

*Drones for Flood Insurance:  
Can't Keep My Drone From  
Getting To You*

2018 ASFPM National Conference

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# *Agenda*

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**Drones Overview**

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**Benefits of Drones in the Flood Insurance Industry and Broader  
Emergency Management**

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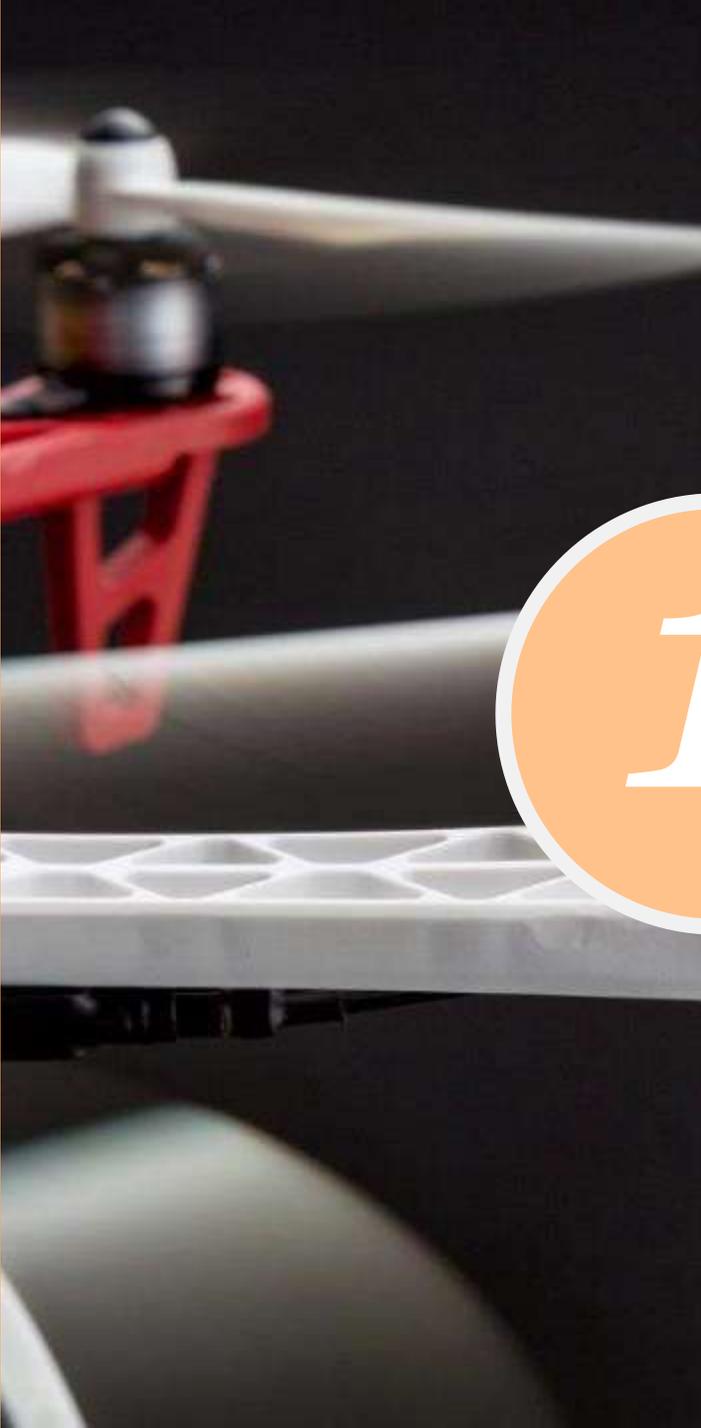
**Drone Usage in Harvey and Irma**

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**Considerations with Drone Usage**

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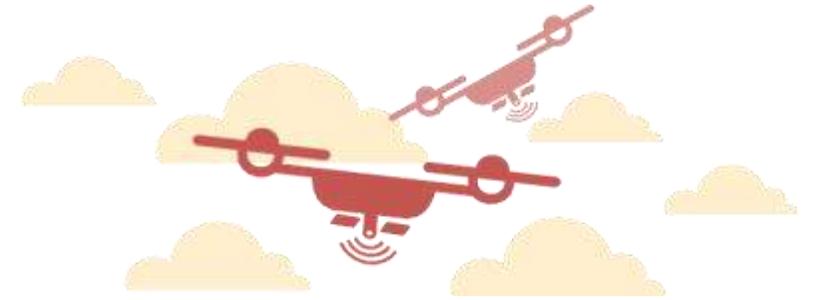


# 1

## *Drones Overview*

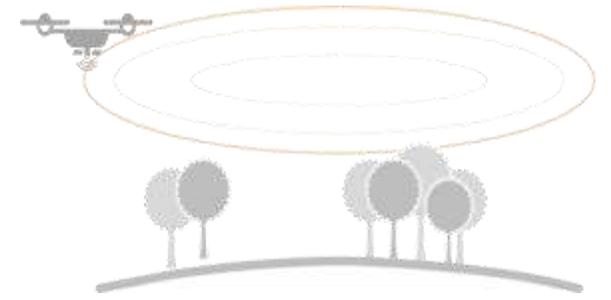
## ***What are drones?***

A drone is an unmanned aircraft that can fly autonomously adjusting for weather and changes to its surroundings using advanced software or by use of human operated controls.



***"I don't think it's an exaggeration to say that the hurricane response (during Harvey and Irma) will be looked back upon as a landmark in the evolution of drone usage in this country." –Michael Huerta, Former FAA Administrator***

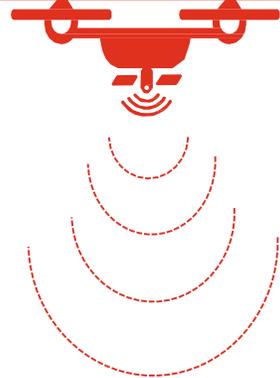
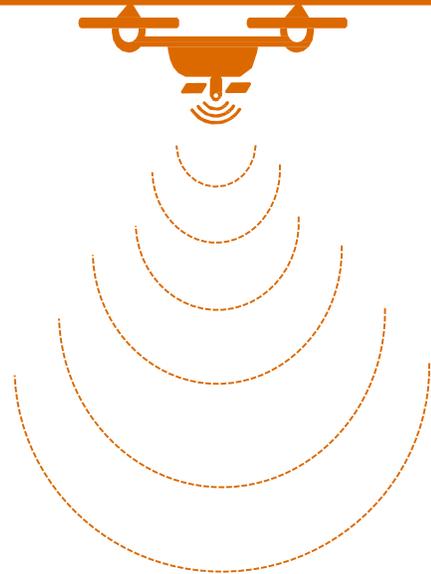
# How are drones different?



Communication

Functionality

Complexity



Technology within drones, in particular ones for commercial use, are far more advanced and allow for autonomous flight

Drones can be more than a flying camera mount. Drones can carry an array of sensors as well as be designed to transport heavy medical and other life saving equipment over long distances

Drones are not only capable of constant communication with other drones but also with people on the ground relaying useful real time data to help in a disaster situation

## *Drone usage after Hurricane Harvey*

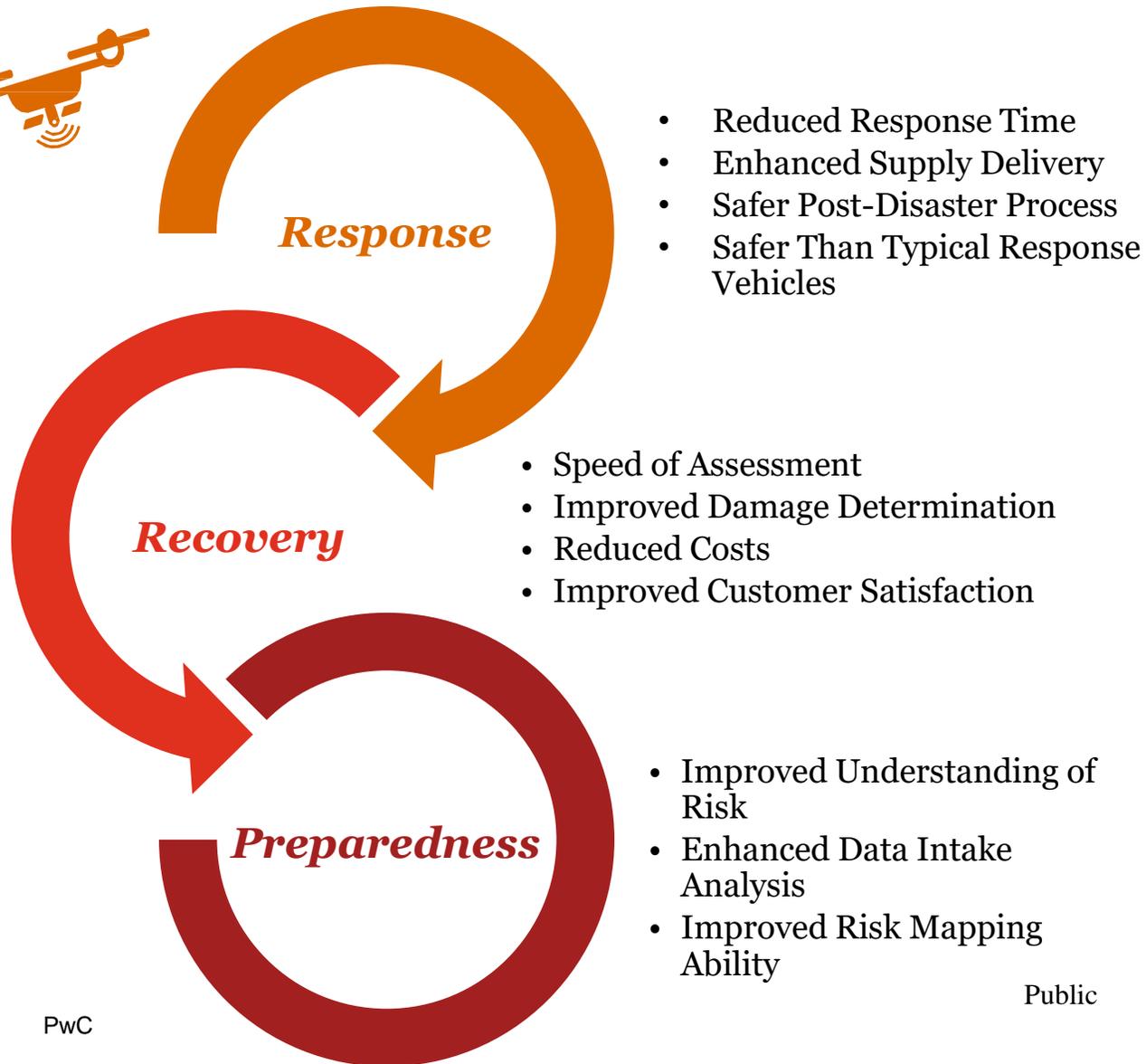


# *Drones in Action*



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# Drone Usage in Emergency Management



*"I'm really excited that this may be the time (Harvey) where everybody sees that it's time to get drones in the hands of emergency managers."*



Dr. Robin Murphy,  
Texas A&M

*"The FAA's ability to quickly authorize unmanned aircraft operations after both Irma and Harvey was especially critical."*



Michael Huerta, former  
FAA Administrator

# *Drones Use Will Spread Due to Cost Savings, Market Opportunity, and Resulting Efficiencies*

## *Increased Presence*

*613 UAV missions: Major insurers like Allstate, Farmers, and State Farm used drones for 613 Harvey and Irma related missions*

## *Cost Savings*

*Insurers responding to Harvey and Irma were able to decrease roof claims costs by \$200-400 per claim, a 60% savings*

## *Projected Drone Market in Insurance*

*\$1.418 billion: Dollars projected to be spent on drones for insurance claims in 2016-2020.*

## *Process Efficiency*

*Using drone technology allows insurers to reduce the claims cycle times by up to 80%.*



*“After the widespread devastation Hurricane Irma wreaked on Florida last weekend, unmanned aircraft – more popularly, drones – have been invaluable in supporting response and recovery efforts in the battered Sunshine State.” – Federal Aviation Administration*



# 2

## *Benefits of Drones in the Flood Insurance Industry and Broader Emergency Management*

# Benefits of Drones: Faster Assessment of Damage

## Damage Determination

- Assess damage to buildings, roads, bridges, power lines
- Identify infrastructure damage
- Survey damage to estimate costs



## Mapping

- Identify and map extent of flood/natural disaster
- Monitor levees to predict further flooding and disaster damage



## Speed of Assessment

- Process claims more efficiently: A drone can help a claims adjuster process three houses in an hour. It would previously be three houses a day



## Initial State Documentation

- Document initial state of insured object or terrain so that when disaster strikes you can compare the differences
- Record changes in landscape



# *Benefits of Drones: Reduced Costs and Improved Data Analytics*

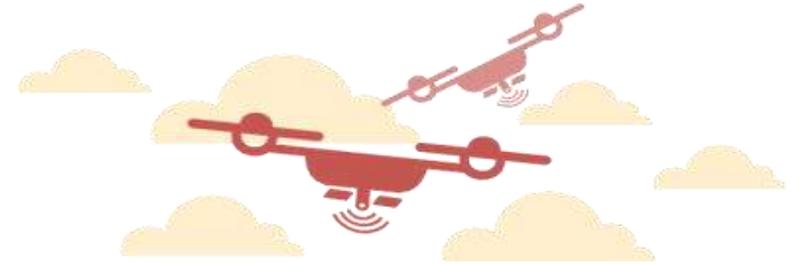
## Cost Effectiveness

- Shrink the number of fraud cases
- Prevent excess claims
- Reduce the number of claims adjusters
- Substitute for helicopters and boats



## Data Improvement

- Expedite collection of data about disasters
- Enhance value through improved archived data



# Benefits of Drones: Improved Customer Experience



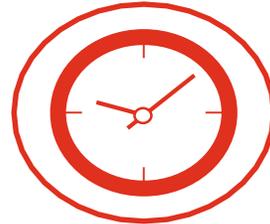
## Improved Customer Satisfaction

- Quick payout of claims, benefitting policyholder and improving customer satisfaction
- Reduce policy turnover



## Reduced Response Time

- Upgrade technology through thermal imaging to reduce response time
- Increase speed over traditional search and rescue efforts



## Enhanced Supply Delivery

- Deliver food, water, and medical supplies
- Distribute rescue ropes, life jackets and other equipment



# Benefits of Drones: Increased Safety

## Safer Than Typical Response Vehicles

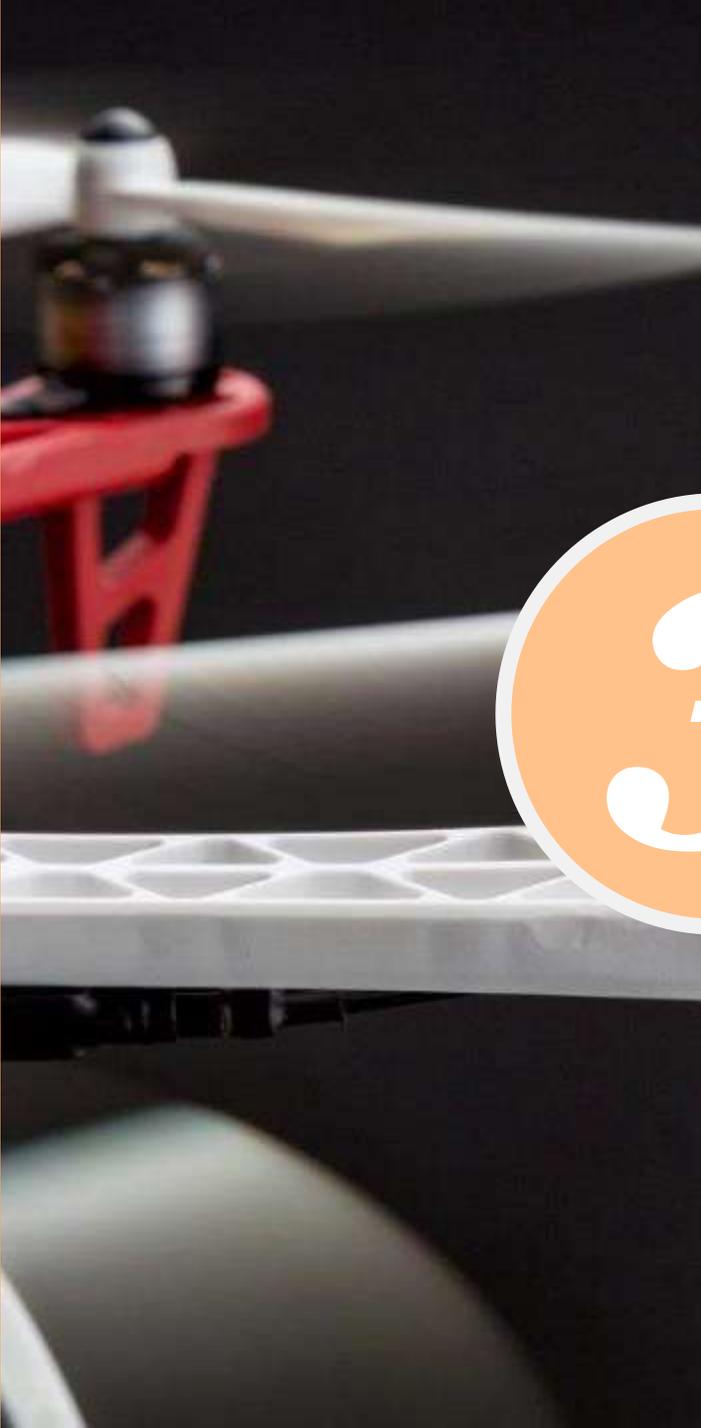
- Reduce risk in pilots' and passengers' lives
- Advance equipment through autonomous flight and impact avoidance technology



## Safer Post-Disaster Process

- Bolster safety of adjusters who don't have to climb on damaged roofs or in damaged homes
- Assess damage done to energy and utility companies to determine whether it is safe to start managing cleanup efforts





# 3

## *Drone Usage in Harvey and Irma*

# Drone Usage in Disaster Efforts

## Harvey

### ➤ Allstate

- Cut down inspection time from one hour with a human adjuster to 15 minutes with a drone
- Relayed footage back to Allstate adjusters in real time, so they could start work before the drone pilot even left the area

### ➤ Farmers Insurance

- Used drones to complete inspections and feed results to adjusters who generated analytic reports in minutes

### ➤ Texas A&M

- Monitored levees, predicted further flooding, and provided estimates for how long certain areas would be underwater using drones

## Irma

### ➤ U.S. Customs and Border Protection

- Sent drones to Florida to help map areas in Key West, Miami, and Jacksonville, using radar to survey infrastructure such as power plants for FEMA

### ➤ DroneDeploy – St. Martin

- Used drones to shorten claims process to days rather than months
- Processed an entire day's worth of maps simultaneously and got the results in less than 24 hours

### ➤ Air National Guard

- Used drones to perform aerial surveys, allowing them to assess disaster-stricken areas quickly and decide which were the most in need of assistance

*“Some of the lessons learned from Harvey provide really an extraordinary example of why this technology has to move forward at a much faster speed. The storm’s aftermath amounts to virtually a poster child for the social, economic, and human benefits of a drone.”*



Mark Dombroff, former lawyer for FAA

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# Benefits of Drones in 2018 Disaster Season

1

## Faster Claims Processing

- 40-50% increase in claim adjusters' efficiency
- Ability to process 3 claims an hour vs. 3 claims a day

2

## Improved Disaster Response

- Quicker access to emergency items (ex. Medical supplies, food, water)
- Reduction in safety-related risks

3

## Cost Savings

- Save insurance companies up to 40%
- Lower losses due to fraud

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*“This should save time for our network of experts and allow us to show the damage to people not on site. We think that in the future the use of the drones will become systematic.”*



Jean-Louis Morant  
COO  
GFA International

*“Adjusters can typically complete two or three in-person inspections in a day, but drones can do 10 per day, or even more. It’s easily twice as efficient, if not three times or more.”*



Justin Herndon  
Company Spokesman  
Allstate



# 4

## *Considerations with Drone Usage*

# Integrating Drones into Your Mission Delivery



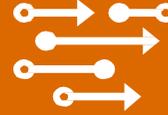
## Business System Integration

- Connect technology to existing IT and business systems so that data collected by a drone is not lost
- Create software with the capabilities to act as a user interface for the claims adjusters to view claims videos from drones



## Training

- Provide subject matter expertise to drone companies on preliminary damage assessment, claims process, insurance, etc.
- Train current claim adjusters on changes in claims processes from drone usage



## Data Processing

- Generation of products (e.g., 3D models)

## Data Integration

- Integrate data generated by drones with outside data sets

## Data Management

- Follow information technology best practices when managing data, in order to provide data confidentiality, integrity, and availability



## Program/Project Management

- Contract regulation/management
- Conduct field verification
- Ensure guidance with FAA restrictions



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# Key Considerations For Drone Use



## Maintenance

- Power failure due to loss of battery
- Cracks or chips to the propellers
- Damage to the hull



## Cybersecurity

Securing drone and claims data, both information stored on the drone and information transmitted wirelessly by the drone.



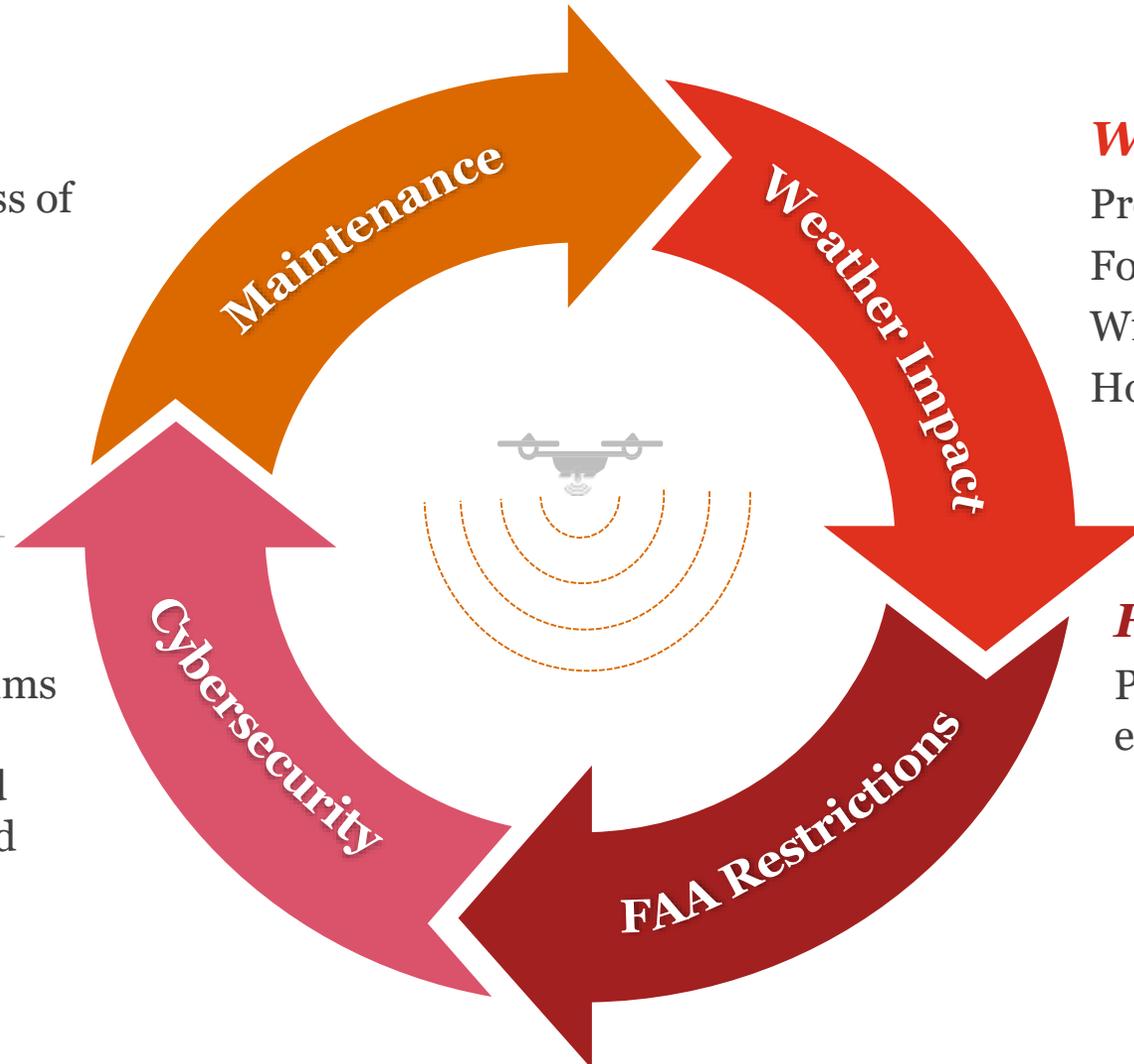
## Weather Impact

- Precipitation
- Fog
- Wind
- Hot and Cold Temperatures



## FAA Restrictions

Part 107 Rules, placed in effect on August 29, 2016



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# Contact Information



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