The Problem

- Skiing: the bigger the terrain, the better
- But wait.....
- Skier numbers are declining across the industry
- Ski Patrol: people get hurt and lost; patrollers respond, putting their lives on the line
- Risk Management: protect employees and guests
- Cartography as a wayfinding tool
How often do significant injuries occur?

- Skier injury rate: 1 per 1000 skier days
- Snowboarding injury rate: 1 per 600 days
- On an average midwinter weekend day: 30-60 people are injured and receive treatment from ski patrol
- Number of injuries is consistent, nature and severity changes with snow conditions
- Injury rates in Colorado decreased until 2006, increasing since then
  - X-Games/Red Bull effect?
Why do people get hurt?

• Skiing/riding too fast for conditions
• Distracted
• Terrain was too difficult
• Tried a shortcut and ended up confused then lost then injured
Who gets hurt?

• Predominantly beginner and intermediate skiers
  – most injuries are minor extremity injuries
  – Less than 50% require surgery
• Advanced skiers are injured less often but more severely
• 8% of patrol dispatches are for uninjured guests who are “lost”
  – 95% of these guests are from Latin America
What if people had better information to make decisions?

• Town of Vail wayfinding project started summer 2013
  – People who feel at ease in their surroundings are more likely to spend $$$

• Above average snowfall during the winter of 2013-2014
  – More rescues occurred in remote areas within the ski area
  – More snow means additional work for patrollers (avalanche mitigation, digging out ski lift towers, etc.)
Proposed Solutions

• Maps by cartographers NOT graphic designers
  – International guests in mind
  – Create a visual hierarchy

• Quantify the dangerous places using GIS data derived from accident reports
  – Is this a dangerous place or just high volume of traffic?
Proposed solutions (cont.)

• QR codes at key locations
  – Informal and formal surveys reveal a pattern of people getting lost in the same places

Scan for directions
Proposed Outcomes (cont.)

• Different map product for kiosks, folded maps, and mobile devices
• GIS data available for other mountain departments
  – Snowmaking lines, utilities, roads, avalanche mitigation
Vail’s Back Bowls

The Back Bowls
Vail’s Back Bowls are famous for uninterrupted expanses of deep powder skiing and are recommended for expert skiers only. Access to the bowls closes at 3:00.

Sun Up Bowl
Served by Chair 5. Ski down from the top of Chairs 4, 11 or 14. Natural conditions exist.

Sun Down Bowl
Also served by Chair 5. Ski down from the top of Chairs 3, 4, 7 or 11. Natural conditions exist.

Bowl Hints
1. Be prepared for varying snow and terrain conditions.
2. Check with Ski Patrol, Hosts or Hostesses for current conditions.
3. Remember, Sun Up and Sun Down Bowls close at 3:00.
4. Check Lift Status Boards for Chair 5 before entering these bowls.

Help keep Vail Mountain the beautiful place it is. Please do not litter! Save your trash for the litter cans at the bottom and top of all lifts.

Suggestions may be directed to:
Bob Hamilton, Director of Marketing

WARNING!!!
The United States Forest Service requests that skiers wishing to leave the area boundary call extension 4652 on any mountain emergency phone to get current weather and avalanche conditions and other information before leaving. Out of bounds skiers should be aware that under the Skier Safety Act of 1979, ski areas have no duty to skiers outside the area boundary. Skiers should be advised that uncontrolled avalanche and other hazards may exist outside the area boundary of Vail Ski Area. Rescue, if available, may be slow and costly for the skier. The Eagle County Sheriff is responsible for rescues beyond the area boundary. Skiers are requested to give name, destination, and size of group when calling.
Desired Outcomes

• Injury rates decrease
• Number of patrol dispatches decreases
• Guest experience improves
Less Desired Outcomes

• Relocate the problem
  – People still get hurt, but they are finding new and equally treacherous places to do it
Thanks for listening!

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