

# Overview

## Advanced Mobility Collective

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[www.amc.org](http://www.amc.org)

Private, nonprofit facilitator of innovation building an ecosystem of business, government and research partners to birth new services using connected and autonomous vehicles in the air and on the ground.

**Connect** - network of technologists, researchers, policy makers and influencers, business leaders and communities.

**Promote** - platform to promote businesses and raise awareness among potential partners, customers and investors.

**Build** - experts and resources to facilitate development of air mobility system infrastructure, navigation, governance, security, data management and business services.

The Collective is an economic development initiative of the Wireless Research Center, a nonprofit with global network of experts, companies, public and private partners.

#### The Collective Leadership Staff

- Todd Spain, Executive Director
- Kyle Snyder, Expert in Residence

#### Advisory Board

- Dr. Stuart Ginn, WakeMed Hospitals Innovation
- Gerard Hayes, founder and CEO, Wireless Research Center
- Michele Stone, president, The Stone Agency

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The Advanced Mobility Collective is a nonprofit global community of business, technology, government and research partners bringing new mobility services to life. The community is a catalyst for innovation and economic development for connected and autonomous vehicles in the air and on the ground.

The convergence of 5G wireless connectivity and massive data from the Internet of Things merged with connected air and ground vehicles evolving into smart machines is enabling innovation. Transportation of people and cargo breaks into the third dimension. The evolution, dubbed as the Fourth Industrial Revolution, will transform every aspect of the economy in ways similar to the unleashing of the Internet in the 1990s.

The Collective helps accelerate the process for companies, entrepreneurial startups and governments to seize opportunities in the emerging mobility marketplace. The Collective will foster collaboration to develop new air mobility systems, network communication technologies, command and control technologies, and sensing systems through operational principles founded on open network architectures, interoperability and shared data.

Areas of collaboration include cyber-physical infrastructure, airspace management, urban planning, policy and regulation, insurance, private investment, and alignment of with communities, operators and governmental agencies.

Mobility advancements are already underway across the nation and around the world. New mobility services including unmanned aerial systems (UAS or “drones”) and urban air mobility systems (UAM) are revolutionizing the transport of people and goods with highly automated and autonomous transportation of cargo and passengers. Emerging mobility services, including many in use for public safety and emergency management today, range from medical package and food delivery to transportation of people, including airport shuttles, air taxi and air ambulances with electronic vertical takeoff and landing drones (eVTOLs), autonomous vehicles and robotic transportation systems in smart cities.

Collective Partner WakeMed Health and Hospitals, working with United Parcel Service’s Flight Forward subsidiary, the Federal Aviation Administration, the N.C. Department of Transportation and others has successfully completed more than a thousand drone deliveries of medical packages on the hospital campus in Raleigh, N.C. Drones have also delivered prescription drugs from a pharmacy to a home.

Stuart Ginn, MD, WakeMed ENT physician and medical director of [WakeMed Innovations](http://WakeMedInnovations.com). Dr. Ginn, a member of The Collective Advisory Board, is a former flight instructor and spent several years as an airline pilot prior to his medical and surgical training.

Healthcare-related uses for drones improve the speed of deliveries, enhance access to care and create healthier communities. WakeMed is exploring connecting to communities in new ways, from clinics and physician practices to regional transplant centers. Public safety, emergency services and healthcare is just the tip of the iceberg for the coming mobility revolution.

## Advanced Mobility Market Landscape

No longer fodder for science fiction and futuristic cartoons, flying cars are nearly visible on the horizon. Imagine a convoy of driverless 18-wheelers traveling the interstate or flying “train” of drones toting cargo.

Autonomous vehicles have already been deployed successfully in commercial agriculture and mining. State and local governments are using drones for public safety, helping to fight crime, combat fires and assist in rescue efforts. The last decade has seen a tremendous pace of change in advanced mobility since drones were viewed as a hobby and drone

photography and videos for real estate was viewed as innovative.

The advanced mobility market is emerging. Widespread adoption will take time and will be gradual. Autonomous technology is not yet modular and work today is exploring how

it will all fit together – a primary focus for The Collective. The technology foundation has advanced significantly in the past decade, sparking exploration of market-ready products, services and business models.

5G networks will enable Internet-connected devices and sensors, including autonomous air and ground vehicles, to exchange information more than 100 times more rapidly than today’s networks. New capabilities, called network slicing, will enable better management of data. Combining the next generation wireless infrastructure with ubiquitous smart phones, artificial intelligence, virtual reality, robotics and cloud computing will unlock and unleash new possibilities including advanced mobility services with connected and autonomous vehicles in the air and on the ground.

Many call the dovetailing of these innovative advances the genesis of the Fourth Industrial Revolution that will change industries from healthcare and drug development to agriculture, finance, insurance and public services. Rapid exchange of information will unleash real-time data gathering, analysis, prediction and decision making. Advanced mobility will transform the way people live and work, transforming how people and cargo travel.

## Advanced Mobility Collective Leadership

### Todd Spain, Executive Director

Driving responsible emerging mobility solutions, while reducing the friction of policy, governance, support services and data management. As co-founder and executive director of the Advanced Mobility Collective, Todd serves as a connector and evangelist for The Collective Partners, as well as futurist and spokesperson for the ecosystem through this non-profit. He also is the leader of strategic initiatives at the Wireless Research Center, the parent organization for the Advanced Mobility Collective.

As Chief Instigator at his Native Lane consulting firm, Todd engages with entrepreneurs as an advisor, consultant and serves on numerous boards. Todd has three decades of experience leading technology companies, guiding product advances and has held numerous executive and senior leadership roles with companies ranging from start-ups to tech titans, including Cisco Systems. Building communities that result in meaningful impact is an intense passion.

Companies including Amazon, Google’s Alphabet, and Uber Technologies are starting the most advanced trials of drone delivery in U.S. history. While commercial drone delivery faces many hurdles, government-approved tests by the tech giants will mark the first time consumers in parts of the country experience the technology. ... United Parcel Service gained approval from the Federal Aviation Administration to build out a fleet of unmanned aircraft to deliver health supplies and eventually consumer packages in the U.S.  
**N.Y Times, “How Amazon, Alphabet and Uber Are Taking to the Skies”**