. (Picture from the website)
- One topic that we have not managed in an optimal way was the quality assurance of all external communication the different functions developed themselves, such as signs, price lists, etc. We who worked in communications and marketing focused much on optimizing message, tonality and visual communication in print and various digital channels. But we lacked procedures for the preparation of communication materials in other parts of the organization.

One tip for future organizers is to develop simple, but clear guidelines for communication material with WOC as the sender, freely including an English glossary of terms used often and decide whether the British or American spelling should be used for words that can be spelled in different ways such as center / centre, color / colour and organiser / organizer.



Foto: Stina Loman

5.4 Media service:

Because of problems to recruit responsible people to the service we started too late with the planning of the work with media service.

- We had the main media centre at the competition arenas. We used a tent with space for 100 people sitting. We used a wifi network (the same network as for the spectators). Each work station in the media tent also had an ethernet connection to internet. There were also a small number of dedicated high speed data links, for uploading of large data files (photos, videos).
- We had about 10 volunteers in the media centre that helped the journalists and photographers during the competitions.
- We had professional help with planning the area after the finish line – mixed zone – where the athletes meet media. It has to be large enough, enough space for photographers with good field of view.
- We did not charge media people for the accreditation. Of that reason we did not have free food, only coffee, water and some kind of simple snacks. Our guest have the possibility to order food which we handled.
- A tip for future organizers is to allocate 1-2 persons responsible for documentation and pressing service for TrailO races. We who worked

with the media service during WOC 2016 found no direct requests for services in advance, but afterwards realized that some guidelines for conduct of media would have been desirable at TrailO competitions, dedicated photo controls and the possibility of shooting medalists in connection with the prize giving ceremonies.

5.5 Media accreditation:

- IOF Eventor needs support for printing of accreditation cards direct from the system and possibilities to log in and add or change accreditations by wishes from media people. For us it becomes a lot of manual work afterward we collected the information from the data base.
- The deadlines for accreditation specified in IOF Guidelines are set very early. Professional journalists have not that long planning why most of them register after the deadlines. We had to move the deadline all the time in steps of one month the whole time before WOC started. This makes the planning of the media service difficult.

5.6 Reason for success

Conclusions:

Hard work with long working days.

Good cooperation and distribution of work within the group.





Foto: Terje Berget

5.7 Arena Production

Arena production had a very important role in making WOC 2016 in Sweden to a memorable and successful championship - the ambition was "The Best Games Ever".

The arena production included the following elements;

- Speakers in different roles.
- Big screen with both live feeds and own arena production
- Daily web-magazine, "WOC-Studio"

Objectives

Arena's main production objectives for WOC 2016 were as follows

- Presenting what happens in an entertaining and informative way to audiences both at arena, in front of the computer and via the webcast.
- Coordinate the arena production with the "host broadcaster". Ensure that the sound and picture will be a total experience.
- Make an opportunity for the athletes to really do their best
- Make sure that the sponsors get value for their money.
- Keep the schedule for the project.

Speakers

The philosophy of the presentation was that all information should be given in English, not so much in Swedish. Per Forsberg, Ola Jodal and Lena Eliasson did an excellent job during all week. These three people have a long experience both as speakers and as elite orienteers.

Big Screen

The big screen had a very important function for the arena production. Mainly the SVT live feed from the competition appeared there, but the arena production had its own cameras and did their own interviews in the picture. This created an arena feeling for all spectators. Via live feed, we also got pictures from the forest, GPS- tracking etc.

The Big screen was also important in opening/closing of the competitions and ceremonies. Beautiful pictures, beautiful music (WOC theme - We made it) and sponsors was shown in a very pleasant way.

5.8 TV Production

High-quality TV broadcasts from orienteering events have really started to pay off. At the World Orienteering Championships 2016, people from all over the world followed the exciting races. GPS-tracking, cameras in the forest and a more professional TV-production have increased the suitability of orienteering as a sport for Television. At the World Orienteering Championships in Sweden, the productions included 17 hours of live coverage from five competitions during the championships week, as well as daily and weekly highlights programs. The full live package was transmitted to five countries in key orienteering markets in Scandinavia and Switzerland.

In Norway, all the finals were broadcast on the national TV-channel NRK. The Long distance was the most popular, reaching 324.000 viewers, and with an average of 88.000 Norwegians following Olav Lundanes winning gold on the tough 15.5-kilometer course in Strömstad. The Norwegian victory in the men's relay was not unnoticed back home in Norway either. Of all Norwegians watching TV in the period the Relay went on, every fifth TV viewer was watching the orienteering event.

In Sweden, where the WOC was broadcast on the national TV-channel SVT, many Swedes followed their fellow countrymen fighting for medals on home ground. The WOC-broadcasts were the most watched TV-programs in the period they were on. In Sweden, the most popular races were the Sprint Relay and the Women's Middle distance, both with 202.000 viewers on average. SVT had expected the number of people following WOC to be a bit higher, but due to good weather in Sweden, fewer people than usual watched television in general during the week when WOC was broadcast.

The International Orienteering Federation also signed rights agreements for the broadcasting of highlights programmes with broadcasters in other European markets. Also, through agreements signed with Broadreach Media and Eurosport, daily highlights programmes were shown via FOX Sports in Europe and Eurosport Asia Pacific to 56 territories.



LiveCenter popular at desktop

• Country	% Views
• Switzerland	22,1%
• Sweden	8,4%
• United Kingdom	7,7%
• France	5,9%
• Finland	5,3%
• Italy	4,7%
• Germany	3,4%
• Russian Federation	3,0%
• Austria	2,5%
• United States	2,4%

The share of viewers on the IOF Livecenter during the WOC 2016.

People with no access to a TV-channel broadcasting the WOC still had the opportunity to follow the championships. For a small fee, the IOF LiveCenter made it possible to follow the WOC in form of live web TV-production with two well prepared commentators and GPS-tracking from all events. On average 2202 bought access to each WOC event, with the Relay as the most popular with 3003 viewers.

84 percent of viewers used the IOF LiveCenter from their desktop while 10 percent used their mobile phone and 6 percent a tablet. A sport event is best seen live, and so thought 69 percent of the viewers as well. However, 31 percent made use of the possibility of viewing the recorded event afterwards.

People followed the WOC 2016 from all over the world. The Swiss had especially a good eye for the IOF LiveCenter representing over 22 percent of the viewers. Following the Swiss were Sweden, the UK and France.

// Transcript from IOF Newsletter #8 September 2016





Foto: Terje Berget

Cooperation TV producer-WOC

The preparation for TV-production started more than a year before the event. Karel Jonak and some of his team visited us and spent a lot of time, both in the office and in the forest for making a successful TV-production.

WOC had a team which assisted Karel and his TV-team with vehicles and cable drawings, this provided good infrastructure in the terrain and in arenas.

During WOC-week we drew 46 000 m cables for TV and timekeeping – probably new world record. In the Long distance we had 9,5 km cable to the cameras/timekeeping that was covering the flags at the boarder to Norway.

Cooperation TV media-WOC

Lars Forsberg from SOFT initiated a project in which the TV-media could get the opportunity to go out in the terrain the day before each competition. They got two hours to run parts of the course, see the map and discuss this with the course setter. They did sign a confidentiality agreement and were well aware of the security.

WOC also made it possible for media who worked off tube to see the courses in Dropbox, at the time when the quarantine closed for the competition that specific day. This new way to inform TV was very much appreciated by the commentators.

6. Finances

6.1 Agreements

A High Level Event as the WOC requires agreements with providers and organisations. This is not something we usually do when we organize competitions locally, but in the WOC its necessary. Before our application for WOC, we had contact with landowners to get their permission to organise the WOC on their grounds. We then had verbal agreements with over 100 landowners, and with almost everyone a handshake. When we got the WOC we should have written contracts with all landowners. This was a great effort to get a signed agreement with these landowners, which led to that one landowner said no. This created problems for course planning in the middle distance where we could not use the map as wanted. In the end the WOC course were not affected much; however the course setting for ROC 3 and 6 were more affected.

To write agreements facilitates relationships, and we can refer to what applies. We have during the entire WOC period had to cancel one agreement signed with a company that would arrange accommodations for WOC. Unfortunately, we had to in this case take help of a lawyer to resolve the dispute and end the relationship.

IOF signs agreement with SOFT who's writing agreement with us organisers. This has in some cases resulted in certain parts become unclear, for us this has applied particularly in Clinics, conference locals, accreditations, who should bear the costs, etc. The feeling has been that we ultimately have had to bear costs that we have not known or had knowledge of.



Foto: Brina Loman

6.2 Budget / Economy

WOC 2016 has had good control of the economy; however, it has been difficult to get a sufficiently high level of income. To compensate for this, the costs have been kept down as much as possible.

It has been difficult to get cash sponsors but we have done well with getting material sponsors.

WOC 2016 managed to get most of the competing countries to pay fees before the competition started; however, some credits were given for some of the VIP fees, etc. which we advise future organizers not to do. This money was much harder to get paid afterwards.

All dates/entries for WOC/WTOC were for almost every nation hard to accept. This applies particularly for the economy. It seems that IOF rules not really are rules, only guidelines for many countries and nations.

As mentioned above it's important with agreements. In some case we had long discussions with providers who tried to get more money than agreed. We solved all this problem in a good way, but it takes much time and effort to agree.

When all the bills were paid and we have made financial statements, there were 900 000 SEK at checkout. This money was paid back to the clubs in WOC 2016 Bohuslän-Dal, which at the beginning of the project had lent money to WOC. We also paid the clubs for the travel expenses.

Now when the project is over and WOC 2016 Bohuslän- Dal will be terminated at the AGM in 2017, all money is back to the clubs that did the job and the cashier will then be empty.

We had hoped for better financial result but we wanted to do the best arrangement possible and not reduce our service to our guests.

The WOC 2016 Bohuslän-Dal clubs have expressed that they are very much satisfied with the WOC financial results; they got their money back which they appreciated. They have also expressed that they were not in this for the money; this was "once in a lifetime" experience!

INCOME	TOTAL SEK
Orienteering	
Entry fee WOC/WTOC	1730
Entry fee ROC/RTOC	2486
Training Camps and maps	132
Value in kind	1638
Transport & Parking fees	169
Catering	894
Secretariat	
Accreditation VIP	79
Party	92
Marketing/Inform.	
O Magazine advertisement	82
Finances	
Cash	598
Municipalities Tanum, Strömstad cash	800
Other municipalities	145
Membership Fees	74
Others	264
Total income	9183

EXPENSES	TOTAL SEK
Orienteering	
Arenas	1382
Video Screens	156
Arena Production	346
Food and Beverages	765
Maps	523
Clothes for volunteers	507
Finances	
Fees SOFT	100
Software	9
Wages	1330
Social contributions	418
Travel	233
Travel voluntarys	274
Misc. Expenses	71
Rates	69
Marketing/Inform.	
Advertisement	292
Office supplies	72
Webpage+profile	64
Bulletines	74
Travel for studies	127
Program/ News	146
Sponsorship materiel service	1126
Secretariat	
Ceremonies	112
VIP Guests	75
Clinics	144
Price, medals	40
Party	86
Event Center	7
Logistic	
Transportation, Parking	121
Technic	
Punching system	216
Timing, GPS- system	157
Bank and insurance cost	
Insurance	4
Bank Cost and Paypal	71
Other expenses	66
Total expenses	9183



Foto: Stina Loman

7.1 Participating Nations | WOC



Foto: Terje Berget

FEDERATION	MEN	WOMEN	TEAM OFFICIALS	TOTAL
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	MEN	WOMEN	TEAM OFFICIALS	TOTAL
Sum	180	147	75	402
Argentina		1		1
Austria	4	5	3	12
Barbados	1			1
Belarus	4	3	1	8
Belgium	4		2	6
Bulgaria	4	3	1	8
Canada	5	3	2	10
Chile	1			1
China		1	1	2
Chinese Taipei	1	1	2	4
Croatia	1	2		3
Cyprus		1		1
Czech Republic	6	5	2	13
Denmark	6	5	5	16
Egypt	3	2	2	7
Estonia	4	5	2	11
Finland	10	7	4	21
France	6	4	4	14
Germany	5	4	3	12
Great Britain	7	6	4	17
Hong Kong	4	4	3	11



Foto: Stina Loman



Foto: Stina Loman

FEDERATION

MEN

WOMEN

TEAM OFFICIALS

TOTAL


























	Hungary	4	5		9
	Ireland	6	5	1	12
	Israel	2		1	3
	Italy	4	3	1	8
	Japan	4	2	1	7
	Korea, Republic of	2	3		5
	Latvia	5	3	1	9
	Lithuania	5	4		9
	Montenegro	1			1
	Netherlands	1			1
	New Zealand	5	5	1	11
	Norway	8	7	5	20
	Poland	4	5	1	10
	Portugal	4	2	1	7
	Russian Federation	5	6	2	13
	Serbia	1	1		2
	Slovakia	1		1	2
	South Africa	1			1
	Spain	5	5	2	12
	Sweden	10	8	5	23
	Switzerland	7	6	6	19
	Turkey	3	2	1	6
	Ukraine	5	4		9
	United States	5	5	1	11
	Uruguay	1			1



Foto: Stina Loman



Foto: Bosse Sandström

	FEDERATION	OPEN	PARALYMPIC	OFFICIALS	ACCOMPANYING	TOTAL
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	Sum	76	38	10	7	131
	Croatia	4				4
	Czech Republic	4	3			7
	Denmark	3	3		2	8
	Egypt	1	1	1		3
	Finland	6	3	1		10
	Germany	2				2
	Great Britain	4	2	1	1	8
	Hong Kong	4				4
	Italy	4	3			7
	Japan	5	2	3	4	14
	Latvia	4	3			7
	Lithuania	3	3			6
	Netherlands	1				1
	Norway	4	1	1		6
	Portugal	4				4
	Russian Federation	2	3			5
	Slovakia	4				4
	Slovenia	2				2
	Spain	3	1			4
	Sweden	6	4	1		11
	Ukraine	3	4	1		8
	United States	3	2	1		6



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7. Appendix

www.woc2016.se



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