



Background

- Airports serve an average of 40 million passengers yearly (1)
- Passenger traffic is growing exponentially with a demand for services provided by Airports (1)
- Locally at the San Diego International Airport (SDIA) the launching of the "Green Concessions" program was piloted to improve environmental stewardship amongst concessions to decrease their carbon footprint

Questions

- Can Airports decrease operation environmental impact?
- What is the impact of implementing sustainable programs?
- Does sustainability increase efficiency?

Methods

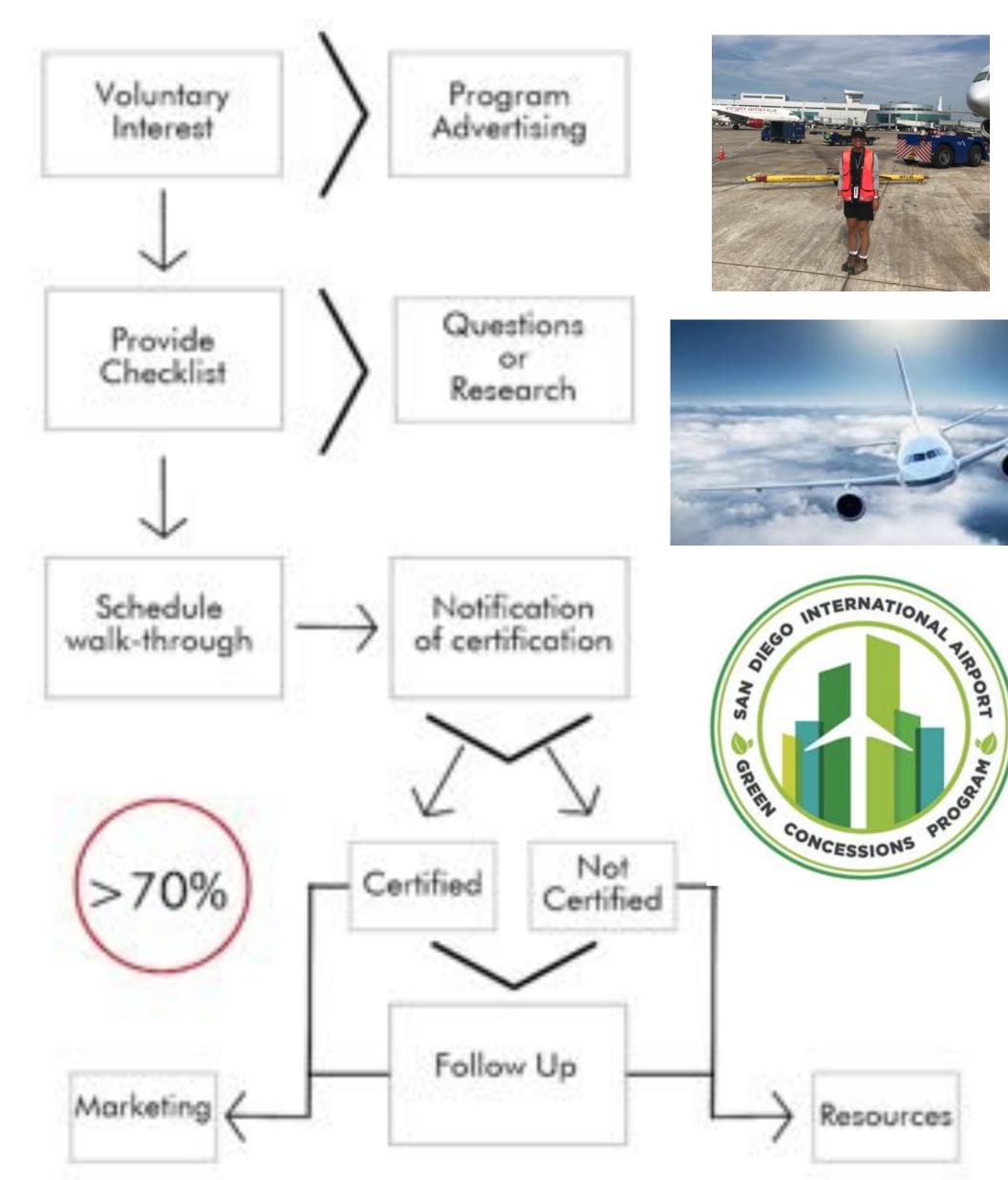


Fig 1: Green Concessions Program certification process outlined.

Airports Going Green Iris Pena Franco

Results

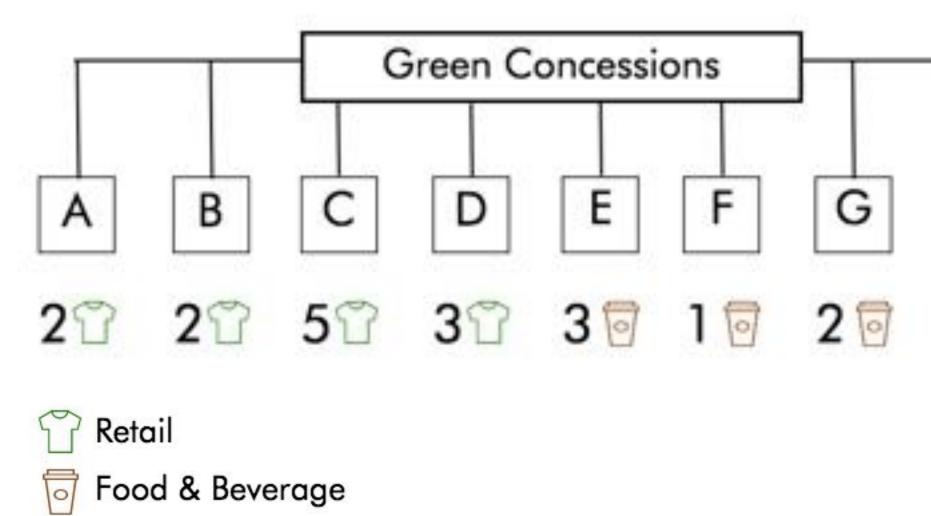
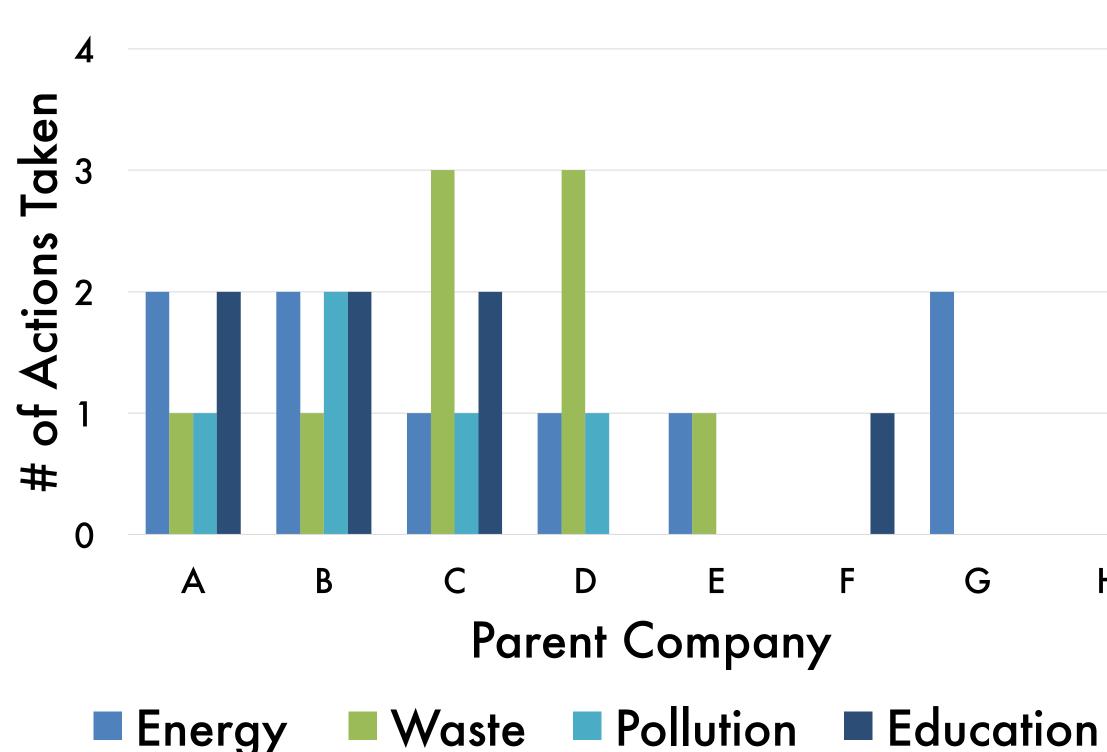


Fig 2: A total of 8 different parent companies (A-H) participated in the Green Concessions Program. The number and types of storefronts (Retail or Food & Beverage) are represented with each company.



Parent Company Actions Post Certification

Fig 3: Company actions taken after implementation and certification of the Green Concessions Program. Retail storefronts and companies (A-D) took more actions after implementation. Energy actions were taken more frequently followed by waste, education, and pollution.

How This Study Has Impacted the Airport

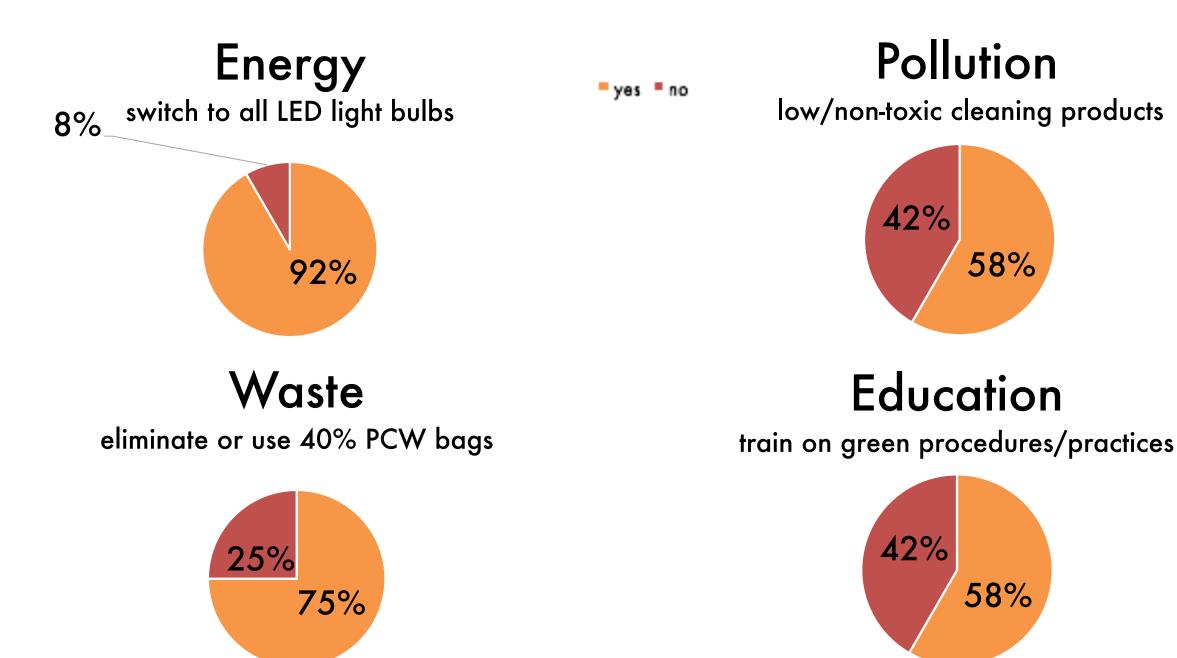


Fig 4: Percentages of the 12 retail storefronts participating in the Green Concessions Program within. PCW stands for post consumer waste.



Environmental and Ocean Sciences: Environmental Studies



Discussion

- SDIA has certified approximately 20% of storefronts through the "Green Concessions" program
- Other Airports like San Francisco have similar programs that have worked and have not affected business operations negatively (1)
- Despite differences in ownerships and available funds at other Airports, programs like these should still be implemented to curb climate change contributions (2)
- The Green Business Network has established that businesses partaking in these types of green practices are able conserve and save (Fig 5)



Fig 5: Green Business Networks have been able to save on average greenhouse gas emissions, solid waste, and energy while benefitting economically (3).

Future Work

- As the initial round of Green Concession certifications SDIA should collect information that will show the economic savings of storefronts to make the program more visible
- SDIA should continue the Green Concessions Program certification process and look into the future
- Airports around the world should start to evaluate if they are capable of piloting similar programs

Acknowledgements

I would like to thank: Paula Morreale, Chad Reese, Brendan Reed, and the Environmental Affairs Department at the San Diego Regional Airport Authority Professor Zhi-Yong Yin, Professor Eric Cathcart, Professor Michel Boudrias, Professor Nathalie Reyns

References

(1) Şan Kılkış, Şiir Kılkış, Benchmarking airports based on a sustainability ranking index, Journal of Cleaner Production, Volume 130, 2016, Pages 248-259.

(2) Tae H. Oum, Nicole Adler, Chunyan Yu, Privatization, corporatization, ownership forms and their effects on the performance of the world's major airports, Journal of Air Transport Management, Volume 12, Issue 3, 2006, Pages 109-121.

(3) Green Business Engagement National Network. "Starting a Green Business Program". https://greenbiztracker.org/site/start-program. Web. Accessed March 2017.

Η

Н

50

42,941,878