

## **Smallsat Launch Delays**

All 1,078 smallsats on commercial launches in the last 5 years experienced delays.



**Cumulative Actual Delays per Spacecraft** 

## **Causes of Smallsat Launch Delays**

Most missions experience multiple types of delays. Estimated delay days attributable to each cause shown below.



This study examines delays of smallsats (less than 600 kg) on commercial launches. Commercial launches are those licensed by the FAA, internationally competed, and/or with a commercial satellite onboard and exclude launches from China, Iran, and North Korea. Length of delay is number of days between the initial publicly announced launch date and the actual launch date. Bryce applied delay data to all smallsats on a launch. Bryce conducted analysis based on published sources and interviews.



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## **Smallsat Launches**

Smallsat launches generally require coordinating multiple satellites as well as launch vehicle and range operations.

Number of Smallsats Launched (2015-2019)





Delays Know what to track

Independent study commissioned by:

SPACEFLIGHT

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**Potential Costs** Direct & indirect



Maintain margin & flexibility

BRYCE

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