

Secure Autonomy Feedback and Evaluation Testbed (SAFE-T) Tulsa Oklahoma

Building the Digital Backbone of the Low-Altitude Economy



RESILIENX

Making Future Skies Safer

Syracuse, NY

info@resilienx.com

meerir

SKYWAY
RANGE

SAFE-T Tulsa: A Blueprint for the Future of Flight

How Tulsa Built Scalable, Safe BVLOS Operations and Positioned the Region to Capture the Commercial Drone Market

Unlocking a Transformational Market

The commercial drone industry is rapidly evolving from isolated deployments to mainstream enterprise capability. According to Renub Research, the drone market is projected to grow from \$32.60 billion in 2024 to \$85.85 billion by 2033, expanding at a strong compound annual growth rate (CAGR) of ~20.8 % as drones find broader use in logistics, inspection, mapping, emergency response, and more.

This growth is part of a larger transformation known as the low-altitude economy, the set of services and industries that operate below traditional controlled airspace. Realizing this future requires more than aircraft; it demands trustworthy, scalable infrastructure that enables routine, safe, and repeatable operations.

SAFE-T in Tulsa delivers that infrastructure.

Before SAFE-T: Siloed Infrastructure, Constrained Operations

Before SAFE-T, the Tulsa region had invested in physical test facilities and individual operator ecosystems, but no shared, commercial-grade infrastructure existed to support routine wide-area drone operations.

Skyway Range, Northeast Oklahoma's 1200 square mile UAS test range, has built infrastructure to support research and development, testing, personnel training, and demonstration flights but is primarily over rural areas. Skyway Range, like other UAS test sites, is useful as a sandbox for testing and proof-of-concept operations, but they are not commercially viable, scalable services. There is no digital backbone to expose capabilities like surveillance, weather, and airspace awareness in a way that operators could easily consume for commercial operations.

In parallel with Skyway Range's test site efforts, local operators, especially public safety entities, have been managing their own patchwork of sensors and systems, balancing two difficult trade-offs:

- Invest capital in more aircraft and mission capabilities, *or*
- Invest capital in surveillance and awareness systems needed to operate safely beyond visual line of sight (BVLOS)

Both Skyway Range and major local public safety operator were unable to mutually benefit one another for operations.

- For the operators, without shared awareness and data services, building fleet capability often outpaced the ability to fly safely, at scale. Operators

incrementally added sensors and systems, but each stood alone, limiting operations to small areas, under visual line of sight, or within narrow waivers. This “piecemeal” approach slowed adoption and constrained economic opportunity.

- For Skyway Range, their services were limited to entities that came to the range for R&D, not positioned to support operators in the region for routine missions

Enter SAFE-T: Shared Infrastructure Driving Scale

SAFE-T flipped this model on its head. Rather than leaving each operator to build their own systems, the program capitalizes on investments made and provides a regional, shared digital backbone that delivers core data services as infrastructure. The foundation is the infrastructure, everything else is built on that.

At the heart of SAFE-T is the ResilienX AAM OptiX® platform, a secure, vendor-neutral data exchange with an In-Time Aviation

Safety Management System (IASMS) that continuously evaluates the health, integrity, and operational relevance of the data being delivered to operators and connects:

- Surveillance and radar systems
- UAS Traffic Management (UTM) services
- Weather and atmospheric data feeds
- Command-and-Control systems

This architecture enables all participants, service providers and operators, to connect through one practical integration path, eliminating costly and fragile point-to-point interfaces.

Rapid Onboarding and Scalable Operations

SAFE-T is designed to be economically efficient for operators, not just technically scalable.

Rather than forcing operators to subscribe to broad, monolithic services, SAFE-T supports tiered service models that allow participants to pay only for what they need. Services can be scoped and filtered by:

- Geographic area (e.g., specific corridors, zones, or regions)
- Time windows (e.g., operational hours or mission-specific periods)
- Service types (surveillance, weather, assurance, or combinations)



This ensures operators are not paying for excess coverage, unused data, or irrelevant services. As mission needs evolve, subscriptions can scale incrementally, protecting budgets while enabling growth.

For emerging operators in particular, this model lowers the cost of entry and enables financially sustainable adoption from day one.

Another key strength of SAFE-T is its ability to reduce onboarding time dramatically. Instead of months of custom integration, new operators can subscribe and integrate in days, typically completing development integration within 1-2 days, followed by final checkouts and training.

This subscription-based model lowers barriers for operators to join the ecosystem and focus on their core mission, whether that is public safety, inspection, logistics, or emerging commercial use cases.



Built for high throughput, SAFE-T’s infrastructure is poised to support thousands of flights per month. In comparable regional data services models elsewhere in the U.S., providers have supported up to 6,000 flights annually; SAFE-T is designed without intrinsic limits on scale, especially in a metropolitan environment like Tulsa.

Initial adoption focuses on two operator groups today, with plans to grow to tens of operators as demand and awareness increase.

A Real Mission: Expanding BVLOS Reach

One of the first operational partners under SAFE-T involves a public safety operator that previously held a limited FAA waiver with tight altitude and location limits.

Without SAFE-T, this operator could only conduct BVLOS flights within a constrained slice of the Tulsa region until additional investment infrastructure was made (back to the capital investment tradeoff). With SAFE-T’s integrated surveillance and awareness services, the operator’s operational footprint is able to be expanded (approximately

four-fold), enabling BVLOS missions across the entire Tulsa region at operationally useful altitudes.

This kind of expansion is not just regulatory paperwork, it directly translates into enhanced mission effectiveness for search-and-rescue, disaster response, and other public safety objectives.

Today's Regulatory Pathway: NTAP and Beyond

From a regulatory standpoint, SAFE-T aligns with the FAA's Near-Term Approval Process (NTAP) for expanded Part 107 operations. Engagement with the FAA began within four months of contract award, with review focused on foundational artifacts such as the Concept of Use (CONUSE) and other Supplemental Data Service Provider (SDSP) documentation.

These align closely with the requirements expected of future Automated Data Service Provider (ADSP) models under Part 146, positioning SAFE-T as a key enabler of ADSP capabilities.

Today, NTAP remains the practical pathway to demonstrate safety and securing approvals for BVLOS operations. SAFE-T's architecture generates centralized, audit-ready evidence, giving regulators confidence, while paving a path toward future rule-based regimes like Part 108 and Part 146.

What This Means for Regions: Economic and Strategic Impact

Beyond enabling safe operations, SAFE-T delivers a powerful regional economic advantage through shared infrastructure.

Rather than requiring each operator to independently fund surveillance systems, weather integration, assurance tooling, and compliance processes, SAFE-T allows regions to amortize infrastructure investment across many operators and use cases.

This shared-services model means:

- No single entity bears the full cost of advanced infrastructure
- Public and private operators benefit from economies of scale
- Regional investments deliver returns across multiple sectors

As additional operators join SAFE-T, the marginal cost per operator decreases, while the overall value of the ecosystem increases. This creates a virtuous cycle, lower barriers to entry, broader participation, and accelerated economic growth.

For regions seeking to participate in the rapidly growing low-altitude economy, SAFE-T transforms infrastructure from a sunk cost into a multiplying asset.

Implementation Reality: From Vision to Deployment

SAFE-T's rollout in Tulsa demonstrates that regional safety infrastructure can be deployed and aligned with existing FAA pathways in months, not years. The primary schedule driver remains the procurement and installation of surveillance radar systems. Once these systems are operational and validated, engagement with the FAA can proceed rapidly.

This experience has informed a clear deployment model for other regions. With early planning around core sensors and service integrations, regions adopting the SAFE-T blueprint can move just as quickly, often faster, by leveraging proven architecture, documentation, and governance.

Importantly, Tulsa is not alone. Battle Creek, Michigan is already beginning to realize this same blueprint, adopting a safety-first, infrastructure-based model to enable scalable low-altitude operations. By starting with shared situational awareness, assurance, and governance, Battle Creek will demonstrate that this approach is not a one-off, but practical and repeatable.

As more regions adopt this model, the path to routine BVLOS operations becomes clearer, faster, and lower risk.

How SAFE-T Enables Scale (At a Glance)

SAFE-T catalyzes regional drone adoption by:

- Providing a secure, vendor-neutral backbone for data and services
- Offering one integration path for service providers
- Reducing operator onboarding time to days
- Embedding safety and assurance into every flight
- Generating audit-ready evidence aligned with current and future FAA expectations