

# ITRS – International Trail Rating System

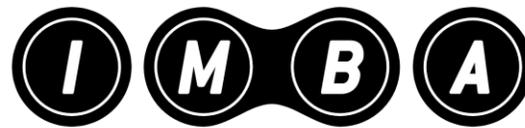
Detailed Information for professional applicators V2.0

**PRELIMINARY – Part on signalization to be added**

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**innovation**  
**tourismus**

Created in collaboration with:



INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION



EUROPE



Trail  
Therapy



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# Content

## 1. Introduction

## 2. ITRS System Overview

## 3. Details Technical Difficulty

## 4. Details Exposure, Endurance and Wilderness

## 5. Combination into Route Rating

## 6. Rollout and application

# A bit of history: The US rating system for Ski Slopes goes back to The Walt Disney company

## European



Beginner



Intermediate



Expert

## Japanese



Beginner



Intermediate



Expert

## USA 1964–68



Beginner



Intermediate



Expert

## North American



Beginner



Intermediate



Expert



Expert Only



Terrain Park

## Disney's role in ski trail signs

Strangely enough, the Disney Company played a key role in the design of ski trail signs. In the 1960s, the company had plans to develop a [Mineral King](#), a glacial valley in California's Sequoia National Park, into a ski resort. Thankfully, the nascent environmental movement prevented the project from turning a national park into a theme park, but the company had already figured out its trail signage. As John Fry and Bob Cram recount in a [piece for skiinghistory.org](#):

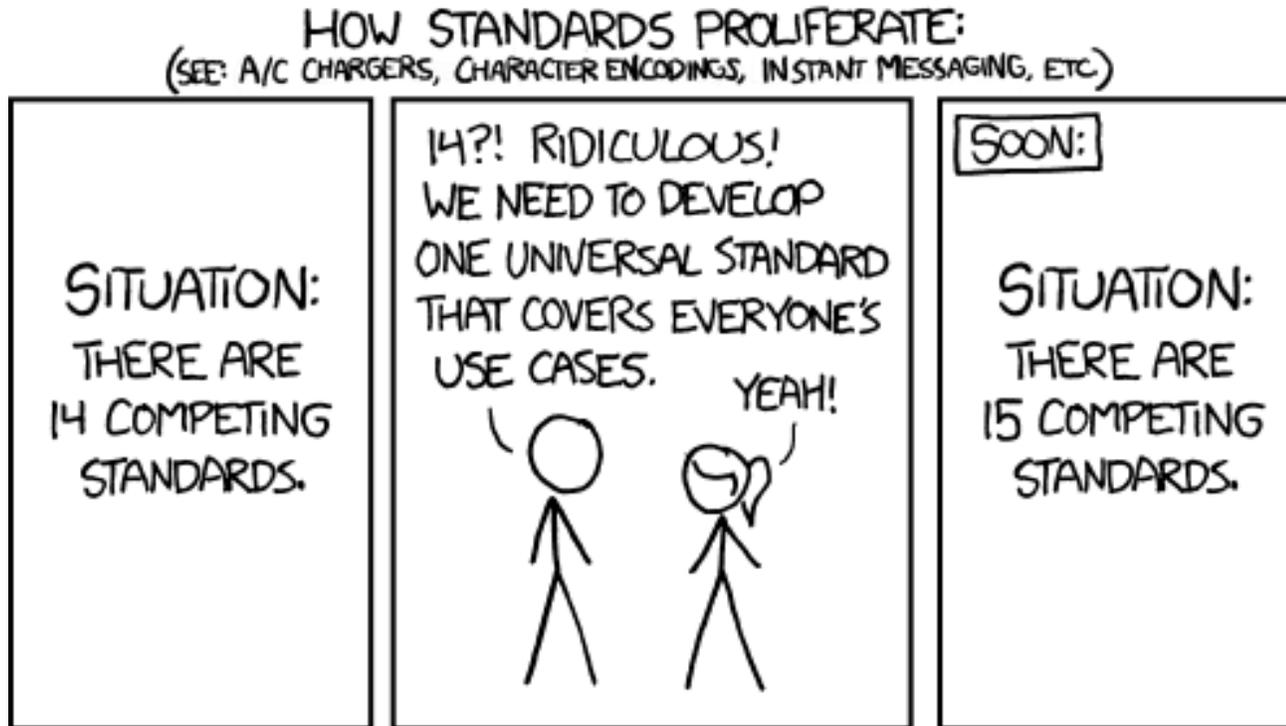
*The company had even tested skier's reactions to different geometric figures, concluding, for example, that the symbol for easy terrain should be a circle, perceived as soft; its color should be green, perceived as mellow.*



Source: [The Walt Disney Family Museum](#)

The National Ski Areas Association preferred Disney's design to its own, so it switched to today's colors and shapes in 1968.

## Let's keep this in mind ...



The ITRS is not an entirely new system, it is a consistent and clearly structured combination of the most relevant systems that existed in 2020, complemented with additional aspects, logics and graphics.

## The ITRS aims at ...



1

... propagating a uniform rating system for routes and trails for mountain bikers internationally to overcome the current situation with various different trail rating systems rating different aspects

2

... increasing the safety of mountain bikers through linking technical difficulty of route and trail offerings with respective riding skills, in order to enable tailoring contents of bike riding skills courses to the difficulty levels.

3

... improving and standardizing the route and trail descriptions offered by destinations, tour providers, media, etc. to further increase the attractiveness of mountain biking as a touristic offering

4

... providing a framework for trail builders to build trails of a certain level of difficulty in a consistent manner

## Which aspects can be rated that characterize a trail and a tour?



Technical difficulty



Exposure



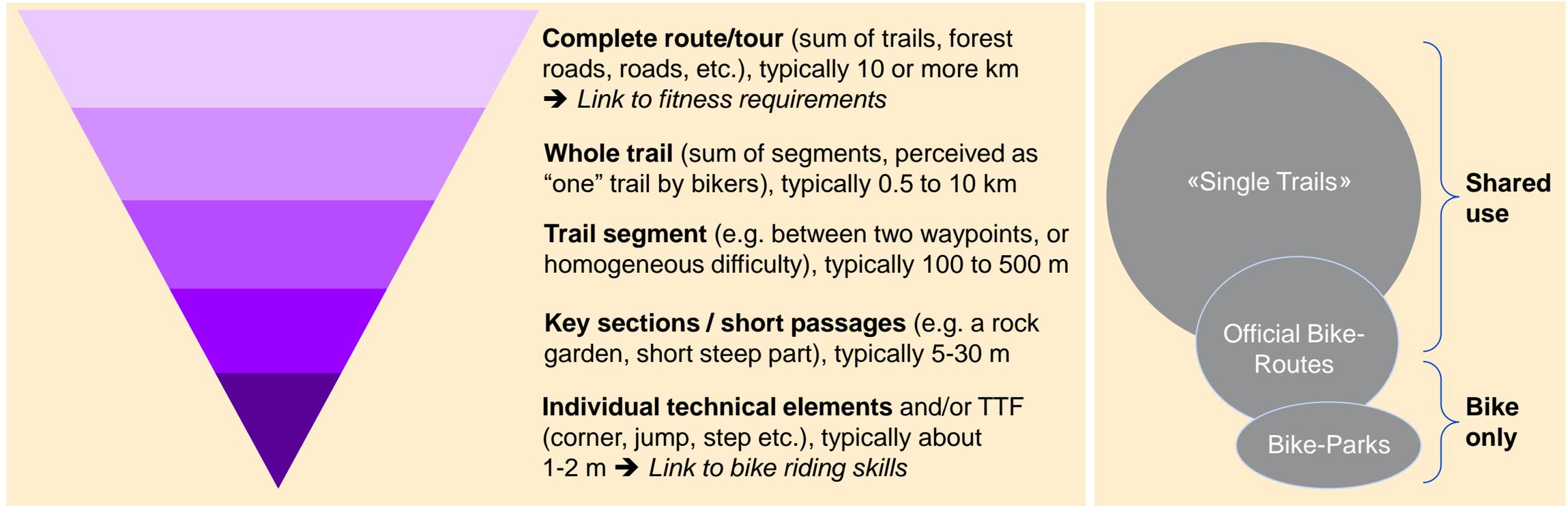
Endurance/fitness requirement (cumulative effect of distance, altitude gain and depth meters on a tour)



«Wilderness Factor»: lack of mobile phone coverage, accessibility for emergency services, lack of drinking water, dangerous wildlife, etc. (based on idea from IMBA Europe)

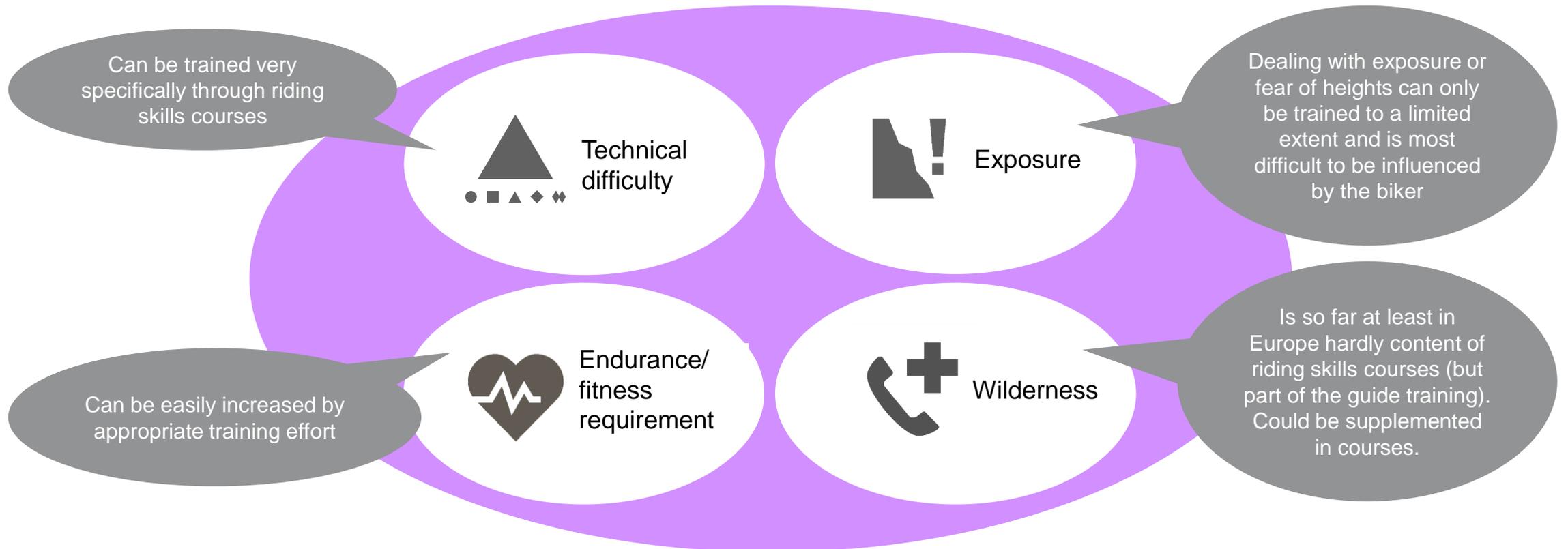
- Existing systems sometimes mix these elements in various combinations, especially the first three

## What infrastructure elements or types can in principle be rated?



- In the ITRS it is described, at which level of detail the rating is done.
- This is different for the 4 aspects that are evaluated
- This is the same whether a bike-only trail or a shared-use trail is rated

## The overall context - embedding technical difficulty as one separately rated aspect of four to characterize trails and routes.



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# Content

1. Introduction

**2. ITRS System Overview**

3. Details Technical Difficulty

4. Details Exposure, Endurance and Wilderness

5. Combination into Route Rating

6. Rollout and application

# ITRS System Overview

The ITRS describes 4 different aspects\* that characterize trails and routes, each in various levels following the same color coding:

### Technical Difficulty

Defined according to the riding skill level that you need for mastering the technical features of a trail



### Endurance

The combined effect of length, uphill and downhill of a route

### Wilderness

The amount of planning required to account for rescue options, mobile phone reception, water supply and dangerous wildlife

### Exposure

Defined by the consequences of a fall

### Technical Difficulty



Beginner



Intermediate



Advanced



Experts



Extreme biker

### Endurance



Generally sportive



Occasional training sufficient



Regular training required



Frequent hard training necessary

### Exposure



Normal injury risk



High risk of serious injury



Life threatening consequences



Fatal consequences

### Wilderness



Civilized area



Some planning necessary



Careful preparation required



Professional planning is prerequisite

\* All combinations of the four aspects are in principle possible

# The ITRS describes both trails and complete routes or tours

## Trails

- For a trail the technical difficulty and exposure are rated.



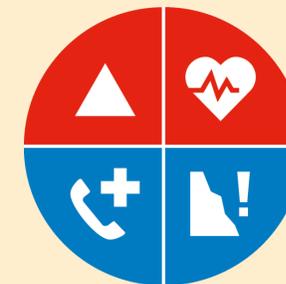
- That is done for each trail segment to account for the fact that trails not purposely built for mountain biking can be inhomogeneous in their difficulty.
- Both, shared use and Bike-Only trails, are rated with the same criteria.

## Routes/Tours

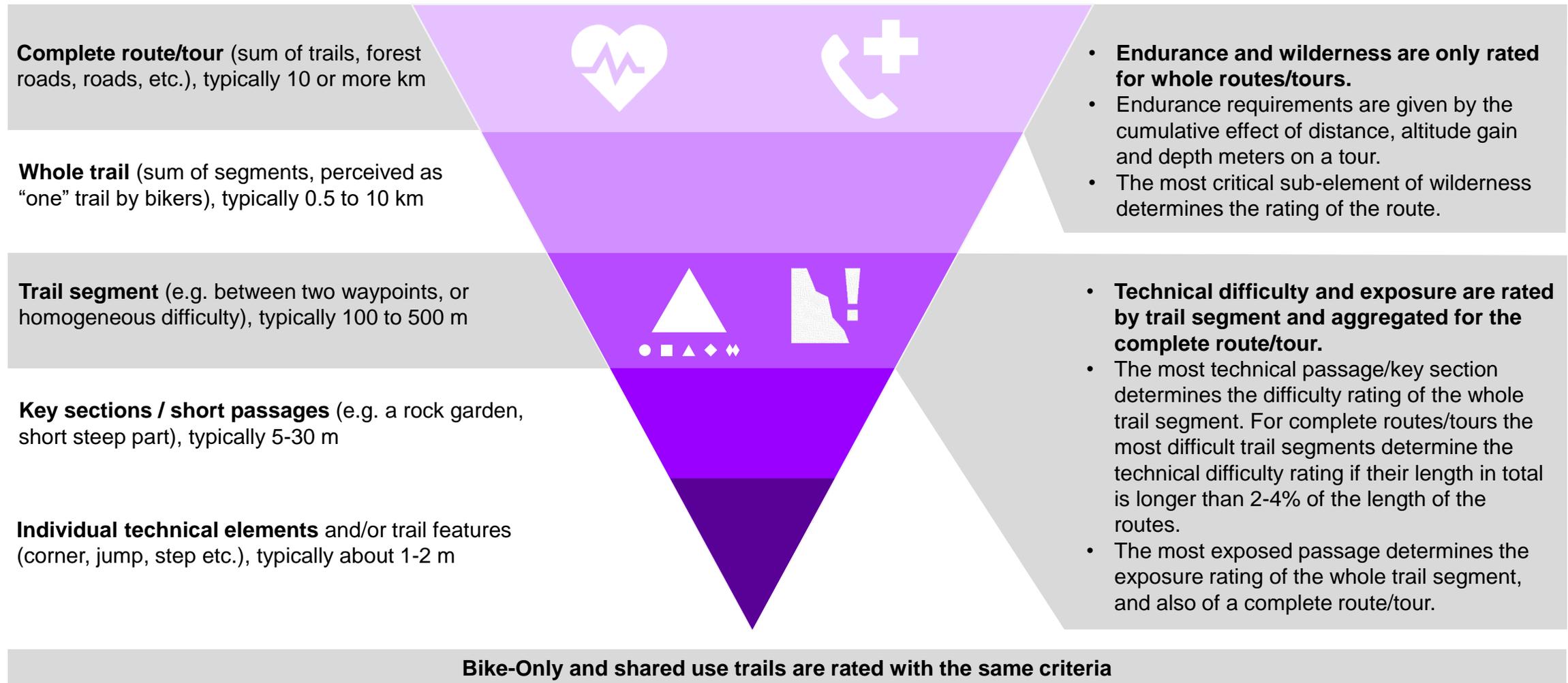
- For a route also the endurance requirements and the wilderness are rated, in addition to technical difficulty and exposure of the trails on this route.



- The ratings according to the four aspects are combined in the «ITRS route pie» to describe the requirements of the route, e.g.



# ITRS overall – which aspect is rated at which infrastructure level?

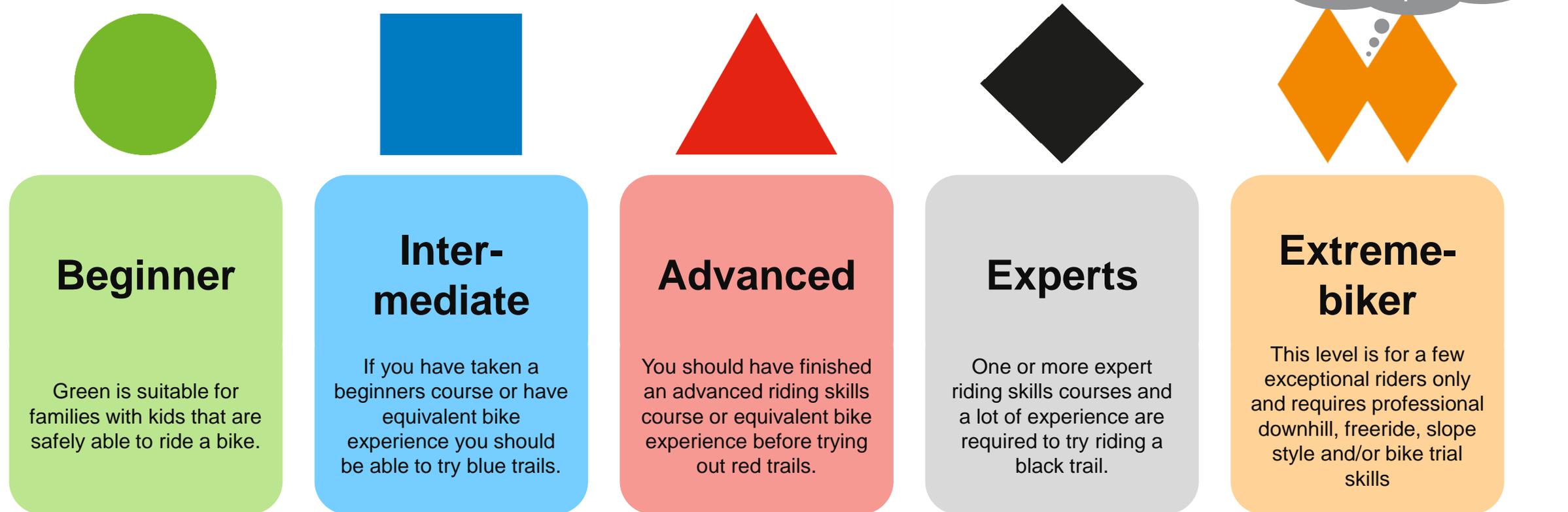


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1. Introduction
2. ITRS System Overview
- 3. Details Technical Difficulty**
4. Details Exposure, Endurance and Wilderness
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## 5 levels of technical difficulty – Icons, colors and short description for bikers to characterize each level in a very short and concise manner



Disclaimer to be added everywhere this chart is accessible:

- Always be prepared to face an unexpected obstacle, especially if you are outside a managed bike park, trail center or equivalent. So adjust your speed. Trails are subject to environmental influences like erosion, growth of vegetation etc., and the actual difficulty of a trail may change over time.
- In wet conditions the trails can be much harder to ride - the rating is done independently on the weather conditions.

Concept for a page with example pictures of typical trails – pictures will change



**Beginner**



**Intermediate**



**Advanced**



**Expert**



**Extreme biker**

**Legacy/  
hiking trail  
style**



**Classical  
Bike Park  
Style**

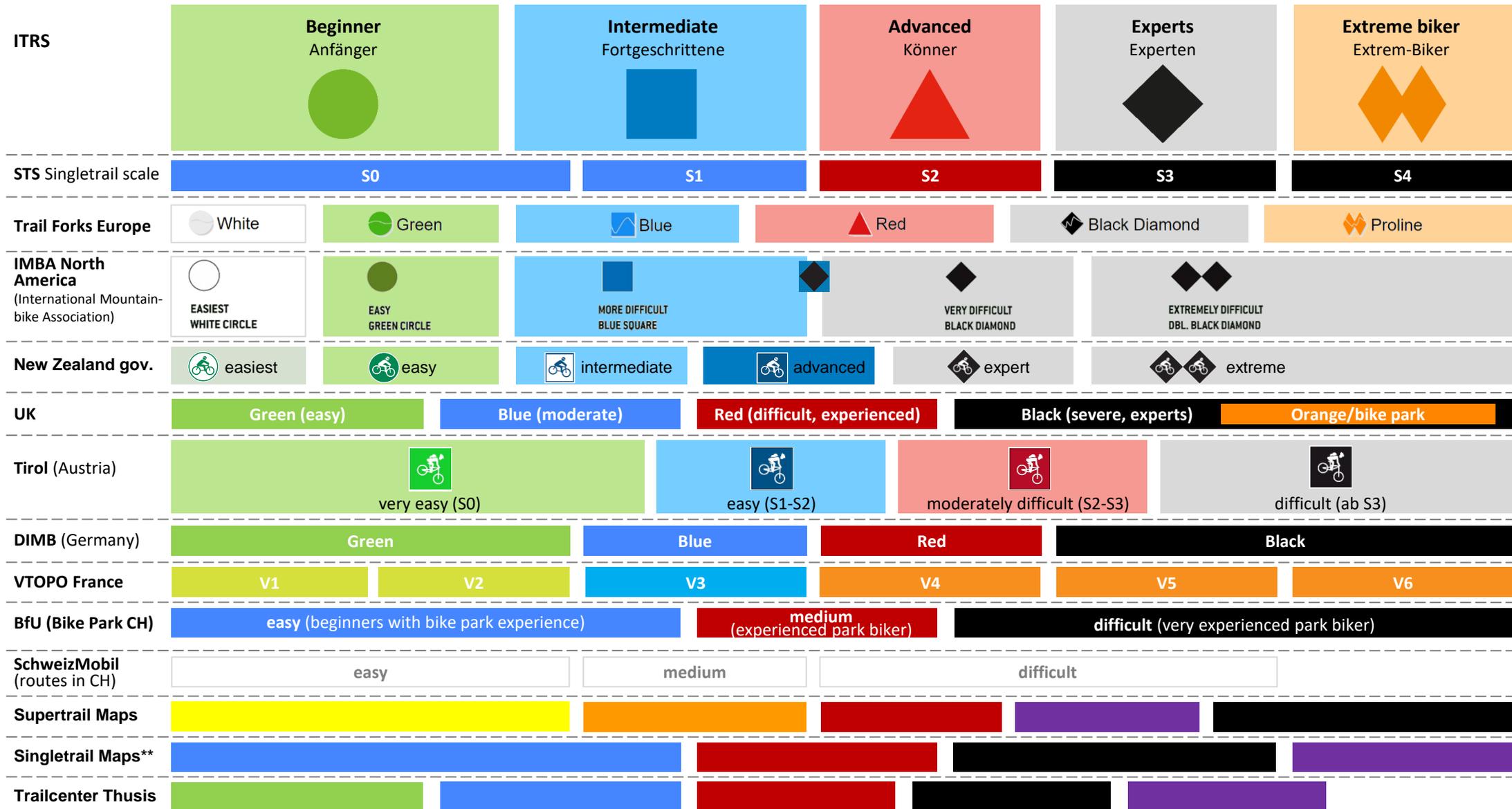


## Description of riding skills required for each level – with this mountain bikers shall be enabled to judge which level is suitable for them (EXCEL file is Master)

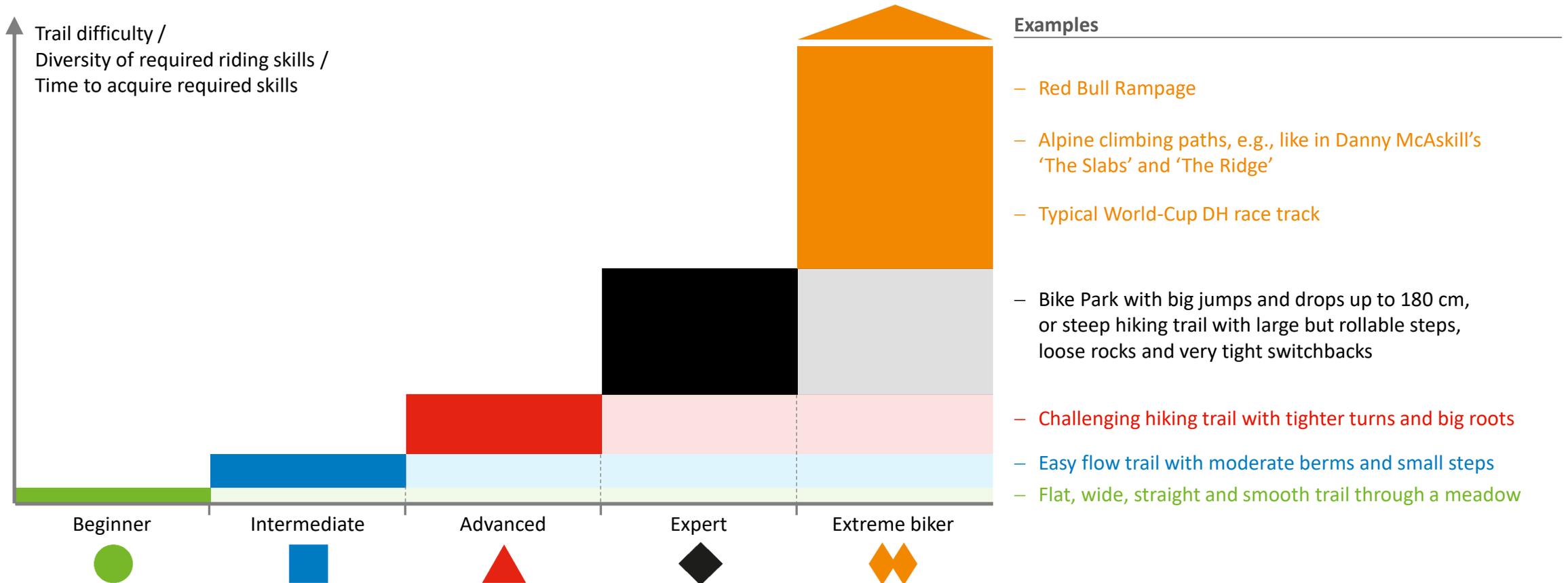
	Required riding skills				
	Beginner / Green	Intermediate / Blue	Advanced / Red	Experts / Black	Extreme biker / Orange
<b>Summary of riding skills required</b>	No special skills are required other than being able to safely ride a bike.	<p>Correct body position and actively adapting it to the trail is required, as well as braking techniques on unpaved surfaces.</p> <p>Basic cornering skills, good line choice and visual focus (knowing where to focus when looking ahead) are helpful.</p> <p>Basic jumping skills will increase the fun.</p>	<p>Ability to constantly adapt your body position and confident brake control in steeper terrain and on varying trail surfaces is required.</p> <p>Corners can become so narrow that accurate line choice and visual focus is needed.</p> <p>Advanced and confident jumping and dropping skills are required.</p> <p>Lifting the front and/or rear wheel will be helpful to overcome obstacles.</p>	<p>Constant and precise brake control are mandatory, as is the ability to quickly adapt your body position; excellent balance is a prerequisite.</p> <p>Corners may be so tight that pivoting on the front wheel becomes necessary.</p> <p>Jumps and drops can be much bigger and higher so expert skills and a very high level of confidence are required.</p> <p>Obstacles may be so high that confident bunny hop and drop skills are helpful.</p>	Professional downhill, freeride, slope style and/or bike trial skills are absolutely necessary

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- In wet conditions the trails can be much harder to ride - the rating is done independently on the weather conditions.



# Representation of the ranges of the 5 levels of technical difficulty



The difference between the easiest and the most difficult blue trail is much smaller than the difference between the easiest and the most difficult black trail. I.e., the steps become larger towards the difficult end of the scale and are not linear.

# ITRS technical difficulty: Technical specification of the difficulty levels (1/2)



		Guidelines for the threshold values for the difficulty levels				
Technical element and/or TTF	Indicator / criteria to measure	Beginner	Intermediate	Advanced	Experts	Extreme biker
Trail width	Minimum width of trail (specifically the <u>tread width</u> )  If the terrain next to the trail is flat and without obstacles (also referred to as <u>trail bed</u> ), the trail width can be as small as of the next higher difficulty level.	100 cm	60 cm	35 cm  <ul style="list-style-type: none"> <li>May include deep ruts/ditches/trenches but pedals easily fit through</li> </ul>	20 cm  <ul style="list-style-type: none"> <li>May include deep ruts/ditches/trenches and pedals can hit the sides</li> </ul>	10 cm
Trail surface	Qualitatively (solid, loose, variability, ...)	Compacted or surfaced	Mostly consistent (variations in short sections)	<ul style="list-style-type: none"> <li>More than one surface type</li> <li>May include loose rocks</li> </ul>	<ul style="list-style-type: none"> <li>Widely variable</li> <li>May include loose rocks</li> </ul>	Widely variable and unpredictable
Trail grade (avg)	Average grade of trail segment	0 - 5 %	5 - 10 %	5 - 20 %	10 - 40 %	Can be above 40%
Trail grade (max)	Maximum grade (short distances of up to 30 m)	Ideally not above 10 %	Ideally not above 15 %	Ideally not above 25 %	Ideally not above 40 %	Can be high above 40%
Off-Camber (max)	Maximum grade transversal to riding direction	Up to 5% off camber	Up to 10% off camber	Can be above 10% off camber	Can be above 10% off camber	Can be high above 10% off camber
Corners	- Radius (at middle line of trail) - Grade	<ul style="list-style-type: none"> <li>Minimum 4 m radius</li> <li>Same or less than trail grade</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 3 m radius</li> <li>Same or less than trail grade</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 1.7 m radius</li> <li>Could be steeper than trail grade</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 0.8 m radius</li> <li>Could be steeper than trail grade</li> </ul>	<ul style="list-style-type: none"> <li>No minimum radius</li> <li>Could be steeper than trail grade</li> <li>Space often very restricted</li> </ul>

This chart contains guidelines to rate trails. Due to the fact that trails are subject to environmental influences like erosion, growth of vegetation etc., the values of a given trail may change over time.

# ITRS technical difficulty: Technical specification of the difficulty levels (2/2)



Guidelines for the threshold values for the difficulty levels

Technical element and/or TTF	Indicator / criteria to measure	Beginner	Intermediate	Advanced	Experts	Extreme biker
<b>Steps and similar obstacles</b> (rocks, logs, etc.)	Height and avoidability; Steps in trails with a proper subsequent landing (so that you can drop the step) have to be rated like drops	<ul style="list-style-type: none"> <li>No steps or other unavoidable obstacles</li> </ul>	<ul style="list-style-type: none"> <li>Unavoidable obstacles 15 cm high/deep or less</li> <li>Avoidable obstacles may be present</li> </ul>	<ul style="list-style-type: none"> <li>Unavoidable obstacles 35 cm high/deep or less</li> <li>Avoidable obstacles may be present</li> </ul>	<ul style="list-style-type: none"> <li>Unavoidable obstacles 60 cm high/deep or less (still rollable without hitting the chainring)</li> <li>Avoidable obstacles may be present</li> </ul>	<ul style="list-style-type: none"> <li>Unavoidable obstacles higher/deeper than 60 cm (not rollable anymore without hitting the chainring)</li> </ul>
<b>Technical Trail Features (TTFs)</b> including drops, north shores and others	Height, width of features	<ul style="list-style-type: none"> <li>No TTFs</li> <li>Unavoidable bridges 100 cm or wider</li> </ul>	<ul style="list-style-type: none"> <li>TTF 50 cm high or less (about height of knee); at full height width of deck not smaller than 100 cm, but the lower the height, the narrower the deck can be</li> <li>Unavoidable bridges 60 cm or wider</li> </ul>	<ul style="list-style-type: none"> <li>TTF 100 cm high or less (about height of hip); at full height width of deck not smaller than 60 cm, but the lower the height, the narrower the deck can be</li> <li>Unavoidable bridges 45 cm or wider</li> </ul>	<ul style="list-style-type: none"> <li>TTF 180 cm high or less (about full body height); at full height width of deck not smaller than 30 cm, but the lower the height, the narrower the deck can be</li> <li>Unavoidable bridges 30 cm or wider</li> </ul>	<ul style="list-style-type: none"> <li>TTF &gt; 180 cm high; even at full height width of deck can be &lt; 30 cm</li> <li>Unavoidable bridges 30 cm or narrower</li> </ul>
<b>Jumps</b>	Rated based on rollability, predictability and size but without specific threshold values	<p>Non-mandatory jumps where the rider chooses to actively pick up the bike to get air time, rather than the trail forcing them to do so.</p> <p>All jumps are predictable even for riders of the size of kid.</p>	<p>Bigger non-mandatory jumps where the rider chooses to actively jump, rather than the trail forcing them to do so (all jumps are still rollable).</p> <p>All jumps are predictable for riders of the size of an adult.</p>	<p>Can include a wide variety of limited in size jumps, some could not be rollable over and not be predictable.</p>	<p>Can include a wide variety of big jumps, most could not be rollable over and be not predictable</p>	<p>Wide variety of very large and unpredictable jumps can be present</p>

This chart contains guidelines to rate trails. Due to the fact that trails are subject to environmental influences like erosion, growth of vegetation etc., the values of a given trail may change over time.

## Additional guidelines for trail builders regarding exposure, trail length and uphill-only trails, which do not influence the technical difficulty rating

					
Topic	Beginner / Green	Intermediate / Blue	Advanced / Red	Experts / Black	Extreme biker / Orange
<b>Exposure* for design of new trails</b>	Trail is not exposed and does not border with steep slopes, even if they would be secured with safety nets	Trail is not exposed and does not border with steep slopes, even if they would be secured with safety nets	Short sections of the trail can be exposed or border with steep slopes	Sections of the trail can be exposed or border with steep slopes	Many sections of the trail can be exposed or border with steep slopes
<b>Maximum trail length</b>	3 km or less	6 km or less	10 km or less	/	/
<b>Rollability of jumps and TTFs</b>	Everything must be rollable with a small kids bike	On purpose build blue and red trails all jumps and TTFs should be rollable (e.g. tables instead of doubles, no gap jumps, drops being made rollable so that jumping them is optional)		Obstacles can be not rollable	
<b>Average grade of uphill only trails</b>	3%	3 - 7%	3 - 10%	7 - 20%	15% up
<b>Obstacles on uphill only trails</b>	Lower than the numbers specified for the downhill direction				

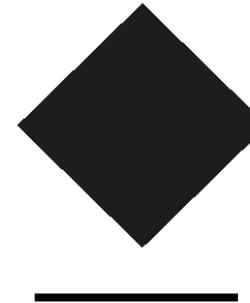
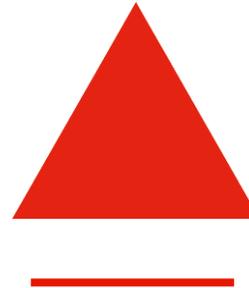
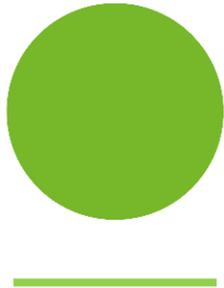
- For purpose build mountain bike trails these values should be taken into account by trail builders.
- In general exposure and length of trails will be indicated separately (see next chapter).
- For the time being, there are no thresholds for uphill-only trails in the specification, just these recommendations for purpose build uphill trails to account for the grade and the height of obstacles.

\* Exposure is not part of the difficulty rating, but on purpose build trails you do not have to expect more exposure than explained in this table. On all other trails there is no link between difficulty and exposure, and exposed sections will be indicated separately.

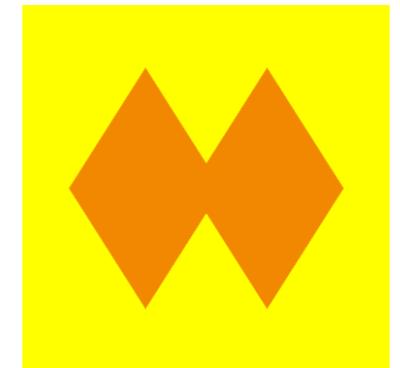
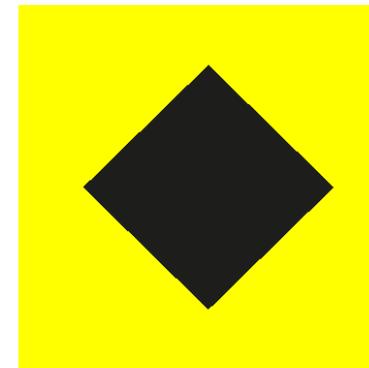
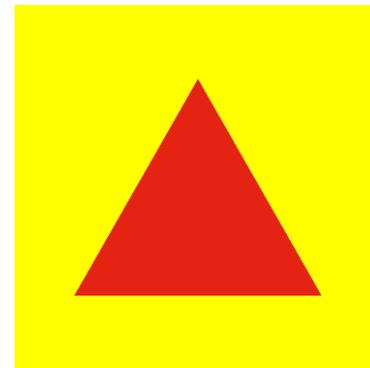
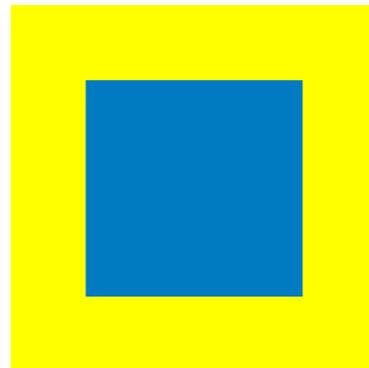
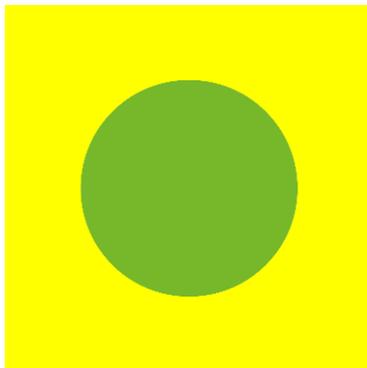
# Distinction of shared-use/Bike-only for signage

(shapes are for signalization in terrain, lines are for drawing trails on maps)

Shared use



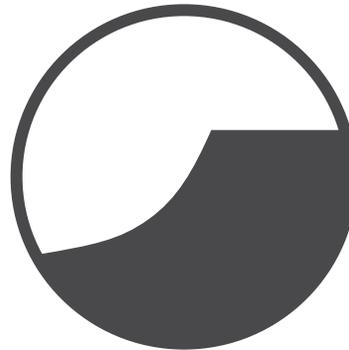
Bike-only



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## Optional symbol that can be used as additional info indicating that a trail contains purpose built jumps (icon for signalization in terrain and on maps)

- Kicker-part of a jump (since there can be various landing styles, but all jumps have some kind of kicker (idea based on symbol used in <https://bikepark-thunersee.ch/> )



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# Content

1. Introduction
2. ITRS System Overview
3. Details Technical Difficulty
- 4. Details Exposure, Endurance and Wilderness**
5. Combination into Route Rating
6. Rollout and application

# ITRS Levels of endurance / fitness requirements: Combined effect of length, uphill and downhill of a route



## Generally sportive

- Up to 25 km (typically around 10 km)
- **Or** up to 350 meters climbing
- **Or** up to 1'000 meters descending
- Sporty entry-level



## Occasional training sufficient

- Up to 50 km (typically around 25 km)
- **Or** up to 800 meters climbing
- **Or** up to 2'400 meters descending
- Good general fitness necessary
- You're going on day tours often



## Regular training required

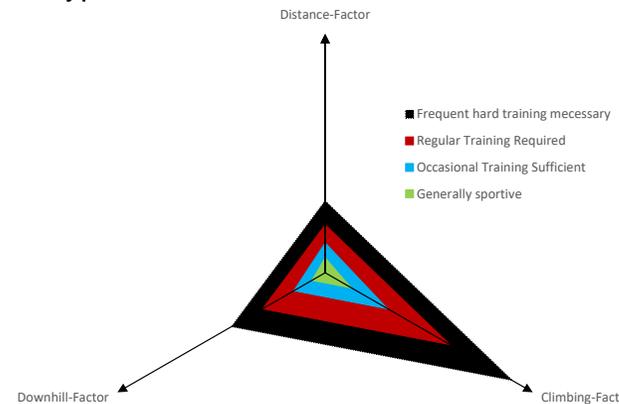
- Up to 80 km (typically around 40 km)
- **Or** up to 1'500 meters climbing
- **Or** up to 4'800 meters descending
- Good condition and regular training is required
- A tough and long full-day tour or a whole day in the bike park does not scare you



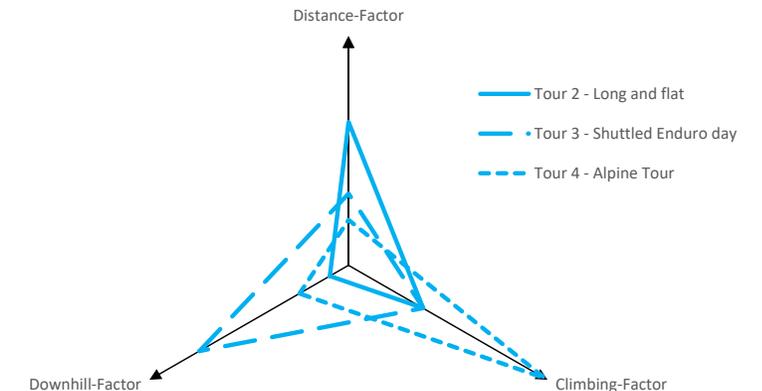
## Frequent hard training necessary

- Typically > 60 km
- Typically > 1'500 meters climbing
- **Or** > 5'000 meters descending
- Frequent and structured endurance training is necessary
- Cross Country races, bike marathons or records in downhill descend meters per day are your thing

Typical thresholds for the levels



3 Variants of a «blue level» tour



Formula to derive the level of a route:  
 $Km * 2 + uphill-meters / 5 + downhill-meters / 20$   
 with thresholds 100 / 230 / 440 to calculate if a route is green (<100), blue, red or black (>440)  
 Option to develop a graphical representation of the three values to compare tours

- The combined effect of distance, up- and downhill meters of a whole route/tour counts
- The effect of a climb on a technical trail versus a climb on a road on the endurance requirements is not captured here. It has to be taken into account by the providers of a route / tour individually

# ITRS Levels of exposure: defined by consequences of a fall



## Normal injury risk

- Trail is not exposed in a way that a fall would have more severe consequences as it anyway has.
- There are also no sections that are exposed but secured by safety nets to mitigate the consequences of a fall, so you will not feel vertigo.

- In purpose build bike trails, exposure should generally be avoided and security measures should be taken.
- If an exposed trail is secured by safety nets, it has to be rated blue, never green.
- For purpose build trails guidelines for trailbuilders are formulated in the trail specification (green and blue trails cannot contain exposure when newly build)



## High risk of serious injury

- A fall in such terrain carries a high risk of serious injury
- Examples: steep forest or meadow terrain below the trail, where one can stop a fall; or a 2 m high vertical drop directly next to the trail.
- There can be sections that are more exposed but secured by safety nets, so you may feel vertigo.



## Life threatening consequences

- A fall in such terrain is life threatening
- Examples: steep terrain below the trail passing into a vertical drop further down, but you have a chance to stop yourself falling; or a 4 m high vertical drop directly next to the trail.



## Fatal consequences

- A fall in such terrain is fatal
- Vertical drop right next to the trail without any possibility to stop your fall.



- The most exposed section of a tour determines the exposure rating of the whole tour.
- The location of exposed sections have to be indicated in maps.

## Definition of levels of wilderness



### Civilized area

**Mobile reception:** strong coverage everywhere

**Evacuation/rescue options\*:** Various quick evacuation options are possible including easy self-evacuation (examples: close to paved roads, medical staff on site, defibrillators installed)

**Water supply:** sufficient, frequent fountains, small bottle sufficient

**Wildlife:** No dangerous wildlife



**Typical examples:** Urban or suburban areas, bike parks and trail centers with permanent staff



### Some planning necessary

**Mobile reception:** more than 70% of tour distance with mobile reception

**Evacuation/rescue options\*:** Self-evacuation possible but takes longer, rescue without helicopter possible but rescue not available on site (example: access with 4-wheel drive only)

**Water supply:** Limited, some fountains along the route, planning required of the amount of water that you carry

**Wildlife:** Dangerous wildlife can be met (e.g., venomous but not deadly snakes or spiders, lynx, wild boar)



**Typical examples:** Most Middle European forests and small mountains, trail centers without permanent staff



### Careful preparation necessary

**Mobile reception:** 30-70% of tour distance with mobile reception

**Evacuation/rescue options\*:** Professional help required for efficient rescue (fastest way is a helicopter), self-evacuation too slow and too complicated

**Water supply:** Scarce, very few fountains along the route and maybe only towards the end, careful planning required of the amount of water that you carry

**Wildlife:** Life-threatening wildlife can rarely be met (e.g., grizzlies or brown bears, wolves, deadly venomous snakes, spiders etc.)



**Typical examples:** Remote areas of the alps, areas in the rocky mountains



### Professional planning is prerequisite

**Mobile reception:** less than 30% of tour distance with mobile reception

**Evacuation/rescue options\*:** Only way to get help is via helicopter, self evacuation would take several hours if at all possible

**Water supply:** None, you need to be self-sufficient with the water that you take along

**Wildlife:** Life-threatening wildlife can frequently be met (e.g., grizzlies or brown bears, wolves, deadly venomous snakes, spiders etc.)



**Typical examples:** Australian Outback, regions in Himalayas, Canyonlands, Alaska, ...

\* In case of a severe injury

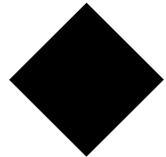
The most critical of the four criteria determines the wilderness factor of a whole route/tour, i.e., only one criterium needs to be met

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# Content

1. Introduction
2. ITRS System Overview
3. Details Technical Difficulty
4. Details Exposure, Endurance and Wilderness
- 5. Combination into Route Rating**
6. Rollout and application

# Concept of route rating – critical definitions

Aspect	Rating for entire route/tour	Example
<b>Overall Rating</b> (for signage in terrain, optional for description)	<ul style="list-style-type: none"> <li>The most demanding of the 4 aspects is taken to describe the level of the whole route</li> <li>Required to determine the color of signs for a route in the terrain</li> <li>Using this single value for the description of a route is not recommended but optional. For this purpose the ITRS-route-pie is preferred (see following pages)</li> <li>The 4 individual ratings are communicated in addition as follows:</li> </ul>	Overall Route Rating  4  
<b>Technical difficulty</b> Final value under discussion	<ul style="list-style-type: none"> <li>The highest technical difficulty along the entire route (i.e. the most difficult trail section) determines the entire route rating</li> <li>Up to 2-4% of the route length can be above the given rating; these sections have to be signaled specifically in the terrain</li> </ul>	Trail 1 - Segment A  4 Trail 1 - Segment B  4 ... Trail 6 - Segment D  3 
<b>Exposure</b>	<ul style="list-style-type: none"> <li>For exposure the most exposed passage/section of the whole route determines the classification, since it can be a reason to turn around and abort the route</li> </ul>	Trail 1 - Segment A  1 Trail 1 - Segment B  2 ... Trail 6 - Segment D  1 
<b>Endurance/fitness requirements</b>	<ul style="list-style-type: none"> <li>Endurance/fitness requirements will be based on the combined effect of length, uphill and downhill meters of the entire route (calculated by a formula)</li> </ul>	Length & Uphill & Downhill  2 
<b>Wilderness</b>	<ul style="list-style-type: none"> <li>The wilderness factor describes four sub-elements. The most critical sub-element determines the wilderness rating of the route: Mobile reception / Evacuation/rescue options / Water supply / Wildlife</li> </ul>	Mobile reception  2 Evacuation/rescue options  2 Water supply  3 Wildlife  2 

# The “ITRS-Route-Pie”: Concept to display the complex information about a route towards the bikers (Example 1 of a tour where all data is known)

“Red endurance level tour, technically predominantly Red, but with short sections with technical difficulty level Black.”

**Requirements**

**Details**

**Map (example Supertrail Map)**

Red Route (single value is optional)



}



**Technical Difficulty (3 out of 5)**  
Predominantly red/advanced, but with some short sections of black/experts (distribution see pie chart)



**Endurance requirements (3 out of 4)**  
Regular training required/red  
30 km, 1'000 m↑, 2'500 m↓

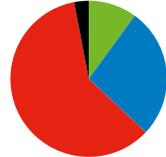


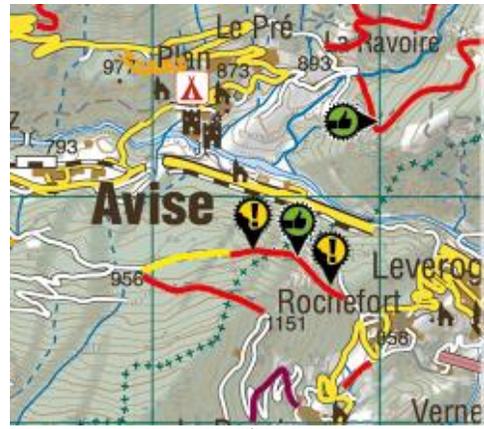
**Exposure (3 out of 4)**  
Short sections with high risk of serious injuries in case of a fall (blue / please see map: !), otherwise not exposed (green)



**Wilderness (2 out of 4)**  
Some planning necessary

- No cell phone reception in places
- Several water points





 Exposed section

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30

# The “ITRS-Route-Pie”: Concept to display the complex information about a route towards the bikers (Example 2 of a tour where all data is known)

“Black endurance level tour, technically predominantly Blue, with several sections with technical difficulty Red.”

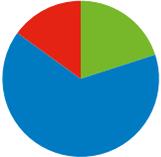
**Requirements**

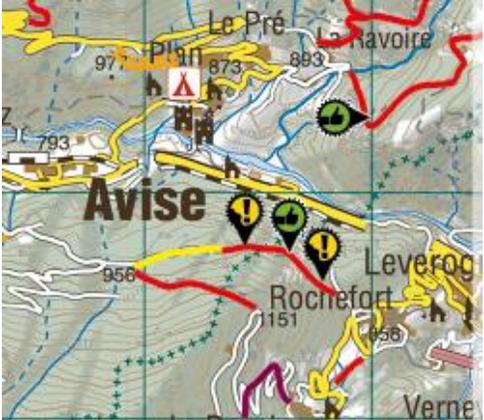
**Details**

**Map (example Supertrail Map)**

Black Route (single value is optional)

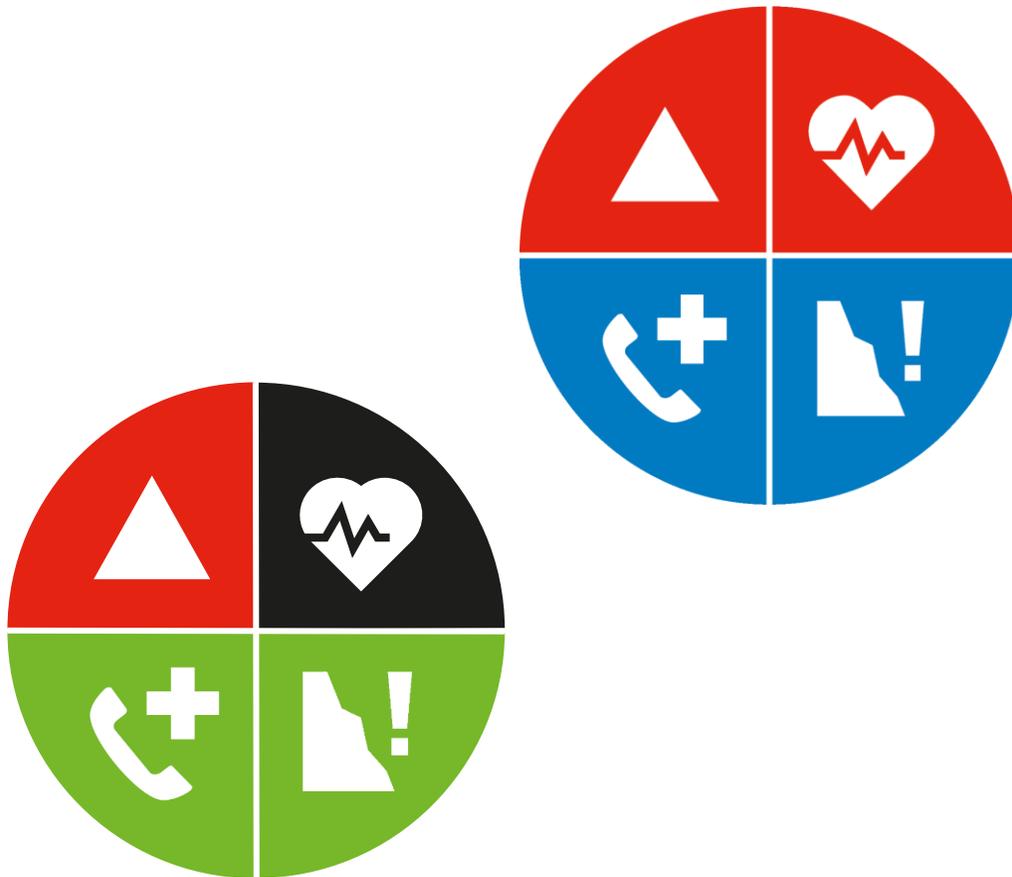


}		<p><b>Technical Difficulty (3 out of 5)</b> Predominantly blue/intermediate, but with several sections of red/advanced (distribution see pie chart)</p>	
}		<p><b>Endurance requirements (4 out of 4)</b> Frequent hard training necessary/black 50 km, 2'000 m↑, 2'000 m↓</p>	
}		<p><b>Exposure (1 out of 4)</b> No exposed sections</p>	
}		<p><b>Wilderness (1 out of 4)</b> Civilized area</p> <ul style="list-style-type: none"> <li>• Strong mobile coverage everywhere</li> <li>• Frequent water points</li> </ul>	



 Exposed section

# Legend for Bike Maps to explain how the pie-charts are working



The ITRS describes 4 different aspects\* that characterize trails and routes, each in various levels following the same color coding:

**Technical Difficulty**  
According to the riding skill level that you need to master the technical features of the trail

**Endurance**  
The combined effect of length, uphill and downhill of a route



**Wilderness**  
The amount of planning required to account for rescue options, mobile phone reception, water supply and dangerous wildlife

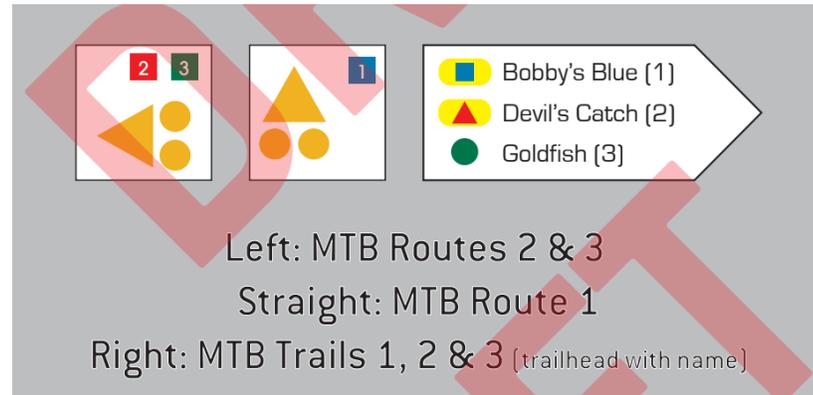
**Exposure**  
Defined by the consequences of a fall

Technical Difficulty	Endurance	Exposure	Wilderness
 Beginner	 Generally sportive	 Normal injury risk	 Civilized area
 Intermediate	 Occasional training sufficient	 High risk of serious injury	 Some planning necessary
 Advanced	 Regular training required	 Life threatening consequences	 Careful preparation required
 Expert	 Frequent hard training necessary	 Fatal consequences	 Professional planning is prerequisite
 Extreme biker			

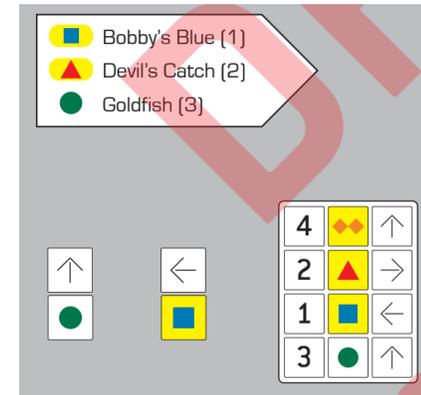
# Extract from early stage signalization concept of IMBA – Currently being updated

## Master with IMBA-Europe

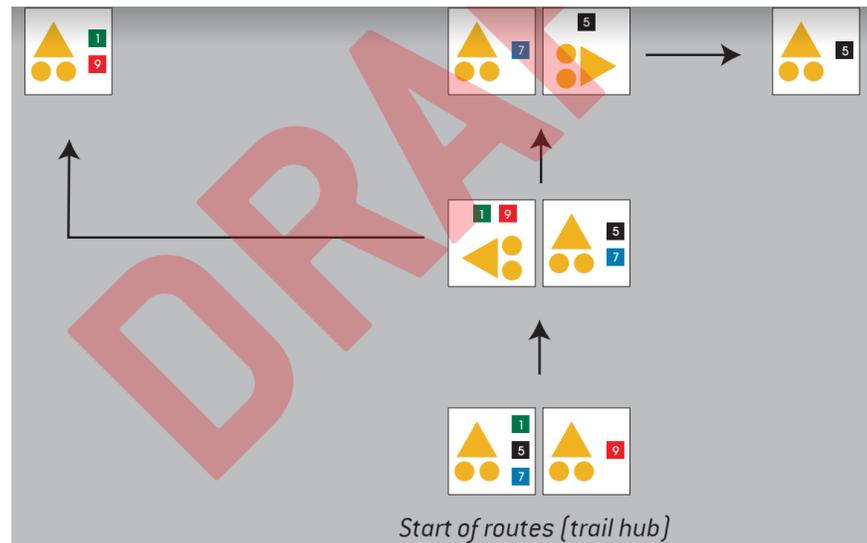
Difference of route and trail signalization



MTB Trails



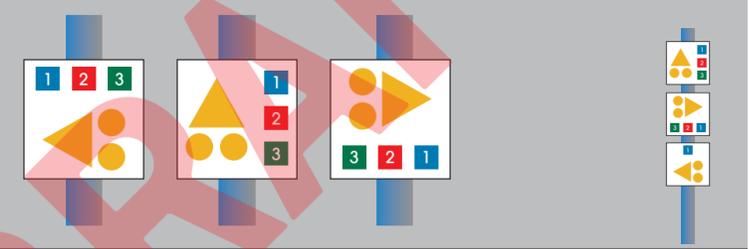
Route network



Implementation in terrain by stickers placed on white signs – easy to change and combine: Single sticker for direction, route number, and background with color for difficulty level of route

MTB Routes

Square and multi function as they can be rotated to mark direction. Route numbers are stickers.



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# Content

1. Introduction

2. ITRS System Overview

3. Details Technical Difficulty

4. Details Exposure, Endurance and Wilderness

5. Combination into Route Rating

**6. Rollout and application**

## Situation and thoughts on the (soft-)rollout (as per 29.12.2021)

- **For IMBA Europe:**
  - IMBA Europe supports the roll-out and is actively looking for pilot destinations.
  - The documentation of the ITRS shall be made available on the IMBA-Europe Website.
- **For online tour platforms:**
  - Trailforks already signaled that they are happy to make the ITRS a default for Europe.
  - Outdooractive is interested, and since they are based on the STS the translation to ITRS would be quite simple, but their IT-System is not as flexible as Trailforks and it requires more effort.
  - Other platforms still have to be contacted.
- **For official national bodies:**
  - For countries without existing official systems, the system could be readily implemented as is. E.g., Sweden is interested in this and had already a meeting with the national stakeholders.
  - For countries with existing official systems, like Switzerland, the system can be seen as a vision that can be implemented stepwise.
- **For existing official routes in Switzerland (SchweizMobil):**
  - In general, a step-wise development into the direction given by the ITRS could be the way to go.
  - The signalization of the entire routes of SchweizMobil should not have to be adapted, because it does not contain a color for the rating. A new signalization is not necessary and should be avoided for financial reasons.
  - In the route descriptions the details about all 4 aspects as per the ITRS could be shown in addition to the existing 3-level overall route classification of SchweizMobil. This would be the biggest effort. As a start the “wilderness” details could be left out.
  - As a last step the current 3-level route rating of SchweizMobil could be entirely transferred into the ITRS. This has of course implications for the SchweizMobil IT-Platform. The added value as compared to existing online platforms like trailforks would have to be discussed.
- **For destinations:**
  - Changeover to the new system for own tour portals.
  - Change of existing external tour portals (often Outdooractive) not easily feasible for destinations, since many interfaces already exist. But at least keep the Trails on TrailForks up to date once they have implemented the ITRS
  - Support other external portals like Outdooractive in the business case to adapt to the ITRS, too.
- **For bike parks:**
  - Voluntary adjustment of classification and signalization of some pistes to the new system, because probably only some blue pistes will be green, and a few black pistes will be new orange, because the concept takes into account the current blue/red/black classification of many EU countries (and the BfU in Switzerland).
  - In addition, it is to be aimed that the classifications happen more consistently between regions (e.g. "red" in the French speaking part of Switzerland can currently be "black" in the Grisons).
- **For tour providers, media, etc.:**
  - Adapt their own offerings accordingly or at least translate them into the ITRS.
  - Motivate the bike community to participate in the ITRS.

# Pros and Cons of how and by whom the rating could be done (I/II)

Preferred options

Option	Pro	Contra
1. Official rating done only by ITRS-Experts (e.g. of IMBA Europe, Swiss Bike Park).	<ul style="list-style-type: none"> <li>Highest possible level of consistency in trail ratings.</li> </ul>	<ul style="list-style-type: none"> <li>Changes of trails by wear and tear, erosion or vegetation change are out of control for the rating entity.</li> <li>Liability risk for ITRS-Experts to be taken into account.</li> </ul> <p>What if a trail is rated, e.g., «red», and in case of an accident a lawyer finds out that at the location of the accident one of the technical specification values of level «red» was not met, e.g. due to erosion?</p>
2. Rating and maintenance concept by ITRS-Experts: <ul style="list-style-type: none"> <li>Educated by experts of IMBA Europe or the ITRS-developers.</li> <li>Together with the rating a maintenance concept is developed for the «trail provider».</li> <li>Rating is only valid if «trail provider» can prove that the maintenance concept is applied.</li> </ul>	<ul style="list-style-type: none"> <li>High consistency of trail ratings.</li> <li>Shares the liability between rating entity and «trail provider».</li> <li>Could be interesting for destination consultants like BikePlan, AllegraTourismus etc. due to link to maintenance concepts.</li> </ul>	<ul style="list-style-type: none"> <li>Still some liability risk for rating entity to be taken into account with law experts for each country (different legal forms may be required for the rating entity employing the ITRS-experts).</li> </ul>
2. Rating done by actual «trail providers» with ITRS-Expert support: <ul style="list-style-type: none"> <li>Based on documentation of ITRS and a training session by ITRS-Expert.</li> <li>Subsequent check of ITRS-application by ITRS-Expert assessing the rating of a sample of trails and providing recommendations to adapt.</li> </ul>	<ul style="list-style-type: none"> <li>The liability for the rating is with the provider of the trails, being the entity that can control the rating continuously.</li> <li>Rating entity can control changes in trails, adapt rating or maintain trails.</li> <li>Consistency check added due to involvement of ITRS expert.</li> </ul>	<ul style="list-style-type: none"> <li>Cosideration required by country how far the ITRS-Experts still bear part of the liability of the rating because they made only a sample check.</li> <li>Different legal forms may be required by country for the rating entity employing the ITRS-experts.</li> </ul>

Level of consistency of the ratings

Level of liability being with the entity that can control/maintain the trails

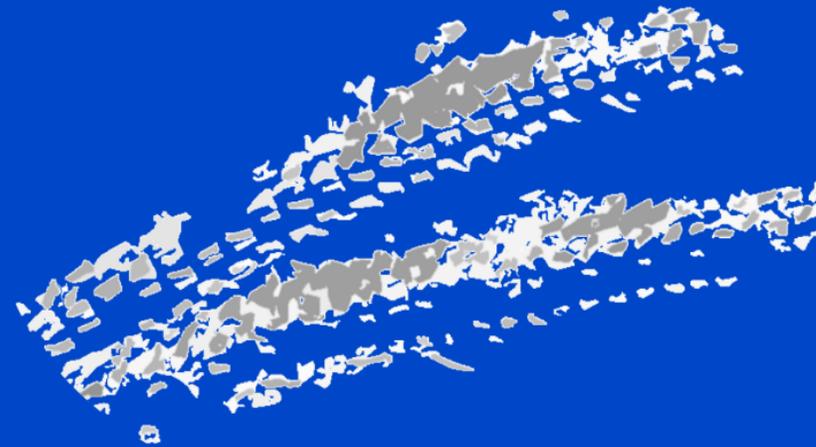
## Pros and Cons of how and by whom the rating could be done (II/II)

Level of consistency of the ratings

Option	Pro	Contra
4. Rating done by actual «trail providers» alone, i.e. destinations, bike park managers, land owners etc. just based on documentation of ITRS.	<ul style="list-style-type: none"> <li>The liability for the rating is with the provider of the trails, being the entity that can control the rating continuously</li> <li>Rating entity can control changes in trails, adapt rating or maintain trails.</li> </ul>	<ul style="list-style-type: none"> <li>Risk of low level of consistency in the ratings</li> </ul>
5. Rating by the cloud of mountainbikers on online platforms <ul style="list-style-type: none"> <li>Based on publicly available info about the ITRS</li> <li>e.g. Trailforks and Outdooractive would include the definition of the rating on their websites/apps</li> </ul>	<ul style="list-style-type: none"> <li>Easy to organize and implement.</li> <li>Will lead to a rating of all trails documented on the respective online platforms and not limited to official trails/routes.</li> <li>Could be used as a supplementary input to one of the other options.</li> <li>So far no description of the levels on Trailforks, hence would hopefully lead to improved consistency of ratings on Trailforks.</li> </ul>	<ul style="list-style-type: none"> <li>Practically nobody is liable for the rating</li> <li>Limited consistency check by roles on the platforms (regional managers etc.) and by the users themselves → Potentially higher level of errors.</li> <li>Potentially not good enough to rate official trails/routes.</li> </ul>

Level of liability being with the entity that can control/maintain the trails

Happy Trails!



Supported by innotour, the funding instrument of the Swiss State Secretariat for Economic Affairs SECO



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INTERNATIONAL MOUNTAIN BICYCLING ASSOCIATION



EUROPE



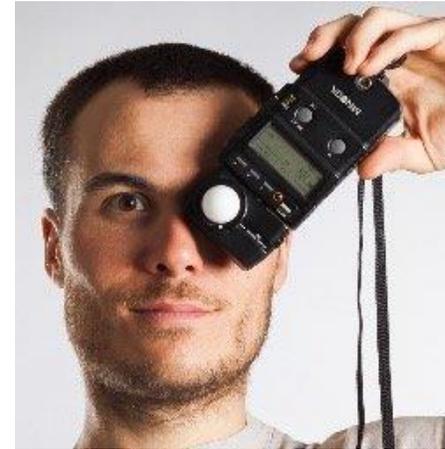
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## About the entities involved in the ITRS project



### ABOUT

- The Swiss Bike Park Oberried is an attractive meeting place and preventive site for the entire population. It acts as a lighthouse project as well as a tourist magnet and combines the needs of professional, recreational and handicapped athletes. Innovative and digital, the Swiss Bike Park forms the perfect symbiosis of active leisure and technology. It developed into the vision of a connecting social project for the whole of Switzerland.
- The park is available to everyone for training free of charge. As a training and experience platform, the park also offers a wide range of courses and services.

### ROLE IN ITRS PROJECT

- The Swiss Bike Park initiated a project aiming at harmonizing the existing trail rating systems in Switzerland.
- The project is run in close exchange with IMBA Europe and the scope has been extended to an international harmonization.
- The park reports the project towards its financing entity innotour.

[MORE INFO](#)



### ABOUT

- Innotour is a funding instrument of the Swiss State Secretariat for Economic Affairs SECO. It promotes innovation, cooperation and knowledge building in tourism in Switzerland.
- Innotour concentrates its funding at national level, but also supports regional and local projects that serve as national role models.

### ROLE IN ITRS PROJECT

- Innotour financially supports the Swiss Bike Park.
- One of the supported activities is the project on harmonizing existing trail rating systems.

[MORE INFO](#)

## About the entities involved in the ITRS project



### ABOUT

- Founded in the USA, since 1998 IMBA is the worldwide leader in mountain bike advocacy and trail development. In 2012, IMBA Europe was founded as a collective of various MTB-related entities spread over more than 20 countries.
- IMBA Europe's vision is to get more people on bikes through sustainable mountain biking

### ROLE IN ITRS PROJECT

- One of IMBA Europe's board members had independently started to work on harmonizing trail rating systems in Europe.
- He teamed up with the Swiss Bike Park project team and co-developed the ITRS.
- IMBA-Europe supports by its vast network of experts to review the ITRS, supports the distribution of the ITRS and invites destinations to pilot the system.

[MORE INFO](#)

## input Consulting

### ABOUT

- Since 50 years Input Consulting is one of the leading Swiss consulting boutiques for growth projects in the areas of business transformation, market performance and corporate performance.
- Its focus is on unique consulting processes that lead to tailored and rapidly implementable results through innovation and co-creation.

### ROLE IN ITRS PROJECT

- Input Consulting supports the Swiss Bike Park in various organizational challenges and business-related aspects in a special partnership.
- One of these aspects is leading the project on harmonizing existing trail rating systems. The project leader is also a co-developer of the ITRS.

[MORE INFO](#)

## About the entities involved in the ITRS project



### Trail Therapy

#### ABOUT

- Trail Therapy is an independent bike school for individual bike guiding and skills courses in the Alps.
- It is also active in bike community development and respective knowledge sharing.

#### ROLE IN ITRS PROJECT

- Trail Therapy provides in-depth knowledge about trail ratings and riding skills to the project team which works on harmonizing existing trail rating systems.
- A co-owner of Trail Therapy is also manager at input Consulting and a co-developer of the ITRS
- It is one of the first bike tour operators applying the ITRS as a pilot on their website

[MORE INFO](#)



#### ABOUT

- The "Davos Destinations Organisation" (association) strives towards the economic success of the region, the maintenance and expansion of touristic added value and employment, as well as the high quality of life of guests and locals, all year round.
- It is the coordinator and primary body responsible for tourism marketing for Davos and Klosters.

#### ROLE IN ITRS PROJECT

- As a destination partner of the Swiss Bike Park Destination Davos Klosters is part of the project team that works on harmonizing existing trail rating systems.
- It is one of the first destinations applying the ITRS in a pilot.

[MORE INFO](#)