



Case Study: Snow Park Davos Winter 08/09

Five steps to a successful park project

Almost every modern winter resort offers either a snowpark, easycross or a halfpipe for it's guests. Any freestyle project has to be thouroughly planned, professionally built and maintained daily to be competitive in this enviroment. One of the most important factors is estimating the needed resources correctly to ensure that the park project fits the resorts resource capacities and that the park will be maintainable also in difficult weather conditions. Correct maintenance and resource estimation is just as important as a good park plan and/or building capacities.



Goals

Davos has had 2 world class superpipes for many years but the permanent park at the Jakobshorn has never had the quality of the pipes. Many good free-skiers and snowboarders frequent Davos and there should be a good park to offer these guests. There is a snowboard training centre for high school aged students in Davos which is a further argument for a good allround park. The decicion was made to keep the park at the same location due to the preexisting pipe and exellent snowmaking and lift capacities at this location.

Strategy and realisation

Since the location of the park and the target user group had been decided on it was time to take a closer look at the location, estimate the resources available and plan the park accordingly. The correct division of the different lines and a „machine friendly design“ for the most efficient maintenance was the main goal.

Step 1: Park planning

For the smaller elements in the park we chose the area above the pipe due to the terrain inclination. The bigger jumps were positioned alongside the pipe where the terrain is steeper. The park was split into 4 different lines and designed in a way that the snowcat could access it from all sides. In the picture below one can see how there is a



rail line and a small kickerline side by side in the upper part of the park and a mixed slope style line for the better riders in the lower part. The superpipe makes a relatively small park seem bigger and completes the appearance of an allround park.

Step 2: Resource estimation and maintenance planning

Estimation of snow volumes and building time:

The snow making capacities at the park location are high enough to guarantee an early season start. When planning a park for the first time it is not advisable to do any earth works unless absolutely necessary since the parklayout will probably change slightly in the first couple of years. When the optimal parklayout has been found, earthworks can be carried out and can save up to 2/3 of the snow volume necessary.

We calculated that the park in Davos would need about 6000m³ of compacted technical snow, not taking surface cover into account. This figure did not include the superpipe. Five to seven days were planned for the construction of the park: 2-3 days of snow moving - 2

snowcats, one of which should be equipped with a winch; 1-2 days of putting up the jib obstacles - 1 snowcat + 2 workers; 1 day final shape: 1 snowcat.

Rails and Boxes - Jibs:

The jibs from the older park were classified into three categories: not to be used / in need of repair / to be used. Three new jibs were ordered.

Snowpark signs and rules:

It is important to place the board of rules in the right places. Most often at the park entry or at the lift entry. The different lines and obstacles should also be marked according to their difficulty level.



Estimation of maintenance:

The park should be groomed and shaped every afternoon after the resort has closed. This ensures that the park will be ready to open every morning and that the snow will not be too soft. It is of great value when the shapers in the park can recognize flaws by themselves and are able to work independently. A competent

snowcat operator is essential for the maintenance of the park and should be schooled in park maintenance when necessary. The snow cat driver in Davos was highly motivated, reliable and had previous freestyle snowboard experience. As one can discern from the table below, one snowcat is enough for the daily grooming of the park.

Estimation of snowcat hours:

Conditions	Hours in the afternoon	Hours in the night/morning
Good conditions	2,5	0
Soft snow / bad conditions		
High use of park	3,5 - 5	0
Fresh snow up to 20 cm	3	1 - 1,5 *1
Fresh snow over 20 cm	0 - 3 *2	1 - 5

Estimation of manual shape hours:

Conditions	Hours in the afternoon	Hours in the night/morning
Good conditions	2	0
Soft snow / bad conditions		
High use of park	2,5 - 3	0
Fresh snow up to 20 cm	2	1 *1
Fresh snow over 20 cm	0 - 2 *2	1 - 3

*1 If it snows less than 20 cm overnight only the run-ins and take-offs need to be groomed in the morning.

*2 If a big snowfall is projected overnight, no grooming is necessary at night.

In the estimation for the manual shape hours only the hours are shown that the shapers need to shape the park outside of the opening hours. The presence of at least one shaper during opening hours is highly recommended.

Step 3: Park construction

After the needed snow volume for the park had been produced in the correct positions and the superpipe was finished we began with the parks construction at 15.12.08. We finished about 80% of the planned obstacles in 4 days. A couple of weeks later we finished the remaining obstacles in 2 days.

Hours needed for park construction:
 ca. 73h Snowcats, ca. 30h local shapers,
 ca. 70h Mellow Parkdesigner



Step 4: Training

During the construction phase we also schooled the snowcat operator and the shapers in an three hour session in the following subjects:

- Intro: General park themes, Maintenance as the most important safety resource
- Park building: Inclination, Exposure, Obstacles, Flightpaths
- Maintenance: Manual maintenance, Grooming, Problem areas, Problem solving
- Safety: Communication, Cooperation with ski-schools, Maintenance as the most important safety resource, fences, signs and rules.

Step 5: Quality control

We recommend a minimum of 1 visit per month by the responsible parkdesigner to ensure the quality of the maintenance process.

Conclusion

At the end of the season we talked again with André Rellstab, head of Marketing in Davos. The feedback we got was very positive. We built the park within our estimated timeframe and the communication with all persons involved was very amiable. The park was highly frequented all winter and very few injuries occurred. All in all a very successful park project.

Mellow Constructions started off as a pure freestyle facility building company, with former snowboard professional Tommi "Mellow" Marsh constructing the set up of the famous Air & Style contest in Innsbruck. At the same time we began to build snowparks and organize events for winter sport resorts in Austria, Switzerland and Germany. Meanwhile Mellow has established itself as one of the top players in the full service snowpark industry. Besides planning and construction of snowparks we offer park tools, content production, communication services, events and on mountain advertising. Mellow is a team of specialists which members are active snowboarders! That's what we are... Mellow

Contact person: Thomas Marsh // marsh@mellow.at // Tel. +43 (0)664 421 62 24
Mellow Constructions // Pradlerstr. 69A // A-6020 Innsbruck // www.mellow.at

we are
mellow
constructions