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CAB 2022-23/58  
December 30, 2022

## TikTok's [redacted] Access to Western Data [redacted]

### Strategic Overview

TikTok, the People's Republic of China's (PRC) first Western-centric social media application, has the potential to be exploited by the PRC government to bolster its influence and power overseas, including in Canada. The highly addictive short-video application, owned by PRC's ByteDance, allows [redacted] access to sensitive user data [redacted]

Despite assurances to the contrary, personal data on TikTok users is accessible to China. [redacted]

### What is ByteDance and its highly addictive short video application TikTok?

1. ByteDance Ltd. (ByteDance) is the world's most globalized and valuable artificial intelligence- (AI-) powered internet technology company and is known for its rapid production of software applications (apps) that have created a large consumer base and have enabled the accumulation of a considerable volume of data. Among all of ByteDance's products, the company's short video-sharing platform TikTok is the most well-known application globally—and available outside of mainland China. (U)

2. TikTok is currently one of the dominant social media apps in the market, available in 150 countries and 75 languages, with over one billion active monthly users globally, including an average of eight million users in Canada. TikTok offers short, highly addictive homemade videos for a wide range of interests. Its competitive appeal lies heavily on its AI-enabled video feed 'For You' page that relies on weighted factors to recommend content based on user preferences, including videos watched, "liked," shared, and commented on, as well as the kind of device a person is using and their account settings. On TikTok, the weighted factors enable the platform's algorithm to update with new data so it can learn more about the user and their preferences. With short videos, TikTok surpasses other social media apps, including Facebook and Twitter, at providing viral content, holding a user's attention and harvesting large quantities of data. All these factors improve video customization and user experience. (U)

### The PRC Government's Ownership of ByteDance

3. ByteDance is a private internet company [redacted]  
[redacted]  
[redacted] The majority share in the company is held by venture capitalist firms from Japan, the United States and the PRC. In April 2021, the PRC's Cyberspace Administration of China (CAC) investment fund China Internet Investment



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Fund (CIIF) acquired a 1% stake in ByteDance's main domestic subsidiary, Beijing ByteDance Technology Co. Ltd., which holds the key licences required to operate ByteDance's products, including TikTok, its Chinese equivalent Douyin, and news aggregator Toutiao. CIIF's stake also permits the internet regulator CAC to appoint a PRC official as a board director of ByteDance's domestic subsidiary.

[redacted]

[redacted]

ByteDance

[redacted]

[redacted]

TikTok


has access to a significant amount of user data that contains sensitive personal information

[redacted]

**TikTok's Collection of Personal Identifiable Information and User Data**

- Biometric data and information: facial geometry, iris scans, voice recognition, fingerprints
- Location Information: IP address, GPS location
- Profile Information: username, password, age, gender, email address, phone numbers, interests, images, videos, contacts, relationship status
- Technical Information: Device brand, model, and serial number, operating system version, mobile carrier, browsing history, app and file names and types, keystroke patterns or rhythms, wireless connections
- User Content and Behavioural Information: content, audio, images, texts, videos, content stored on a device's clipboard, including text, images and video which can include passwords for unrelated websites or apps, content of messages and information about when messages are sent, received and/or read, information about use of the platform, information about followers, likes, dislikes, responses to content uploaded. (U)

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6. Open-source reporting indicates that Western data is accessible to China. While ByteDance claims that all TikTok user data is stored in the United States and Singapore—not in China—ByteDance's servers are all located in China and TikTok's source code itself contains some underlying basic functionalities of ByteDance's other products, including its Chinese equivalent Douyin.

An internal company document from ByteDance's Internal Audit and Risk Control Department confirms that data stored on servers located outside of China is also possibly retained on China-based servers.

7.

Conversely, as revealed by internal company documents, ByteDance's Internal Audit team had plans to access GPS location data from specific US users' devices—without their knowledge or consent—to closely monitor them for unverified purposes. (S)

8.

**Chinese law mandates ByteDance to support, assist and cooperate with the PRC in data collection:**

***China's National Security Law 2015***

compels PRC commercial entities and individuals to assist the PRC government and intelligence entities with security issues when required.

It may compel locally employed PRC personnel of Canadian companies to assist in investigations that may expose operating elements of Canadian entities. (U)

***China's National Intelligence Law 2017***

compels PRC and foreign entities to provide access to—or collaborate with—the PRC intelligence entities.

It may force locally employed PRC personnel of Canadian companies to assist in PRC intelligence operations. (U)

***China's Cyber Security Law 2017***

mandates PRC companies to comply with data localization measures that enable access to foreign data. (U)

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9. [REDACTED]

[REDACTED] Open-source research reveals varying degrees of censorship on a range of topics related to democratic values, while also suppressing content that is sensitive—even prejudicial—to some non-Western countries. ByteDance maintains very strict content guidelines, as revealed from within the company itself, where AI-enabled censorship is supported by the work of more than 20,000 content moderators. (TS/[REDACTED])

10. [REDACTED]


[REDACTED] ByteDance recently failed to remove 90 percent of disinformation ads on the 2022 US midterm elections, compared to Facebook and YouTube, which identified and blocked most of them, [REDACTED]. Further, TikTok's algorithm has seemingly directed users to content that features Russian mercenaries fighting in Ukraine, in breach of the platform's guidelines forbidding content that "promotes, normalizes, or glorifies extreme violence." (TS/[REDACTED])

#### TikTok Technical Security Vulnerabilities

11. [REDACTED]

12. Mobile apps, like TikTok, can easily circumvent permissions that are otherwise designed to protect users' data and the device's system resources. This breach presents an opportunity for an actor to persistently gain unauthorized access, exfiltrate sensitive personal information and control the device's systems. Several security vulnerabilities in TikTok have been publicly reported from 2019 to 2022. A cybersecurity research team discovered security flaws in 2019 that could have allowed an actor to gain control of TikTok accounts and obtain sensitive user data by sending malicious messages that bypass privacy protections. Other similar vulnerabilities have been discovered, which could have allowed an actor to inject malicious scripts into trusted websites for cyber fraud. In February 2022, researchers discovered a "high-severity vulnerability" whereby users who clicked on a link would allow malicious actors to compromise user accounts—without user awareness—and then execute malicious functions. ByteDance's response to these and other security vulnerabilities has been instant, releasing regularly updates that aim to mitigate the reported security concerns. (U)

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### Canada and International Partners' Reaction to ByteDance and TikTok

13. Few countries have outright banned TikTok. The Federal Communications Commission (FCC) strongly recommends banning TikTok altogether. In June 2022, the FCC sent letters to Apple and Google requesting the companies to remove TikTok from their app stores due to national security concerns. In December 2022, a newly tabled US bipartisan bill, if enacted, would block commercial operations of TikTok, thereby banning the platform in the United States. India has banned TikTok and more than 300 other PRC apps since June 2020, labelling them a "threat to sovereignty and integrity."

[REDACTED]

14. [REDACTED] have attempted to bring awareness and limit the use of TikTok following national security concerns. The US Congress is expected to vote this week on a sweeping bill that, if enacted, would ban the use of TikTok on government-issued devices, extending existing 2020 restrictions to the entire US federal workforce. Multiple US states, including Alabama, Maryland, Nebraska, South Carolina, South Dakota, Texas, and Utah have banned the use of TikTok on state-owned devices citing security concerns. The UK Parliament has closed its TikTok account following national security concerns in August 2022. The Australian government has publicly urged caution over TikTok's connection to the PRC.

[REDACTED] (S//CEO)


15. The Committee on Foreign Investment in the United States (CFIUS) continues its lengthy national security review of TikTok, after ByteDance acquired US short video platform Musical.ly to create TikTok in 2018. In 2020, CFIUS requested that ByteDance divest from TikTok and destroy all data obtained or derived from the app, wherever it is located. However, that order was unenforced in 2021. US mitigation has been drafted in recent months to request that US software company Oracle become the secure cloud provider and host of Western data.

[REDACTED]

16. In late 2020, a TikTok subsidiary opened an office in the Liberty Village neighbourhood of Toronto. In addition, the subsidiary plans on hiring roughly 3,000 engineers globally, most of whom will be based in Canada, Singapore and Europe. Preliminary open-source research reveals hundreds of TikTok job postings and/or active employees are located in Canada.

[REDACTED] (U)

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