Regulation & Legislation Workstream Plenary Event #4

Electron Building, Jupiter room
Harwell | 17th July 2019
Welcome and introductions
Nicola Higgins | UK Space Agency
About today

**Aim:** To continue our series of regular engagement events

- We will update you on the progress made on legislation and regulation since the last plenary
- We will provide an overview of the liabilities and security work
- We are happy to take Q and A throughout the day

*The small print: No part of the discussions held (unless otherwise noted) should be taken as a reflection of developing or future government policy or legislation, and any decisions taken by any individual or organisation on the basis of any information they hear or see at these meetings are taken at their own risk*
Agenda

10.15 - 10:45  Arrival and Registration

10:45 – 11:00  Welcome and introductions
   Nicola Higgins | UK Space Agency

11:00 - 11:15  Update since the last plenary and progress on regulation and legislation
   Colin Macleod & Nicky Reynolds | UK Space Agency

11:15 – 12:15  Security presentation
   Tyler Davies | Department for Transport

12:15 – 13:30  Networking lunch

13:30 – 14:30  Liabilities
   Louise Smith | UK Space Agency

14:30 – 15:00  Summary and closing remarks
   Nicola Higgins | UK Space Agency
Update since the last plenary and progress on legislation and regulation

Colin Macleod & Nicky Reynolds | UK Space Agency
Components of the Target Operating Model

**Strategic Model**

- People model
- Delivery model
- Demand model
- Regulatory model
- Capability model
- Technology model
- Strategic model

**Regulatory model**

- SIA and OSA licences

**Capability model**

- People model

**Technology model**

- Delivery model
- Demand model
- Regulatory model
- Strategic model
Regulatory model for Launch – demonstrates the anticipated split between authorisation and monitoring activities (simplified view)
Opportunities to engage with us

13 August
• Plenary Session, Glasgow
• Topics covered: environmental assessment

September
• LaunchUK Industry Group and Plenary session, London (final details TBC)

October
• Plenary Session (final details TBC)

November
• Plenary Session (final details TBC)

1-2-1 engagements

Regulator’s marketplace

Consultation early 2020
Plenary Session
Security

17th July 2019
➢ Section 23 – Security regulations

➢ Schedule 5 – Security regulations: further provision

➢ Section 8 – Grant of licences: general

➢ Section 10 – Grant of a spaceport licence

➢ Section 13 – Conditions of licences

➢ Section 26 – Monitoring and enforcement by regulator

➢ International Agreements
*Regulations will apply to all licensees, although not every regulation will apply to all licensees*

*Security should be treated as holistically as possible between licensees*
Key Principles - 1

- Physical
- Personnel
- Cyber
Key Principles - 2

Protection

Vetting

Training

Cyber
Requirements – nothing is definite (yet)! *

Measures to be taken should be **appropriate** and **proportionate** for the site or activity. Our proposals are:

- Security Manager
- Security Programme – sets out how the regulations will be addressed
- National Aviation Security Programme rules will apply at spaceports co-located with an aerodrome – there will be some guidance on this
- Vertical spaceports – similar requirements
- Spaceflight activities will need to be secured from unauthorised access
  - Perimeter protection and “secure area”
  - Access control – persons, vehicles, supplies, equipment & payloads
  - Prohibited articles
  - Surveillance
  - Protection of vehicles used for spaceflight activities
  - Protection of hazardous materials

*Consultation*
Access Control

Spaceport

Clean room

Space "Secure Area"

Cleared, authorised

Screened

ID, valid reason, vehicle details

No prohibited articles

Persons, vehicles, supplies, goods, payloads

Satellite Manufacturer

or other spaceflight related activity
Requirements – nothing is definite (yet)! *Consultation*

Measures to be taken should be appropriate and proportionate for the site or activity. Our proposals are:

- Cyber security – light touch approach
  - Cyber security strategy
  - Notifiable incidents
  - Space cyber Risk Audit Matrix (proposed)
- Flight Safety Systems
  - Physical and cyber security of such systems
- National vetting & clearance
- Training & qualifications
  - Regulators will need to set out security training requirements, working with industry
  - Persons carrying out security functions

- Critical National Infrastructure & Operators of Essential Services
For the purposes of the SI, “payload” likely means “satellite”
  • Unlikely to be screened at point of entry to the spaceport

Accountability will lie with the operator licensee under the SIA, however, both the spaceport operator and launch operator will need to be involved
  • A licence application to launch will be assessed by the regulator
  • Payloads will need to be screened at entry into the “secure area” or be shown to have been protected at place of manufacture
  • A declaration of security will be the likely method

For the purposes of the SI, “supplies” means items for the spaceport
  • Supplies will need to be screened at entry into the “secure area” or be shown to have been protected at place of manufacture
Payloads and Supplies

**UK Satellite Manufacturer**

- Satellite manufactured in a controlled environment
- Obligation to protect payload
- Declaration of security

**UK Spaceport**

- Assembly / clean room
  - Supervised / Protected*

**Overseas Satellite Manufacture**

- Border Controls**

**Launch Operator^^**

*US technology will need to be protected within “controlled” and “segregated” areas

**Import / export license controls are likely to be a factor

^^Once mated to the launch vehicle, security of the payload becomes the responsibility of the launch operator
For activities involving US technology, there is likely to be a requirement for:

- **Controlled Areas**: areas where access is only permitted to persons authorised by HMG the US Government
- **Segregated areas**: areas where access is only permitted to persons authorised by the US Government

This is subject to ongoing discussion with the US Government. We are negotiating a Technology Safeguards Agreement which will allow the maximum possible flexibility while respecting important commitments concerning transfer of technology.
➢ Are you an aerodrome?

➢ Are you a vertical spaceport?

➢ Are you using US technology?

➢ Proportionality (is it acceptable to the regulator?)

➢ Appropriateness (is it acceptable to the regulator?)

➢ Compliance with regulations

➢ Guidance
Networking lunch
Liabilities and Insurance for Launch - Space Industry Act 2018

Louise Smith
Legislation Manager – Insurance and Liabilities

Industry Plenary Event – Harwell 17 July 2019
What we will be covering

• Liability Provisions in the Space Industry Act 2018
  o Work Done to Date
  o Next Steps

• Insurance Provisions in the Space Industry Act 2018
  o Call for Evidence Responses
  o Work Done to Date
  o Next Steps

• Provisions to Limit Liabilities in the Space Industry Act 2018
  o Call for Evidence Responses
  o Work Done to Date
  o Next Steps

• Q&A session
Where do the liabilities come from?

• The UN Convention on International Liability for Damage Caused by Space Objects, the “Liability Convention” makes the UK Government ultimately liable for the space activities of its nationals.

• Foreign nationals suffering damage or loss can bring a claim (via their Governments) against the UK Government.

• Liability for damage on the ground and to aircraft in flight is absolute – no fault needs to be established (strict liability).

• In space, liability is fault based.
Liabilities Provisions in the Space Industry Act 2018

Two types of liability covered

- **Section 34** places a strict liability for injury or damage caused on land or water in the UK by a craft or space object of an operator carrying on spaceflight activities in the UK. The uninvolved **general public** suffering injury or damage can bring a claim against the operator without having to prove fault.

- **Section 36** places a liability on an operator carrying on spaceflight activities to **indemnify the UK Government** or listed person or body for any claims brought against them for loss or damage caused by those activities.

- Therefore UK nationals have the same easy recourse to compensation and protections as foreign nationals.
Work completed to date

Liabilities
• Policy is being formulated on those individuals who would not benefit from a strict liability right of claim under section 34.
• Policy is being formulated on licence conditions for cross waivers and indemnities.

Next Steps
• Formal Consultation to begin in Quarter 4 2019/20 FY
Insurance provisions in the Space Industry Act 2018

• **Section 38** provides a power to make regulations to require holders of licences and others engaged in spaceflight activities **to be insured**.

• This applies to **all activities regulated** under the Act – including operation of a spaceport, provision of range control services, launch from the UK and in orbit operations.
Call for Evidence Responses - Insurance

• Generally TPL insurance is available but not to cover an unlimited liability.

• Mixed responses on using MPL - some respondents preferred an MPL approach but others were concerned about the costs of modelling.

• Little appetite for making use of alternatives to insurance.
Insurance requirements for launch

• Policy is still being formulated.
• Looking to follow current practice under the Outer Space Act 1986 and mandate third party liability insurance for launch.
• Still anticipate using MPL style calculation to determine minimum insurance amounts for launch but taking into account the views expressed in the call for evidence.
• The “Modelled Insurance Requirement” (MIR) is the amount of potential third party liability claims that an operator could incur in a realistically possible scenario.
• Reflects UK approach to calculating damages arising from death, injury and property damage.
• Worked with the Government Actuaries Department (GAD) to come up with proposed financial values for death, injury and property damage.
Powers to limit operator liability

• In **section 12(2)** there is a power to specify a limit on an operator’s liability to indemnify the UK Government under section 36.

• In **section 34(5)** there is a power to make regulations to limit the amount of liability of an operator for injury or damage to third parties.

• Where these liabilities are limited **Section 35** provides a power to the Secretary of State to **indemnify an operator** for claims against it that exceed their insurance cover.

• There is also a **duty on Government** to indemnify a claimant where injury or damage exceeds an operator’s limited liability.
Call for evidence

• Liability limits were key issues in Parliament so Government committed to issuing a call for evidence
• 14 responses received
• Government response issued 28 May 2019
• On liabilities:
  o Most respondents wanted to see a limit on liabilities for launch activities from the UK
  o Most respondents thought that by not having a limit on liabilities, the UK would be at a disadvantage when competing internationally
  o Most respondents generally preferred to see some sort of variation in any liability limits applied to reflect risks associated with different types of launch but there were a range of different approaches suggested as to how such limits could be set
Next Steps

• We acknowledge the clear concerns raised.

• We have commissioned a report to inform a decision as to whether liability limits for launch activities from the UK can be justified. This is expected within a few months.

• If a limit is justified, we need to assess any financial, state aid and other legal implications before deciding whether to make regulations providing for a limit to be set in a licence.

• If a limit is considered appropriate, we will then consider the level at which this should be set.

• To determine the limit, we will take into account the ongoing work on setting minimum third party liability insurance requirements.
Next steps

• Review results of the report on liability limits. Further information will be provided once this is complete.
• Progress of MPL calculation for both in orbit and launch.
• More informal sessions prior to formal consultation.
Questions?
Thank You

https://www.gov.uk/guidance/how-we-are-promoting-and-regulating-spaceflight-from-the-uk