REDUCING THE CLIMATE IMPACT OF PROFESSIONAL AIR TRAVEL:
LANDING ALTERNATIVES FOR UNIVERSITY FACULTY & STAFF

Andrew Tran

@andylt94

Host organization: UW Sustainability Office
Site supervisor: Elise Glassman, UW Sustainability
Faculty advisor: Yen-Chu Weng, Program on the Environment

Environmental Studies
Capstone
Program on the Environment

Current altitude of air travel at UW

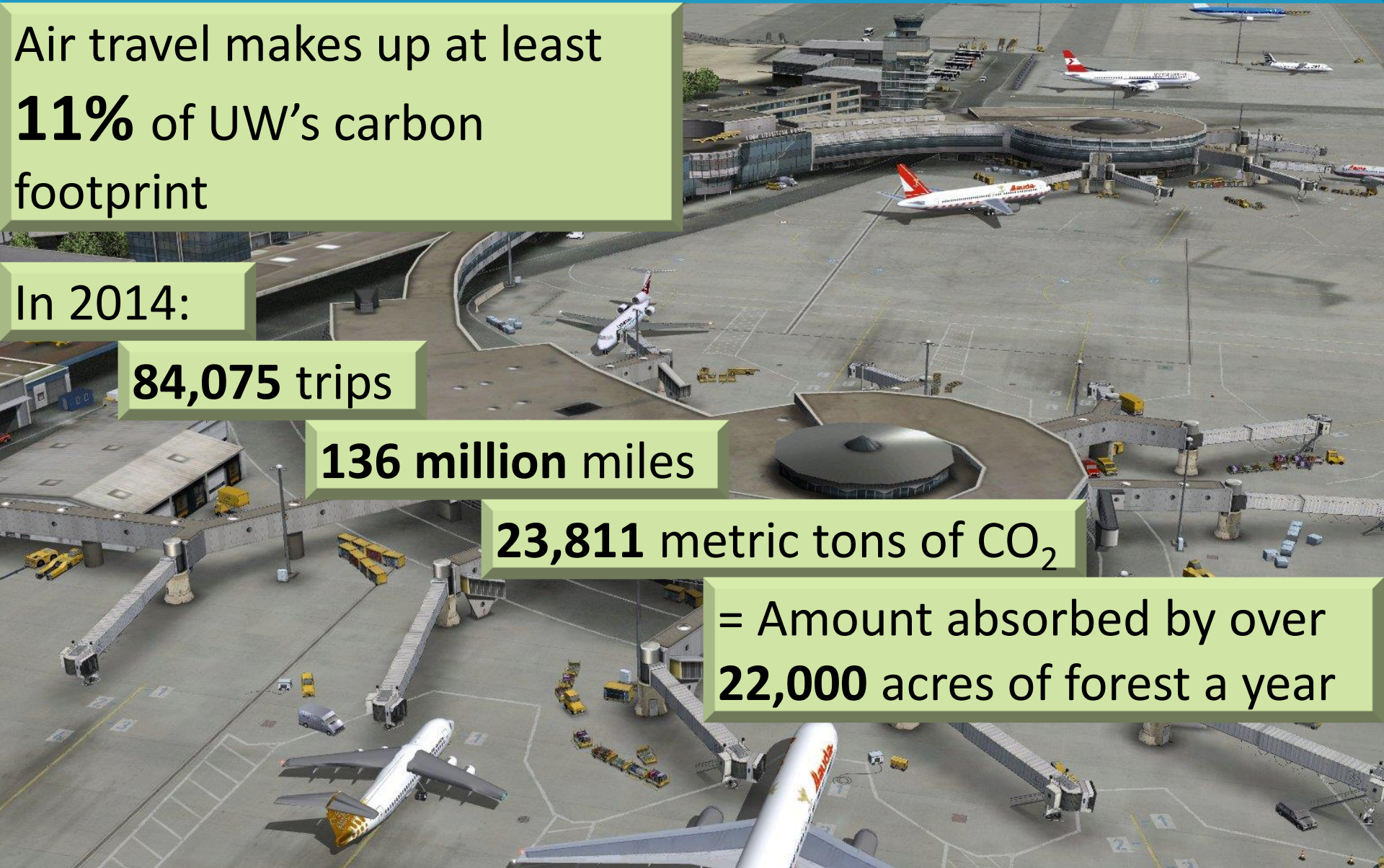Air travel makes up at least **11%** of UW's carbon footprint

In 2014:

84,075 trips

136 million miles

23,811 metric tons of CO_2

= Amount absorbed by over **22,000** acres of forest a year

The ascending rationale

1. Carbon emissions contribute to climate change

2. Faculty and staff air travel continues to increase

My high-flying research questions

1. Are there alternatives within travel communications systems that may reduce unsustainable professional air travel?

2. What are the challenges to their success and implementation?

Methods: UW Sustainability internship

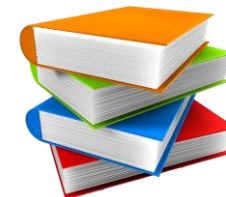Presented awareness to professional parties

Created a communications plan

Researched alternatives to air travel

Reviewed literature on challenges to alternatives
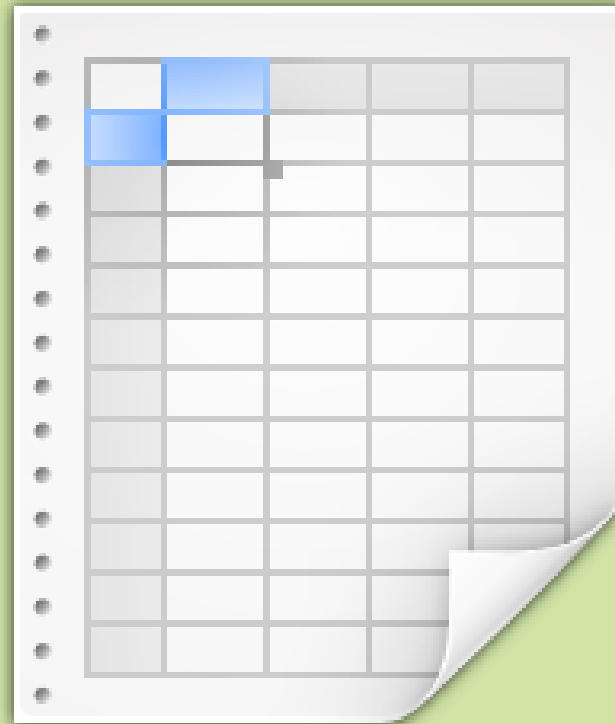
Methods: Presentations

Presentation to the UW Travel Office Information Meeting on August 25th, 2016

Methods: Communications plan

A quarterly spreadsheet that plans:

- Delivery date

- Media stream

- Audience

- Purpose

- Message

Results: Conferencing alternatives

Offer many features including:

- Free or low cost on campus

- Large number of participants

- Unlimited meetings

- Screen and file sharing

- Instant messaging

- Video and audio recording

Results: Transportation alternatives

Air Travel Versus Alternatives

Sample Short-Haul Trip (<300 miles): Seattle to Spokane

	Roundtrip CO_2e	Roundtrip Cost	Roundtrip Time
(airplane)	271 lbs	From $189	2 Hours*
(car)	268 lbs*	From $28	8 Hours
(bus)	132 lbs	From $36	5-6 Hours
(train)	209 lbs	From $110	7-8 Hours

Results: Challenges to alternatives

Economic incentives

High valuation of time and convenience

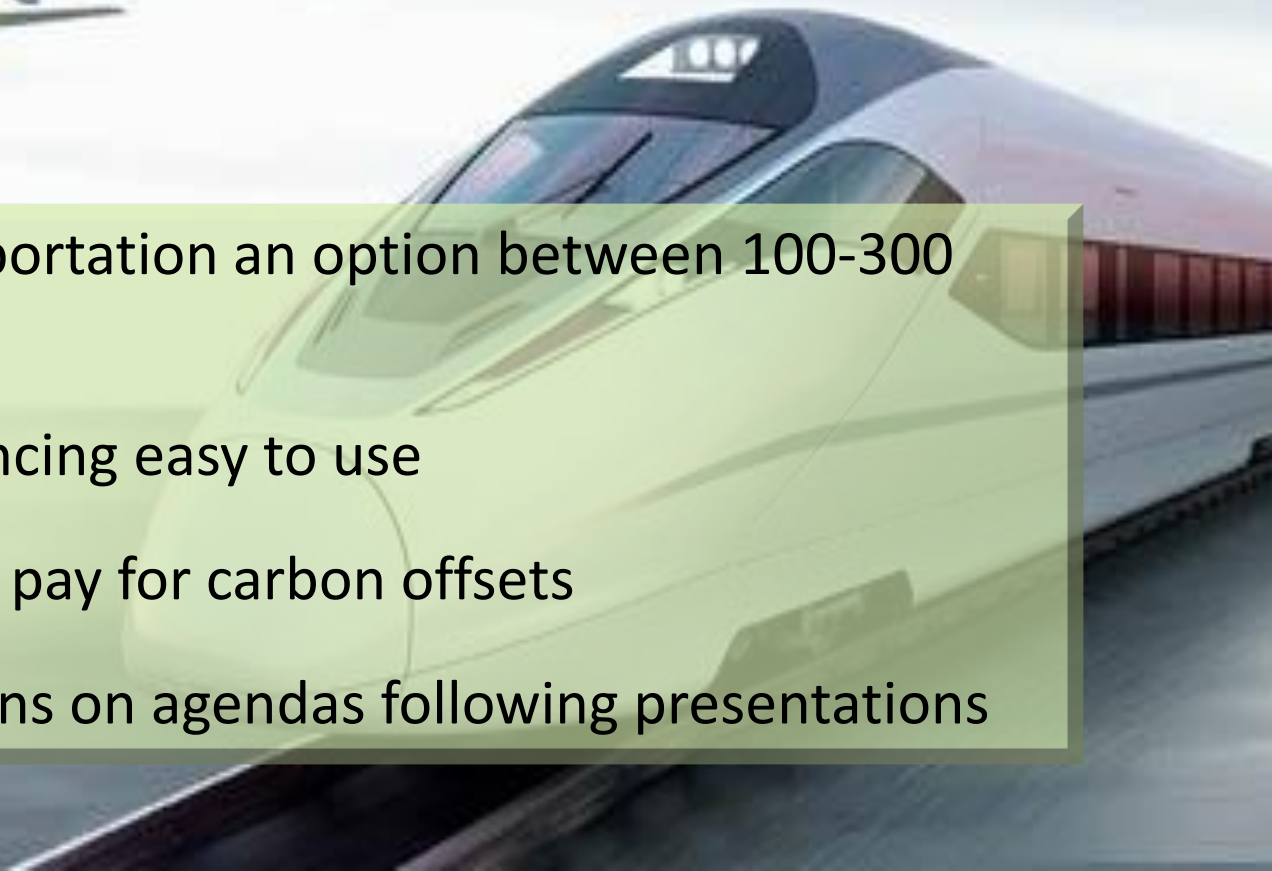Environmental backgrounds and beliefs

Lack of sustainable travel infrastructure

Results: Optimism for faculty and staff

- Ground transportation an option between 100-300 miles

- Videoconferencing easy to use

- Willingness to pay for carbon offsets

- Travel emissions on agendas following presentations

Significance of my study

- Raises awareness of unsustainable travel

- Creates a stepping stone for future communication

- Helps UW consider sustainable innovations in travel infrastructure

Conclusion

- Air travel emissions are a climate threat

- Personal incentives need to be accounted for

- Need a top-down approach for behavior change

- Systematic infrastructure and policy changes are necessary

Acknowledgements

- **Elise Glassman**

  – Site supervisor

- **Yen-Chu Weng**

  – Faculty advisor

- **UW Sustainability**

- **UW Travel Office**

- **Family and friends**

Thank You!