


FIGHT OR FLIGHT:

EXAMINING ACADEMIC AIR
TRAVEL'S CARBON FOOTPRINT

TESSA YIP

 @tessayip

Host organization: UW Sustainability
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**WHAT FACTORS
AFFECT
ACADEMIC AIR
TRAVEL?**

COMPARING TONS OF CARBON DIOXIDE



6.6 tons CO₂
per house

1 year of
electricity in
the average
U.S. home



4.76 tons CO₂ per
passenger

1 roundtrip flight
between Seattle
and Delhi, India



1.9 tons CO₂
per car

1 year of
commuting: 100
miles a week in a
car

15 - 40%

The predicted percentage of global carbon dioxide emissions to come from air travel by 2050



5.3%

Annual growth rate of all
civilian air travel over the next
decade



The extensive predicted
growth in aviation will
outgrow any increases in fuel
efficiency



11%

The percentage of
the UW's carbon
footprint that
comes from air
travel



2050

UW Climate Action
Plan goal for
climate neutrality

INTERNSHIP AND INTERVIEWS



Interned with UW Sustainability



Analyzed Keystone Team's
2015-2016 research

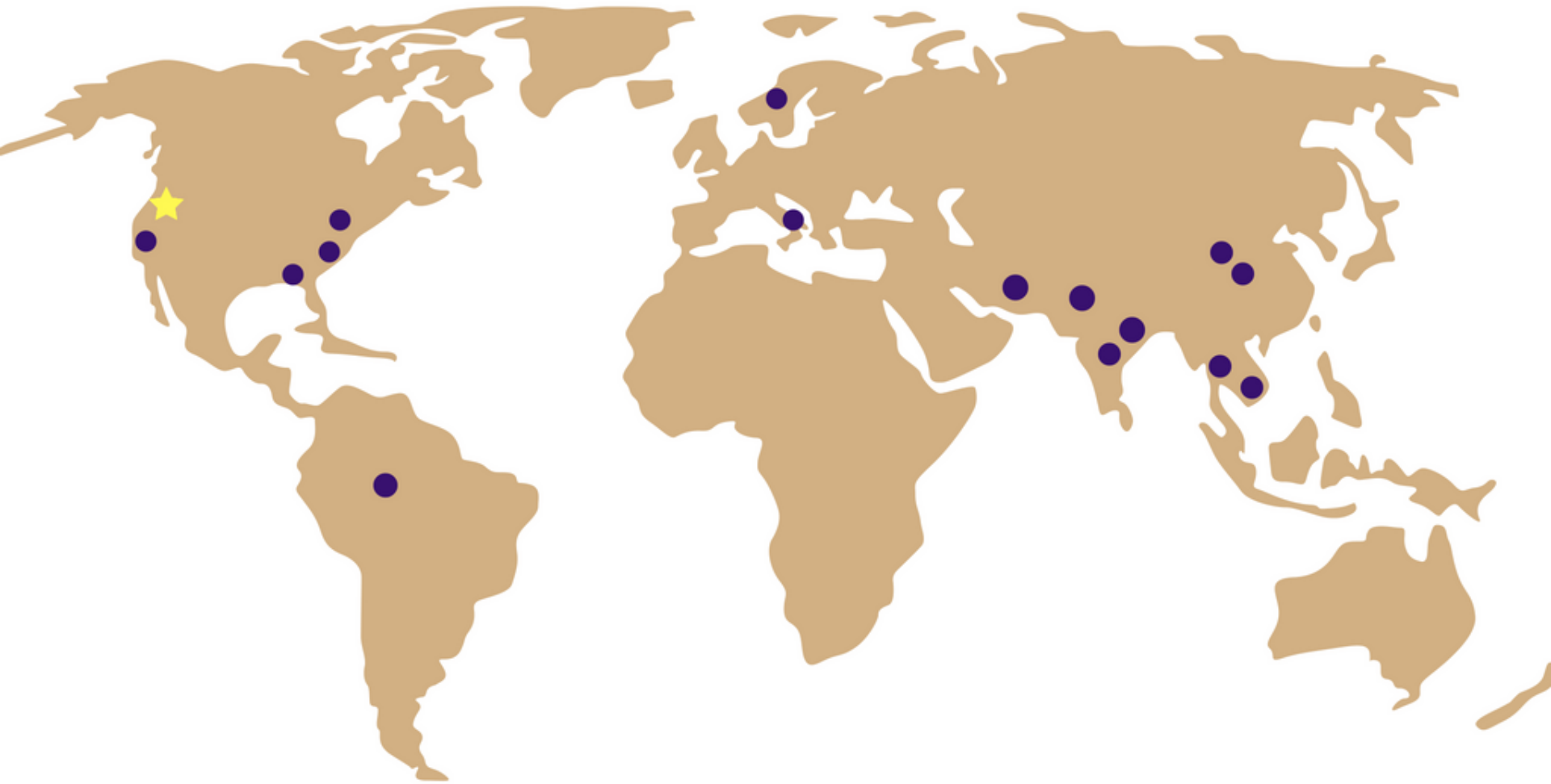


Developed communications
plan for UW Travel Office



Conducted interviews with 10
UW faculty members

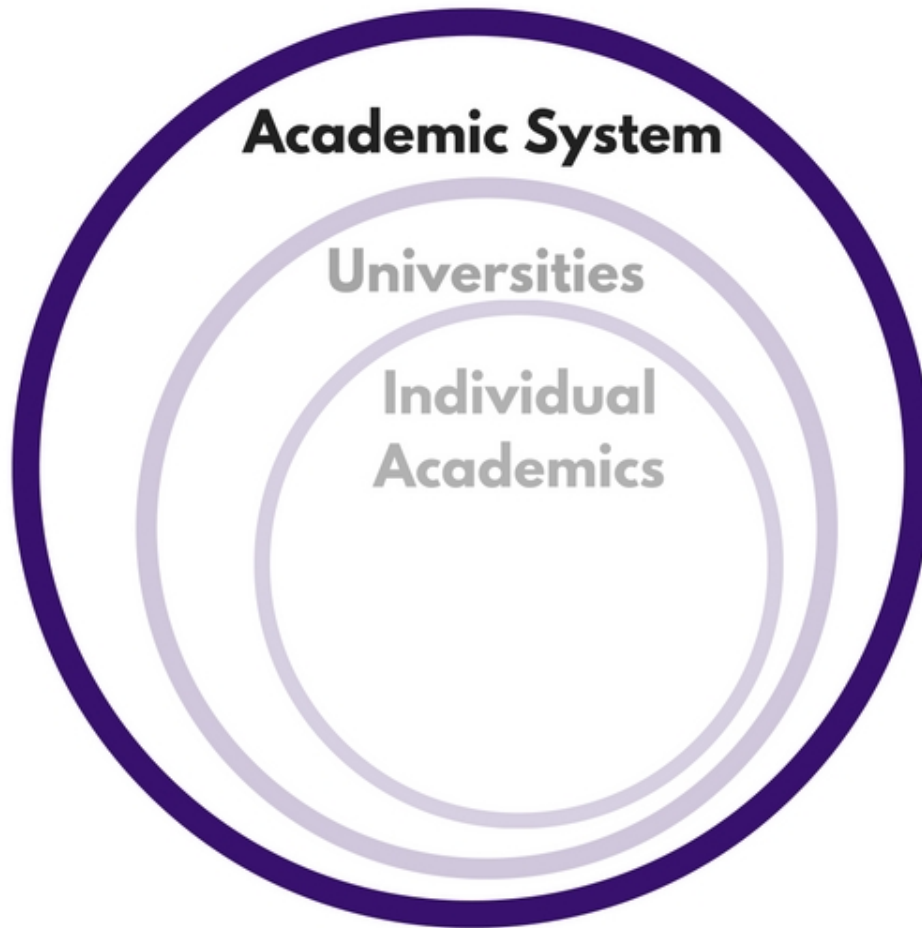
WHERE DO PROFESSORS GO?



DIFFERENT SCALES OF ACADEMIA



SCALE 1: THE GLOBAL ACADEMIC SYSTEM



THE GLOBAL ACADEMIC SYSTEM

TRAVEL TYPES

Research
Conferences
Study abroad
Teaching

ESSENTIAL AND INESSENTIAL

Travel types range in importance

SCALE 2: THE UNIVERSITY SYSTEM



THE UNIVERSITY SYSTEM

CAREER PROGRESSION

Career progression is vital to an academic's career

TENURE

Tenure and seniority give greater freedom of choice regarding travel

ACADEMIC DEPARTMENTS

Travel requirements range between each department

SCALE 3: INDIVIDUAL ACADEMICS



Academic System

Universities

**Individual
Academics**

INDIVIDUAL ACADEMICS

CATEGORIZING PROFESSORS BASED ON TRAVEL IDEOLOGY

Shift in air
travel habits



Perception of
air travel

Environmental
awareness



Openness to
alternatives

IDEOLOGY SCALE - "TYPE"



Value-Driven

Rationalizer

Trailblazer

Value-Driven



20%

Rationalizer

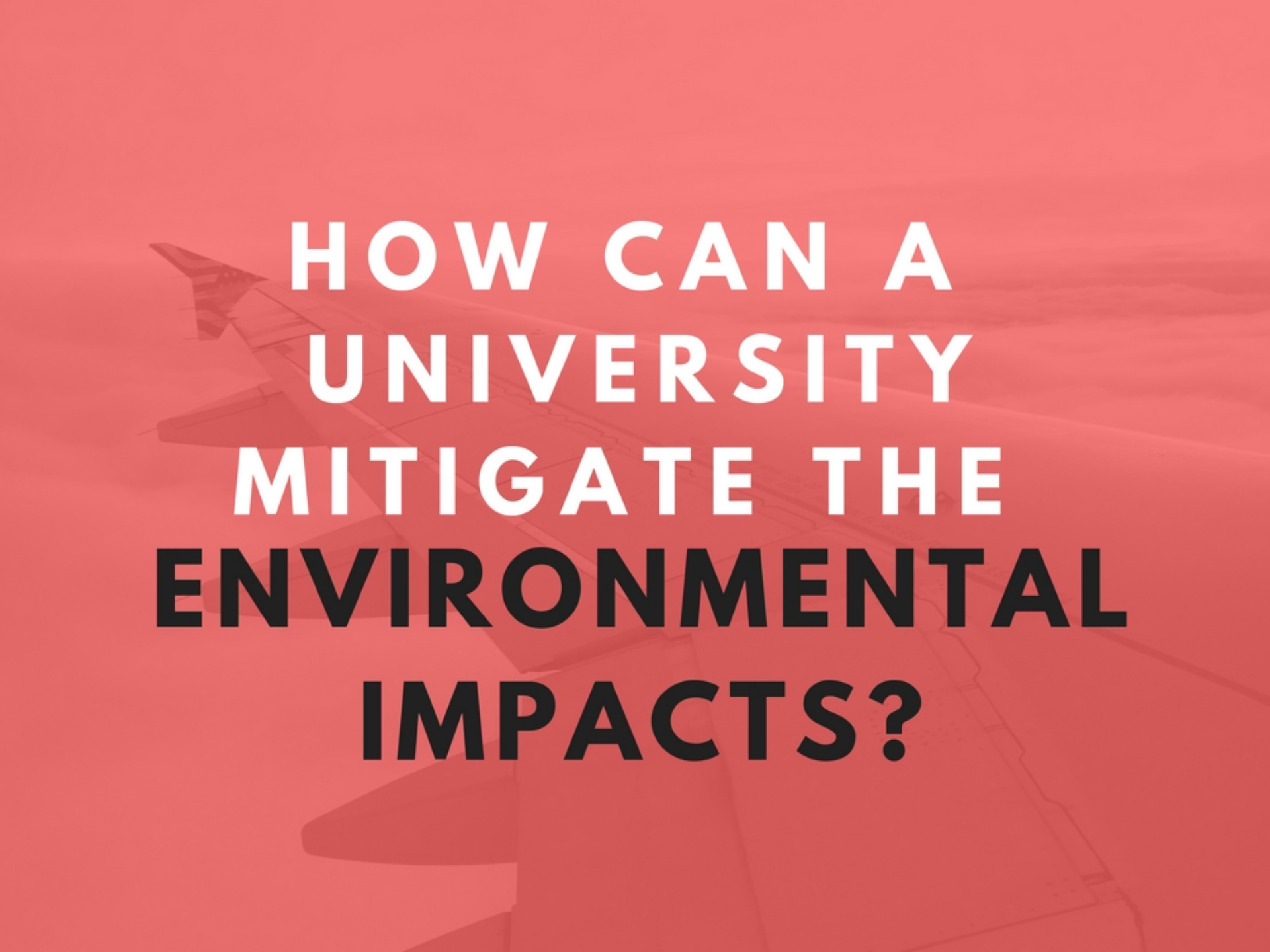


60%

Trailblazer



20%



**HOW CAN A
UNIVERSITY
MITIGATE THE
ENVIRONMENTAL
IMPACTS?**



**REDUCE
AIR TRAVEL**



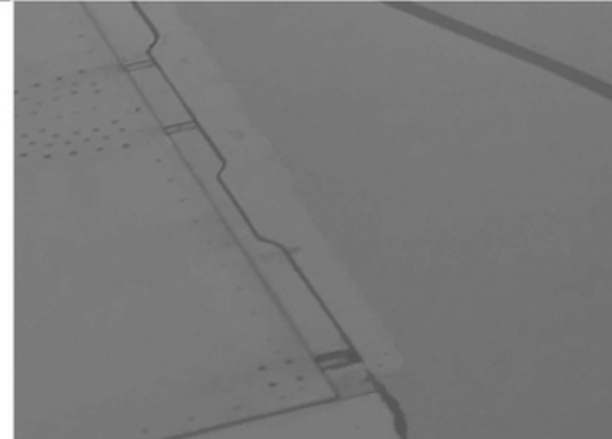
**CREATE A
NEW
DISCOURSE**



**STREAMLINE
AIR TRAVEL**



**CONFERENCE
DECISION-
MAKING
PROCESS**



REDUCE ACADEMIC AIR TRAVEL



Cutting academic travel would be the **most efficient action** to reduce UW's **carbon footprint** but would this impede the **university's mission?**

“ACADEMICS HAVE A DUTY TO DISCUSS, DISSEMINATE, DEFEND THEIR WORK, AND LEARN ABOUT OTHER APPROACHES TO THE SAME PROBLEMS AND QUESTIONS.”

- Jeremy Hess, Emergency Medicine,
Health Sciences, Global Health

STREAMLINE ACADEMIC TRAVEL

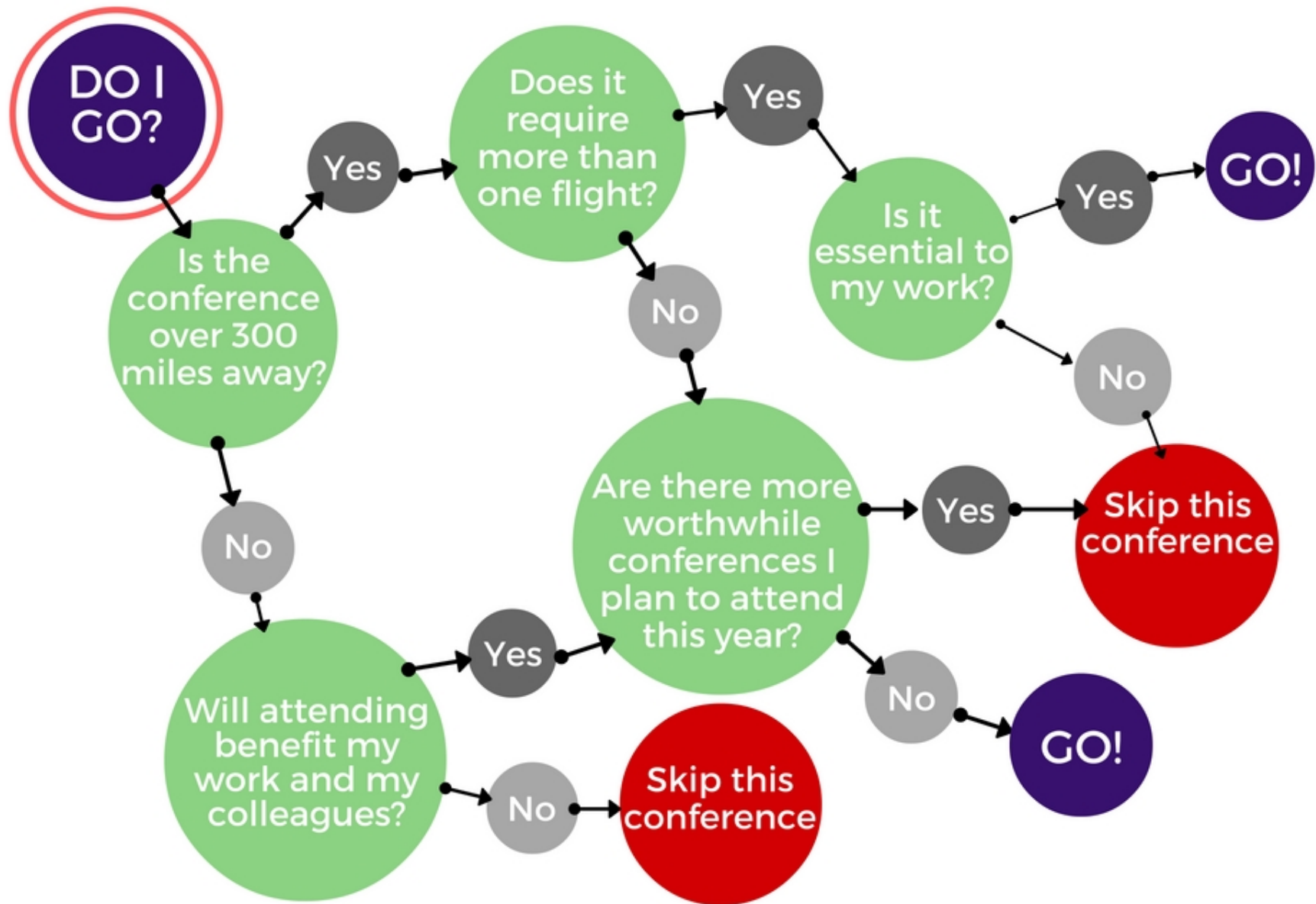
Better organize
and schedule
travel

Coordinate travel
with other kinds of
travel

Reduce the "back
and forth"

Maximum amount is
done with 1 round-trip
flight

CONFERENCE DECISION-MAKING

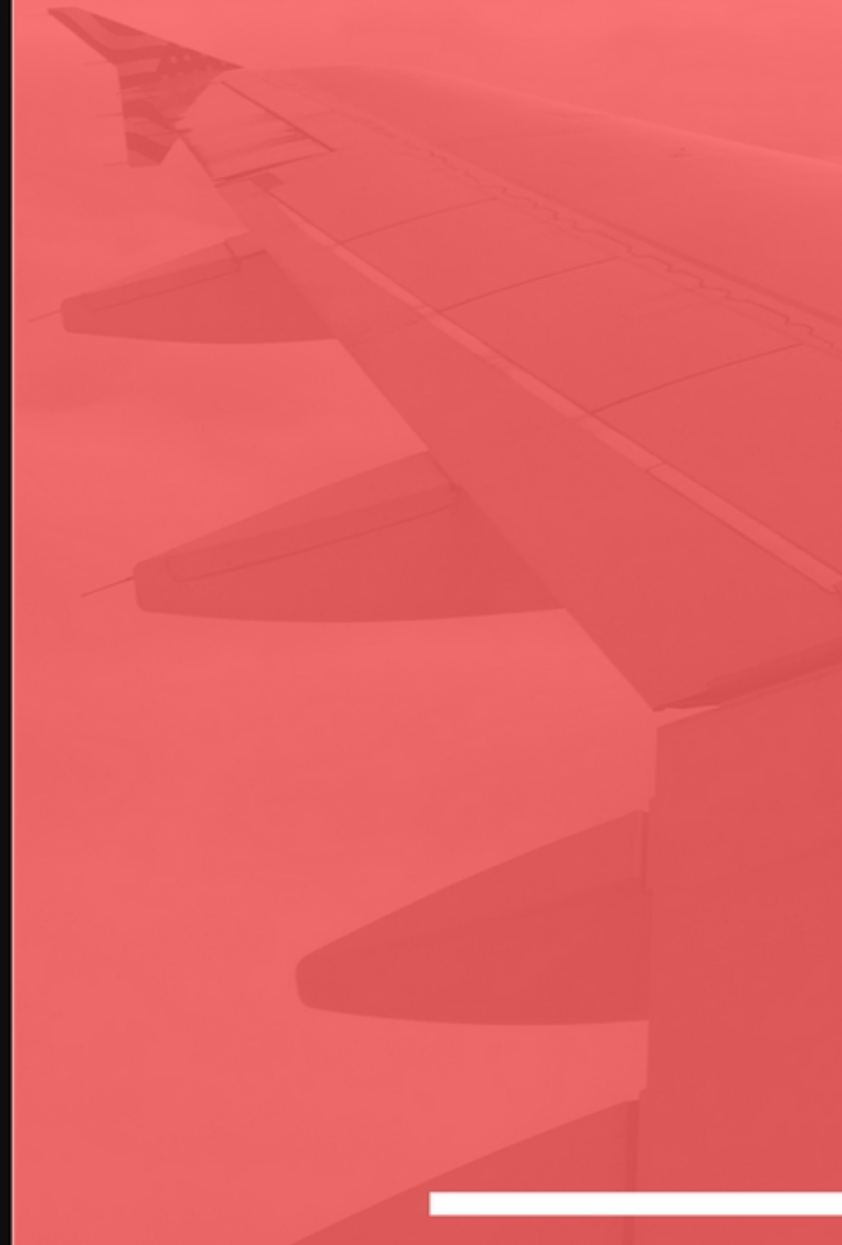


LET'S MAKE AIR TRAVEL PART OF THE CARBON CONVERSATION

Talk about flying with colleagues

Keep personal emissions record

Make flying part of the study abroad curriculum



CHANGE SYSTEM NORMS

“If we look at sustainability as 'doing less bad' then our endgame is doing nothing; **the endgame is to do good.**”

- Stephen Muench,
Civil and Environmental
Engineering

START WITH CONFERENCES



World Seabird
Twitter Conference

FUTURE DIRECTION

“How do we use the existing resources of a totally unsustainable culture to leverage them in a direction of something that’s viable for the future?”

- Karen Litfin,
Political Science

ACKNOWLEDGEMENTS

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Faculty Advisor: Kristi Straus

My parents, friends,
and girlfriend

Fellow PoEple

