

# Sky for All: A Vision for the Future Aviation System

NASA's Sky for All program endeavors to be a gathering place for working together to reimagine the future aviation system for the mid-21st century.



## Vision and Goal

- **Vision:** A sustainable, safe, resilient, adaptable future aviation system realized by advanced and continually emerging capabilities for agile, scalable, optimizable, increasingly diverse, and equitable operations in shared airspace.
- **Mission:** Create a community co-developed Vision of the future aviation system and alignment of focus towards the pathway to Sky for All.
- **Community:** Students, Professionals, Aviation Associations, International Associations, Government, Non-Government Organizations, Infrastructure, Safety and Standards, Manufacturers, Service Providers, Flight Operators, End Users

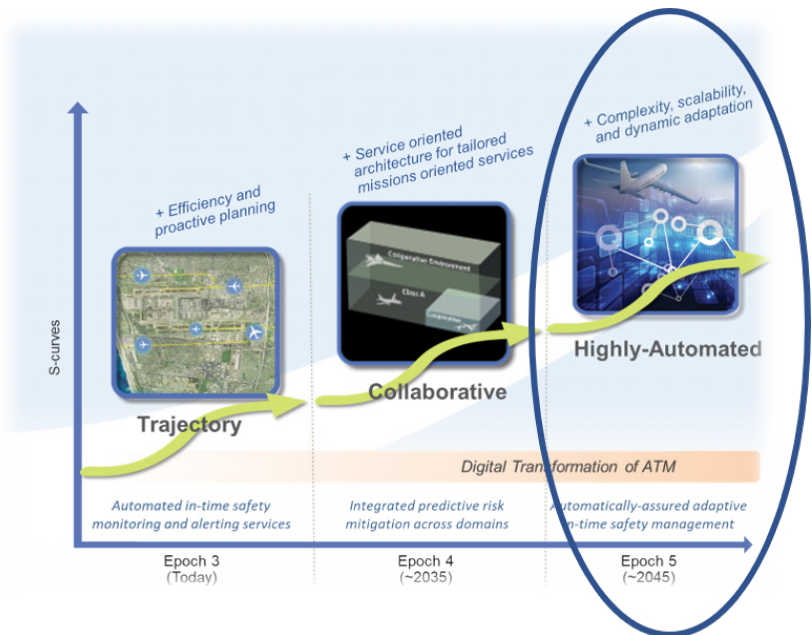
## What is the Future?

The rapid development of innovative technologies will require a bold, new approach to reshape the future aviation system. A thriving airspace must be

scalable, accessible, safe, sustainable, and resilient to meet the demands of emerging air vehicles and operations. Mega drivers influencing the future include:

- **Diversity** of vehicles, operations, performance, missions, and aviation systems
- **Complexity** of diverse operations, performance, and off-nominal contingency
- **Density** of operations
- **Volume** increase on several orders of magnitude given the emergent vehicles
- **Highly Integrated** heterogenous airspace

NASA anticipates that the National Airspace System will evolve from trajectory based operations to collaborative and highly automated operations. Sky for All is focused on looking to the future to define a Vision for highly automated operations that will benefit all stakeholders.

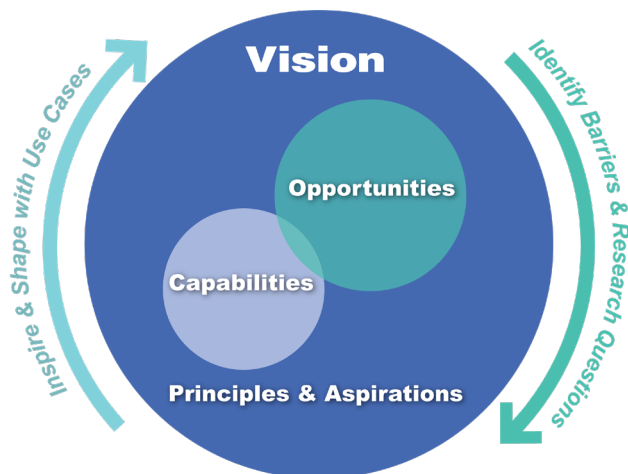


NASAfacts

## Defining the Vision

The Sky for All Vision is defined by these elements found on the web portal:

- **Principles & Aspirations** are the foundation
- **Capabilities** are building blocks needed
- **Opportunities** are paradigm shifts to operations
- **Use Cases** inspire possibilities and shape the Vision
- **Barriers** describe obstacles we will need to overcome
- **Research** questions guide needed exploration



## Co-developing the Vision

Sky for All's strategy for Vision co-development is a web portal based evolution that will enable us to gain a better understanding of the barriers to the future aviation system, the capability building blocks needed, and the research questions to be answered. The Vision is comprised of two phases:

### Art of Possible

Sky for All will co-develop and clarify the Vision, principles, and aspirations for the mid-21st century future state.

### 2022 R&D Starter Kit

Sky for All's starter kit will synthesize community input from the web portal and workshops. Five-year time periods will be informed by the previous.

### Vision

- Co-Develop
- Clarify a future state

### 2022 R&D Starter Kit

- Synthesize community input from portal / workshops
- 5-year time periods informed by the previous



## Outreach

Sky for All will invite contributors from all communities to co-develop and evolve the Vision, principles, aspirations, capabilities, sub capabilities, and opportunities targeting a community validation phase in June 2022.

We invite you to help define the future of aviation. For more information on Sky for All please visit:

[www.nari.arc.nasa.gov/skyforall](http://www.nari.arc.nasa.gov/skyforall)

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