

SECURE WORLD FOUNDATION &
CAELUS FOUNDATION PRESENT:

LOST WITHOUT TRANSLATION

IDENTIFYING GAPS IN U.S. PERCEPTIONS OF
THE CHINESE COMMERCIAL SPACE SECTOR

Virtual Launch Event

23 February 2021

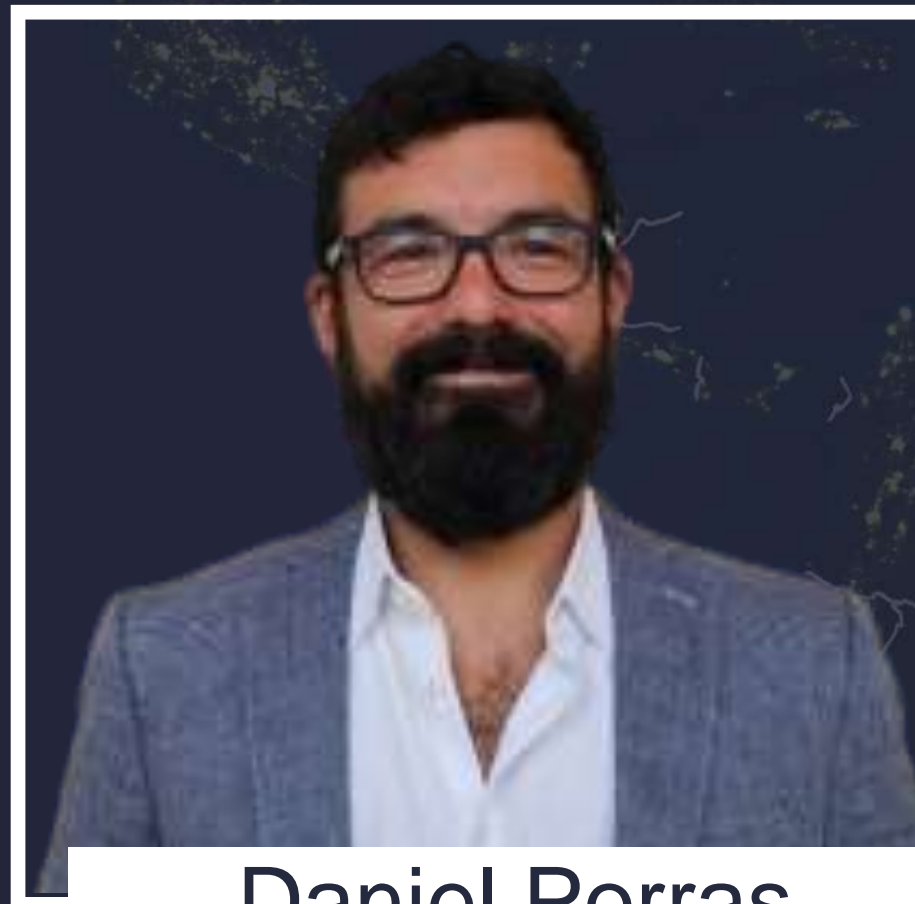
11:00-12:15 EST

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MODERATOR:



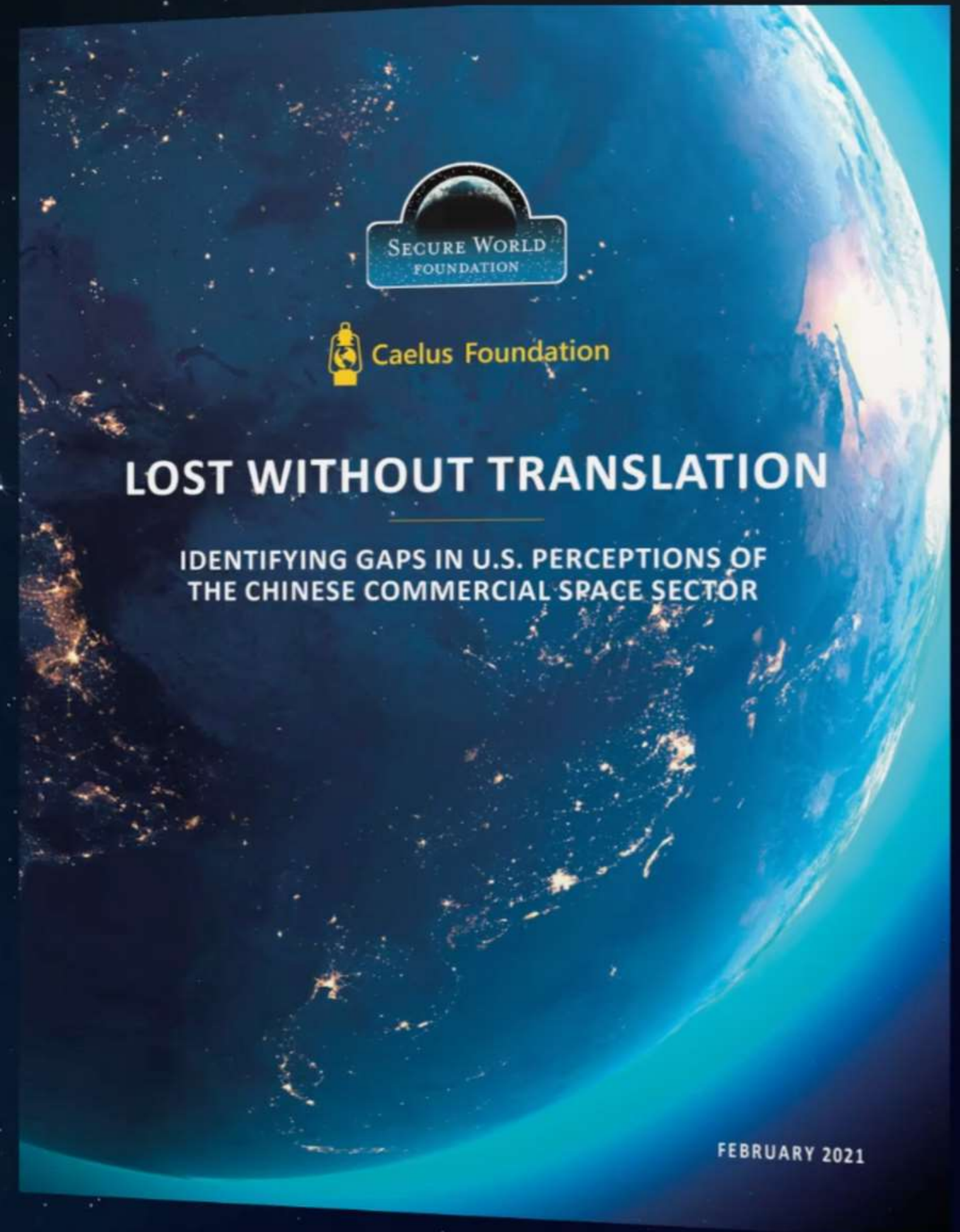
Daniel Porras

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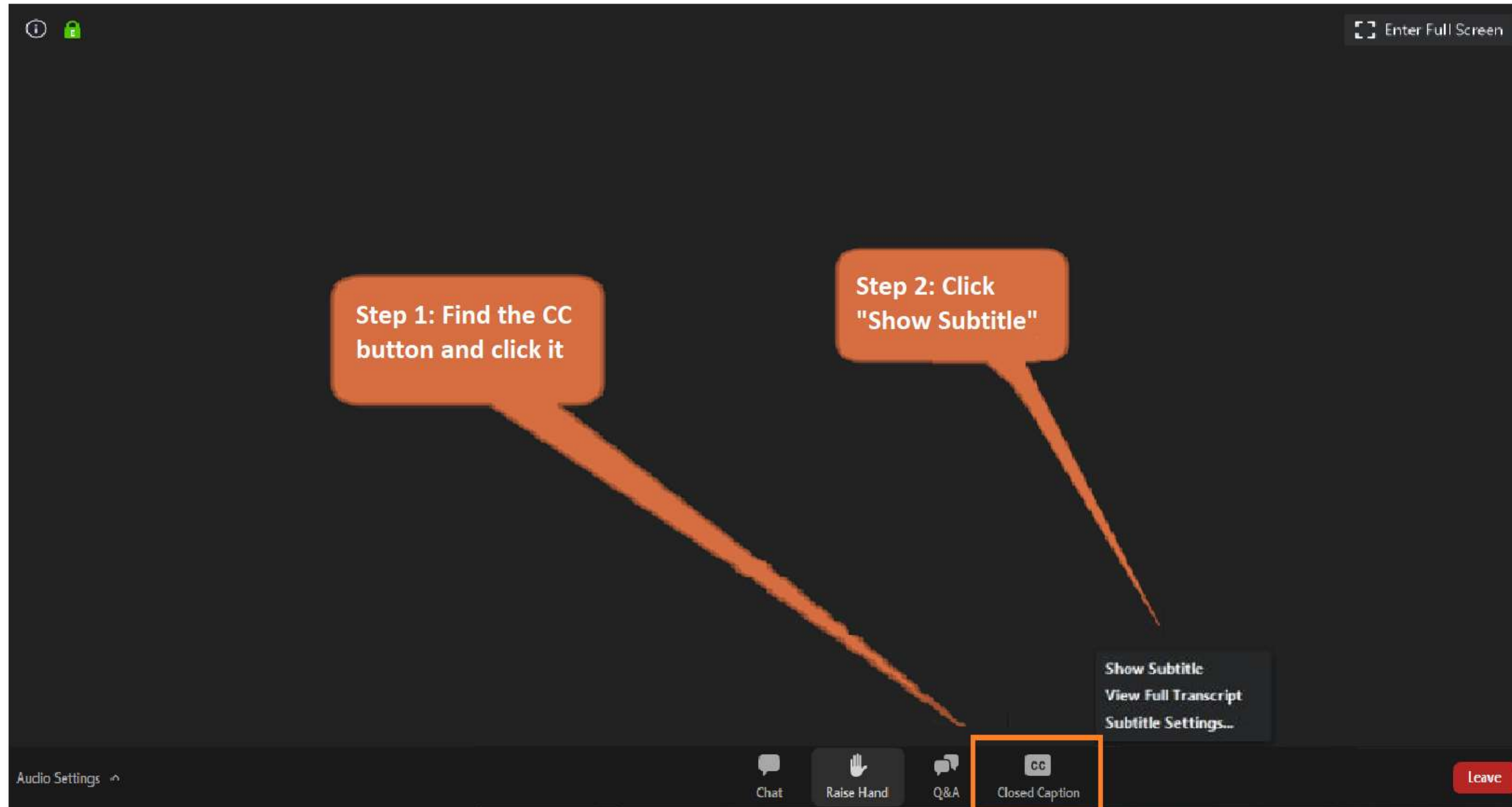
AGENDA:

- Presentation of *Lost Without Translation: Identifying Gaps in U.S. Perceptions of Chinese Commercial Space*
 - by report authors
- Discussant Panel
- Audience Q&A

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How to Turn on Closed Captions



The screenshot shows a video player interface with a dark background. At the top right, there is a button labeled "Enter Full Screen". At the bottom left, there is a button labeled "Audio Settings". At the bottom center, there are four buttons: "Chat", "Raise Hand", "Q&A", and "Closed Caption". The "Closed Caption" button is highlighted with an orange box. A context menu is open over the "Closed Caption" button, showing three options: "Show Subtitle", "View Full Transcript", and "Subtitle Settings...". Two orange callout boxes provide instructions: "Step 1: Find the CC button and click it" points to the "Closed Caption" button, and "Step 2: Click 'Show Subtitle'" points to the "Show Subtitle" option in the context menu.

Step 1: Find the CC button and click it

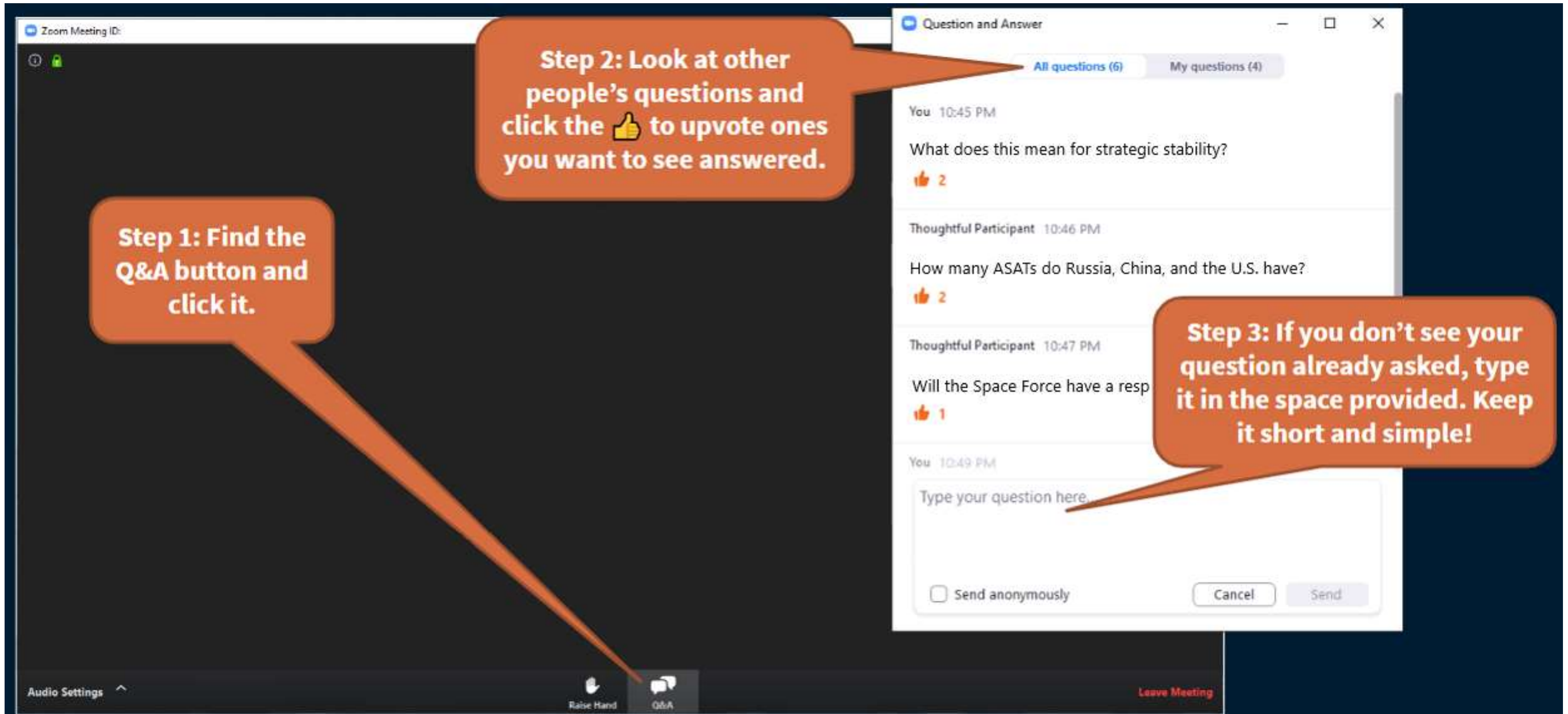
Step 2: Click "Show Subtitle"

Show Subtitle
View Full Transcript
Subtitle Settings...

Audio Settings ↕

Chat Raise Hand Q&A Closed Caption Leave

How to Ask Questions



Step 1: Find the Q&A button and click it.

Step 2: Look at other people's questions and click the 👍 to upvote ones you want to see answered.

Step 3: If you don't see your question already asked, type it in the space provided. Keep it short and simple!

The screenshot shows the Zoom Meeting interface with the Q&A panel open. The Q&A panel displays a list of questions from other participants, each with a thumbs-up icon and a count of upvotes. The questions are:

- You 10:45 PM: What does this mean for strategic stability? (2 upvotes)
- Thoughtful Participant 10:46 PM: How many ASATs do Russia, China, and the U.S. have? (2 upvotes)
- Thoughtful Participant 10:47 PM: Will the Space Force have a resp (1 upvote)
- You 10:49 PM: (question not yet typed)

The Q&A panel also includes a "Send anonymously" checkbox, "Cancel" and "Send" buttons, and a "Type your question here" text input field.

REPORT AUTHORS:



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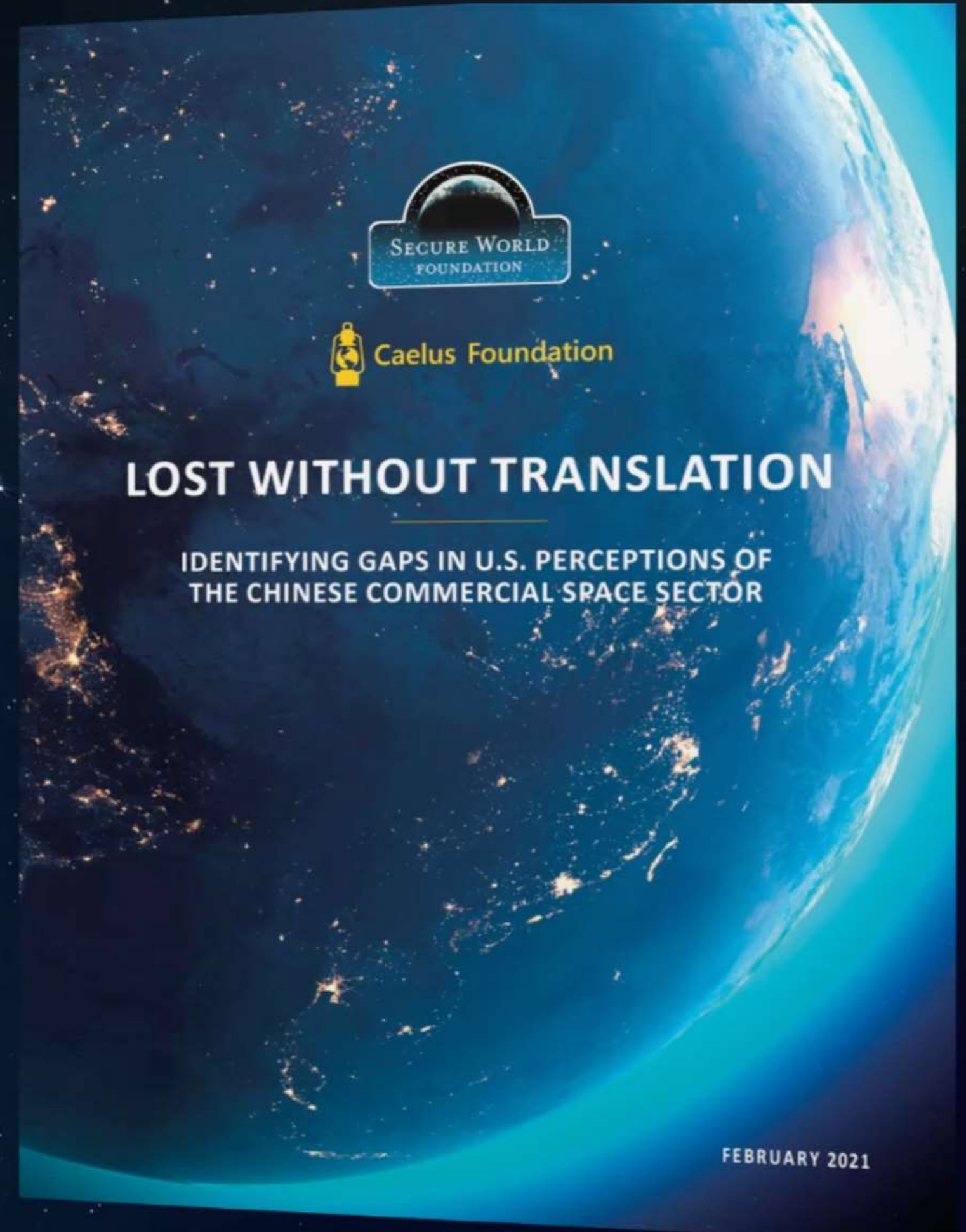
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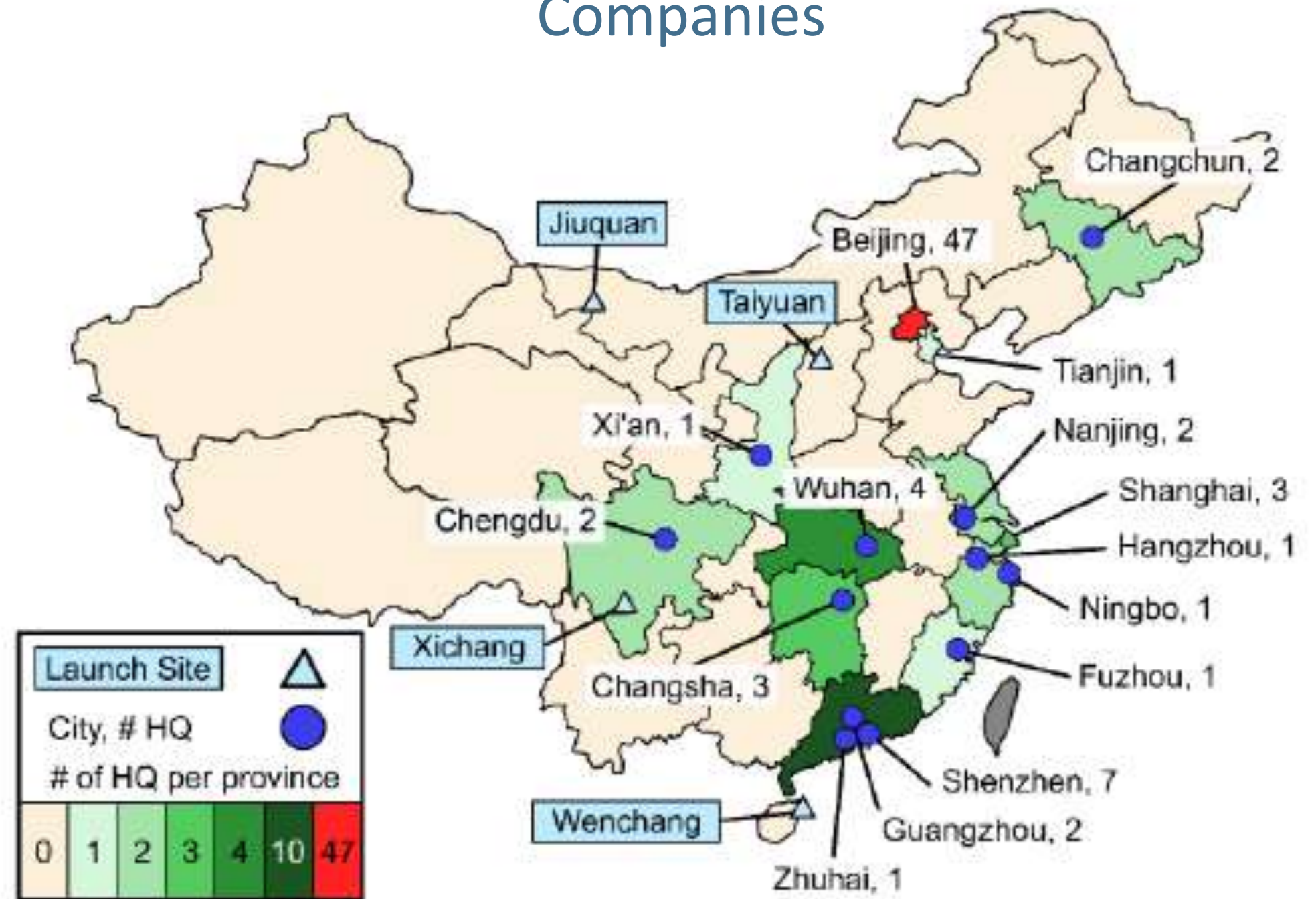
MASTERS STUDENT,
UNIVERSITY OF DENVER &
RESEARCH INTERN,
SECURE WORLD FOUNDATION



Commercial Space In China

- Bryce Space and Technology Start-Up Space Report (2020): **China was the second largest private space investment destination in 2019, behind the U.S.**
- Euroconsult China Space Industry Report (2020): **Chinese commercial launch companies raised ~\$530 million across 8 funding rounds in 2020 and the last 2 months of 2019**

Locations of Chinese Commercial Space Companies

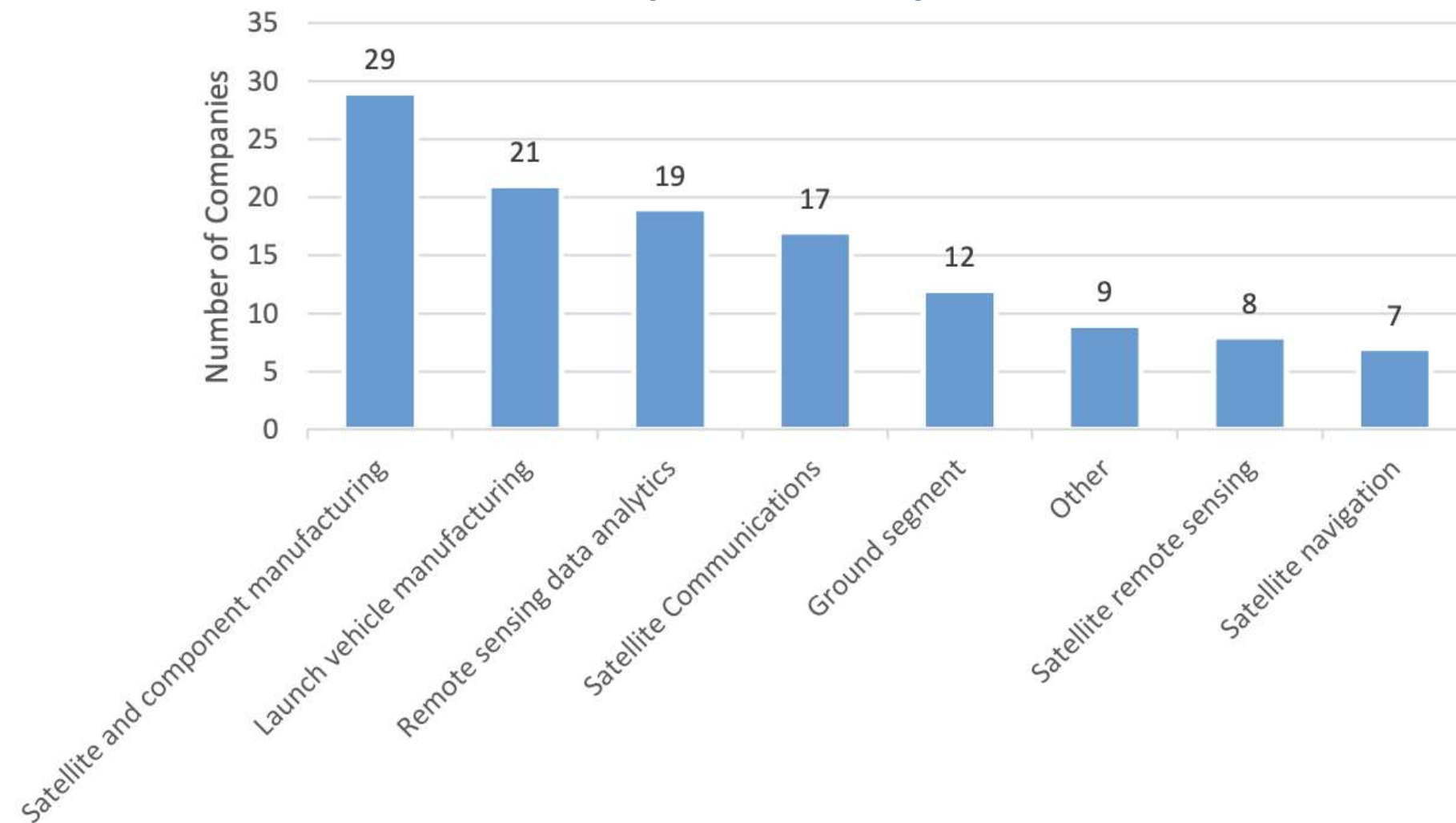


Source: "Evaluation of China's Commercial Space Sector" *Institute for Defense Analyses*, September 2019

Commercial Space In China

- IDA Science and Technology Policy Institute (STPI): **78 commercial space companies in China identified (2019)**
- Top 3 categories: **satellite and component manufacturing, launch vehicle manufacturing, and remote sensing data analytics**

Distribution of Chinese Commercial Space Companies by Sector



Note: Some companies fall into more than one category so the total adds up to more than 78.

Source: "Evaluation of China's Commercial Space Sector" *Institute for Defense Analyses*, September 2019



Commercial Space and China's National Strategy

- The development and innovation of China's space sector serves Xi Jinping's goals of the "China Dream" and national rejuvenation
- Since 2014, the Chinese government has released policies and documents encouraging growth of commercial space industry
- Broad policy initiatives: **Military Civil Fusion (MCF)** and the **Belt Road Initiative (BRI)** may impact commercial space sector





Understanding China's Commercial Space Sector

- Information asymmetry exists between US and China commercial space sectors
- Challenges to understanding China's commercial space sector
 - Information transparency
 - Reliability of sources
 - Language barriers



Interview Summary

“I welcome dialogue with anybody, I welcome true competition with anybody. It makes us better. And I generally think that that actually supports more of a competitive free market society, such as those that we enjoy in liberal democratic governments.”

- Chief Strategy Officer at a large U.S. remote sensing company

- Few saw China or it's space sector as a current competitor, but all saw it as future source of competition
- Competition welcomed but looked for it be under fair and defined rules
- Few felt confident in their awareness and ability to obtain information on Chinese commercial activities.
- All interviewees believed that more information on Chinese commercial space activities is beneficial for U.S. strategic positioning





Perceptions Inextricably Linked to Overall Geopolitical Context

“We’ve got our collective opinion about China, right? And that collective opinion I would say is outside the industry, is skewed and influenced by political winds and by different parties and a numerous amount of other influencers anywhere between social media, to the news media, to politics. And then we’ve got the collective opinion within the industry, within the commercial space industry about what is going on with China.”

- A member of the legal staff at a U.S. space exploration company

“Space is closely tied to a nation’s strategic objectives, so we have to see in terms of great power competition, which can then simplify dynamics between the U.S. and China: good guy / bad guy camp.”

- A CEO of a U.S. in-space logistics company





China's Space Sector is Viewed in a Monolithic Fashion

“I'd be very interested to understand exactly what kind of relationship exists with these quote unquote independent companies, and the government itself.”

- A business development executive at a U.S. space exploration company

“Political and economic ideologies in China are diametrically opposed to the U.S., and industry (although it may function as commercial in some aspects) is largely driven by and responding to needs of the state.”

- CEO of a U.S. in-space logistics company

“This perception that I have, that I know others share, that these [Chinese commercial space companies] are really state-owned actors that are probably just trying to partner with us to steal our data and our IP.”

- A space focused venture capitalist





Counterpoint: An Increasingly Complex Sector

- How to recognize the sector is not a monolith: Look for the cracks (internal division, competition, and friction)
- “They” are the National Team
 - *“as much as startups can ‘stand on the shoulders of a giant,’ they are equally beholden and constrained by it”* – Founder of Chinese space launch startup
- Competition over personnel
- SOEs not engaging with private firms despite direction





Perception: China's Space Industry is Driven by a Long-Term Vision

“A big advantage in China is that they appear to have a long-term strategy that doesn't get interrupted every four years. And so they're able to execute on programs in ways that Americans are not able to execute.”

- CEO of a U.S. space logistics start-up

“VCs in this country [US] tap out at 10 years. I mean, they just, they unload the company. ...The Chinese could be 25 years. If they're in it, they're not going to walk away at year 15 or 18 or 20.”

- A finance sector executive

“Wouldn't be surprised if the government vision in Chinese companies tends to have a stronger role though, in how those companies evolve.”

- A finance sector analyst





Counterpoint: Domestic Motivations

- Domestic economic, technology, and workforce development goals are important motivating factors
- Role of provincial governments
- Chinese private companies focused on internal markets and downstream business and consumer services
- Example: satellite internet constellations, National Development and Reform Commission, and provincial industrial parks





Perspective: Unlimited Financial Resources & Government Support

“I certainly believe that there is a lot of government support behind those businesses. They’ve been very open and overt about it.”

- CTO at a U.S. remote sensing company

“If a competitor is funded by the Chinese government and can offer product or service at much lower costs, because they have that government subsidy, that could knock one of my portfolio companies out of the ring.”

- A space focused venture capitalist

“I can't invest in an asteroid mining company. That's not going to be profitable for 15 years. I can't do that. Chinese can. So that patience coupled with the capital will make a big difference in the space sector.”

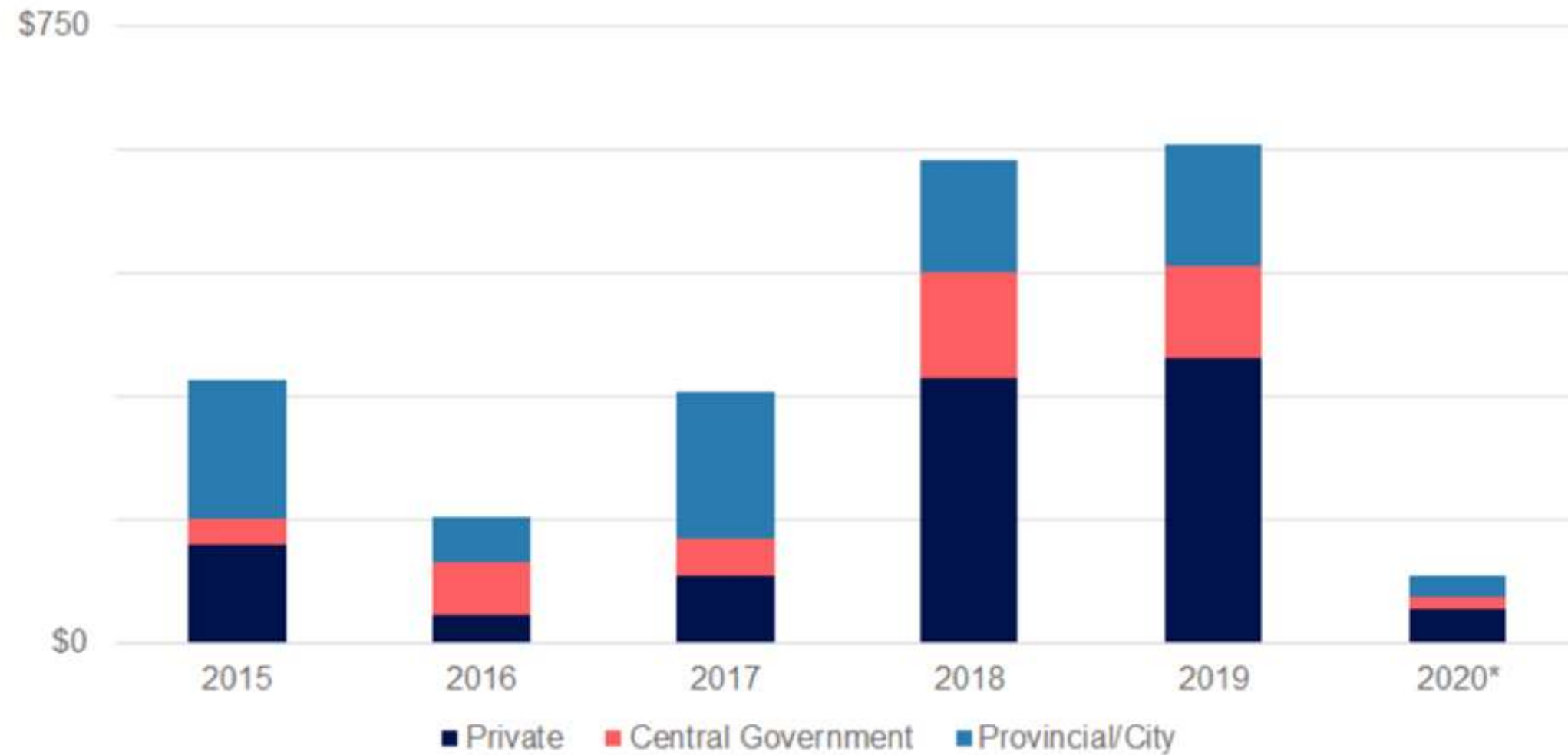
- A space focused venture capitalist



Counterpoint: Less Robust Commercial Support

- Provincial government primary funding source
- No Chinese NASA (source of envy)
- Lack of regulatory structure
- Chinese VCs have shorter ROI timeframes than US counterparts
- Lack of business acumen
- Chinese firms commonly engage in revenue generating activities outside of core business model
- Unclear role in initiatives such as BRI

Funding for Chinese Commercial Space Companies by Source (US\$ M)



Source: Euroconsult Estimate. *2020 figure is through May 2020

Is There Current Competition?

“From what I’ve seen and based on what’s been publicly reported, it does seem like they’re pushing really hard to compete with us on launch...”

- A business development executive at a U.S. in-space logistics company

“I don’t see [the U.S. startups and early phase companies I work with] actively worried about competition from China...[but] most of the companies I’m working with are not launch companies.”

- A venture capitalist

“None of our customers take [Chinese commercial launch] seriously, but as soon as customers bring it up, we would take it seriously.”

- A business development executive at a U.S. launch provider

Implications and Further Steps

“...any opportunity where we can better understand why people think the way they do and, and what values people hold, so that we can better manage our own response to that I think is valuable. And it may just come down to in the end that, you know, maybe they do have, you know, a different value set than we do, and maybe they do have different aims in space than we do.” - Business development executive at a U.S. in-space logistics company

- There is a clear need for further efforts to better understand the nature of commercial space activities in China.
- This information might be developed through two means:
 1. Conducting further detailed research studies on China’s commercial space dynamics
 2. Hosting and developing opportunities for bilateral dialogue

Future Research Themes

1. Is there such thing as a private space sector in China, and if so, how is commercial space defined in the Chinese context?
2. What is the nature of internal competition in China's space sector?
3. What is the role of the Chinese government in ownership and control of commercial or private space companies?
4. What resources do/will Chinese private space companies have access to, and will that create "unfair" advantage?

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