Keep a safe distance
Rotating propellers, even on a small aircraft, may cut off your fingers.

Fly within line of sight, LOS
Make sure that you can see the drone with your eyes all the time. Usually, no national regulatory framework on any INTERACT field stations allows flying beyond visual line of sight, BVLOS, without special permission or license.

Fly in a wide and open area away from people, animals or property
A falling drone can cause a lot of damage at impact.

Fly within safe altitudes
The height limit in the airspace near your field station may differ, but usually no flight above 120m/400ft should be performed as this will interfere with regular manned air traffic. Also consider that many INTERACT field stations do have regular aircrafts approaching/leaving at altitudes near ground.

Follow local rules and regulations
National parks, restricted areas, animal preservation areas and military areas are often marked in an aeronautical online chart, but some information needs to be obtained from additional sources. In some countries and at some stations there are exceptions for using drones for scientific research within restricted areas. Just do not forget to apply for that permission.

FACTS AND BUZZWORDS

FPV  First Person View. Flying is performed with assistance from a camera. Information is transmitted to the pilot and usually displayed on a video monitor or in FPV goggles.
CTR  Controlled Traffic Region. A control zone, which is a controlled airspace, usually around an airport.
CTR  Controlled Traffic Region. A control zone, which is a controlled airspace, usually around an airport.
ATC  Air Traffic Control. The guys in the tower.
UAV  Unmanned Aerial Vehicle.
UAS  Unmanned Aircraft System.
GNSS  Global Navigation Satellite System.
RPAS  Remotely Piloted Aircraft System.
MTOM  Maximum Take-Off Mass.
(V)LOS  (Visual) Line of Sight.
BVLOS  Beyond Visual Line of Sight.

LINKS AND APPS THAT WILL GUIDE YOU FURTHER
These links will assist you with aeronautical data and services for drones.

IATA  AirMap
AirMap Android
AirMap Apple
Transport Canada
FAA UAS
EASA

AF:  www.afconsult.com
umbilical design:  www.umbilicaldesign.se
INTERACT:  www.eu-interact.org
What to choose
In general, large drones can cost a lot of money and small drones will be cheaper. Large drones will lift heavy equipment, while small ones will not. Everything is a tradeoff, and it is difficult to give any specific recommendations on what to select.

First of all, start by finding an answer to the question “What do you want to do?” This will hopefully tell you what type of sensor or equipment you want the drone to carry. Many of the commercial drones available on the market will come with a camera and specific features for that. This may not be optimal for the type of work, you would like to do. If you need the drone to carry other types of sensors, you might need a custom made drone.

Flying your drone may also require a certain amount of training. In the end you might realize that hiring a drone expert service is better than buying your own equipment.

As a very rough rule of thumb, on a multirotor drone, one gram extra weight of payload will reduce the flight time by one second.

Insurance
Accidents involving aircrafts can be costly. An insurance covers damage to third party property or persons. Legislation in some countries demands a mandatory insurance, when operating drones commercially. It is important to sort this out prior to your flight.

Permission from authorities
In many countries, flying a drone for a scientific or commercial business, might need a permission from civil aviation authorities. Make sure that you follow the procedures to obtain a valid license or permission.

The authorities sometimes require you to maintain a log for all performed flights.

Battery safety
A vast majority of all energy sources for drones are lithium-ion polymer batteries. These are high energy packages and need to be handled and transported in a safe way. IATA will give you guidelines on how to handle your batteries during air transport.

Legislation
What to choose
In general, large drones can cost a lot of money and small drones will be cheaper. Large drones will lift heavy equipment, while small ones will not. Everything is a tradeoff, and it is difficult to give any specific recommendations on what to select.

First of all, start by finding an answer to the question “What do you want to do?” This will hopefully tell you what type of sensor or equipment you want the drone to carry. Many of the commercial drones available on the market will come with a camera and specific features for that. This may not be optimal for the type of work, you would like to do. If you need the drone to carry other types of sensors, you might need a custom made drone.

Insurance
Accidents involving aircrafts can be costly. An insurance covers damage to third party property or persons. Legislation in some countries demands a mandatory insurance, when operating drones commercially. It is important to sort this out prior to your flight.

Permission from authorities
In many countries, flying a drone for a scientific or commercial business, might need a permission from civil aviation authorities. Make sure that you follow the procedures to obtain a valid license or permission.

The authorities sometimes require you to maintain a log for all performed flights.

Battery safety
A vast majority of all energy sources for drones are lithium-ion polymer batteries. These are high energy packages and need to be handled and transported in a safe way. IATA will give you guidelines on how to handle your batteries during air transport.

Insurance
Accidents involving aircrafts can be costly. An insurance covers damage to third party property or persons. Legislation in some countries demands a mandatory insurance, when operating drones commercially. It is important to sort this out prior to your flight.

Permission from authorities
In many countries, flying a drone for a scientific or commercial business, might need a permission from civil aviation authorities. Make sure that you follow the procedures to obtain a valid license or permission.

The authorities sometimes require you to maintain a log for all performed flights.

Battery safety
A vast majority of all energy sources for drones are lithium-ion polymer batteries. These are high energy packages and need to be handled and transported in a safe way. IATA will give you guidelines on how to handle your batteries during air transport.