





From the Alps to Wall Street

What Can Businesses Learn from Alpine Sports Regarding Risk Management



Risk Management



RISK - quantifiable uncertainty

Identification

Assessment

Prioritization



Risk Management in Alpine Sports



1. Avoid triggering of avalanches



2. Find a safe route for getting to the top of the mountain

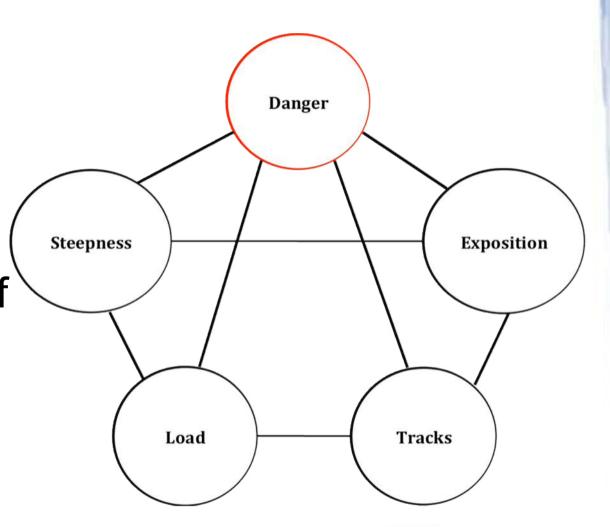
3. Identify the safe route for down skiing



Risk Management in Alpine Sports



There is a complex mix of factors that results in danger and risk of accidents.





The 3x3 Filter System



	Weather & Snow	Terrain	Human	
Regional	Avalanche bulletin Danger rating (PAB, RP) Usage freq. of trip (RF2)	Map Max. inclination on map (RF1) Terrain info (PAB) Aspect on map (RF2) Elevation on map (RF2)	Who belongs to the group Group size (RF3)	
Local	Alarm signals Danger rating (PAB, RP) Usage freq. of route (RF2)	Relief Max. inclination in terrain (RF1) Terrain info (PAB) Aspect in terrain (RF2) Elevation in terrain (RF2)	Who else is here? Group size (RF3) Spacing (RF3)	
Zonal' slope	Snow conditions Danger rating (PAB, RP) Usage freq. of slope (RF2)	Steepest slope partie Max. inclination (RF1) Terrain info (PAB) Aspect (RF2) Elevation (RF2)	Precaution measure Group size (RF3) Spacing (RF3)	

PAB - public avalanche bulletin

RF - reduction factor (class 1, 2 or 3)

RP - risk potential



Analogy for Everyday Business Life



Influence	Alpine sports factors	Business factors
Hard	 1. Conditions – weather change in time ca. every 6 to 8 hours temperature 	 1. External environment Customer, Market Demand, Finance Supplier, situation of raw material, prices, Quality, delivery time Competition Government
Somewhat	 2. Terrain Change from terrain chamber to terrain chamber Steepness Surface of ground (grass, rocks) Exposition N-NE-NW 	 2. Internal environment Technology – obsolete technology Machines + Equipment Funding
Generally easy	3. HumanExperiences Know HowGroup sizeEquipment	 3. Internal Human/ Talent factors Training level + skills + attitude Resources Availability



The 3x3 Method in Project Management



Main time frames:

- project start
- different project milestones
- project end

Main factors:



- external project customer or subcontractor
- technology and budget available
- team resources involved

	Extern	Intern	
	Project-Customer / Subcontractor	Technology / Budget / Planning	Team / Resources
Project start	Project obligations from customer General project master plan Project budget Evaluation Subcontractor + Resources	Test know-how of used technologies Budget uncertainty Planning uncertainty	Resource availability Evaluation team leader and team members
Milestone	Project review obligations with customer Technology / Finance / Planning Project review subcontractor Project changes	Check technology with budget Check planning Planning issues	Quality of teamwork Resource availability Lack of resource availability
Project end	Delivery delay subcontructor	Technology malfunction and/or failure	Detailed resource planning for intern and extern Illness of specialist

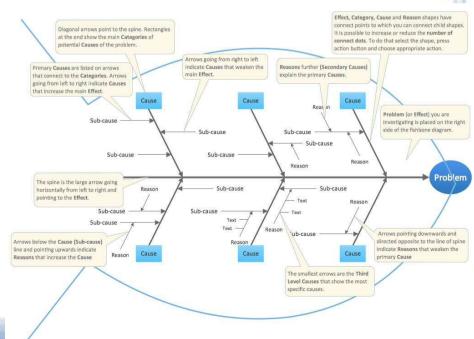






First identify crash potentials Consider contingency plans Continous improvements

- Fishbone diagrams
- Evaluation matrix
- Action plans





Thank you





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