

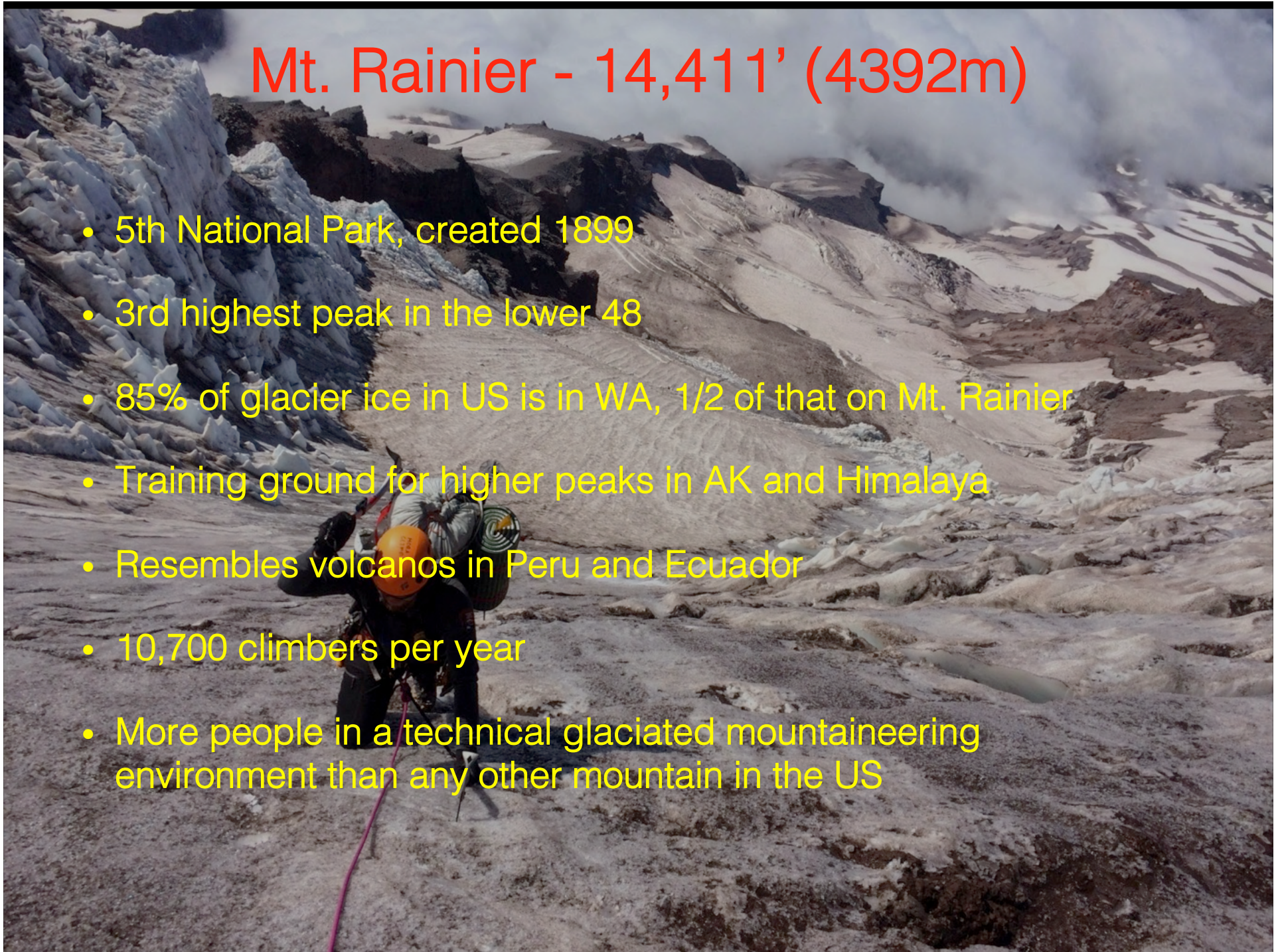
Mt. Rainier Climbing Rangers

Lessons Learned



Mt. Rainier - 14,411' (4392m)

- 5th National Park, created 1899
- 3rd highest peak in the lower 48
- 85% of glacier ice in US is in WA, 1/2 of that on Mt. Rainier
- Training ground for higher peaks in AK and Himalaya
- Resembles volcanos in Peru and Ecuador
- 10,700 climbers per year
- More people in a technical glaciated mountaineering environment than any other mountain in the US



Quick Definitions

Seasonal: Federal employee working less than 6 months per year

Permanent: Federal employee working 6 to 12 months. 30-year

GS: General Schedule - a federal wage system based on incre

Objective

- Share lessons learned from climbing ranger accidents, injuries, and fatalities.

Boards of Review



Lesson 1: Culture, Traditions, Values

- What have you inherited?
- What are you not questioning?
- What are you taking for granted?

Invite and welcome outside review

Example of Changing Culture

<- Then

- 7 total rangers
- GS-5's (\$15/hr)
- 3-4 month seasons
- ~32 hrs technical training / person
- Single coverage at ranger stations
- Little mountain supervision
- Poor equipment

Now

- 16 total rangers
- GS-5, GS-7, GS-9
- 6 month seasonals
- 200+ hrs technical training
- 2-3 Rangers @ each station
- 4 GS-9 perm field supervisors
- Industry standard equipment

Future ->

- 16 total rangers
- GS-5, GS-7, GS-9
- 6 month seasonals
- 200+ hrs technical training
- 2-3 Rangers @ each station
- GS-9 & GS-7 permanent staff
- Industry standard equipment
- AMGA Certification

1995



1997 - 2000



2002



2014



Common denominators in employee accidents / fatalities

- Lack of leadership
 - Risk Normalization
 - Inadequate Communication
 - Sub-standard training
 - Insufficient career experience
-
- Poor Mountaineering Practices

What is your organizational culture?

Five Core Skills

EMT-B

Skill Curriculum/Validation:
NR-EMT / WMI / WMA, etc...



Five Core Skills

Avalanche / Snow Stability

Skill Curriculum/Validation:
AIARE / CAA



Five Core Skills

Aviation

Skill Curriculum/Validation:
NWCG / US-DOI



Five Core Skills

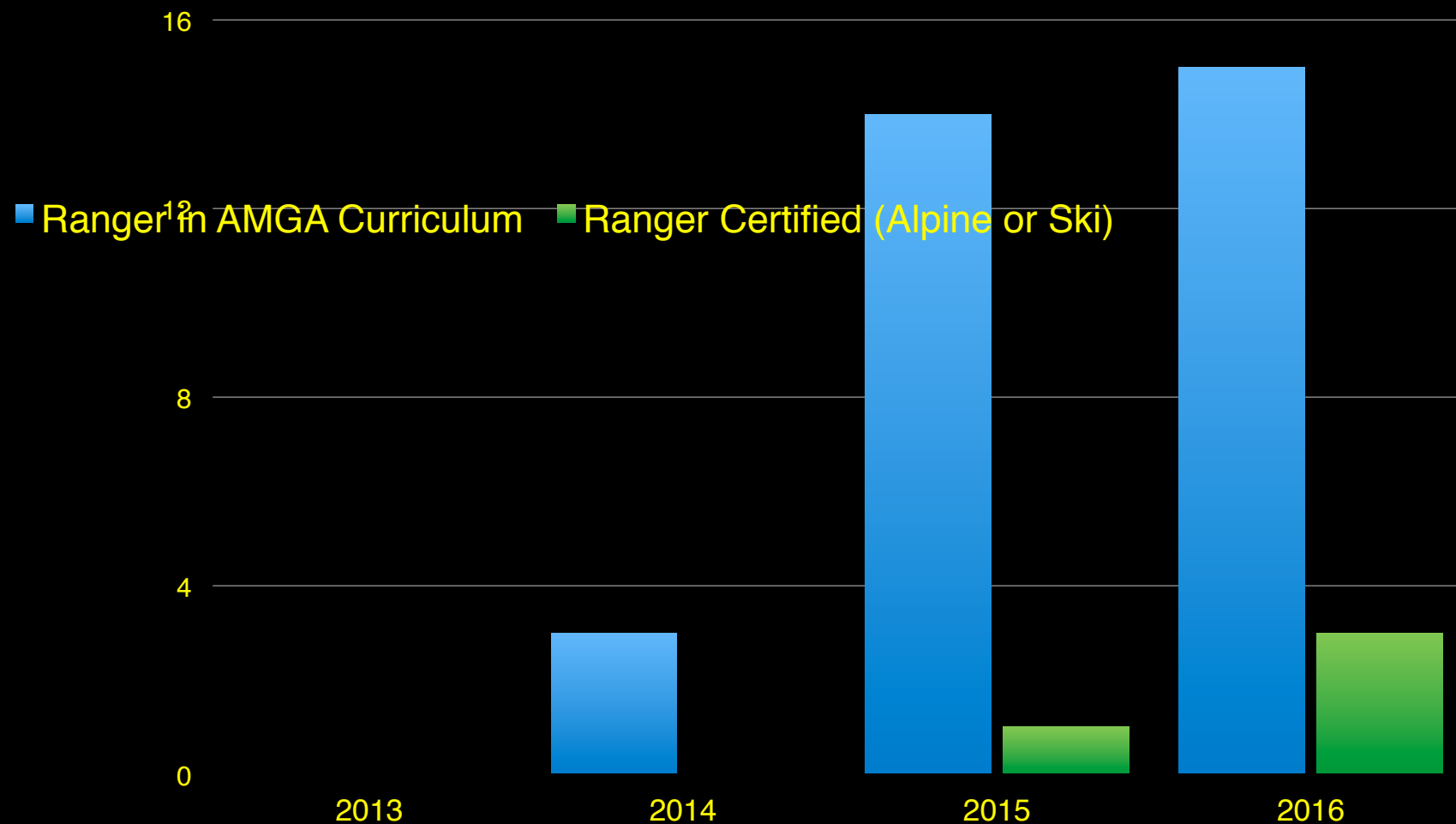
Technical Rope Rescue Skill

Curriculum/Validation:
US DOI All-Hazard



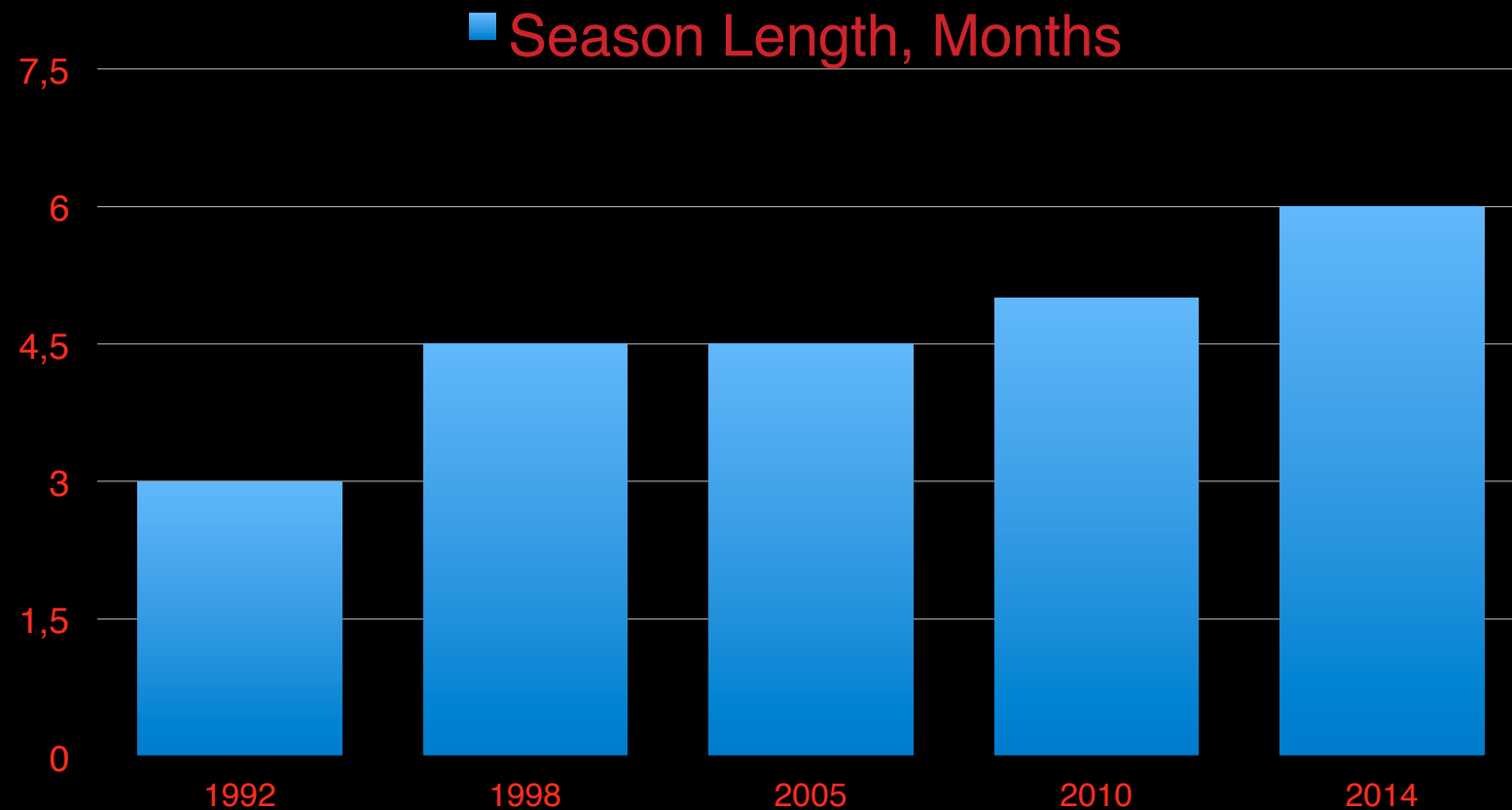
Professionalization in Mountaineering

All climbing rangers on path to AMGA Ski and/or Alpine Certification



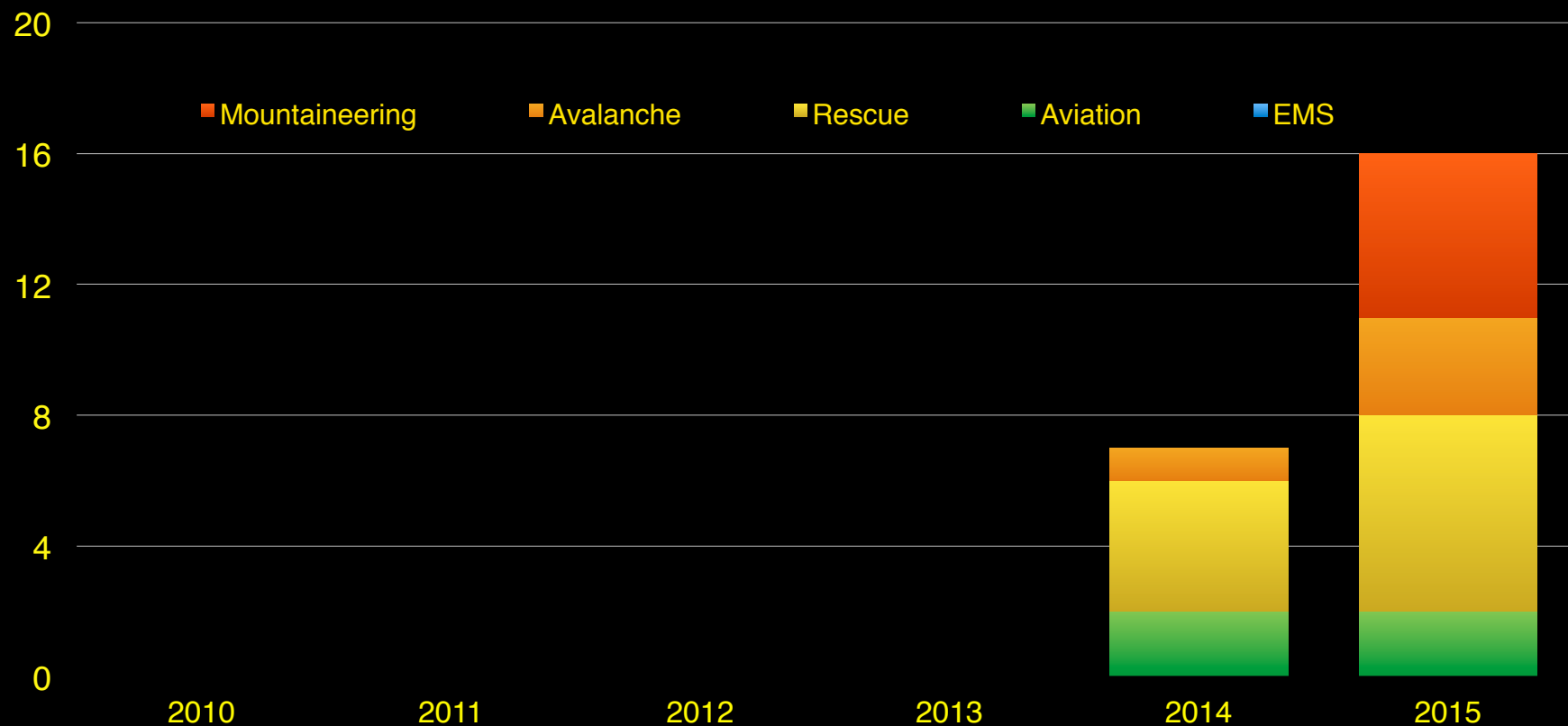
Professionalization in Mountaineering

- Maximizing Seasonal Yearly Employment



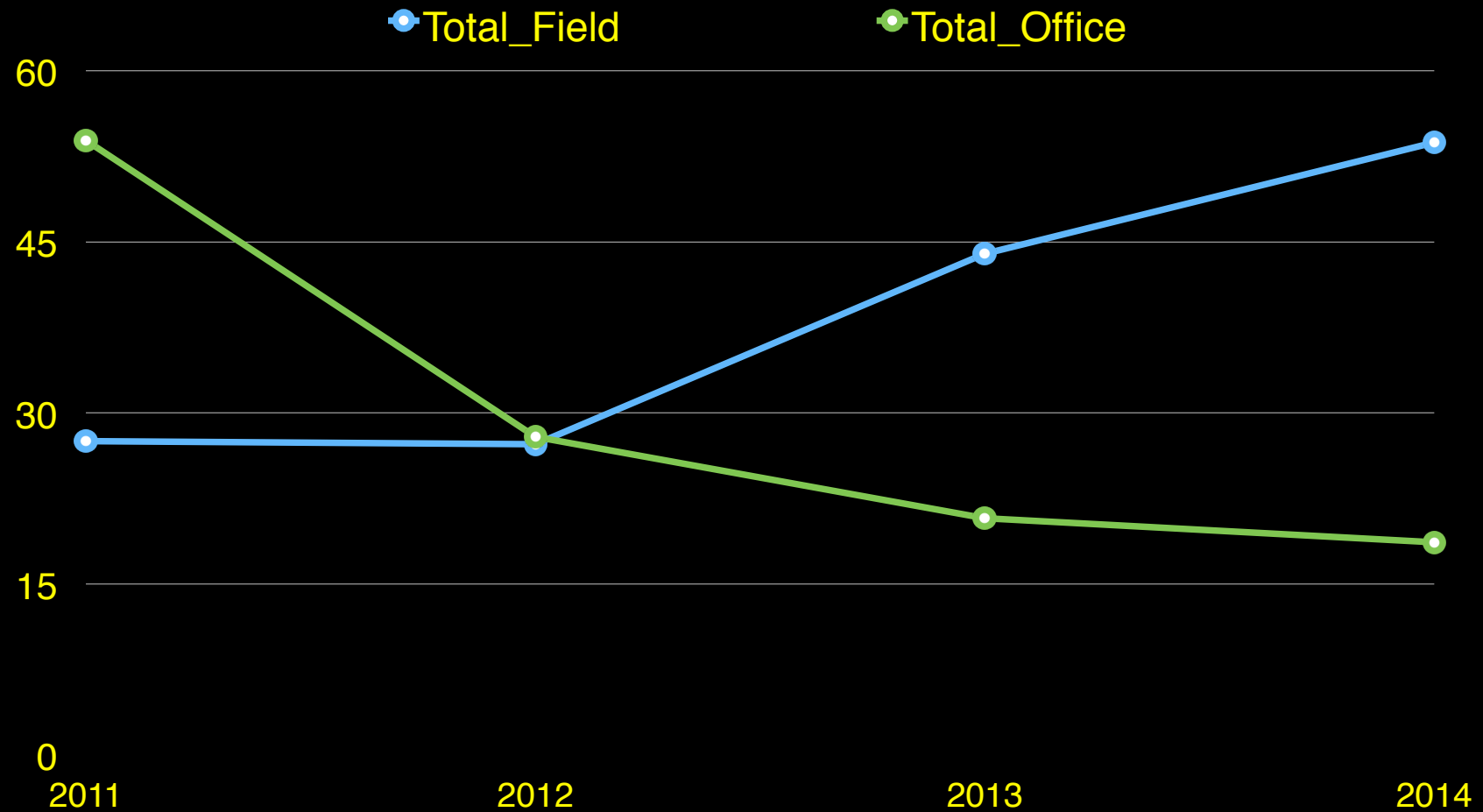
Professionalization in Mountaineering

Supporting off-season training in core skill areas for seasonals



Professionalization in Mountaineering

Decreasing office/admin time for supervisors



Integrated Skills Training with Mountaineering

Helicopter - Rescue Scenarios



Integrated Skills Training with Mountaineering

Typical Terrain / Upper Mountain Rope Rescue



Lesson 2

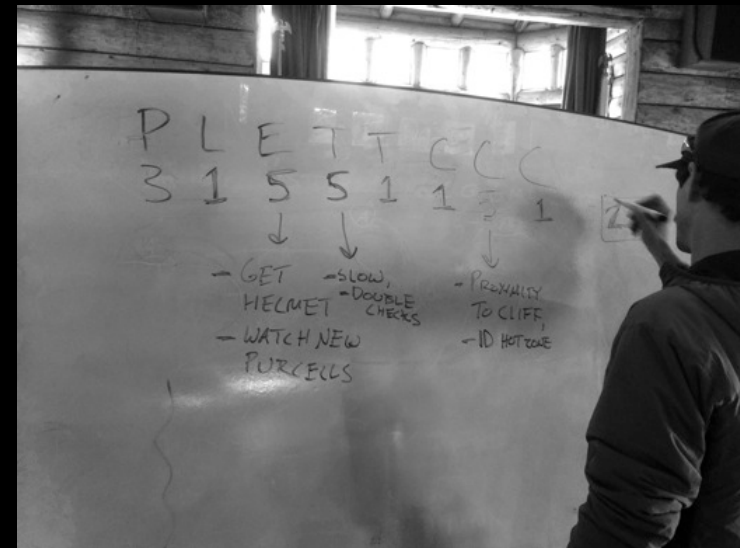
Identify your core skills

Outsource training, testing, and certification

Risk Assessment and Management

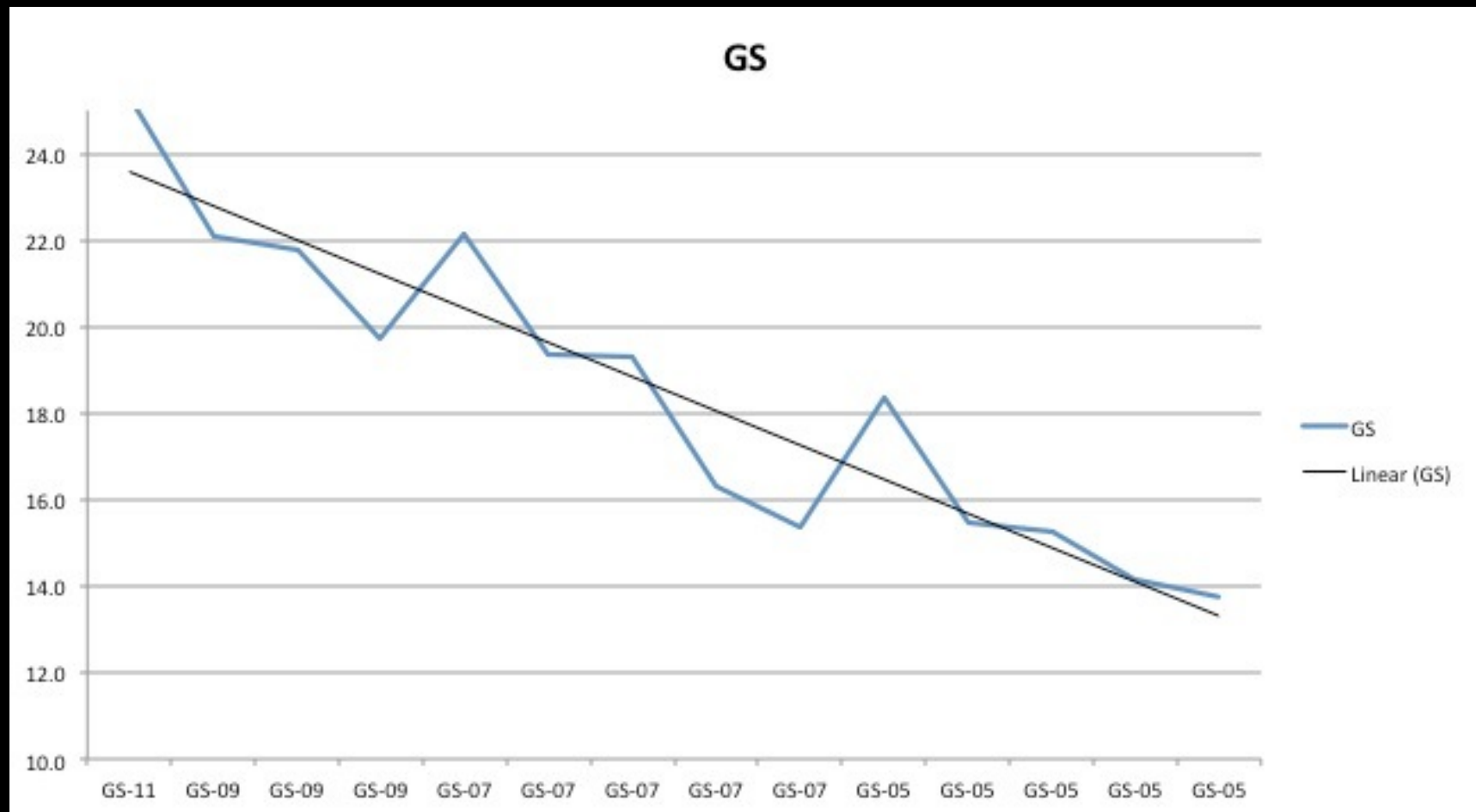
Operational Leadership

- Evaluates Risk based on 8 criteria
 - Planning
 - Leadership
 - Equipment
 - Training
 - Team
 - Communications
 - Conditions
 - Complexity
- Frames discussion before the task
- Common denominators of accidents
- 500 documented GAR Models



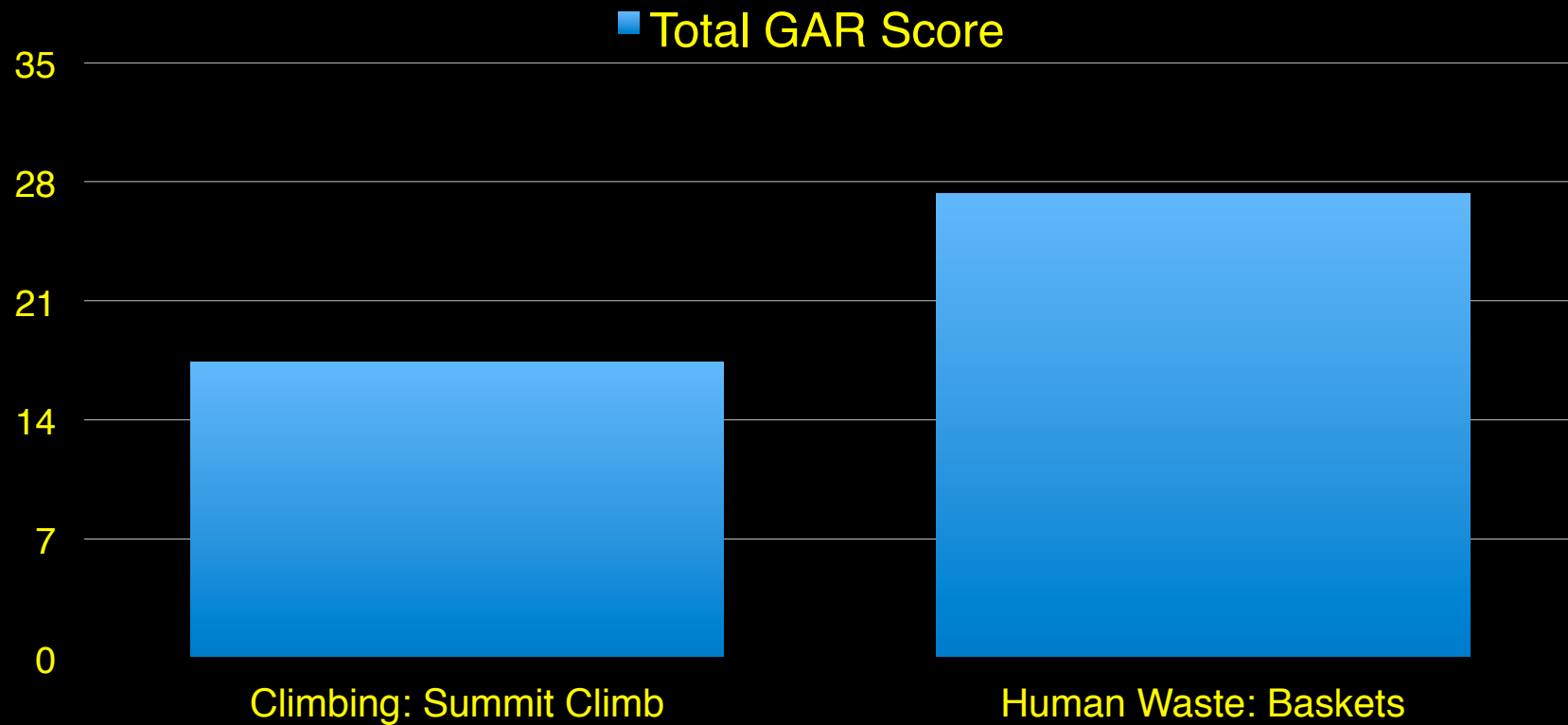
GAR Risk Analysis - Lessons

Risk Awareness Increases with Increase in Responsibility



GAR Risk Analysis - Lessons

Risk Normalization - Summit Climbing vs. Human Waste



Summary

Know your culture - Invite outside critique

Identify Core Skills - Train, Test, and Certify

Manage Risk - Seek and destroy risk normalization