

The NextGen We Need

NEXTOR

NAS Performance Workshop

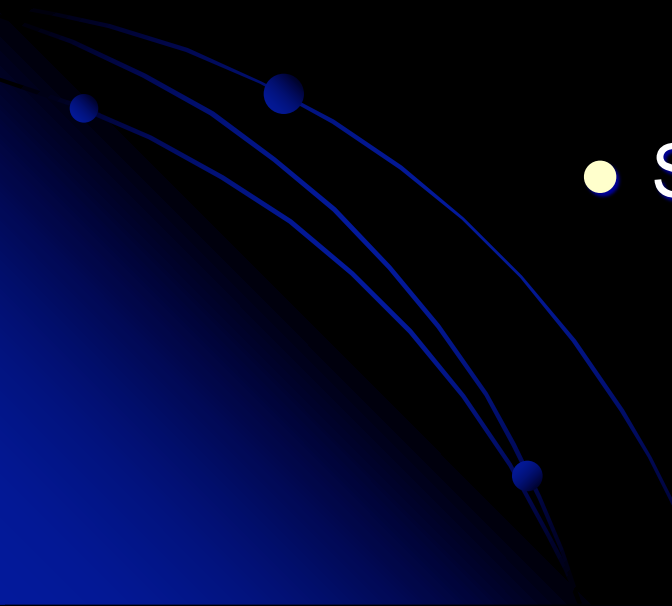
Asilomar

April 13-16, 2009

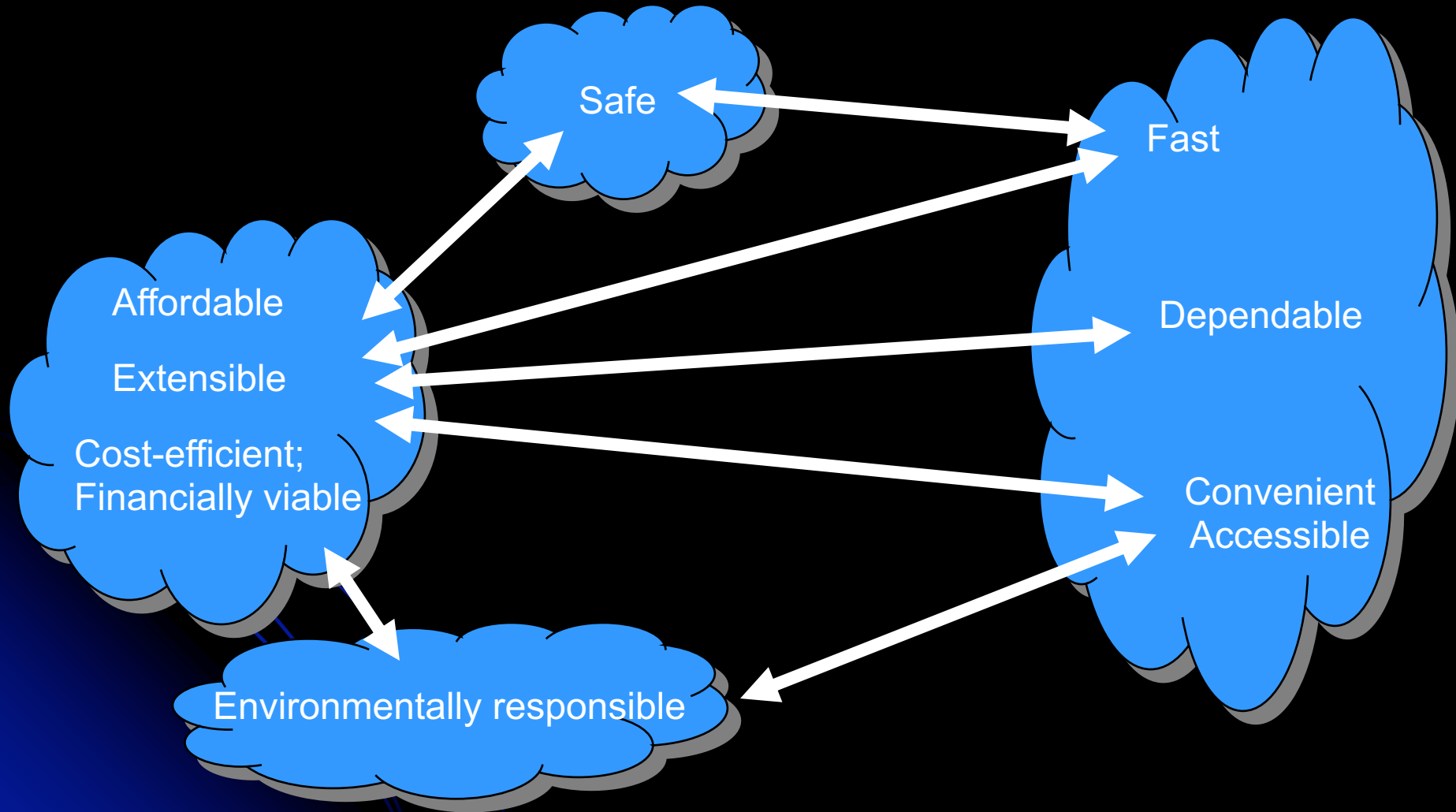
Norm Fujisaki



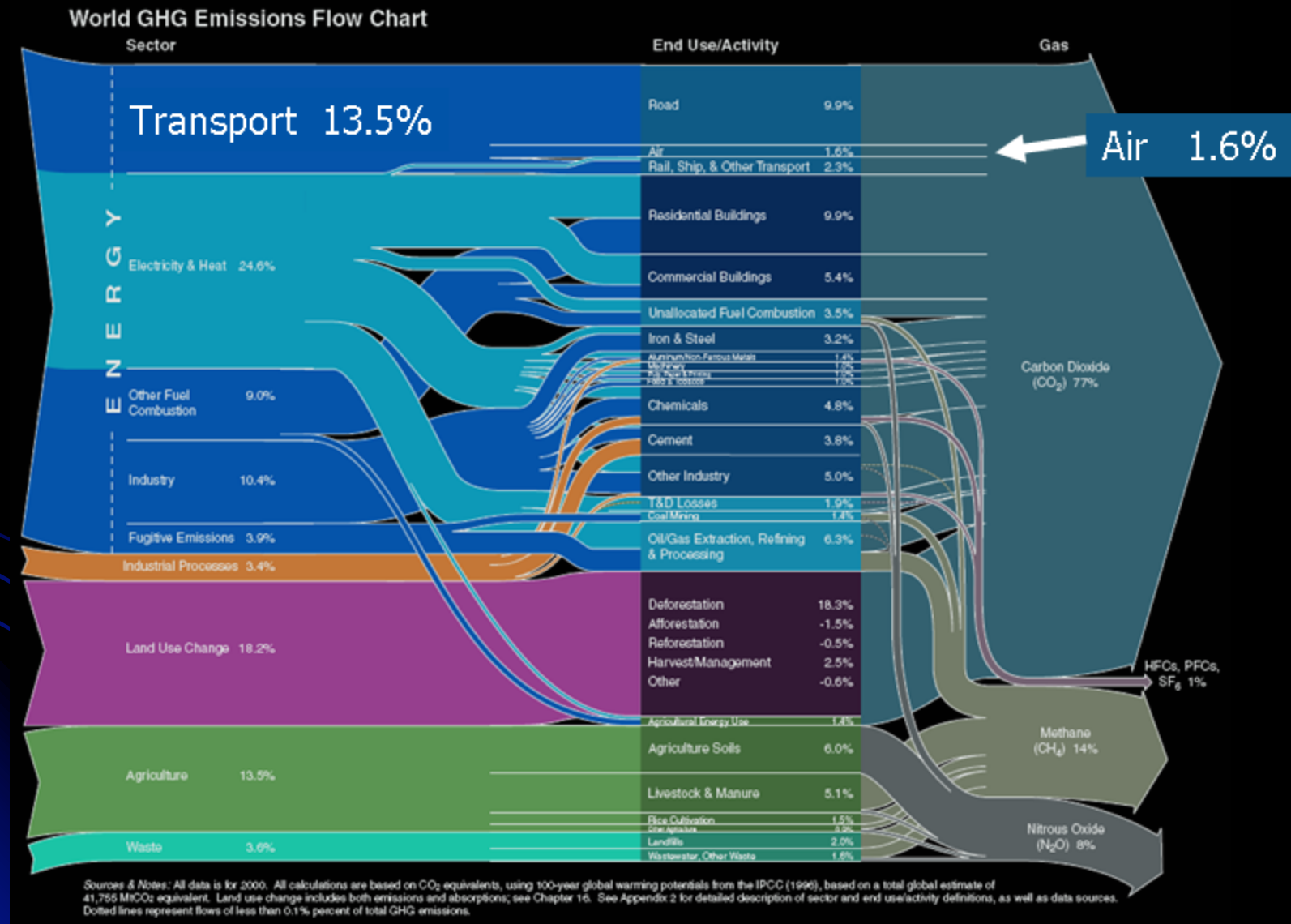
Next Gen for the Next Gen

- Travelers' expectations
 - Safe
 - Fast
 - Dependable
 - Affordable
 - Convenient; accessible
 - Environmentally responsible
 - Service provider expectations
 - Cost-efficient; financially viable
 - Extensible in face of uncertainty
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Trade-offs Required

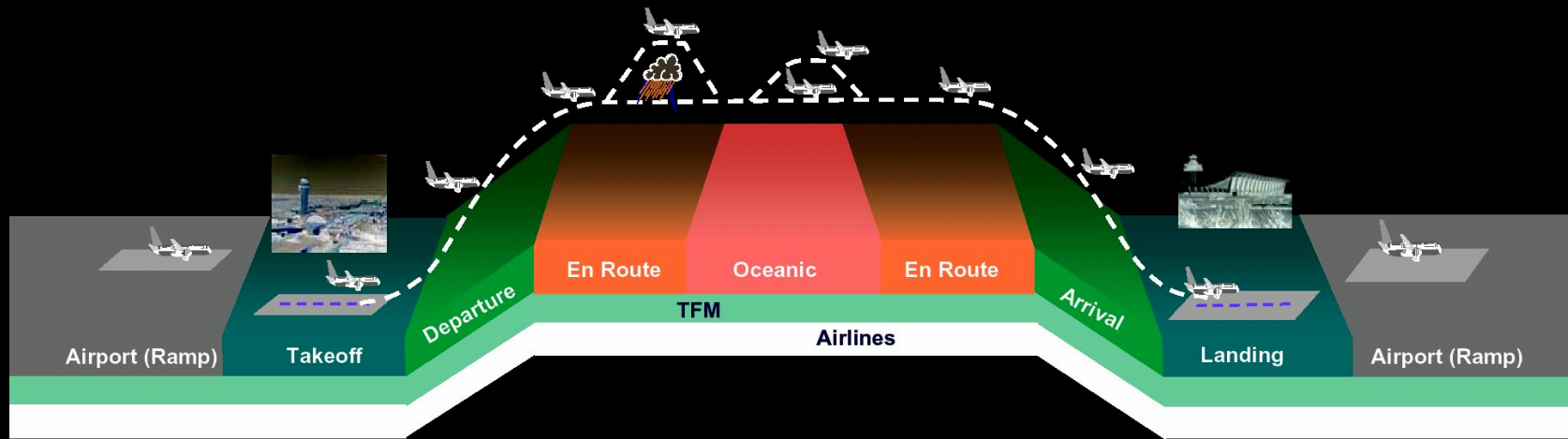


Aviation Contribution to GHGs (2000)



Source: World Resources Institute

Fuel Burn by Phase of Flight



Taxi out to 3,000 feet	9%
Climb 3,000-29,000 feet	16%
Above 29,000 feet	60%
Descent 29,000-3,000 feet	12%
3,000 feet to Taxi in	3%

Source: Metron Aviation estimates based on NASA ACES simulations of 2005 US traffic

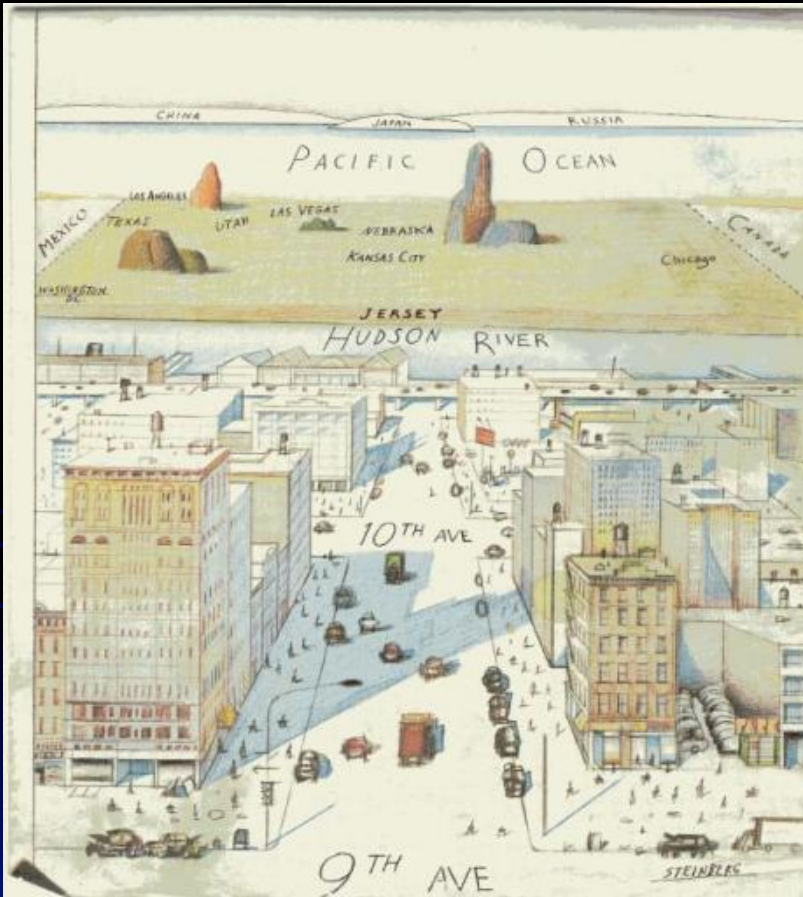
Reallocations

- Address bottlenecks, productivity opportunities (workload, separation-capacity, processes)
- Allocation of functions to humans vs. machines
- Allocation of functions to aircraft vs. ground systems; flight crews vs. controllers
- Allocation of functions to airport operators, users, and service providers
- Allocation of functions to procedures, airspace, and technologies
- Allocation of demand to transportation modes

Other Key Features

- Achieves global integration
- Rewards efficient behaviors (consumption, equipage)
- Requires payment for consumption of valuable resources
- Measures of success match desired outcomes
- Early return on transition steps; uses current capabilities, taps latent capacity

Our View of the World



From Ninth Avenue



From NextGen

The NextGen We Need

- Convergence of the best of:
 - Public policy
 - International cooperation
 - Economics
 - Environmental responsibility
 - Intermodal planning
 - Operating efficiencies
 - Technology

