

Cross-Party Group on Space

Tuesday 20 February, 12:15 – 13:45, online

Minutes

Present

MSPs

Colin Beattie MSP
Beatrice Wishart MSP

Invited Guests

Phil Chambers
Stewart Miller

Non-MSP Group Members

Derek Harris
Kristina Tamane
Malachy Devlin
Grant Campbell
Nick Laird
Jonathan Orr
Grant Lewis
Peter Young
Sharon Parker-Lines
Yvette Hopkins
Julian Dines
Joanne Wheeler
Karen Wilson
Peter Guthrie
David Shaw
Jill McLaren
Shane Clark
Jonny Pearson
Kenneth Govan
Jenny Gray
Derek Young
Luke Vanstone
David Sandy
Ramsay Jones
Craig Clark
Emily Dingle
Douglas Lyons

Nic Ross
Warrick Malcolm
Victoria Mills (note taker)

Apologies

Ivan McKee MSP
Carol Mochan MSP
Jamie Halcro Johnston MSP
Sharon Dowey MSP
Gordon Bingham
Keith Robson
Daniel Smith

Agenda item 1 - Opening remarks and welcome to new members

New members welcomed without objection:

Derek Young, Institute of Physics
Kenneth Govan, Missiles & Space Batteries Ltd
Grant Campbell, Brodies LLP Solicitors
Shane Clark, Astraius

Agenda item 2 - Approval of minutes from last meeting & actions arising

Minutes approved without objections.

1. **Graeme Dey, the Scottish Government Minister for Higher and Further Education, will be invited to the next meeting to discuss skills and education.**
Carried forward
2. **Frank Strang and Ramsay Jones to update on event planning at the next meeting.**
Carried forward
3. **Colin Beattie MSP to review David Geen's contribution on ground-based space infrastructure.**
Carried forward

Agenda item 3 – Guest speaker – Derek Harris, Business Ops Manager, Skyrora

Skyrora, a Scottish-based small launcher, specialises in small satellite launch and in-orbit servicing. They employ proprietary technology, including Ecosene (made from waste plastics) and 3D printing. Since 2018, they've progressed from launching the Skylark Nano (over 2 meters) to the Skylark L (over 11 meters) in 2022. Their main

orbital vehicle, the Skyrora XL, is slated for completion in 2025. Low G-loading enables sensitive payload delivery due to their use of High Test Peroxide and Ecosene as kerosene fuel, reducing CO2 emissions by 45% per launch. A 3D printing hub in Germany is experimenting with simultaneous printing of 2 metals, cutting engine and vehicle weight and cost. Their goal: mass production of up to 8 orbital vehicles annually by 2029, all launching from SaxaVord, Shetland.

Noteworthy is their robust educational program and collaboration with Prospero Space Fellowship.

Agenda item 4 - Guest speaker – Phil Chambers, CEO, Orbex

Founded in 2015, Orbex is Europe's leading orbital launch services company. They specialize in launching small satellites. The average person interacts with up to 200 satellites daily. In 2022, 2300 small satellites were launched, and an estimated 26,000 more will launch between 2023 and 2032. Orbex offers a solution for small satellite launches in Europe, with 6 flights already booked. Their micro-launch vehicle, Orbex Prime, uses liquid oxygen and bio-propane, significantly reducing carbon emissions. They employ additive manufacturing and carbon fibre composites for their rocket design with the first stage being reusable, and the second stage being de-orbited. The Sutherland Spaceport, set to complete construction this year, is the world's only carbon-neutral spaceport. Their main challenge is housing availability and essential services (like dentists) in the Moray / Highland / Shetland area.

Colin Beattie MSP to feedback the challenge of housing and associated services (dentists) in the Moray / Highland / Shetland area to the ministers, alongside the possibility of renting facilities as opposed to building.

Agenda item 5 - Discussion of work programme

The local authority seeks guidance in designing a curriculum that cultivates the necessary skills.

Group Feedback: All members will provide input on the curriculum to address technical skills gaps and enhance softer skills. This feedback will be shared with Colin Beattie MSP.

New Voices Group: Colin Beattie MSP will engage with the New Voices Group in Space Scotland, facilitated by Hina Khan (Executive Director).

Space Clusters: Funding has been secured for both the 'West of Scotland Space Cluster' and the North Coast cluster.

Technician Shortage: Noted that technicians are particularly in deficit.

Industry Connections for Colin Beattie MSP

- **Nick Laird will provide contact information for Rob Hill (Kx) to discuss driving skills in education.**
- **Kristina Tamane will share contacts at Jacobs to discuss their National Space Skills Academy, as well as Stem Learning.**
- **Joanne Wheeler will share contacts related to the UK CanSat competition, the National Space Academy, and the Prospero Fellowship.**
- **Julian Dines will provide contact information for the STFC.**
- **Yvette Hopkins will share any relevant contacts from agencies or groups collating skills information.**

Agenda item 6 - Guest speaker – Stewart Miller, CEO, National Robotarium

Located at Heriot-Watt University, the National Robotarium has been operational for 18 months. Their four main aims are:

- Facilitating widespread adoption of robotics by organizations and companies, including the NHS Scotland.
- Promoting increased research funding in the field.
- Supporting growth of small robotics companies, aiming to expand their accelerator program from 7 to 13 companies by the end of March.
- Engaging with the public on robotics, encouraging young people to consider robotics as a career, and providing industry training.

The National Robotarium acts as a hub, connecting start-up companies with larger organizations and helping young individuals navigate their career paths. Notably, there is an opportunity to explore synergies between the robotics and space ecosystems in Scotland, given shared skill requirements and non-engineering capabilities.

Concerns have arisen regarding space limitations for phase 2 and 3 start-ups. The National Robotarium is actively engaging with the Scottish Government to establish clear pathways for scaling businesses to remain in Scotland. Collaborating on shared facilities for space and robotics could be a strategic investment.

Stewart Miller and Joanne Wheeler to connect in order to link the National Robotarium and the Space Agency.

Agenda item 7 – AOB

None raised.

Agenda item 8 – Agreement of actions, next meeting date

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Carried forward
2. **Frank Strang and Ramsay Jones to update on event planning at the next meeting.**
Carried forward
3. **Colin Beattie MSP to review David Geen's contribution on ground-based space infrastructure.**
Carried forward
4. **Colin Beattie MSP to feedback the challenge of housing and associated services (dentists) in the Moray / Highland / Shetland area to the ministers, alongside the possibility of renting facilities as opposed to building.**
5. **Group Feedback: All members will provide input on the curriculum to address technical skills gaps and enhance softer skills. This feedback will be shared with Colin Beattie MSP.**
6. **New Voices Group: Colin Beattie MSP will engage with the New Voices Group in Space Scotland, facilitated by Hina Khan (Executive Director).**
7. **Industry Connections for Colin Beattie MSP**
 - 1) **Nick Laird will provide contact information for Rob Hill (Kx) to discuss driving skills in education.**
 - 2) **Kristina Tamane will share contacts at Jacobs to discuss their National Space Skills Academy, as well as Stem Learning.**
 - 3) **Joanne Wheeler will share contacts related to the UK CanSat competition, the National Space Academy, and the Prospero Fellowship.**
 - 4) **Julian Dines will provide contact information for the STFC.**
 - 5) **Yvette Hopkins will share any relevant contacts from agencies or groups collating skills information.**
8. **Stewart Miller and Joanne Wheeler to connect in order to link the National Robotarium and the Space Agency.**

Date of next meeting - Wednesday 24 April 2024, 12:15 – 14:35, online

Meeting close