

*Imagine the Future...*



# *An Overview of UAS Capabilities*

Tom Hagen

President, AUVSI Cascade Chapter

July 23, 2018

# *What is a UAS?*

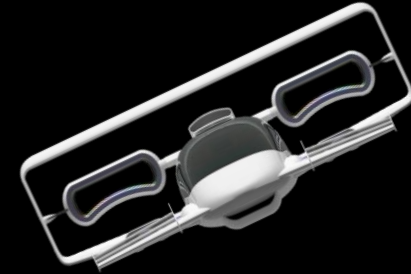


## System Components:

1. Control Station and Pilot / Crew
2. Unmanned Aircraft
3. Communications / Data Links

# *The Growth of UAS*

- 1,200,000 – Drones registered in U.S.
- 1,100,000 – “Small model” UAS fleet in 2017
- 2,400,000 – Small model fleet in 2022 (AGR 16.9%)
- 110,604 – Commercial, small non-model UAS fleet in 2017
- 451,800 – Commercial fleet by 2022 (AGR 32.5%)
- 122,000 – Remote Pilots certificated
- 301,000 – Remote Pilots forecast for 2022
- 36,000 – Estimate of law enforcement UAS by 2035
- \$500M+ – Investment capital for 2018
- \$100B - \$125B – UAS market estimate for this decade



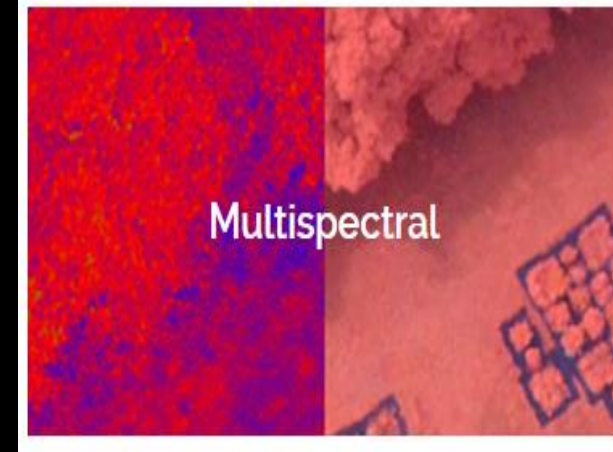
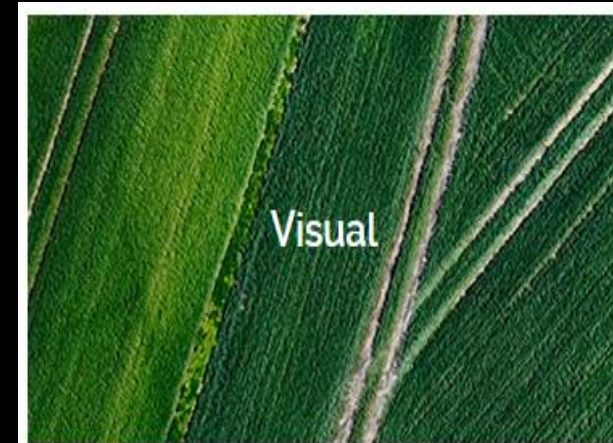
# *Operational Missions*

- Infrastructure inspections
- Real estate / aerial photography
- Precision agriculture
- Insurance claims
- Research and development
- Search and Rescue
- Resource management
- Mining
- Media coverage
- First responder support
- Security





# *Technologies on the Farm*

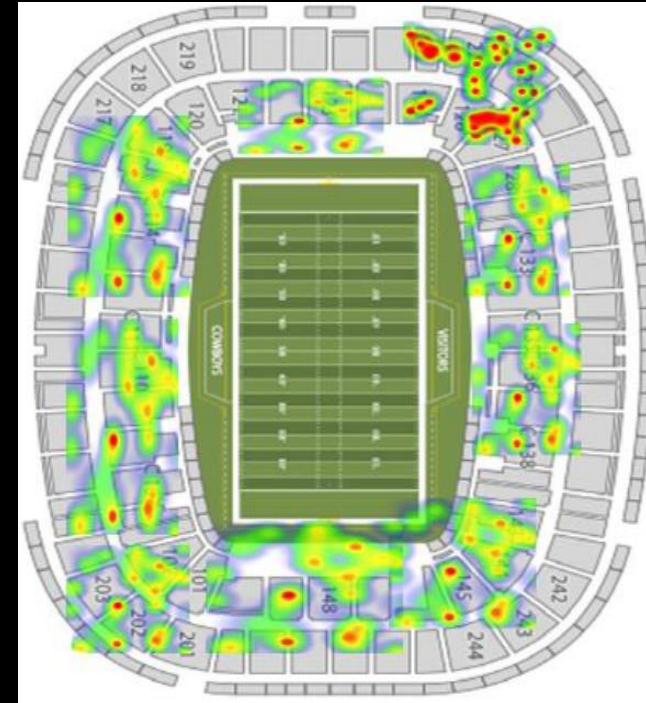


# *Fire Monitoring / Suppression*





# *Communications*





# *Package Delivery*



# *First Responders – Humanitarian Assistance / Disaster Response*



# *Workforce Opportunities*

- Engineering
  - Operations
  - Data Collection, Exploitation, Dissemination
  - Imagery Analysis
  - Communications
  - Avionics and Payloads
  - Airframes and Propulsion
  - Counter UAS
  - Field Support
  - Marketing
  - First Responders
  - Attorneys
  - Insurance Human Factors
  - Advanced Manufacturing
  - Regulators
  - Flight Test Operations/Management
  - Science and Research
  - Air Traffic Controllers
  - Consultants
- ...and many more!



# *UAS Challenges*



# *PNWER Can Play a Critical Role...*

- Critical mass of aerospace firms and skilled workforce
- Advanced manufacturing and materials companies
- Information and communication technology businesses
- Strong academia baseline / workforce development
- Wide variety of services and support industries
- Much-needed focus on regional disaster resilience
- A wealth of geographical resources
- *YOU!*



*Pacific NorthWest  
Economic Region*



# Contact Info

Tom Hagen

President, AUVSI Cascade Chapter

[tomhagen@cascadeauvsi.org](mailto:tomhagen@cascadeauvsi.org)

President, Enterprise Initiatives, Inc.

Strategy and Business Development Consulting

Aerospace and Unmanned Systems

253-988-2515

[tom.hagen@comcast.net](mailto:tom.hagen@comcast.net)

AUVSI Cascade Chapter

[www.auvsi.org/members/chapters/cascade-chapter](http://www.auvsi.org/members/chapters/cascade-chapter)



# *More Education and Networking...*

 <p><b>Drones Droids</b> Unmanned Systems at Work</p>	<p>PRESENTED BY <b>AUVSI Cascade Chapter</b></p> <p>September 26-27, 2018</p> <p>Hosted By </p> <p>Hillsboro, Oregon</p>
---	---

More information at: <http://www.auvsi.org/2018-activities-cascade-chapter>



More information is available on our website:  
[www.auvsi.org/members/chapters/cascade-chapter](http://www.auvsi.org/members/chapters/cascade-chapter)