

Planning (New Chapter)

Compiled Comments / Draft Outline

I. Objective

- a. What is Sustainable Planning?
 - § Sustainable planning is the innovative decision-making process that aims to find an optimal balance of trade-offs between the social, environmental and financial aspects of sustainability (triple bottom line). The overall intent of sustainable planning is to engage all appropriate stakeholders in all aspects of the project.
 - § Historically, airport planning has been focused in large part on forecasting, demand, capacity, funding, and capital program implementation. Broaden these important concepts to include a focus on sustainable planning that blends a triple bottom line approach (environmental, economic, social)
- b. Why is Sustainable Planning Important?
 - § Many funding sources are short-term in nature
 - § We operate in a rapidly changing environment
 - § We can't afford to lose quality programs and important innovations
- c. Why Implement Sustainable Planning?
 - § Clarify where you are and where you want to go
 - § Develop strategies for long-term success
 - § Provide benchmarks to measure progress
 - § Demonstrate the value of sustainable planning
 - § Identify what lends itself and what doesn't to incorporating SDM practices as a planning foundation
- d. Sustainability Master Plan
 - § A fusion of capacity, ongoing asset renewal, flexibility for industry change, and environmental. A vehicle for integrating environmental into strategy into both capital improvement programs and operational practices. A holistic look at systems planning, beyond just project definition.
- e. Components of Sustainable Planning
 - § Capacity
 - Leveraging process redesign and changing flow patterns and processes to build efficiencies that result in a smaller footprint, conserve materials and resources, and have less impact on the environment (both initial and ongoing).
 - § Flexibility for Industry Change

- Continual facility churn due to industry change has a significant economic and environmental impact. Building in flexibility for inevitable change in facility design and operational processes.
- § Ongoing Asset Renewal
- A strategic approach to total cost of ownership issues that optimizes the relationship between capital and operating costs.
- § Environmental
- Metrics and methodologies to compare between airports (such as carbon emissions, facility condition and sustainable funding levels, or percent of asset utilizing green materials). Development of environmental targets over short-, mid-, and long-term planning horizons (such as energy targets that might be 30%, 50%, or 70% less than current baseline codes).
- § Scenario Planning
- Historically, a weakness of most airport planning is that it assumes a single future outcome. Integration of scenario planning concepts would be a more realistic and sustainable way of dealing with constant industry change in all areas, including environmental.
- § Key Performance Indicators (KPI's)
- Focus on qualifying planning and design firms from the very beginning at the procurement/contracting process based on dedication and experience to sustainable practices and initiatives (e.g. some kind of rating would be a factor in selection)
 - Shift planning efforts to the perspective of the user or passenger--that is, how to change behavior--rather than just the owner or operator (e.g. prominent recycling system with incentives, priority parking for alternative fuels, promoting transit/intermodal projects)
 - Examine technologies and procedures that reduce paper, emissions, etc.
 - Possibly expand upon the LEED based framework and case study approach, identifying specific quantifiable metrics such as water efficiency (LPY Demand, Greywater, Blackwater, Stormwater, Condensate), energy consumption (kWh electricity, Btu gas), recycled content by weight or value, operational waste (ft3) in the arenas of design, construction and operation. These variables can be tracked and reported for O'Hare and other airports to understand relative performance and establish a philosophy towards continual improvement.
- § Carbon Accounting Protocol
- The capacity of the SDM to steer the continued pursuit of sustainable development could be furthered by adoption of a Greenhouse Gas accounting protocol and possibly linking this to performance based mandates/incentives for teams associated with design, construction and operation of projects. With the rapid increase in value of air cargo leading to stricter global competition along with an emerging new framework to address climate change from the United, a coordinated Aviation Sustainability Master Plan centered on carbon abatement could help support the long term viability our nation's airports. The system could also dovetail into

the "de-carbonization plan" the City of Chicago is currently developing with AS+GG for the central business district as part of the Climate Action Plan CCAP and potential federal legislation.

- § Integration of design, construction, and facilities-related stakeholders at initial planning stages
 - Ensure SDM practices are incorporated at the earliest planning stages
 - Often opportunities to improve on schedule, cost, quality and sustainability are realized by having different vantage points early within the design process. While traditional practice may rely on an over-the-wall approach where the design team along with the client would identify the requirements for the project design and pass-off to the construction team; a sustainable process should seek to leverage preconstruction services in the determination of requirements and submittals. There should also be the inclusion of a facilities management perspective as well. Construction/FM teams can also provide crucial input for the requirements of design submittals such as a Building Information Model (BIM).
 - With regards to the "triple-bottom line", try to think outside the traditional design/construction processes as much as possible to incorporate SDM practices as a planning foundation:
 1. Focus on qualifying planning and design firms from the very beginning at the procurement/contracting process based on dedication and experience to sustainable practices and initiatives (e.g. some kind of rating would be a factor in selection),
 2. Shift planning efforts to the perspective of the user or passenger--that is, how to change behavior--rather than just the owner or operator (e.g. prominent recycling system with incentives, priority parking for alternative fuels, promoting transit/intermodal projects,
 3. Examine technologies and procedures that reduce paper, emissions, etc.

II. Stakeholders

- a. Identify and address all parties to engage in the process
 - § Carriers
 - § Tenants
 - § Regulatory agencies
 - § Neighboring community leaders and groups
- b. Broaden the outreach effort of airport and regional stakeholders, establishing the opportunity for stakeholders to enhance what will be accomplished (beat the price to beat - so as to incentivize active partnership), using the Triple Bottom Line as a method of discerning sustainability thresholds, etc.
- c. Guide stakeholders to identify planning objectives up front on each project and then carry them through construction, effectively adding a new layer for expectations.

III. Incentives

- a. Develop design goals and minimum thresholds or a “price-to-beat” for each aspect of each SDM category. He also suggests that the SDM update should encourage and incentivize planners to think about ground-breaking best-practices rather than just what’s in front of them.
- b. Encourage designers and contractors to think about how to assess their own local situation and how to bring in the necessary stake-holders. There is no one approach for all to use throughout the country. Instead, users of the SDM need to think about the threshold standards in each category that are applicable to their own unique situations. The committee should think about how to develop an incentive/compliance program, embellish what’s already in the SDM, and how to make the guidelines generally applicable to any airport that would use the document.
- c. Develop high-level descriptions of the types of incentives available for airport operators to use when structuring a program that would then be handed over to consultants or experts to put the programs in place. The committee’s focus should be on the high-level specifics that would allow any airport operator to apply the guidelines to their specific local situations and requirements. This can be accomplished in the relative short-term.
- d. Continuous Commissioning - Identify the minimum threshold or “price-to-beat,” bring together designers, engineers, and architects to see if they have input on the thresholds based on their real-world experience on past projects, and then bring in the contractor as the project moves to construction in order to bring yet another layer of refinement based on their experience and past projects. The overall intent is to provide guidance toward establishing a baseline and then continuously reviewing that baseline throughout the project.

IV. Learning and Refining Process

- a. Integrate sustainable concepts into the approach
- b. Always asking the questions, is there more we can do or can we do something better, so that the process itself is sustainable
- c. This is an organic document and process that are constantly evolving as needed
- d. Ensure that an ongoing SDM committee/meeting structure of all airport stakeholders (carriers, tenants, government, etc.) be established to discuss new ideas, program implementation, and foster education

V. Possible Initiatives or Case Studies

- a. Minimizing footprint of deicing (& associated environmental impact)
 - § Collection and reuse of de-icing material, alternative materials, etc.
- b. Analyze projects factoring energy cost for life cycle
 - § In choosing materials, automatic energy saving switches/computer programs, components, etc.
- c. Intermodal planning
 - § Provide (transit or alternative access) options as a means of providing sustainable alternatives
- d. Public education/outreach opportunities

- § Provide sustainability education to passengers as they wait/ information on why airport has put certain initiatives in place
- e. Recycling incentives/initiatives for all tenants, airlines, etc.
 - § Separate out materials
- f. Pilot projects for alternative fuels for all fleet and vehicle operations at the airport.

Appendix

Include example programs that are in use at other airports...creates an opportunity to educate the reader so that they would better appreciate what Chicago has done and see if elements would apply to their airport.

CASE STUDY SUGGESTIONS

- § Sustainable Asset Development Program (DFW)
- § Sustainable Master Plan (SEATAC)