# ASCEND Conference & Expo Sessions, Panels, & Keynotes

Please check back regularly as we are adding new sessions!

## FEATURED SESSIONS

### BUILDING OUT A SCALABLE UAS OPERATION

Melanie Harris, Vice President of Client Engagement, AeroVista Innovations
Brendan Stewart, Co-Founder and President of Engineering, AeroVista Innovations

Whether you own a commercial UAS operation or are building out UAS operations within your organization, we believe there is a formula to success. We can help you jump-start your business by identifying how to rapidly deploy business operations to test your strategy before going to market. We will show you how to turn use case tests into marketing and sales opportunities. Then we will show you how to develop, refine, and replicate processes to scale your business.

Key actionable benefits:

- Save time and increase your chances for success when entering the UAS market.
- Identify sales and marketing opportunities.
- Learn how you can turn one success into more successes.

### DRONE JOURNALISM: HOW TO USE DRONES TO FIND AND REPORT STORIES

Sally French, Journalist, The Wall Street Journal's MarketWatch

From CNN to Good Morning America to local news websites, journalists are increasingly using drones for storytelling -- both to find them and to tell them. Learn how journalists use drones in their work, including the story of one blogger who flew a drone over a factory, discovered that blood was being dumped into a nearby river, and embarked on an in-depth investigation into the illegal activity. If you are a journalist, come learn how to legally use drones, what qualities to look for when purchasing a drone for the newsroom, and other important safety considerations. If you are a drone-related business, learn to pitch your stories or your services to journalists.

Key actionable items:

- Learn how drone photography businesses can work with journalists.
- Discover what drones work best for journalism.
- Understand the laws around drones and journalism.

## DRONES FOR THE ENTERPRISE: PRACTICAL APPLICATIONS OF TODAY AND FUTURE VISIONS OF TOMORROW

Jonathan Evans, CEO and co-founder, Skyward

Large companies are using drones to save money, increase efficiency, improve worker safety, and obtain access to new data. They're also providing some of the most innovative and under-the-radar use cases. In this session, you'll learn how enterprises are using drones to increase their bottom line and what the future holds for aerial robotics on a global scale.

Key actionable items:

- See into the future of global aerial robotics.
- Learn how to use drones to create efficiencies for your business.
- Find critical safety reasons to integrate drones.

## FIVE IMAGERY AND PROCESSING SKILLS YOU NEED TO SUCCEED IN THE COMMERCIAL DRONE MARKET

Colin Snow, CEO and Founder, Skylogic Research

As drones become easier to fly, the industry is seeing an increasingly popular trend: Recreational pilots turning their hobbies into professions. A growing ecosystem of commercial drone service providers is already catering to a long list of industrial clients in agriculture, land management, energy, and construction. Some of the most successful drone service providers have come from humble recreational beginnings. But what is the secret to their success and what can you learn from them? In this session, we'll reveal those secrets and walk you through the five most important drone imagery and processing skills you need to deliver value to enterprise clients.

Key actionable items:

- Gain a useful knowledge of drone sensors and imaging technology.
- Learn what it takes to edit and process the images captured in a way that provides value to clients.
- Discover how you can differentiate your business from recreational activities.

## PRACTICAL RISK MANAGEMENT TOOLS FOR COMPANIES USING DRONES FOR THEIR BUSINESS

Brian Johnson and Sheila Kerwin, Attorneys, Nilan Johnson Lewis

This session is intended for companies that use or wish to use drones to enhance their business operations. Kerwin and Johnson will provide practical tips on how to reduce a company's risk when setting up a drone program. They'll present a brief overview of those risks, both from a regulatory and a civil liability perspective, including cyber security and privacy issues. Specific examples of steps a company should take will include insurance issues; preparing policies and procedures; training and certification; contractual analysis; and records management. The session

will also provide information on how to prepare for a drone-related incident or accident, should a worst-case scenario occur.

Key actionable items:

- Gain an overall understanding of the risks associated with using drones for business.
- Learn how to minimize risk involved in commercial drone operations.
- Gain practical advice on various topics including: insurance issues; preparation of policies and procedures; training and certification; contractual analysis; and records management.
- Learn how to prepare for a drone-related accident, should one occur.

### THE DRONE REVOLUTION: HOW COMMERCIAL OPERATORS CAN MAKE THE MOST OF THE FUTURE OF DRONES

Ben Marcus, CEO, AirMap

The drone revolution is just beginning. We're building a future in which millions of drones will fly billions of flights, driven by data and powered by technologies that will allow drones to think, sense, and connect with others in real-time. What can commercial drone operators expect in 2017, 2020, and beyond? As autonomous, beyond-visual-line-of-sight flight comes within our reach, how can commercial drone operators and others in the drone ecosystem make the most of these innovations? And how can they influence and advocate for a future where commercial drone flight reaches new heights?

Key actionable items:

- Gain a broad understanding of the current state of drone technology and regulation and a clear look into the opportunities of the future.
- Learn what to expect as drones become more autonomous and fly beyond visual line of sight.
- Get insights into how you can contribute to the development of the entire drone ecosystem.

## ADDITIONAL SESSIONS

### ADVANCED AERIAL IMAGING TECHNOLOGIES

Moderators: Belinda and Terry Kilby, Co-founders, Elevated Element

The co-founders of Elevated Element will describe their latest aerial advanced aerial videography applications, including 3D modeling and virtual fly-throughs using animated motion-tracked renderings. Leave this session with a better understanding of aerial imaging techniques that combine the latest emerging 3D technologies. The Kilbys have built a reputable sUAS service company by harnessing the power of the media and educating the public on responsible drone operation and real-world benefits of UAV technology.

Key actionable items:

- Gain a general understanding of some cutting-edge UAV cinematography techniques that combine traditional video, 3D modeling, and motion-tracked animated renderings.
- Become aware of the importance of evolving along with each advancement in UAV tech and maintaining high standards to set your aerial imaging work apart from the pack.

## ADVANCED AGRICULTURAL INNOVATIONS AT OREGON UAS FUTUREFARM

Young Kim, CEO, Digital Harvest

The Oregon UAS FutureFarm is the only remote sensing-focused digital agriculture proving ground in the United States. Digital agricultural pioneers are utilizing this real-world proving ground to develop the next generation of advanced agricultural innovations. UAS data becomes more valuable when interconnected with other layers of data on the farm. Learn how innovators are developing, testing and ultimately validating significant advancements in digital agriculture.

Key actionable items:

- Learn how innovations at FutureFarm are interconnecting agricultural data.
- See how product-market misfits can be minimized at FutureFarm.
- Shift UAS product development thinking from a point to a systems approach.

## AN ENTREPRENEUR'S INSIGHTS INTO OPTIMIZING RESOURCES AND CAPITALIZING ON YOUR BIG DATA

Casey Adams, CEO, The Kansas City Drone Company

Get a successful entrepreneur's perspective on how to make the most of your company's resources from Casey Adams, who built his drone company from the ground up. Sort through the popular UAS software options and learn how to select optimal products for your company and mission. Big data capture is only one part of the equation; Adams will also talk through how the best software helps take your raw data and turn it into actionable intelligence.

Key actionable items:

- Substantive insight into the UAS software industry.
- Comparison of UAS processing software options and help determining which are best for your company
- Clear conclusions about how to make the best use of your data

## BASIC OPERATIONS ON MAJOR MOTION PICTURES AND NETWORK TELEVISION

Scott Bones, UAS Pilot and Camera Systems Engineer, Action Media
Adam Bailey, Pilot and Camera Operator, Action Media

The demands placed on a UAS crew by a director, assistant director, and production team can be significant, and it is the job of an aerial cinematographer to capture vivid action while complying with safety standards and minimizing risk. Large-scale film and television production using drone videography changes the game and allows creative visionaries to tell their stories in a new way. Gain insight into what it's like to be part of the action on set and see behind the scenes to learn about strategies for selecting jobs, pricing, and operating safely and efficiently.

Key actionable items:

- Develop operations processes for using UAS on large-scale film and television productions.
- Hear real-world case studies from insiders in the filmmaking industry.
- Get details on flight planning for safety and efficiency.
- Learn best practices for dealing with production crews.
- Gain insight about how to price your work.

## BEGINNING A PUBLIC AGENCY UAS PROGRAM

Kris Graham, Director, Public Sector UAV Initiatives, Open Technology Center

Learn how to start a UAS program for your government agency from someone who's done it. This session will help you understand the key considerations to keep in mind before getting started. You'll be walked through the steps you need for launching a legal, safe and successful Public Agency UAS Program. Best practices, goal-setting, and compliance needs are among the topics that will be covered.

Key actionable items:

- Learn the fundamentals that all legal, safe and successful UAS programs have in common.
- Identify federal, state and local laws that can impact your program.
- Compare current best practices with the practices of an already existing program and learn to bring it into compliance.
- Set reasonable and realistic goals for your program and learn how to convey them, both internally and externally.

## BEYOND THE MAP: USING GIS TO ADD VALUE TO UAS DATA

Dr. Joe Hupy, CTO, Menet Aero

Unmanned Aerial Systems, or Drones, serve as an excellent tool for gathering geospatial data. Unfortunately, this data rarely gets incorporated into a geographic information system (GIS) for further analysis, and is treated as merely a high-resolution image that can be used as a map. Moving beyond a simple map, drone data can be modeled using GIS software to produce a wide array of value-added data products. This session will cover the types of products that can be produced with UAS data, ranging from simple to complex, and also will relate these products to the potential customers and market niches.

Key actionable items:

- Understanding data collection best practices (GPS quality, ground control, etc.).
- Understanding the capabilities and limitations of sensor payloads in terms of what can be done in value-added data analysis.
- Understanding which clients should be interested in value-added data analysis.

## BRACE FOR IMPACT: SURVIVING INFLIGHT EMERGENCIES

Brendan Stewart, President of Engineering, AeroVista Innovations

If you're an experienced drone pilot, you know that sinking feeling in the pit of your stomach when DJI GO announces "MC DATA ERROR" and your aircraft stops responding to the flight controls. When the systems abandon you, procedure, proficiency and aeronautical decision-making become your only paths to survival. Given enough fight hours, you're bound to experience this kind of scenario -- hardware and software failures happen. But can your business live through your next emergency? Brendan Stewart is a 2,500-hour multirotor pilot with a manned pilot's certificate and a passion for anything and everything that flies. As the President of Engineering at AeroVista Innovations and the lead instructor at the AeroVista Drone Academy, he will share the cockpit secrets that his students use to mitigate risk in critical environments, and achieve the mission safely.

Key actionable items:

- Learn to mitigate risk in critical flight environments.
- Find out what steps to take in case of hardware and/or software failure.
- Gain insights into the ways that flight plans can ensure safe missions.

## DOMAIN OF SMALL AND MID-SIZED UAS/DRONES IN AGRICULTURE

Dr. Lav Khot, Assistant Professor, Precision Agriculture, Washington State University

In past few years, small unmanned aerial systems (sUAS or drones) have fascinated farmers and researchers alike with their versatile imaging capabilities. The agribusiness industry is trying to keep pace with rapid developments in this sector. As this frontier emerges, we must look beyond small drones to realize the full potential of UAS technology in crop production management. This session is an effort to initiate discussions about non-imaging application aspects of drones. Among the topics discussed will be general technology (platforms, sensors and data-to-decision layer) and application domain of small and mid-sized UAS in agriculture.

Key actionable items:

- Learn about small and mid-sized UAS technology (platforms).
- Understand sensor types and imaging issues.
- Application domain (imaging and non-imaging).

## DRONES: A NEW TOOL IN A WILDLIFE MANAGER'S KIT

David Bird, Emeritus Professor of Wildlife Biology, McGill University

Small, unmanned vehicle systems are gaining in popularity among wildlife biologists and managers all over the world. Compared to using manned light airplanes or helicopters, flying drones can be cheaper, greener, less obtrusive, and much safer. (The number one source of mortality for wildlife biologists is dying in a plane or helicopter crash!) In this session you'll learn how a drone can undertake counts; monitor breeding, wintering and migrating populations of colonially nesting animals; map breeding habitats of endangered species; track animals wearing transmitters; deter poachers in Africa; and more. All is not that simple, as UAV technology is still in its infancy. Limitations exist in the form of regulations, costs, and in the technology itself. We also know little about the behavioral responses of wildlife to drones. In this class, you'll learn the possibilities as well as the practical realities.

Key actionable items:

- Learn to decide what data you want to collect and then choose the right equipment.
- Be brought up to date on the current uses (and users) of unmanned vehicle systems in the field of wildlife research and management.
- Understand how to render drones more effective in conducting such tasks, and what limitations you'll need to work within.
- Learn about regulations on the use of drones for wildlife research and management.
- Find out whether a drone is appropriate for the job at hand.

## DRONES IN HUMANITARIAN AID

Faine Greenwood, Researcher, Harvard Humanitarian Initiative

Drones are used in humanitarian aid work that frequently raises key ethical issues and practical concerns. What are the legal, ethical, and societal considerations when, for example, attempting to differentiate between military and civilian drone use? Under what conditions are drones accepted in the humanitarian community? These and other practical issues will be covered in this session, including maintenance in the field, access to data, data processing in the field, and the relative merits of different platforms. Discuss how journalists use drones and how your drone-related business can work with journalists.

Key actionable items:

- Gain an overall picture of the use of drones in humanitarian aid work.
- Develop an understanding of key ethical issues in sensitive disaster and conflict scenarios.
- Learn about drone hardware, software, and service providers that might better address humanitarian needs.
- Understand what members of the drone community can personally do to get involved in humanitarian work.

## DRONES, THERMAL IMAGING AND EMERGENCY RESPONSE

Patrick Sherman and Brian Zvaigzne, Roswell Flight Test Crew

The Roswell Flight Test Crew has extensive experience using small, low-cost, unmanned aircraft systems equipped with thermal imaging cameras. These are used to assist firefighters and other first responders in a range of scenarios that include structural and wildland firefighting, search and rescue, and hazardous material spills. Draw on the Test Crew's firsthand experience in this session, which will cover the capabilities and limitations of thermal imaging technology as well as specific applications in emergency response situations.

Key actionable items:

- Understand how thermal imaging works, by measuring and displaying variations in heat emitted and reflected by objects.
- Understand the capabilities and limitations of thermal imaging and how it differs from other technologies, such as night vision and multispectral imaging.
- See practical examples of how drones equipped with thermal imaging cameras can be used in emergency response scenarios.

## ENTERPRISE DRONE OPERATIONS: WHERE TO BEGIN?

Brian Whiteside, COO, Drone Complier

Are you looking to start a drone operation for your company? This session will help you move that vision forward. You'll learn about establishing a framework for operations, best practices, and other critical steps that will enable your company to use drones in a safe and compliant manner.

Key actionable items:

- Gain a foundational understanding of the key elements of a successful drone program.
- Identify optimal training and standardization procedures for safe operations.
- Better understand compliance requirements, Part 107 and the role of the FAA.
- Learn how to fly within the bounds of federal and state regulations.
- Understand the differences between public and private operations.

## FILLING THE FEDERAL VOID? STATE AND LOCAL REGULATION OF UAS PRIVACY AND PROPERTY ISSUE RIGHTS

Thomas Dougherty, Partner, Lewis Roca Rothgerber Christie

While FAA regulation of UAS operations has been the primary focus of the industry and the public in recent years, a growing number of states are stepping up to address issues not directly covered by federal regulations, particularly issues related to privacy and property rights. This session will address the current limits of federal regulation in this area and provide an overview of the legal concepts as well as state and local efforts to address privacy and property rights concerns related to UAS operations.

Key actionable benefits:

- Understand the scope of current federal regulations related to UAS.
- Unravel the relationship between federal and state regulation of UAS operations.
- Understand the development of legal principles related to privacy and property rights in the context of manned aircraft; then learn how they apply to unmanned aircraft.
- Learn about the current landscape of state and local laws and regulations concerning UAS operations as they relate to property rights and privacy issues.

## FINDING VALUE ON THE FARM THROUGH DRONE TECHNOLOGY

Landon Smith, Owner, Midwest-UAV

Landon Smith will share his experiences using drones on the farm, including, but not limited to: starting and growing a drone business for farms, minimizing risks, and finding resources to act on strategies.

Key actionable items:

- Learn about short- and long-term strategies for delivering value from drone technology.
- Better understand the role of drones in farming.

## FOUR-PHASED APPROACH FOR ESTABLISHING YOUR DRONE PROGRAM

Lori Brown, President, Brown Unmanned Aerial Solutions

When considering whether or not to implement a drone program in your business, it's all in the details. There are important business considerations to evaluate if you want to make a smart decision that delivers a successful outcome. It's important to focus on four distinct areas: Assessment, Recommendations, Execution, and Review/Adjust. This workshop will give you a framework to adopt when evaluating the merits of implementing a drone program for your business or initiative.

Key actionable items:

- Learn a practical decision-making framework that can be used with any type of business.
- Receive an outline for your Project Plan (the Assessment phase) as an important first step before implementing a drone program.
- Learn from other attendees about their drone experience (or lack of) through interactive discussions.

## FUNDING AND THE FUTURE: WHAT'S GOING ON IN THE DRONE INDUSTRY

Moderator: Jessie Mooberry, Technologist, Stanford Peace Innovation Lab
Kate McAndrew, Associate, Bolt
Timothy Reuter, VP, AUVSI Silicon Valley Chapter

Ian Smith, Host, Commercial Drones FM Podcast
David Weekly, Founder, Drone.VC

The drone community is going through a great deal of upheaval with hardware investment down, the ecosystem consolidating, and ROIs still uncertain. This panel brings together a cross-section of venture capitalists and drone experts to discuss the current "trough of disillusionment" and provide a glimpse into the future.

Key actionable items:

- Learn how to scale/fund a drone business.
- Get an insider perspective on UAV ecosystem looks like now and what the future might look like.
- Learn from insiders about future opportunities in the industry.
- Learn how to set expectations for customers in an industry that's made big promises.

## HOW BIG COMPANIES CAN INTEGRATE UAS TECHNOLOGY WITHOUT THE PITFALLS

Harrison Wolf, President, Wolf UAS LLC

This class will provide a programmatic approach to integrating UAS in ways that avoid squandering internal resources while promoting the efficient and effective use of UAS. We will also introduce "CONOPS," or Concept of Operations. This best-practice methodology is a formal approach to identifying all elements of an operation and understanding where potential issues may arise. The main elements of the CONOPS are: Environment, System, Personnel, Task. Attendees will be led through each of these four elements and will identify crucial points a planner should understand prior to the rest of the risk-assessment and operational approach.

Key actionable items:

- Identify key concepts for recognizing hazards and creating solutions to common UAS integration issues.
- Receive a clear understanding of why some UAS contractors fail to meet the required standards of big companies.
- Understand what a CONOPS (Concept of Operations) approach is to UAS and how to implement that process easily.

## INCREASING CONSTRUCTION EFFICIENCY WITH DRONE DATA

Andrew Dennison, COO, Uplift Data Partners

This is a watershed moment for the construction industry. Prior to 2017, accurate 3D data was slow and expensive to collect. With recent advances in drone technology and regulation, two-centimeter accurate point clouds can be collected and analyzed within hours. This new flood of 3D data gives builders new opportunities to beat budgets, prevent mistakes, increase efficiency,

and lower prices for owners. Every day Uplift Data Partners collaborates with key players in the construction industry to understand how we can fly, analyze and deliver meaningful data in a safe, efficient, forward-thinking approach. Join Uplift COO Andrew Dennison for insights into use-cases from a two-year research initiative of drone data for construction. This session will share a case study on how drone data is integrated into each phase of the construction lifecycle to manage budgets, prevent mistakes, and increase efficiency and safety.

Key actionable items:

- Learn how to certify and onboard drone pilots for construction sites.
- Discover the best drone equipment for construction.
- Practice methods of ensuring data accuracy.

## INTEGRATING DRONES INTO YOUR BUSINESS OPERATIONS: GETTING TO YES SAFELY

Michelle Hammel, Counsel and Chief Ethics Officer, Delaware River and Bay Authority

Many companies are excited about integrating UAS technology into their business operations. However, not implementing the right safeguards while using this technology can and will have disastrous results. How can you channel your excitement into an actionable and sustainable business plan? Key decision-makers will evaluate the merits of your plan based on whether you have addressed legal, insurance and regulatory matters, for example, to avoid hiring unqualified "qualified" operators. In this session, practical advice will be provided for end-users, drone operators, and service providers to help make proposals stand out from the crowd.

Key actionable items:

- Create a safety checklist of what to look for in a safe, legal drone operator/service provider.
- Learn how to get your "technophobe" management team on board.
- Discover risk analysis and mitigation strategies.

## INTEGRATION OF CIVILIAN DRONE PILOTS INTO PUBLIC SAFETY AGENCIES

Wayne Baker, Fire Chief, City of Joshua Fire Department
Garret Bryl, UAS Pilot, City of Joshua Fire Department

With experience flying UAS and managing a UAS program in support of the Joshua Fire Department and other public safety entities, Garret Bryl and Chief Wayne Baker will discuss how to approach public safety and UAS. They will explain the best way to show the benefits that UAS will provide to law enforcement, public safety departments, and the community. Each will share his experience to help you navigate the potential roadblocks when planning and managing public safety UAS operations.

Key actionable items:

- Learn how to prepare for UAS integration into public safety operations.
- See how best to approach public safety agencies.
- Understand how to discuss benefits of civilian-piloted UAS programs to public safety agencies.
- Find out how to get citizen buy-in for public Safety UAS programs.
- Learn best operations practices for public safety agencies.

## MULTIROTOR MAINTENANCE AND REPAIR (Double Session)

Patrick Sherman and Brian Zvaigzne, Roswell Flight Test Crew

In this special Double Session (90 minutes), the Roswell Flight Test Crew shares knowledge collected from more than six years of flying multirotor aircraft, now commonly known as "drones." Like manned aircraft, drones require regular upkeep and maintenance in order to perform safely and reliably. This session will cover common issues that can affect performance. You'll also learn the appropriate steps to take following a crash to determine the cause as well as how to make repairs. This session includes a look at the basic systems and components that all drones have in common, as well as lithium-polymer battery charging, storage and safety, and a wealth of other subjects.

Key actionable items:

- Understand the mechanical and electrical systems that allow drones to fly, as well as potential issues that can affect performance.
- Learn about the importance of proper lithium-polymer battery safety to prevent fires, serious property damage, and potential loss of life.
- Gain the knowledge you need to examine aircraft performance issues in a systematic way, allowing you to isolate, identify and solve problems.

## POWERING THE COMMERCIAL DRONE SUPER-HIGHWAY

Derek Waleko, CEO, Up Sonder
Dr. A. Isaac Nabors, COO, Up Sonder

What is the future of the "drone super-highway" and how will companies shape this future in a way that will benefit commercial sectors? This session will help attendees learn about the drone super-highway and understand what it will mean for commercial sectors. After a general overview, we will take a dive deep into current successes and challenges and begin to map the landscape to explore what steps are being taken by the FAA and the Trump administration to advance the drone industry toward this reality.

Key actionable items:

- Understand how the drone super-highway will benefit businesses.
- Learn where battery technology is heading, and its limits

- Understand how the FAA and Trump administration are helping advance commercial drones.

## PUBLIC SAFETY OPERATIONS: LEVERAGING THREE RULES FOR QUADCOPTER MISSIONS

Anthony DeMolina, Director of Aeronautical Training, Los Angeles Regional County Training Center

Police and fire first responders need to know when and how to use regulations governing small unmanned aircraft systems. Flying under Part 107 provides standardization with established training requirements. Public Use entities have an advantage requesting a certificate of authorization or waiver through an expedited process. To leverage the benefits each section provides, operators need to understand the advantages and limitations associated with each.

The first responder community can incorporate recreation's sUAS activities as part of a holistic approach to maintaining remote pilots' currency and proficiency. Attendees will learn to identify the requirements of each category, analyze the costs and benefits, and determine strategies to maximize sUAS use with increasing efficiency. They'll also learn the key differences between flying under a Public Use waiver and Part 107, as well as how to leverage Part 101. This session will enable first responders to focus training efforts on actionable goals.

Key actionable items:

- Identify key elements of public safety sUAS operations.
- Learn the benefits of operating under Public Use vs. Part 107, and the value of Part 101.
- Understand the unique challenges associated with integrating public safety sUAS into the National Airspace.

## SAFE INTEGRATION OF COMMERCIAL DRONES IN URBAN AIRSPACE

Eden Attias, CEO and Chairman, ParaZero

This session will offer a comprehensive overview of the commercial drone revolution and key aspects of its potential success or failure. Attendees will learn about best safety practices, methods for mitigating risk, and the ways that manned and unmanned platforms can co-exist in the modern airspace. Eden Attias will also provide a global outlook on current regulation and the direction the whole drone industry is going in light of increasing government involvement. The session is aimed at government officials, drone manufacturers and enterprise users.

Key actionable items:

- Risk analysis and mitigation methods for commercial drones operating in an urban environment.
- Statistical presentation of commercial drone economic impact.
- An overview of global regulations guiding commercial drone use.

## SAVING LIVES ONE FLIGHT AT A TIME – BEST PRACTICES FOR PUBLIC SAFETY UAS TRAINING

Jay Hart, Director, Force Training Institute

Law enforcement organizations across the nation are rapidly becoming certified under the Federal Aviation Administration's Part 107. While Part 107 has been a breath of fresh air, many organizations find themselves grounded when deciding how to create and implement sound training that is mission-oriented and also defensible in the court. In this session, you will learn best practices for creating, implementing, and documenting training so public safety professionals can deploy their UASs with confidence while also saving lives. You'll walk away with practical tools you can tailor to your needs.

Key actionable items:

- Walk away with a template to create UAS training outlines that will work for your organization.
- Learn to use a UAS Training Evaluation Rubric to evaluate UAS pilot performance or score the performance of your public safety UAS team.
- Acquire templates you can use to document your training program.

## SO YOU WANT TO START A DRONE COMPANY. NOW WHAT?

Abby Speicher, CEO and Co-Founder, DARTdrones

All drone start-ups are different, but there are several factors common to all of them that must be taken into account in order to succeed in this fast-paced industry. This session will go over the considerations that any aspiring drone entrepreneur should be aware of in order to start, build, and grow a successful company in any specific vertical. The goal of this session is to equip aspiring drone entrepreneurs with the right knowledge, tips, and considerations for starting a drone business. These considerations include, but are not limited to, legal, insurance, regulatory, business strategy, marketing, software, hardware, capital expenditures, and finding investment. This class will illustrate ways to set strategic goals, find the right partner and employees, find and grow a customer base, figure out the hardware and software that makes sense, consider legal implications, and drone insurance, and more

Key actionable items:

- Learn first-hand the trials and triumphs faced during the early stages of building and growing DARTdrones from the ground up.
- Discover the Do's and Don'ts of starting a drone business.
- Gain knowledge on the different aspects of a drone business.
- Walk away with a list of action items to prepare you for a successful launch and growth of a drone business.

## THE NEW FIRST CLASS: WE'VE REMOVED THE PILOT SEATS

Michael Zirulnik, Executive Director/Program Manager, The Varsity Project LLC, Arizona State University

From the standpoint of human communication and psychology, informed by the history of aviation, this session takes a deep dive into the state of Unmanned Aerial Vehicles and Autonomous Aerial Vehicles including the potential for public resistance to their use in passenger air transport. We will look at models for public engagement on the topic and learn about successful behavior change strategies that may assuage a reticent public to accept unmanned or autonomous passenger air transport.

Now is the time to have these discussions, engage the public and construct informed policy. In the last two years, NASA, DARPA and the US military have shown success in the AAV arena. How can we learn from their success and build for the future?

Key actionable items:

- Gain insight into the direction of UAVs future use in commercial passenger air transport to begin considering key business and policy matters.
- Learn about potentially significant financial savings in real labor costs for operating UAVs and AAVs for cargo and passenger air transport.
- Understand the challenges in communicating to the public that UAV and AAV passenger transport is safe, reliable and valuable.
- Learn successful behavior change strategies and communication campaign techniques useful in messaging campaigns.
- Get a list of successful go-to public engagement models for interacting with large publics about disruptive innovations and contested issues as a means of collecting valuable data.

## UAS FOR LAW ENFORCEMENT

Peter Menet, CEO, Menet Aero
Detective Chris Litzkow, Director of Public Safety Operations & Training, Menet Aero

Listen in as Detective Chris Litzkow gives an overview of the Wisconsin Emergency Management Air Ops Drone Network and highlights the things agencies should consider when integrating UAS operations into their operations. Peter Menet will start by presenting a case study of a search and rescue event that emphasizes the importance of integrating all air assets into a common operational framework. Gain an understanding of the unique issues involved with operating UAS for public safety operations and learn what is required in terms of training and equipment to have a successful public safety UAS program.

Key actionable items:

- Learn how to integrate UAS into emergency management planning and operations.
- Plan for and resource a successful public safety UAS program.

- See how different use cases can drive different requirements for a public safety UAS program -- there is no one-size-fits-all.

## UNDERWATER DRONES: WHERE THEY'RE GOING, HOW THEY GOT HERE

David Lang, President, OpenROV

Drones aren't just for the skies. A new generation of underwater drones is becoming more powerful and more affordable. Get up to speed with this fast-growing drone market by hearing from an innovator in the field who is using an open-source community of DIY explorers to advance the potential – and the accessibility -- of this technology. Along with offering insights about the technology and market, David Lang will explain how open-source development, marketing, and customer engagement can change the way you think about your business.

Key actionable items:

- Learn how underwater drones are being used and where the underwater drone market is headed.
- Learn how to cultivate and grow an engaged community around your business or product.

## VALUING COMPLIANCE: THE NEXT WAVE

Moderator: Steven Flynn, CEO, Skytango
*Panelists to be announced*

Let's open our eyes and minds to what's happening in the global drones marketplace. The Irish market is four years ahead of the U.S. in terms of maturity. Communities are beginning to explore engaging new ways to say "yes" to drone operations while also addressing data privacy. This session will begin with a brief overview of the issues around compliance, and then explore ways to anticipate the next wave of challenges and opportunities. What's the difference between "illegal operators" and "legal operations"? What are the fundamental issues around how the drone economy is currently operating? How do customers and landowners fit into the perceived problems? How can landowners who are experiencing drone overflights be brought into the equation to add value to the entire process?

Key actionable items:

- Develop a deeper, more nuance appreciation for the issues facing the successful development of a drone economy.
- Gain new critical thinking that will help you understand whether your operations are contributing to the problem or to the solution.
- Landowners and customers will learn how their behavior and values impact the overall health of the industry.

## WHAT IS THE EYE IN THE SKY ACTUALLY LOOKING AT, AND WHO IS CONTROLLING IT? U.S. AND GLOBAL REGULATIONS

Jennifer Urban, Associate Attorney, Cozen O'Connor

In this session you'll gain insights into existing U.S. federal regulations regarding drone activities as well as laws around the globe. Knowing the regulatory landscape can do more than help you to comply with laws domestically and abroad; it will also help you broaden your thinking about drones' potential. This session will include real-world international case studies.

Key actionable items:

- Learn how to comply with both federal and international drone regulations.
- Acquire knowledge and insights about fields that are not yet regulated – such as privacy and cybersecurity -- but where careful action can minimize both safety and legal risks.
- Learn the reasons why policies have or have not been developed regarding specific drone-related issues.
- Know where to find resources on breaking developments in the UAS industry.

## WHO OWNS THE SKY?

Moderator: Dan Gettinger, Co-director, Center for the Study of the Drone; Member, Drone360 Advisory Board
Jonathan B. Rupprecht, Commercial Pilot and Flight Instructor, Rupprecht Law
*Additional panelists to be announced*

As the integration of unmanned aerial systems in the national airspace system progresses, many unresolved questions remain regarding safety, privacy, and local legislation. This panel will explore the intersection of some of these questions, examining how state and local legislators are responding to the integration of drones with bills and ordinances limiting their use, how these sub-federal rules are likely to interact with federal regulations, and what that interaction will mean for both operators and individuals who may have drones flying in their community. The panel will then turn challenging questions around airspace over private property and whether or not private individuals and organizations are entitled to protection from "aerial trespass" and, if so, what that will mean for the wide-scale integration of drones into the airspace system.

Key actionable items:

- Understand the current regulatory landscape at a sub-federal level.
- Understand questions surrounding the expectation of privacy and private property rights when applied to the airspace system.
- Understand the key challenges and conflicts that are likely to arise in this realm as a result of these issues.
- Understand some of the potential solutions moving forward.

## WOMEN IN DRONES NETWORKING BREAKFAST

Moderator: Sharon Rossmark, Chief Operating Officer, AeroVista Innovations

Suzanne El-Moursi, Uplift Data Partners

Sally French, The Drone Girl and MarketWatch

Melanie Harris, AeroVista Innovations

Sheila Kerwin, Nilan Johnson Lewis

Rhianna Lakin, Amelia Dronehart RC Copter Group

Kerry Palakanis, Crisfield Clinic

Dara Randerson, ComEd

Lia Reich, PrecisionHawk

Jennifer Richter, Akin Gump Strauss Hauer & Feld

Maria Stefanopoulos, ABC News

Women are making critical contributions to the UAS industry through technology, advocacy, education, and business innovations. The Women in Drones Networking Breakfast provides a meaningful platform to help women share ideas, network with like-minded professionals, and be recognized for their accomplishments. (Women only, please.)

Moderated Roundtable Discussions will focus on:

- Biggest Challenge – how are others solving it
- Words of Wisdom – most important lesson so far
- Agents of Change – Starting today, I will work to…

Also please note the nomination process for Women to Watch in UAS in 2017 is now open. Visit www.womenanddrones.com for more information.

Finalist Introduction and Award Announcement will be 5:00pm, Thursday, July 20, 2017, Expo Hall.

Please check back regularly as we are adding new sessions!