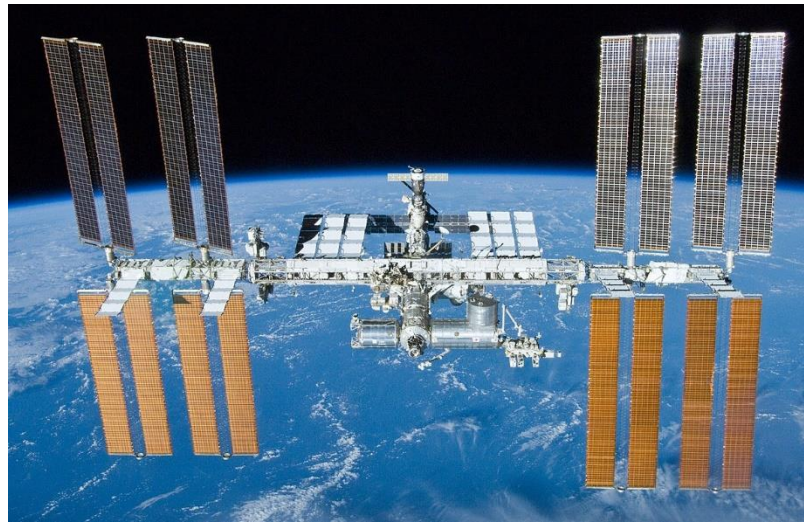


6<sup>th</sup> UNISEC-Global Meeting  
Group Discussion Activity

Group 1

***Commercialisation of ISS:  
How to Open Up the ISS Utilisation to Commercial Sectors***



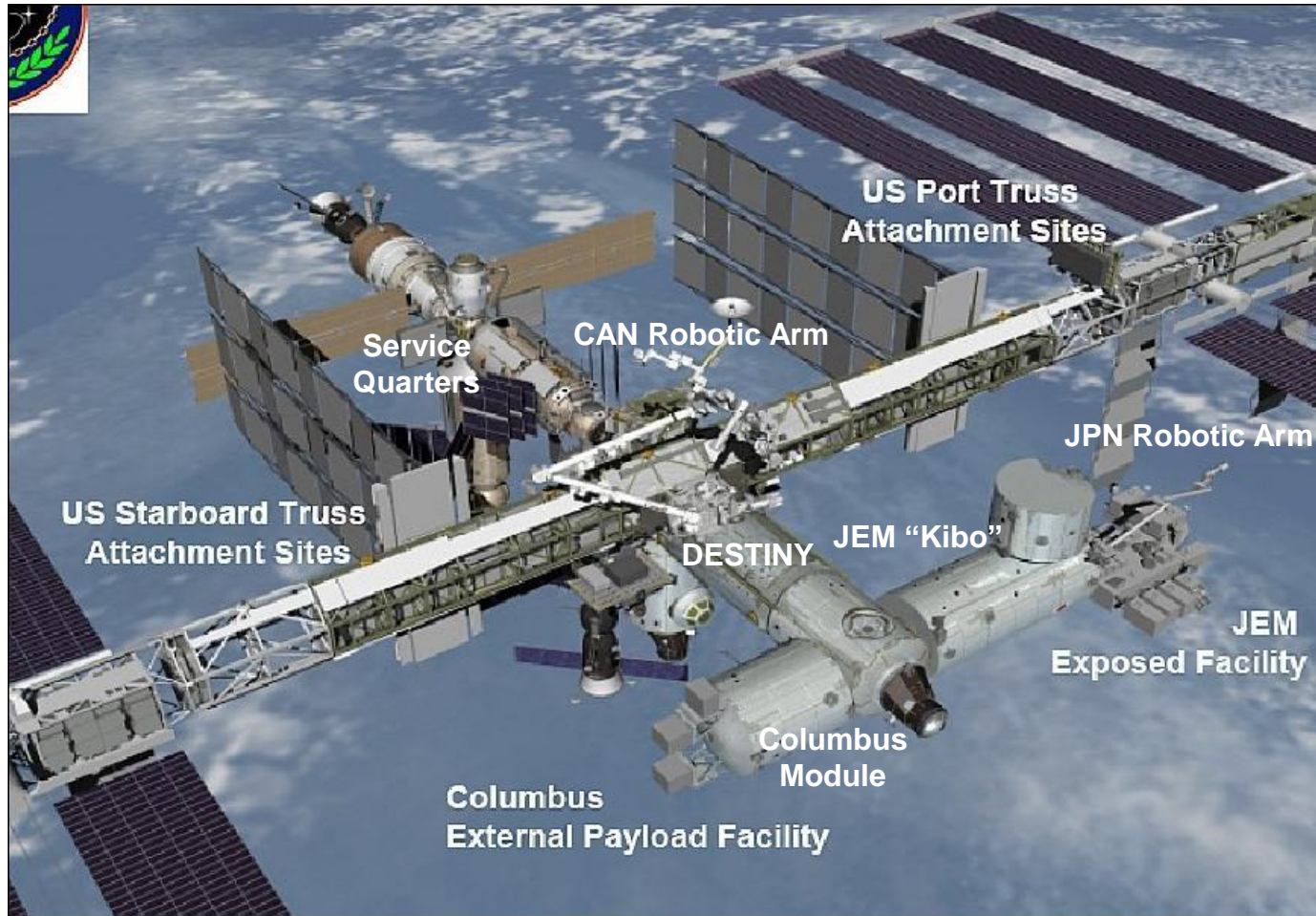
- The budget of the ISS operation after 2025 is still unclear among the participating governments.
- NASA and other national space agencies are considering re-directing their budgets to deep space exploration, such as cis-lunar habitation plan.
- In amidst of this transition, there is an urgent need for further commercialization of the ISS in order to keep it sustainable.

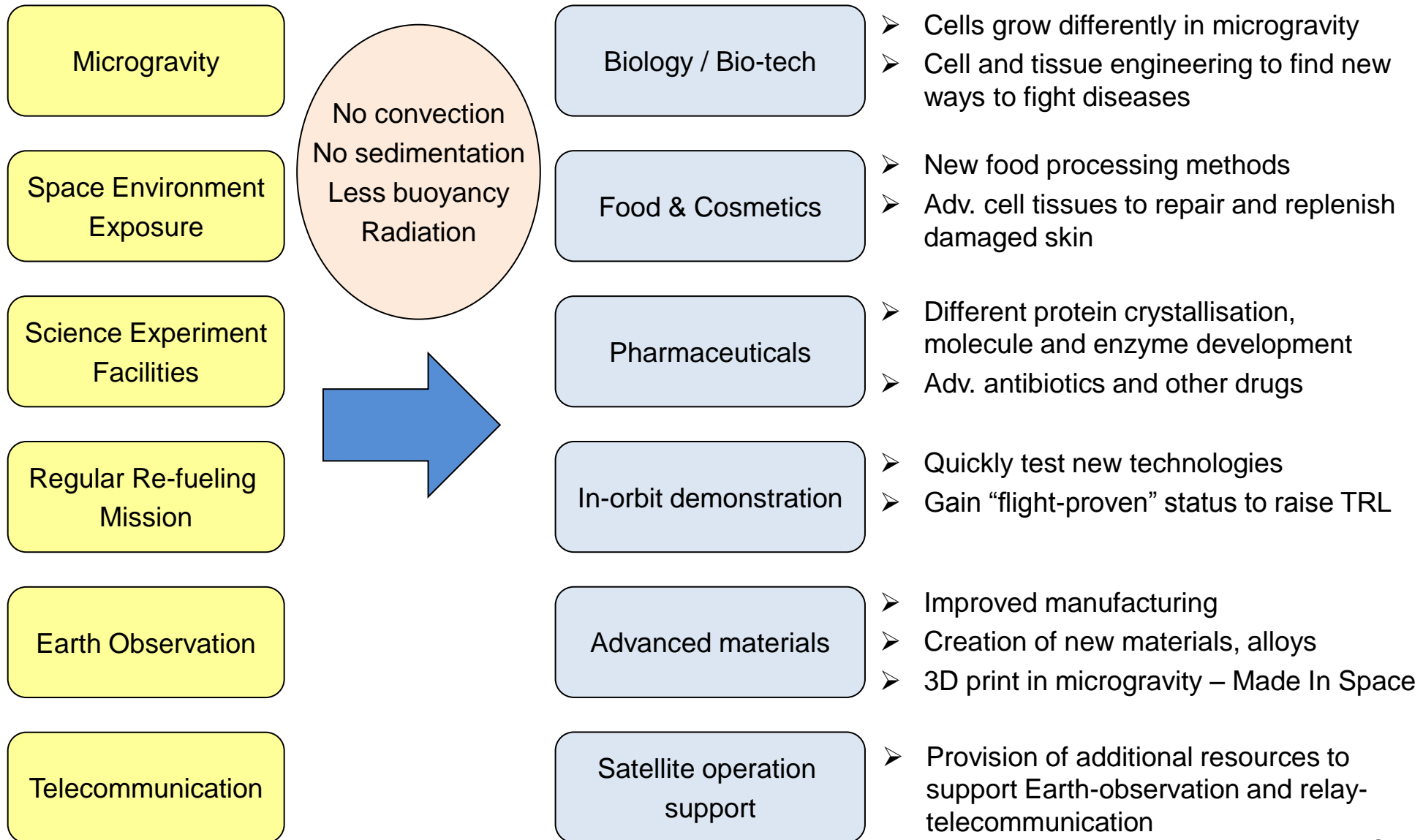
## Question

### **What uses or services can contribute to further commercialisation of the ISS??**

- You can come up with any ideas utilizing external and/or internal platforms on the ISS, or even new facilities (but within reasonable limits)
- Ideas shall be summarized with a brief, tentative business plan(s).

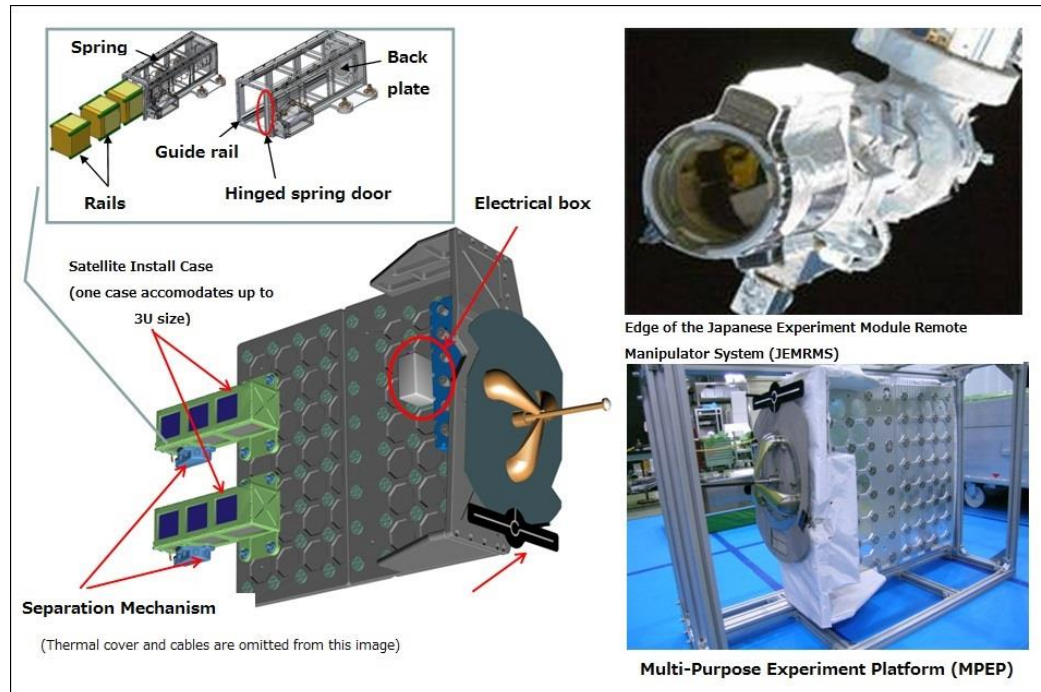
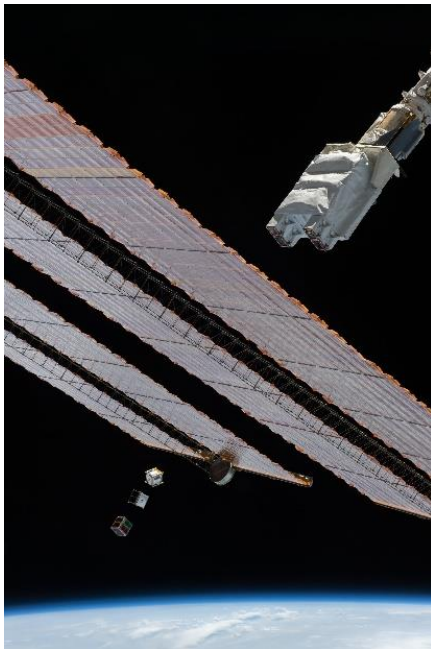
- ISS has internal & external platforms, robotics arms, and smallsat deployment facilities





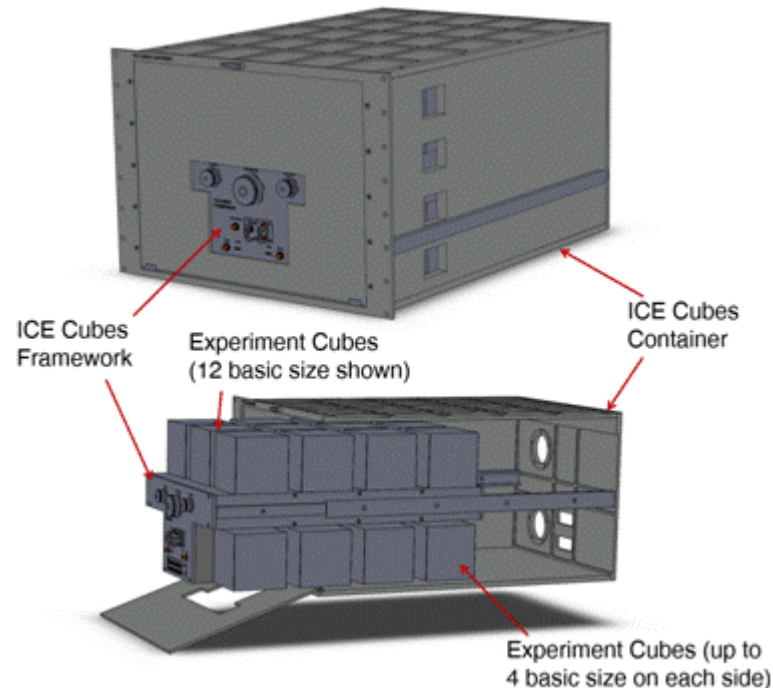
## Space BD – Cubesat and microsat deployment service from the ISS (J-SSOD)

- Regular deployment opportunity – 4 re-fueling missions per year to the ISS
- No need to wait for a piggy-back launch opportunity
- Flexible deployment schedule – 4 deployment opportunities per year so easy to re-schedule
- Reduced vibration during launch – Launched in soft cushions with ISS supplies



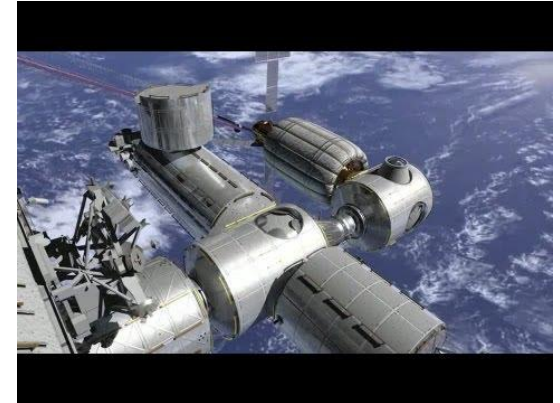
## Space Applications Services – “ICECUBES” Experimentation Platform

- Provides a platform where a system can plug on to
- Fast, simple, low cost & direct access for research and technology in LEO
- The platform provides standard interface - power, communication, USB and Ethernet ports
- Unique real-time interaction capability with space experiment from own premises



## Space for Entertainment, Tourism and Virtual Reality

- Space tourism – Bigelow Aerospace
  - Additional modules on ISS to operate as hotels
- ALE Co., Ltd – Artificial shooting star
  - Shoot metal pellets from smallsats/ISS, which then burns up in atmosphere to create artificial shooting stars that can be viewed from the Earth
- Warp Space – Gaming and VR experience in space
  - Smallsats for gaming where players can send signals to “power up” and “collect items”
  - Cubesat with a camera to provide customers a VR experience of flying through space



- Brainstorm on commercialization ideas in smaller groups (30 – 45 mins)
- Come back together, round circle of ideas (15 mins)
- Concept establishment + benefit to the customer / value proposition (30 mins)
- Approach implementation / required facility (30 mins)
- Basic monetization scheme / business plan (30 mins)
- Preparation of pitch presentation (30 mins)