



Adaptation strategies of Swiss ropeways due to climate change

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Pictures...



... say more than words



Soon to be the «new normal»?



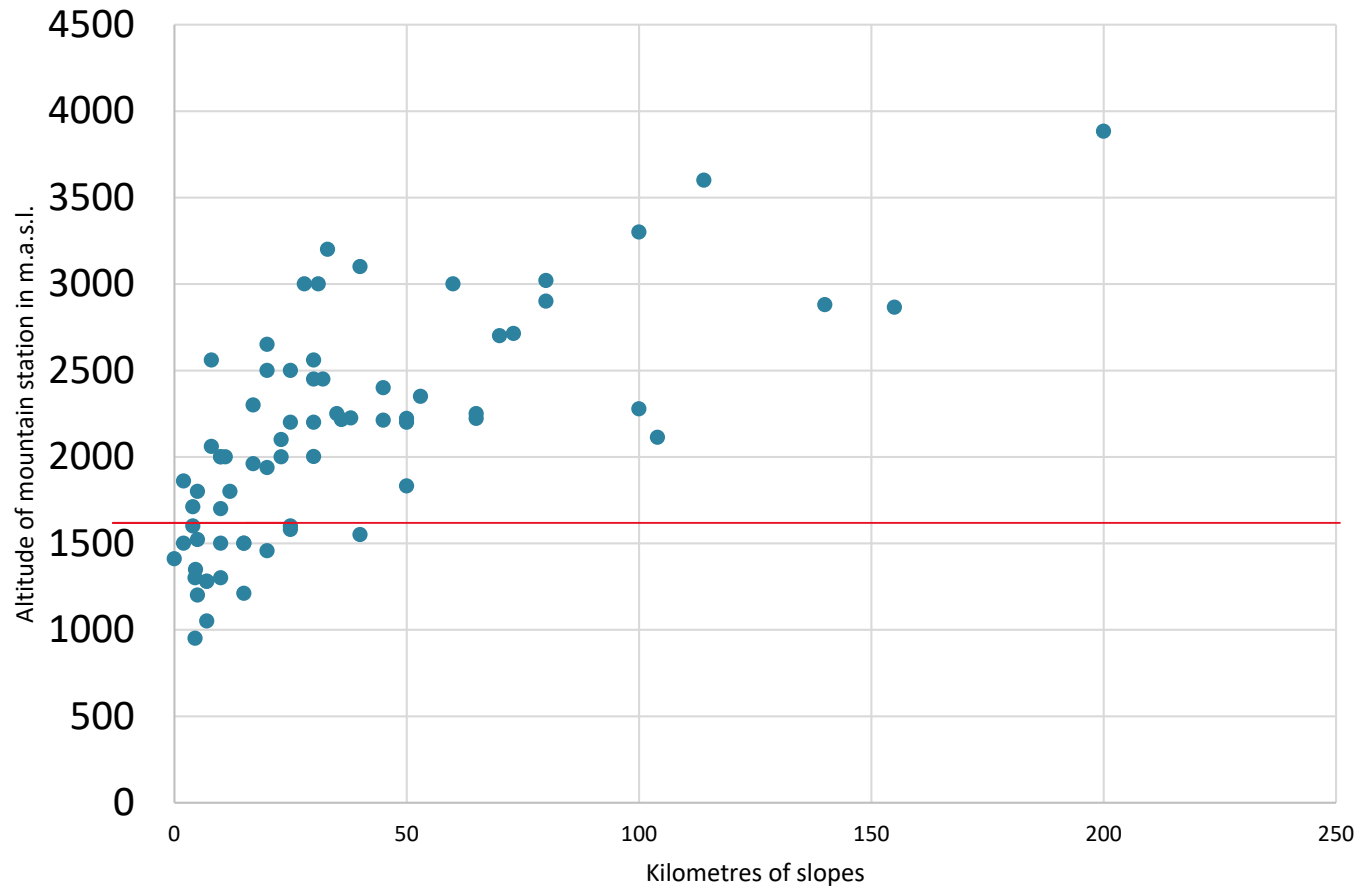
Is skiing passé?



Matterhorn Glacier Paradise – Europe's highest mountain station (3883 m)



Altitude of the top 100 Swiss ski resorts



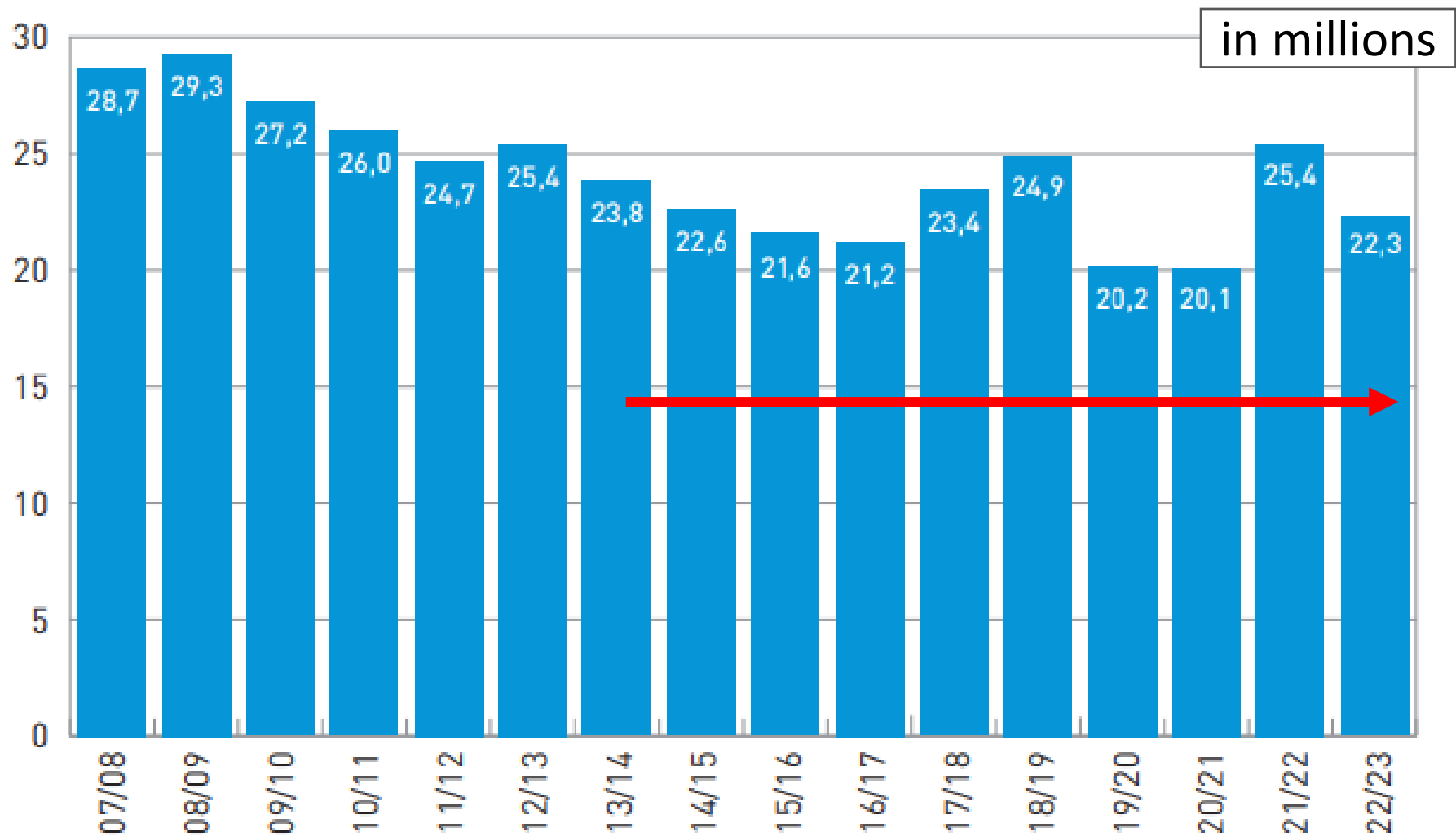
Average altitude: 1,666 metres above sea level.

Total number of kilometres of slopes (in total): 3,263

Of which snow-covered: 54%

Source: University of St. Gallen; Climate change as a strategy driver, 2024 - Seilbahnen Schweiz

Development of Skierdays in Switzerland



The youth is on the boards



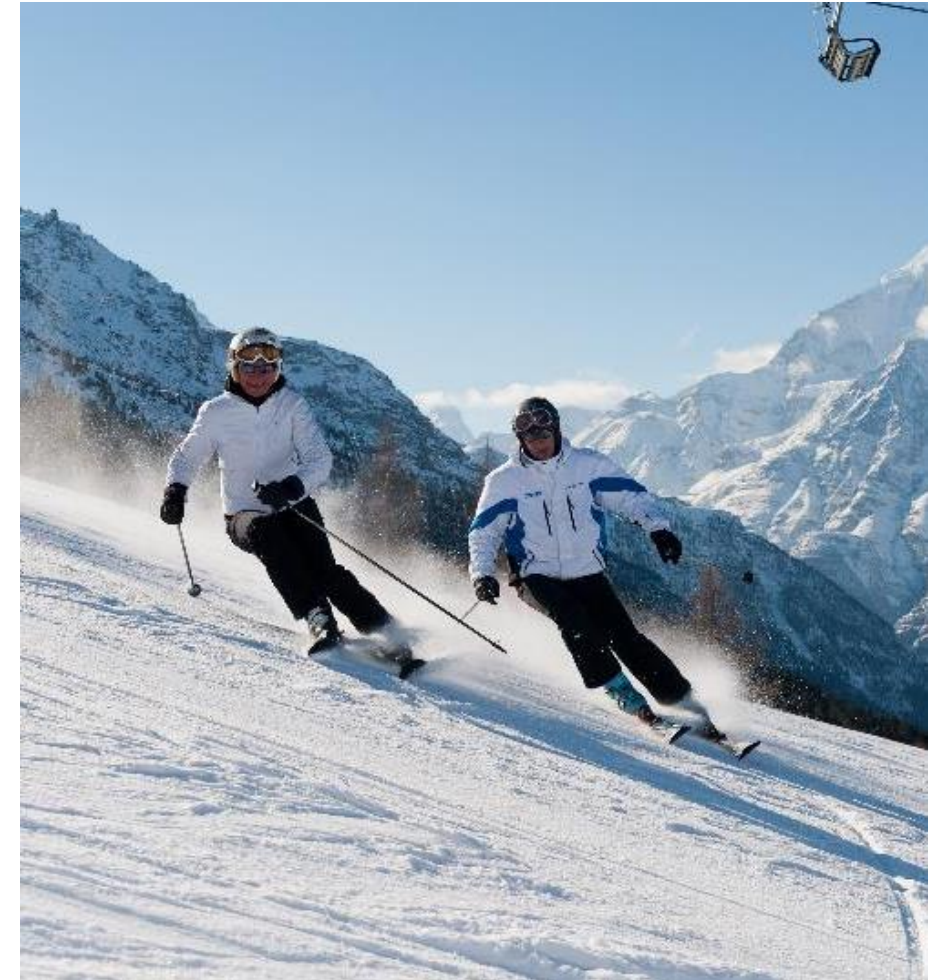
- 34% of the Swiss population (3 million) ski
- Swiss achieve 17 million skier days: People ski 5-6 times per season
- No. 1 sport for children and young people
- 59% of 10-14 year olds ski
- 43% of 15-19 year olds ski

Sources: Cableways Switzerland - Seasonal balance 2021/22, FOSPO

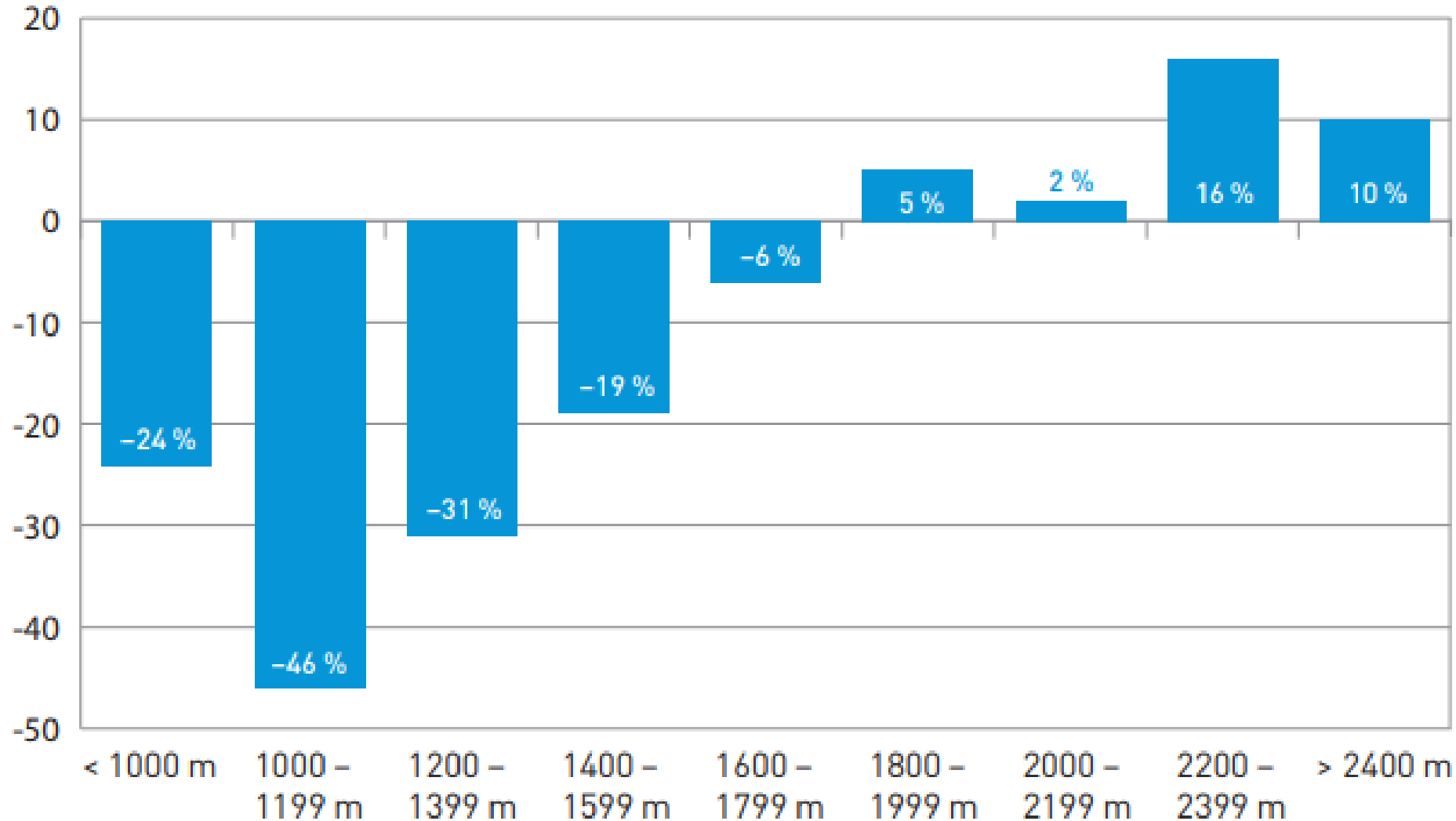
The image is changing

Results of MANOVA's market analyses

Statement	Consent	Tendency
Skiing/snowboarding is healthy	2019: 81% 2022: 90%	✓✓✓
Skiing/snowboarding is worth what it costs	2019: 49% 2022: 60 %	✓✓
Cable cars disfigure the landscape	2019: 42% 2022: 26%	✓✓
Cable cars are energy guzzlers	2019: 46% 2022: 51%	☒



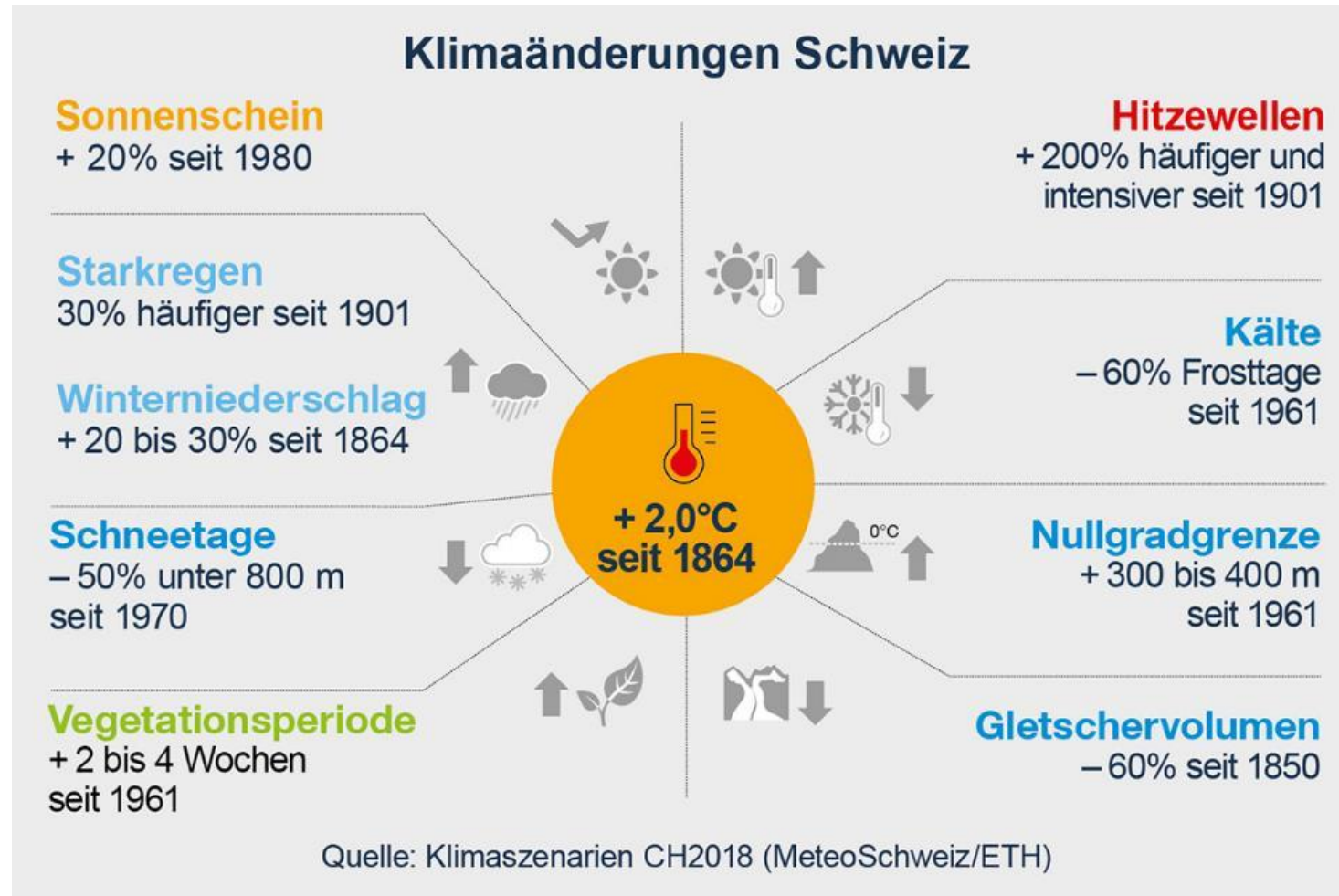
5-year average frequencies by altitude



Source: Cableways Switzerland, Seasonal balance 2023

Climate scenarios for the Swiss alps

Climate change in Switzerland



Concrete effects of climate change

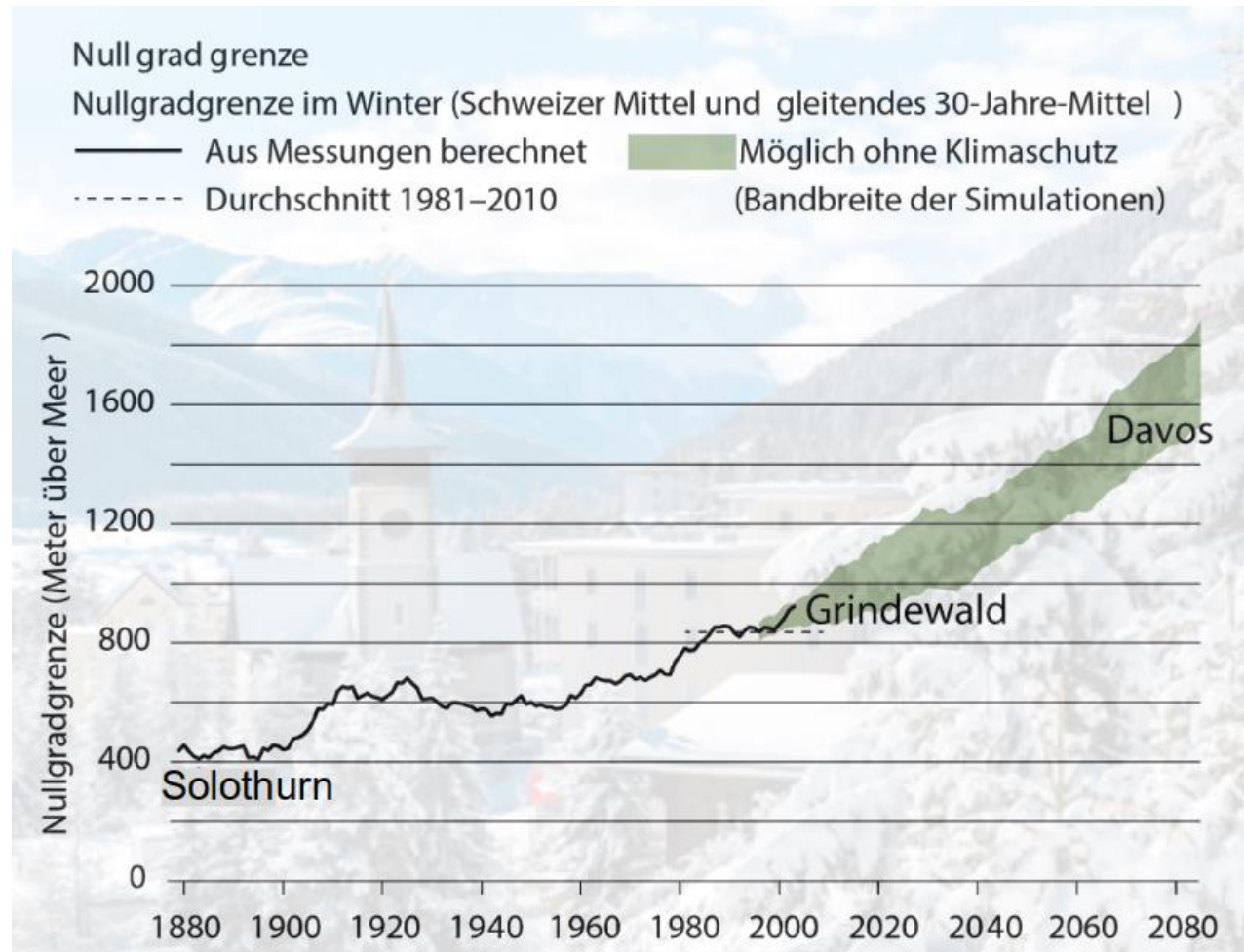
Climate change - Winter

1. Rain instead of snow in winter
2. Snow doesn't stay that long: Reason heat
3. Snow cover is shorter: season is 30 days shorter

Climate change - Summer

1. Hot and long summer periods

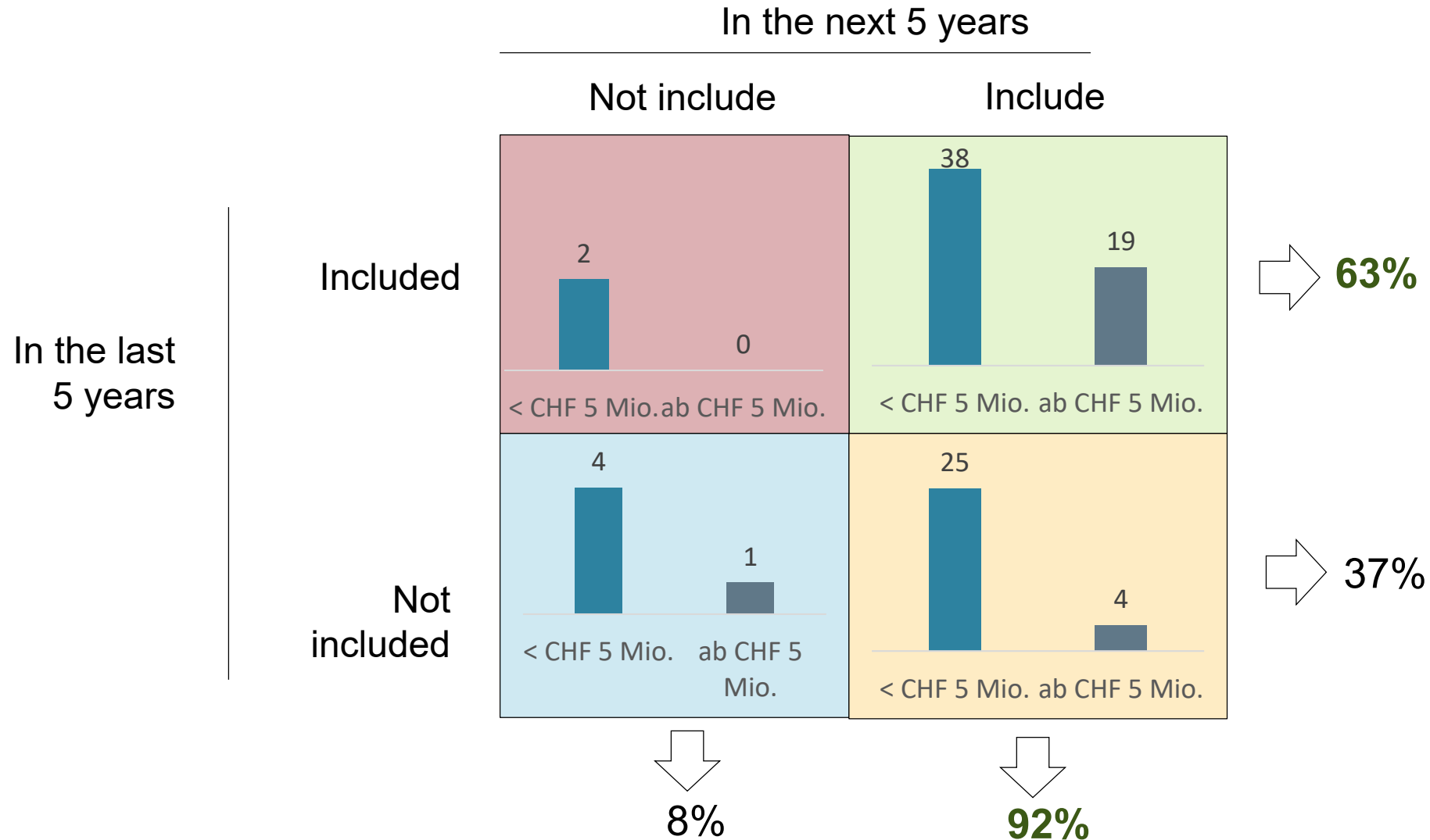
Shift in the zero degree limit



- Currently at around 1000m in winter (Grindelwald)
- 2080 already possible at 1600m (Davos)

Strategic adaptation of ropeway companies

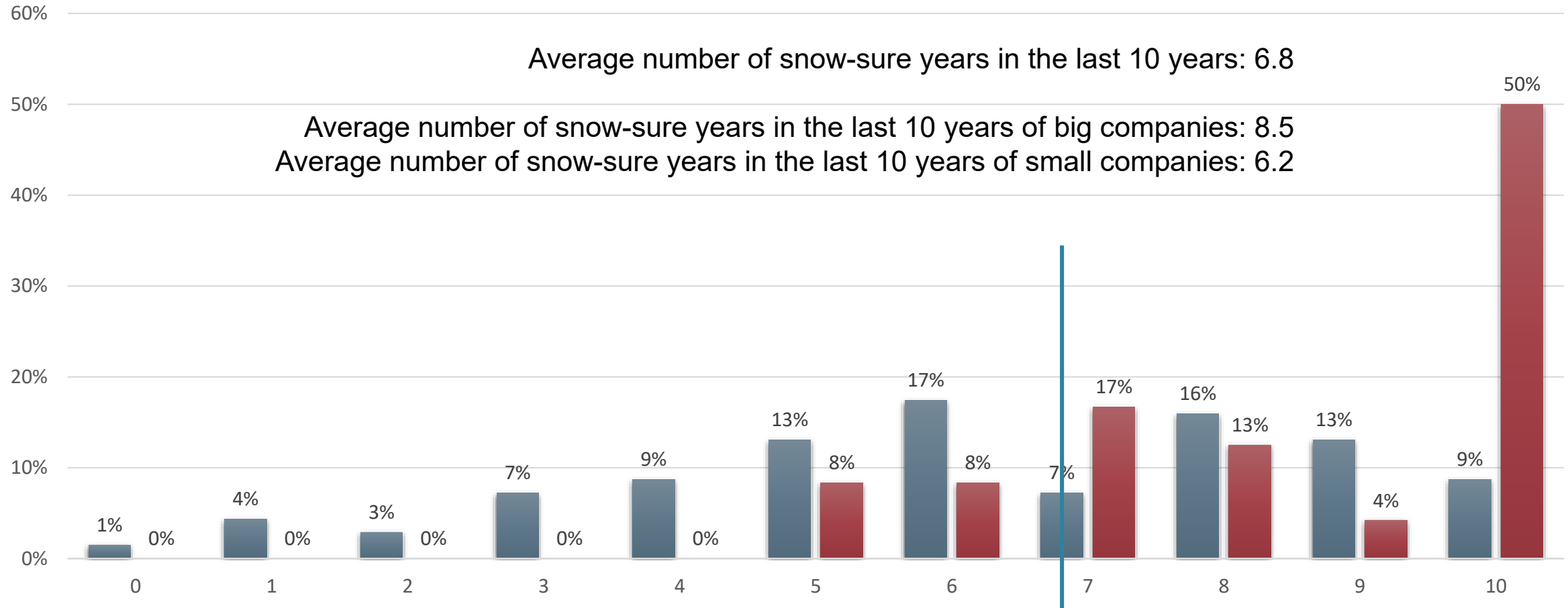
Perception and assessment of climate change



How many winters have been snow-sure in your area in the last 10 years?

Broken down by traffic revenue

n=93 (69; 24)



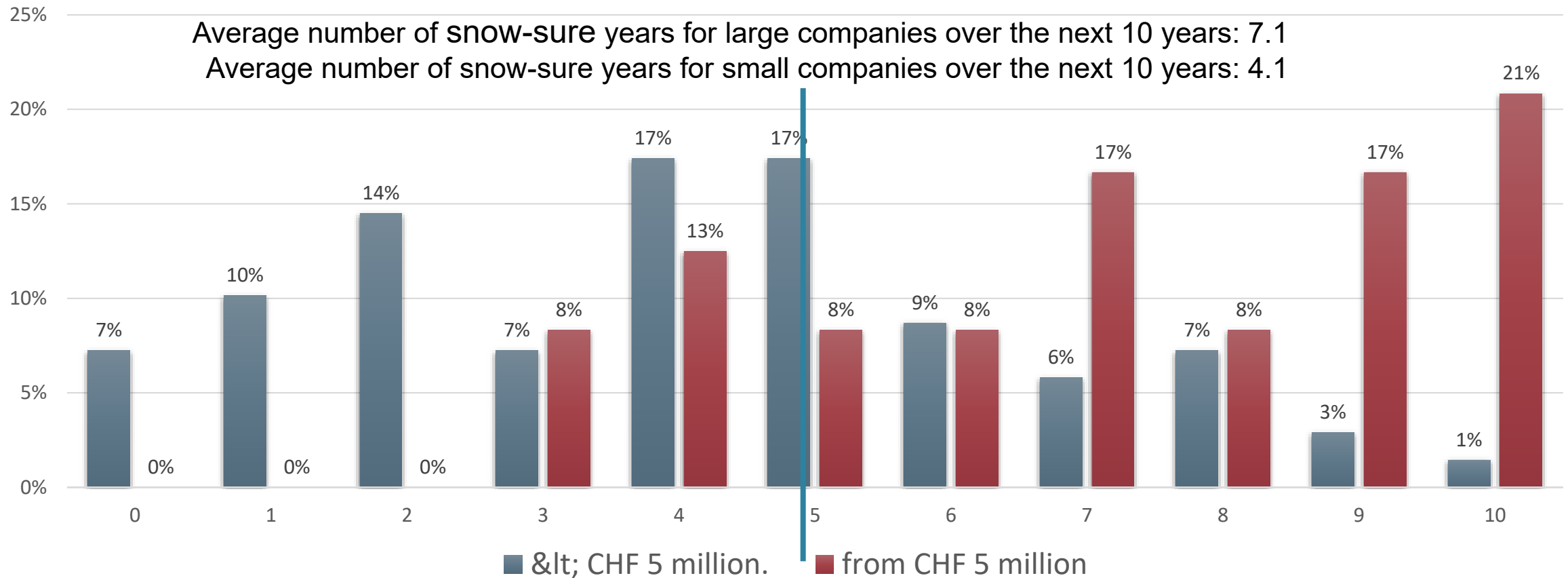
How many winters will be snow-sure in your area between 2041 and 2050?

n=93 (69; 24)

Broken down by traffic revenue

Average number of snow-sure years 10 years: 4.9

Average number of snow-sure years for large companies over the next 10 years: 7.1
 Average number of snow-sure years for small companies over the next 10 years: 4.1



What effects do you expect within the next 20 years for your area?



Adaptation Strategy 1: Snow safety – safeguarding ski operations

1. Expansion of snowmaking: Central
2. Upward shift of ski resorts: Investments in facilities at higher altitudes
3. Improvement / professionalisation of slope maintenance (e.g. snow compaction)
4. Abandonment of ski slopes that require excessive snow cover/expensive snowmaking
5. Landscape interventions to reduce the required snow depth)
6. Snowfarming?



Adaptation Strategy 2: Diversification – expansion of winter offers



1. Expansion of the offer in winter Fun sports (snowkiting, tubing, winter golf etc.)
2. Winter events on the mountain
3. Organisation of winter sports competitions
4. Winter hiking trails sufficiently developed for large areas

Strategic measures in winter



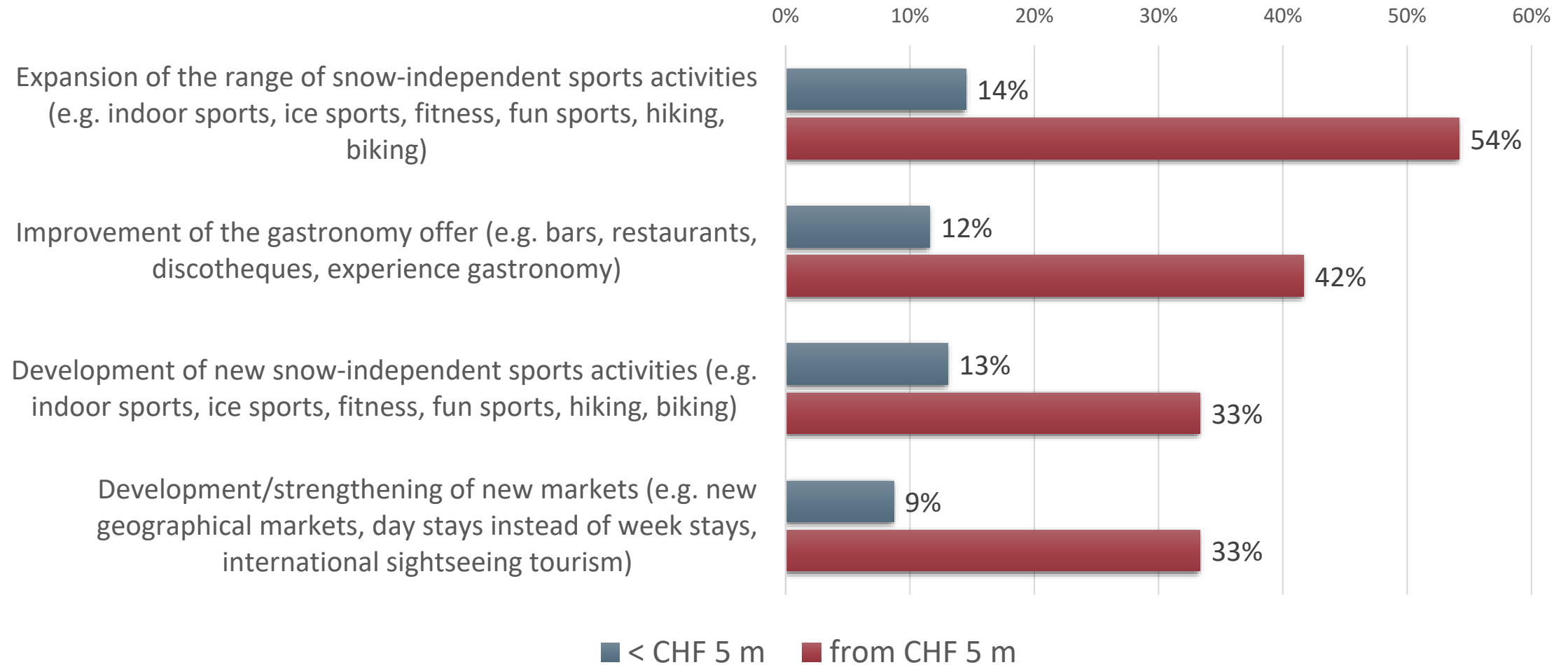
- Co-operations with ski resorts at higher altitudes
For example: Magic Pass
- Dynamic pricing

Adaptation Strategy 3: Expansion of summer offers

- Product innovation
- Much broader range of product customisations:
 1. Adventure fun sports (paragliding, zipline, mountain cart etc.)
 2. Events (Open-Air)
 3. Playgrounds, themed walks



Snow-independent offers



Use the infrastructure all year round



Measures against greenhouse gas emissions



- On-site energy production
- Purchase of renewable energies
- Energy efficiency measures

Measures against greenhouse gas emissions



- Mobility
- Arrival and departure by public transport
- Promoting e-mobility

Financing the measures



Strategic positioning



62% want to strengthen snow tourism

20% want to expand winter offer

17% are increasingly focussing on summer tourism

Strategic orientation



Positive, resilient and innovative perspective



**Thank you for
your attention!**