

Bringing Sustainability to Your Airport

San Francisco International Airport
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Ben Gould
Sustainability Analyst



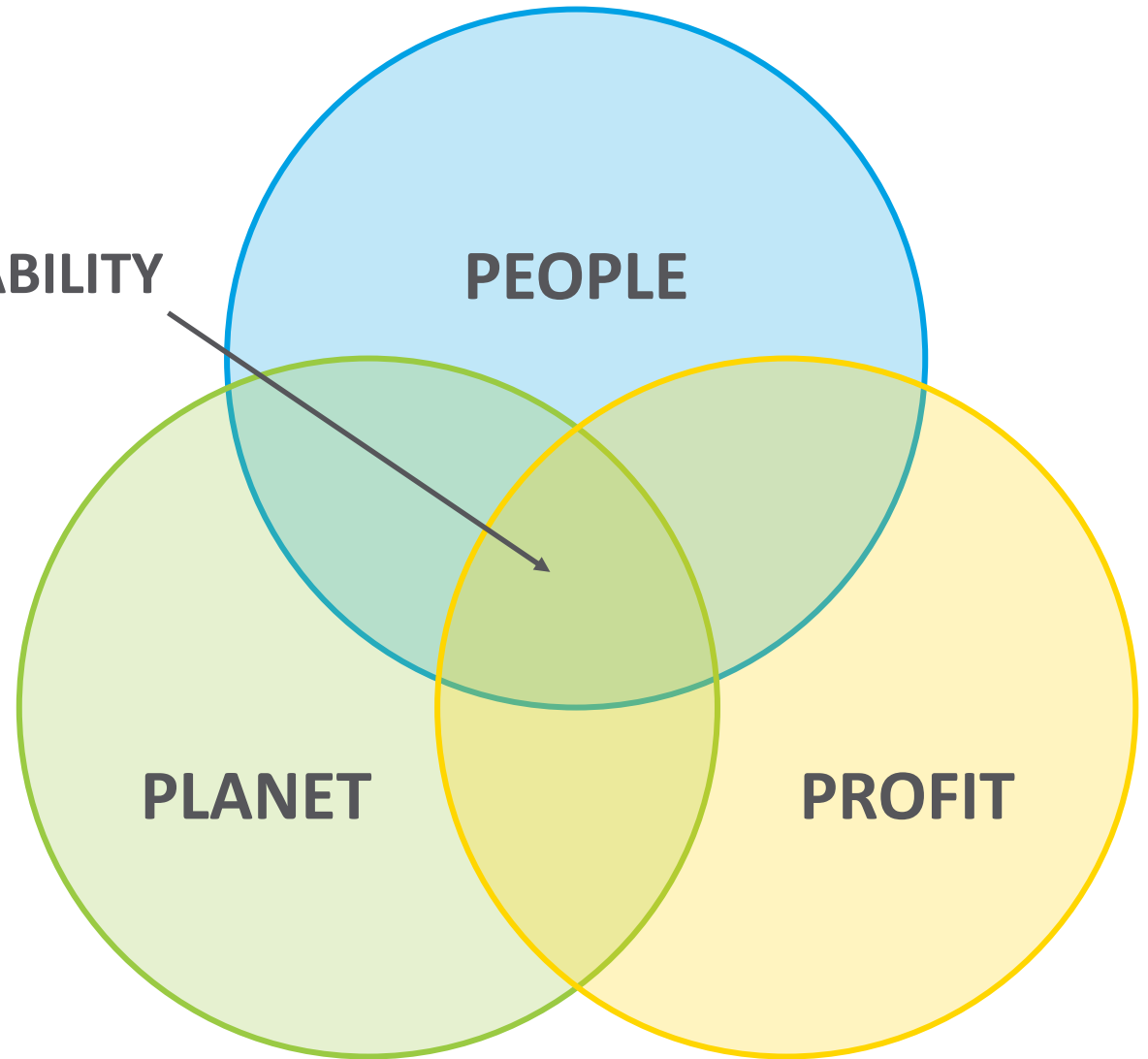
Sustainability Defined

- “Meeting the needs of the present without compromising the ability of future generations to meet their own needs.”
 - Brundtland Report, United Nations, 1987



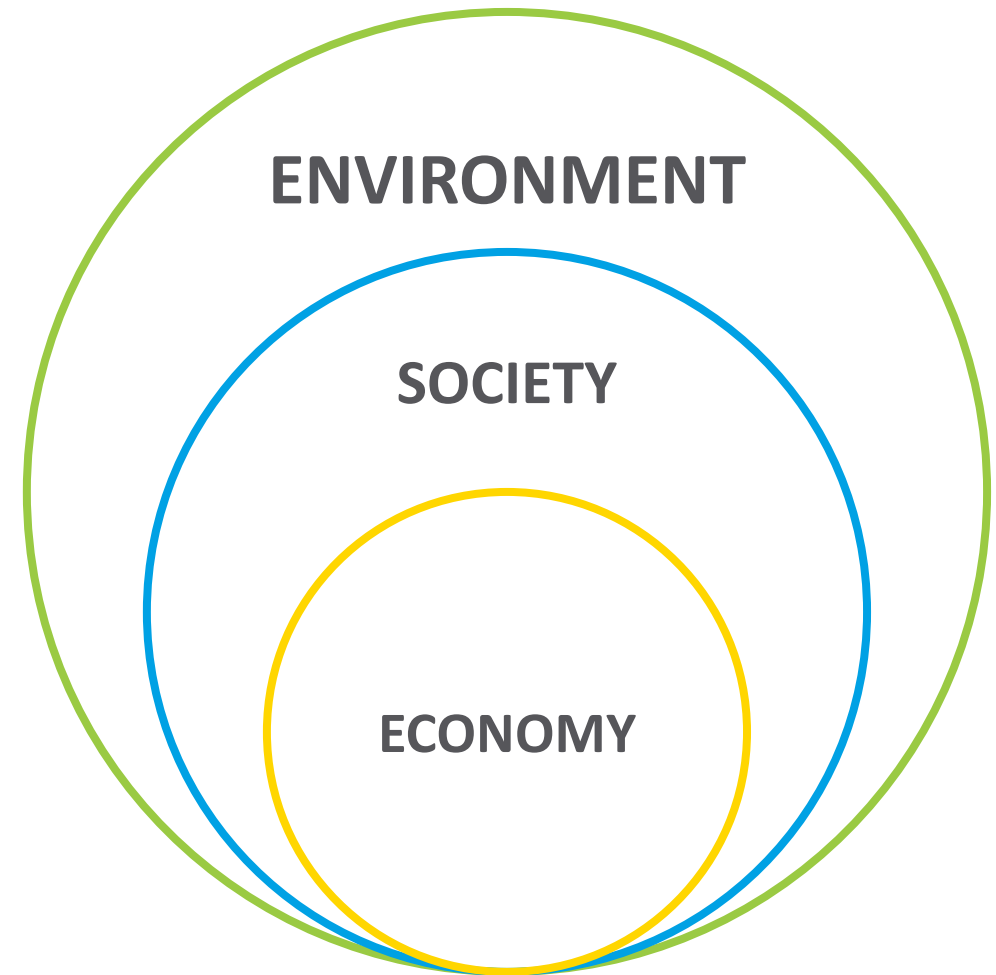
Sustainability Defined

- Triple Bottom Line:
 - People, Planet, Profit
 - Environment, Society, Economy



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Sustainability Defined

- Aviation Sector: EONS
 - **Economic Vitality**
 - **Operational Efficiency**
 - **Natural Resources**
 - **Social Responsibility**



Sustainability Defined

Key Takeaways

- Long-term perspective: **needs of the present *and* needs of future generations**
- Integrative: **environment, society, economy, operations**

Systemic Sustainability

What existing projects are systemic, across & throughout airports, and aligned with EONS – providing economic, operational, environmental, and social benefits?



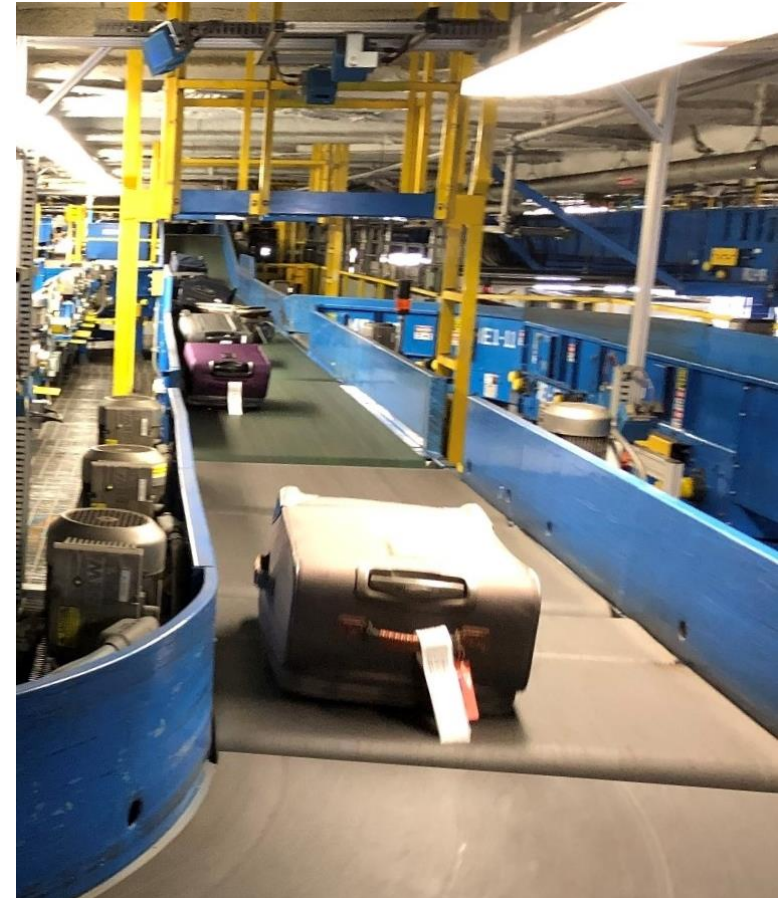
Existing Airport Projects Aligned with EONS



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Not Everything Aligns with EONS



Not Everything Aligns with EONS

What are the opportunities & paths for improvement?

- Identify strategies to enhance each element of EONS
- Review new projects, policies, proposals from an EONS framework

Strategies to Enhance EONS

Economics & Operations

- Airport Strategic Plan
- Airport Development Plan
- Airport Master Plan
- Annual Operating Budget
- Capital Improvement Plan
- Long-Range Development Plan
- Economic Impact Study
- Competition Plan
- Annual Report
- Tarmac Delay Contingency Plan

Environment & Social Responsibility

- *Climate Action Plan*
- *Sustainability Plan*
- *Environmental Management Plan*
- *Social Equity Plan*
- *Social Responsibility Plan*
- *People Strategy*
- *Corporate Social Responsibility Strategy*

Strategies to Enhance EONS: Social Responsibility

Strategies to Enhance EONS: Social Responsibility

Pay, Benefits, & Leave



***Living Wages and
Economic
Performance: the San
Francisco Airport
Model***

M. Reich, P. Hall, K. Jacobs
UC Berkeley Labor Center
March 2003

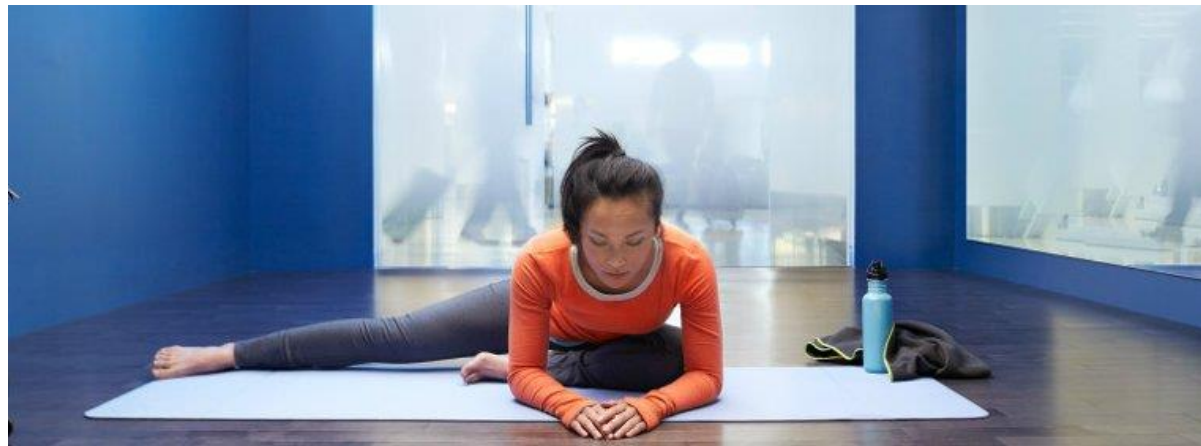
Strategies to Enhance EONS: Social Responsibility

Health & Safety



Strategies to Enhance EONS: Social Responsibility

Wellness



Strategies to Enhance EONS: Social Responsibility

Learning & Professional Development



Strategies to Enhance EONS: Social Responsibility

Going Local



Strategies to Enhance EONS: Social Responsibility

Internships & Apprenticeships



Strategies to Enhance EONS: Social Responsibility

Community Service & Partnerships



Strategies to Enhance EONS: Social Responsibility

Employees

- Competitive Wages
- Benefits & Paid Leave
- Employee Health & Safety
- Employee Wellness
- Learning & Development

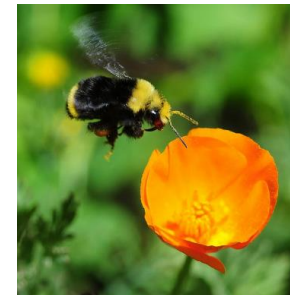
Community

- Noise abatement
- Preference (where allowed or required) for small, disadvantaged, and/or local businesses & hires
- Student internships & apprenticeships
- Community partnerships
- Community services

Strategies to Enhance EONS: Natural Resources

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Open Space & Natural Habitat



Strategies to Enhance EONS: Natural Resources

Renewable Energy & Energy Efficiency



Strategies to Enhance EONS: Natural Resources

Water Efficiency



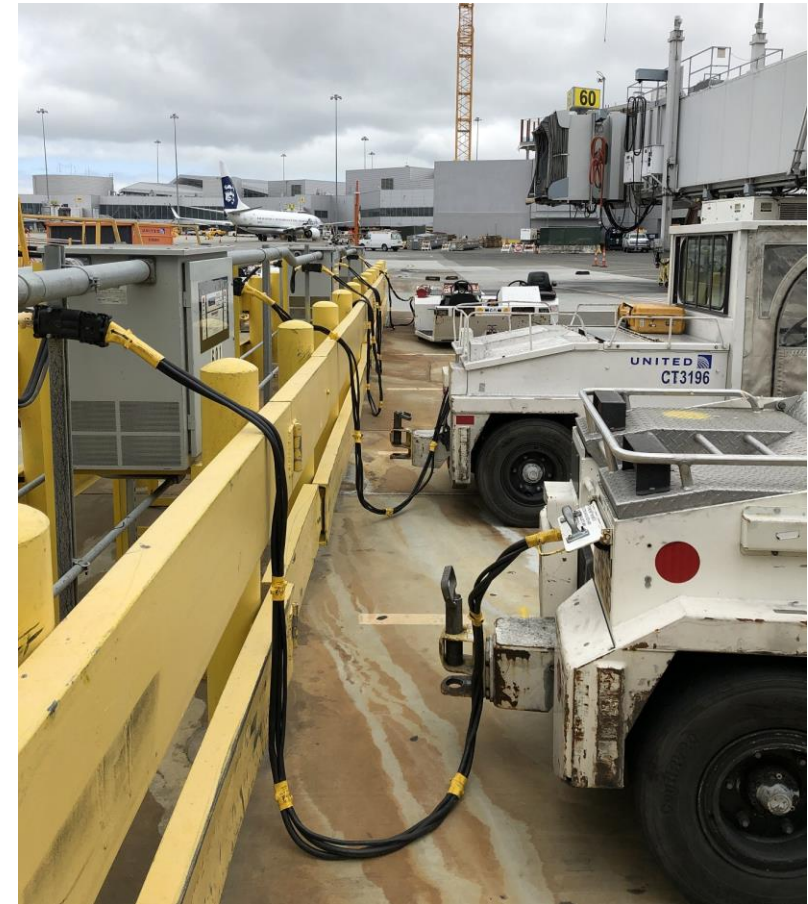
Strategies to Enhance EONS: Natural Resources

Recycling & Composting



Strategies to Enhance EONS: Natural Resources

Electric Vehicles



Strategies to Enhance EONS: Natural Resources

Public Transit & Biking Access & Incentives



Strategies to Enhance EONS: Natural Resources

Green Building Design



Strategies to Enhance EONS: Natural Resources

Building Decarbonization



Strategies to Enhance EONS: Natural Resources

Certifications



Strategies to Enhance EONS: Natural Resources

Standard Initiatives

- Energy efficiency
- Renewable energy generation
- Water efficiency & conservation
- Electric & alternative fuel vehicles
- Transit & bike access / incentives
- Recycling & composting
- Green building design
- Open space & natural habitat

Next-Gen Approaches

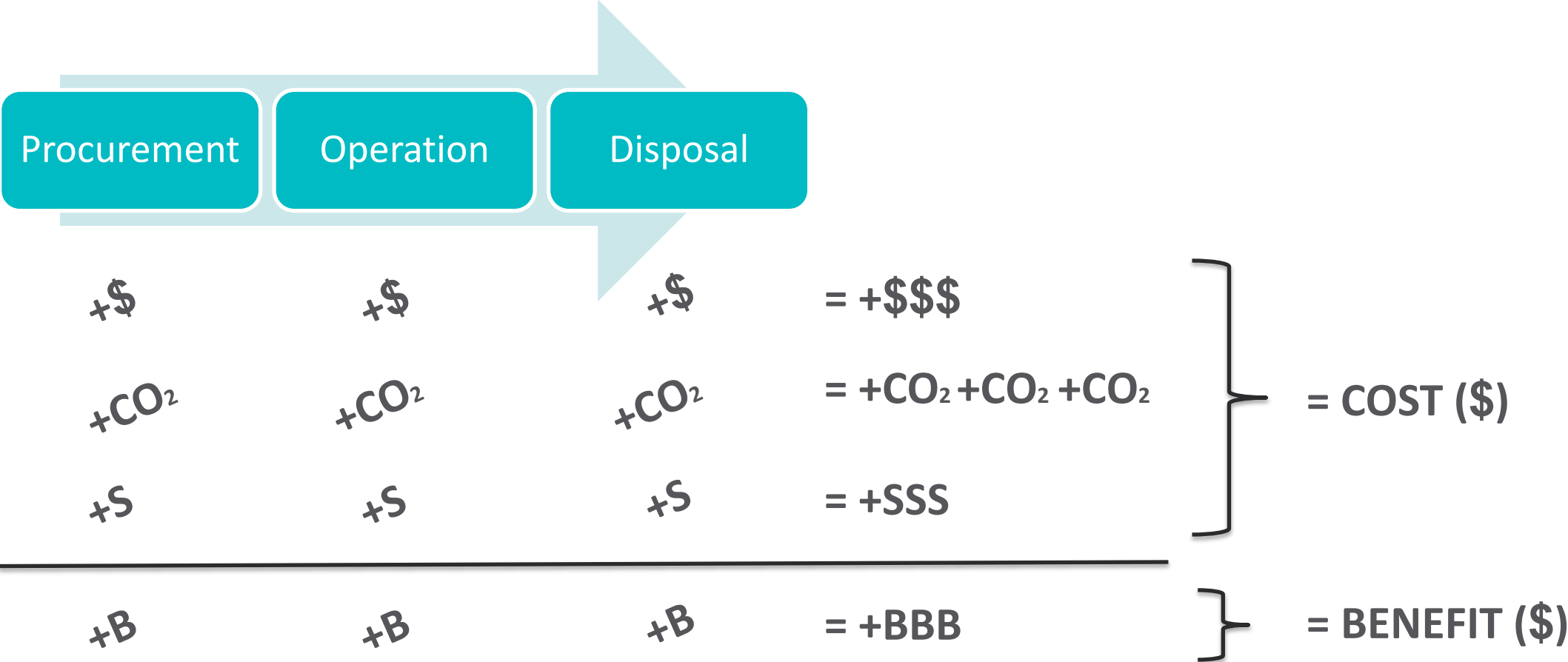
- Building decarbonization:
 - Ground / air source heat pumps
 - Heat recovery chillers
 - Induction cooktops
- Certifications:
 - LEED Gold / Platinum
 - Airport Carbon Accreditation
 - Zero Energy
 - And more...

What are the opportunities & paths for improvement?

- Identify strategies to enhance each element of EONS
 - Consider tradeoffs and co-benefits
- Review new projects, policies, proposals from an EONS framework
 - Compare to status quo – what are the improvements in each area of EONS?
 - Ask how it could do better – what are the opportunities for even greater performance in each area of EONS?
 - Talk about tradeoffs and co-benefits

Balancing Trade-offs & Comparing Alternatives

Life-Cycle Assessment & Triple Bottom Line Cost-Benefit Analysis (TBL-CBA)



Recap

- Long-term perspective: **needs of the present *and* needs of future generations**
- Integrative: **environment, society, economy, operations**
- Leverage EONS framework: **Identify strategies & review new proposals**
- Ensure breadth and depth of social responsibility & environmental strategies:

Social	Environmental
Employee wages & benefits	Reduce energy, water, CO ₂ emissions
Health & safety, wellness, & training	EVs, transit, & biking
Going local	Green buildings
Community service & partnerships	Habitat & open space
Internships & apprenticeships	Certifications

**What does
sustainability
look like at
your airport?**



Thank you



benjamin.gould@flysfo.com