

GO FOR LAUNCH

*National Academy of Sciences
Committee on Planetary Protection Meeting
January 19, 2022*



**Federal Aviation
Administration**

APPROVAL POLICIES & PROCESSES

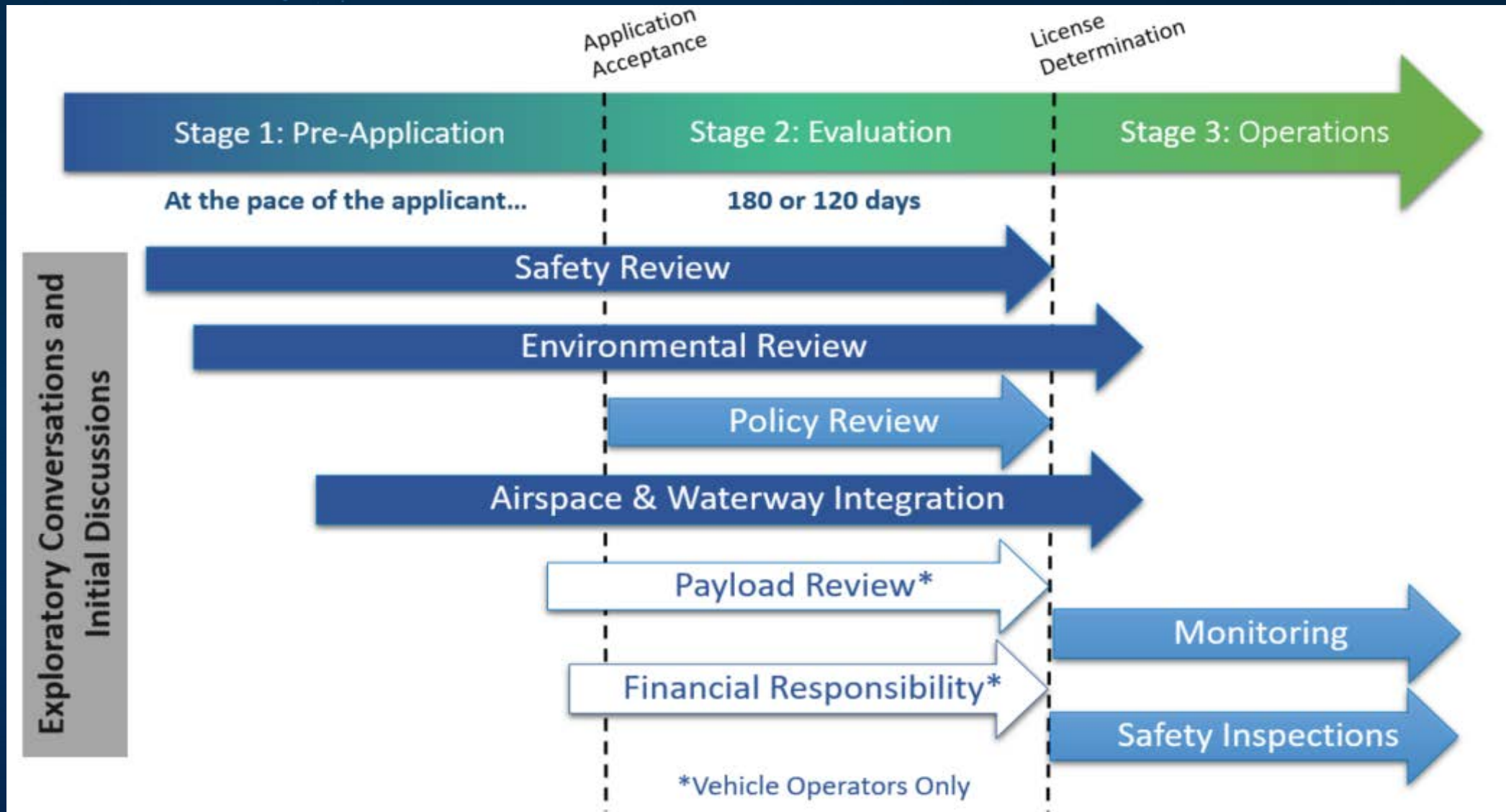


Modernized Regulatory Framework Streamlined Launch and Reentry Licensing

- Part 450 **enhances** proven **public safety** requirements that have enabled over 500 launch and reentry operations without a public casualty
- **Combined** the 4 primary, but outdated, launch or reentry regulatory parts
- Offers flexibility that **enables innovation** fulfilling national space program needs and continued U.S. global leadership in an increasingly competitive sector
- **Improves** the overall licensing review **process**, creating opportunities for efficiencies in resource utilization
- **Advisory Circulars** and guidance are being developed and published



AST Process- Site/Vehicle Operator License



Safety Reviews

System Safety Analysis (SSA)

- Develop and implement a system safety program plan & demonstrate acceptable mission risk through system safety hazard analysis.
- Contains description of the applicants safety organization, analyses that demonstrate compliance with public safety limits, mission rules, procedures, contingency plans & checklists, mission operation requirements and restrictions that must be met in order for the assumptions used in the analyses to be valid.
- Final results must be included in the application & any supporting data must be provided before the operation.

Flight Safety Analysis (FSA)

- Quantitative risk assessment that demonstrates public risk does not exceed regulatory limits.
- Contains: calculations that demonstrate compliance with public safety limits (collective risk, individual risk), flight safety limits & impact limit lines, hazard areas on the ground, sea or air, & other flight rules that must be met for the assumptions used in the analyses to be valid.
- Final results must be included in application; results may not be available until 30-10 days prior to operation.

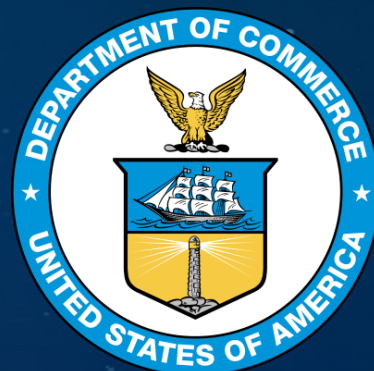
Environmental Review

- The FAA must complete an environmental review under the National Environmental Policy Act (NEPA) by assessing the environmental impacts of the proposed licensing actions.
 - Environmental Assessment (EA) – concise public document. Could result in preparation of a Finding of No Significant Impact (FONSI) or preparation of an Environmental Impact Statement.
 - Environmental Impact Statements (EIS) – detailed analysis of environmental impacts and plans to mitigate those impacts.
- Contains purpose and need, proposed action (includes construction and vehicle operations), alternatives including the no action alternative, affected environment (baseline description of project area), impact analysis, mitigation requirements.
- Timeline typically includes a scoping meeting, public meeting during Draft EA/EIS review, email updates & other stakeholder engagement.
- Draft EA or EIS is released for public review, agency consultations are integrated into or referenced in environmental document, Final EA or EIS is released for public review, EA – end in Finding of No Significant Impact or preparation of an EIS, EIS – Record of Decision.



Interagency Policy & Payload Review

- For both payload reviews and policy reviews, AST consults with partner agencies to examine the proposed activity from their unique perspectives
- AST generally accomplishes the requirement for interagency consultation by formally requesting reviews from other agencies.
- For unique activities that are expected to raise issues, AST may convene meetings of its interagency partners.



PLANETARY PROTECTION



Planetary Protection

- FAA does not have regulations specifically for planetary protection, nor do any other regulatory agencies: FAA regulates launches from planet Earth and reentries to planet Earth.
- This doesn't prevent FAA from stopping the launch or reentry of a payload if its intended use in space may jeopardize public health and safety, safety or property and the national security and foreign policy interests of the U.S.

Payload Reviews

- The FAA reviews a payload for launch or reentry to determine whether it would jeopardize public health and safety of property, U.S. National security or foreign policy interests or international obligations of the U.S.
- A launch or reentry operator or a payload owner or operator can request a payload review independent of a launch or reentry license.
- NASA has their own recommendations for commercial space operators to include in license applications to U.S. regulators.





[faa.gov/space](https://www.faa.gov/space)