

Innovation & Uncrewed Systems (UXS)

*UXS Program Management
Bringing Drone Wisdom to Others*

John "J.C." Coffey

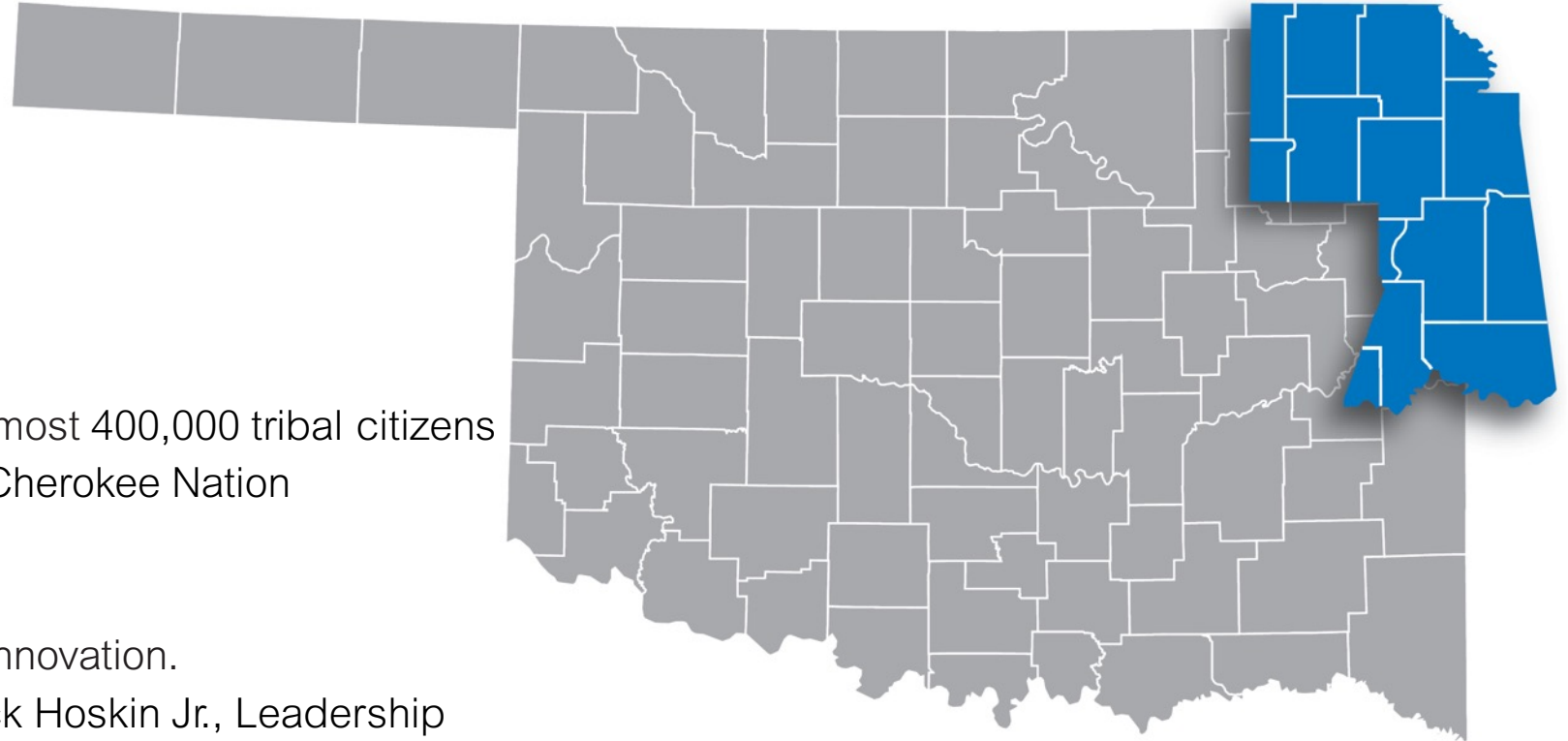
*Executive Director, Uncrewed Systems (UXS), Cherokee Nation
Chairman, Federal UXS Tribal Interest Group*



CHEROKEE NATION



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CHEROKEE NATION®



- Largest Native American tribe, with almost 400,000 tribal citizens
- Tahlequah, Oklahoma, capital city of Cherokee Nation
- 14-county jurisdictional service area
- Sovereign, tripartite government
- We are technology tribe that leads in innovation.
- Cherokee Nation Principal Chief Chuck Hoskin Jr., Leadership Award for Public Service from the International Economic Development Council (2021)
- Just as Cherokee, Will Rogers, took to the sky nearly 100 years ago, we are looking to emerging technologies to keep us moving forward.



Serving a Higher Purpose

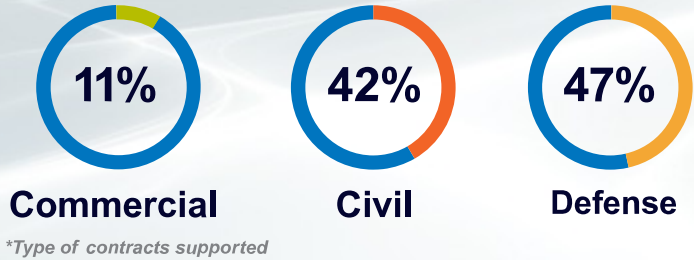
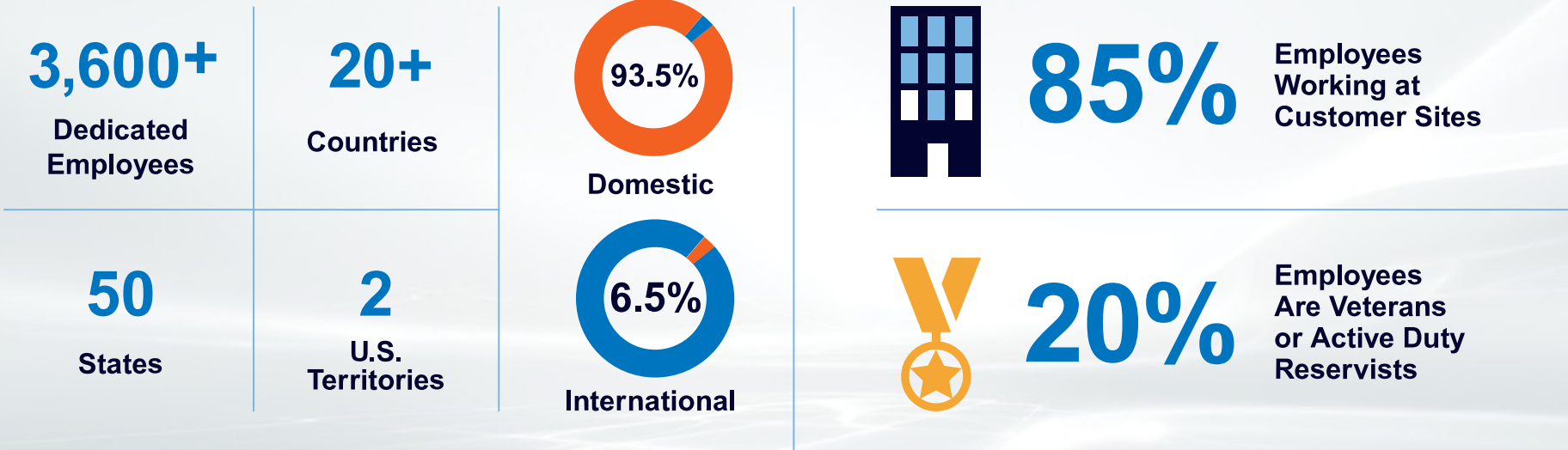
Cherokee Nation Business

- The Cherokee Nation, the largest Native American tribe in the U.S. with almost 400,000 tribal citizens
- Cherokee Nation Businesses – the economic engine of the Cherokee Nation
- Cherokee Nation & its businesses employ more than 11,600 people & has an annual economic impact of \$2.16B on northeast Oklahoma
- 63% of profits reinvested in businesses:
 - Promote self-sufficiency of Cherokee Nation citizens through job opportunities
 - Create jobs in a variety of industries
 - Build capacity from within the tribe by training & educating Cherokee people
 - Partner with industry leaders to learn from the best & train Cherokee Nation citizens to do the same
- 37% of profits support programs & services
 - Education
 - Health Care
 - Housing Programs

Building. Solving. Serving.



Our Workforce



\$8+ Billion
In Contract Wins Since 2012



FAA UAS Beyond Visual Line-of-Sight ARC

Our Vision is to be a leader in UXS...

Native Americans have always been connected to nature, the environment and surroundings.

With drones and the IoT we will be more connected than ever at sea, in the air and on land the possibilities are endless. We will be there!



“Whole of Government Approach” to UAS and Underserved Community Involvement

Cherokee Nation’s UAS – Government and Beyond

- Decades of sophisticated operations experience across the government space from CONOPS to OPS.
- Utilizing experience to serve our Nation and Country. *Been there from the beginning!*
- Numerous DOT, FAA, NASA, DHS, DOD, BIA and others support ensuring comprehensive technical solutions.
- Accelerating integration into the National Airspace including the Key Infrastructure required.

Underserved Community Involvement

- Federal Tribal Interest Group for Uncrewed Systems
- The BIA Tribal Climate Resilience Program website is: <https://www.bia.gov/bia/ots/tribal-climate-resilience-program>
- The *Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* specifically action items to address. (See Section 10)

[Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government](#)



Cherokee Nation UAF FAA UAS IPP & Beyond – Pilot Shortage Including coordination with Tribal Schools and Universities

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Level 1
certification



Level 2
certification



Level 3
certification

- Once size does not fit all when it comes to the level safety systems complexity required.
- Higher risk activities will require more complex safety systems and certification.
- The three levels of certification are directly proportional to the level of safety system requirements.

NASA / FAA AAM Ecosystem Community Integration Working Group

*Aircraft
Airspace
Operator
Infrastructure
Acceptance*



NASA / FAA AAM Vertiport Construction Standards



Our Inter-Agency engagement includes:

- DOD, DHS and other government agencies within the NCR
- Supporting operations in the DC Flight Restricted Zone
- Global Support including UAS Hangars overseas
- Numerous standards working groups

Our experience includes:

- We built the Emergency Landing Zone at St. Elizabeth's
- We support the Pentagon Heliport
- We built the Emergency Landing Zone for the US Embassy residence facility in Juba South Sudan
- We have worked in, on and around airfields at Tinker AFB, Andrews AFB, Pentagon, St. Elizabeth's, and Alliance Airfield
- We built international UAS and Vertiport facilities

Cherokee Federal Capabilities

INTELLIGENCE	INFORMATION TECHNOLOGY	PROFESSIONAL SERVICES	NATURAL ENVIRONMENT	MEDICAL RESEARCH	BUILT INFRASTRUCTURE	ENGINEERING & MANUFACTURING
Geospatial Intelligence	Helpdesk	Training and Education	Restoration	Viral Disease	Construction Management	Rapid Prototyping
Law Enforcement	Enterprise Systems	Logistics Support	Environmental Quality	Surgical Research	Design Engineering	Engineering Services
Human Intelligence	Network Support	Facilities Support / Custodial / Janitorial Services	Environmental & Geologic Research	Vaccine Development	Asset Management	Low Rate Production
Business Intelligence	Web Design	Program Management	Resource Management	Clinical Trials	Data Management	Full Scale Production
Financial Forensics	Network Security	Information Technology	Environmental Liabilities	Financial Management	Cost Estimating	Kitting
Strategic Planning Communications	Data Management	Quality Assurance / Quality Control	Data Management	Program Management	Cost & Schedule Management	Warehouse Operations
Information Operations	Unmanned Systems	Human Resources	Cost Estimating	Epidemiology	Planning & Programming	Depot Level Maintenance
Intelligence, Surveillance, and Reconnaissance	Risk Management Framework	Administrative	Cost & Schedule Management	Bio Surveillance	Sustainability	Systems Integration
Psychological Operations	Programming	Policy & Planning	Planning, Programming, Budget & Execution	Lab Support	Facility Management	Supply Chain/Distribution
Battlespace Awareness	Mobile App Development	Supply Chain Management	Root Cause Analysis	Psychological / Trauma	Physical Security	Field Team/Modifications
Identity Intelligence	Cybersecurity	Financial Management	Base Realignment and Closure Activities	Military Medical Health Readiness	Technical Reachback	Life Cycle Management

Cherokee Federal Programs Core Capabilities Evolving with UXS

Engineering, Scientific, Research & Development & Technical Support

- Design and Construction Support
- Facilities Engineering and Asset Management
- Planning, Programming, Budgeting and Execution
- Environmental Remediation and Compliance
- **Scientific and Technical Subject Matter Expertise**
- **Research and Development (R&D) Support and Staffing**
- Systems Engineering
- Weapon System RDT&E
- Global Health Threat Surveillance
- Patient Safety Policy Implementation
- **Weather Analysis and Modeling**
- **Oceanography & Mapping**
- **Geospatial Data Acquisition & GIS Services**
- **Geospatial Modeling and Application Development**
- **Autonomy**
- **Interoperability**

Intelligence & Analysis Support

- Intelligence, Surveillance, and Reconnaissance (ISR)
- Information Operations
- Analysis and Reporting
- Battlespace Awareness
- Identity Intelligence
- TENCAP Technical Assistance
- Counter Narcotics and Global Threats

Uncrewed Systems (UXS) Support

- Program Development, Strategies & Roadmaps
- Proof of Concept Coordination
- System engineering – analysis of alternatives
- Test & Evaluation
- Data Management & Analysis (Cloud, ML/AI)
- Facilitating FAA Air & Battle Space Approvals
- Field-Based Operations & Maintenance
- Transitioning to “Fully Operational Capability”
- Policy, Regulations and Compliance
- Cyber, Security and Counter-UXS

Strategic Operations and Data Management

- Program and Project Management
- Configuration and Change Management
- Logistics and Maintenance Management
- Business Reengineering
- Business and Transaction Support
- Warehouse and Logistics Support
- Software Modernization and Maintenance
- Data Life Cycle Management
- IT Infrastructure Upgrades
- Physical Security Systems
- **Systems Administration**
- **Network Management**
- **Data Center Services**
- **Enterprise Architecture**
- **Information Systems Security and Cybersecurity**
- **Artificial Intelligence & Machine Learning**
- **Clouding & Clouding on the Edge**
- **Advanced Data Analytics**

FORWARD-FOCUSED MARKET CAPABILITIES

Unmanned Systems (UXS) supporting the Digital Enterprise

Capabilities

ISR <ul style="list-style-type: none"> • Stalker – USMC • Puma – USCG • Zephyr - USN 	Environmental Intelligence & Climatology <ul style="list-style-type: none"> • GlobalHawk – NOAA • Latitude - NOAA • Coyote – USN NOAA 	GIS & Survey (+Maritime) <ul style="list-style-type: none"> • Altavian – USDA • Juniper – USDA • Triton - USCG 	Emergency Response & Disaster Relief <ul style="list-style-type: none"> • Tiger Shark – NOAA • Puma – NOAA USCG • ScanEagle – NOAA
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Key Enablers

Data Optimization and Distribution

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|-------------------------------|----------------------------|--|
| - Data Management & Analytics | - Networks & IT | - Infrastructure & C4 |
| - Interfaces & Standards | - Facilities & Sustainment | - Program, Policy, Training & Operations |

Core Technologies

Integrate, Test, Assess and Manage

- | | | |
|-----------------------------------|-------------------------|---------------------------------|
| - Cyber & Physical Security | - Systems & Integration | - Communications |
| - Cloud Architecture & Processing | - Mission ML / AI | - Power, Propulsion & Endurance |
| - Positioning & Timing | - Sense & Decide | - Performance & Reliability |

UXS Platforms

Build, Buy or Lease

- Air
- Sea
- Land



Whole of Government

GSA



Cherokee Federal UXS Content

Welcome to the Drone Age: <https://cherokee-federal.com/news>

Drone Wisdom: <https://cherokee-federal.com/media-center> & <https://cherokee-federal.com/unmanned-systems>

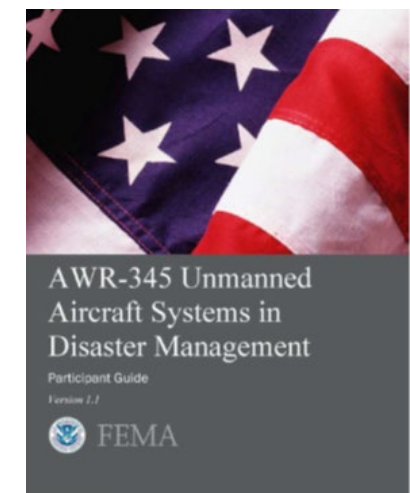
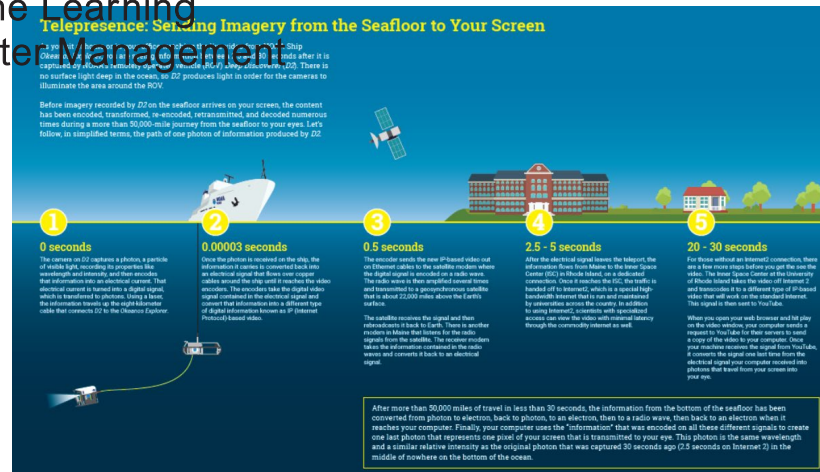
CNSP continues to expand Triton capabilities for DHS: <https://cherokee-federal.com/industry-insights/cnsp-continues-to-expand-triton-capabilities-after-reaching-major-project-milestones-for-dhs-project>

Cherokee Federal advances ocean science with autonomy, AI & telepresence: <https://cherokee-federal.com/industry-insights/cherokee-federal-subject-matter-expert-advances-ocean-science-with-ai>

Cherokee Federal provides end-to-end data management disaster-response efforts: <https://cherokee-federal.com/industry-insights/cherokee-federal-provides-end-to-end-data-management-for-federal-disaster-response-efforts>

Capability Content in Development

- Cloud
- Artificial Intelligence and Machine Learning
- Emergency Response and Disaster Management



Building. Solving. Serving.



RELENTLESS



PLAY VIDEO

Parting Gifts & Getting Started

Membership in Uncrewed Systems Federal Tribal Interest Group

Big Data Expert in the “Drone Age.” Take a look: www.uxswisdom.com

Sophisticated UXS Operations: <https://www.youtube.com/watch?v=M2WjYkyaJL8>

Expertise in protecting the C6 – Cyber & Counter-UXS

AUVSI Membership - Tribal Discount



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