

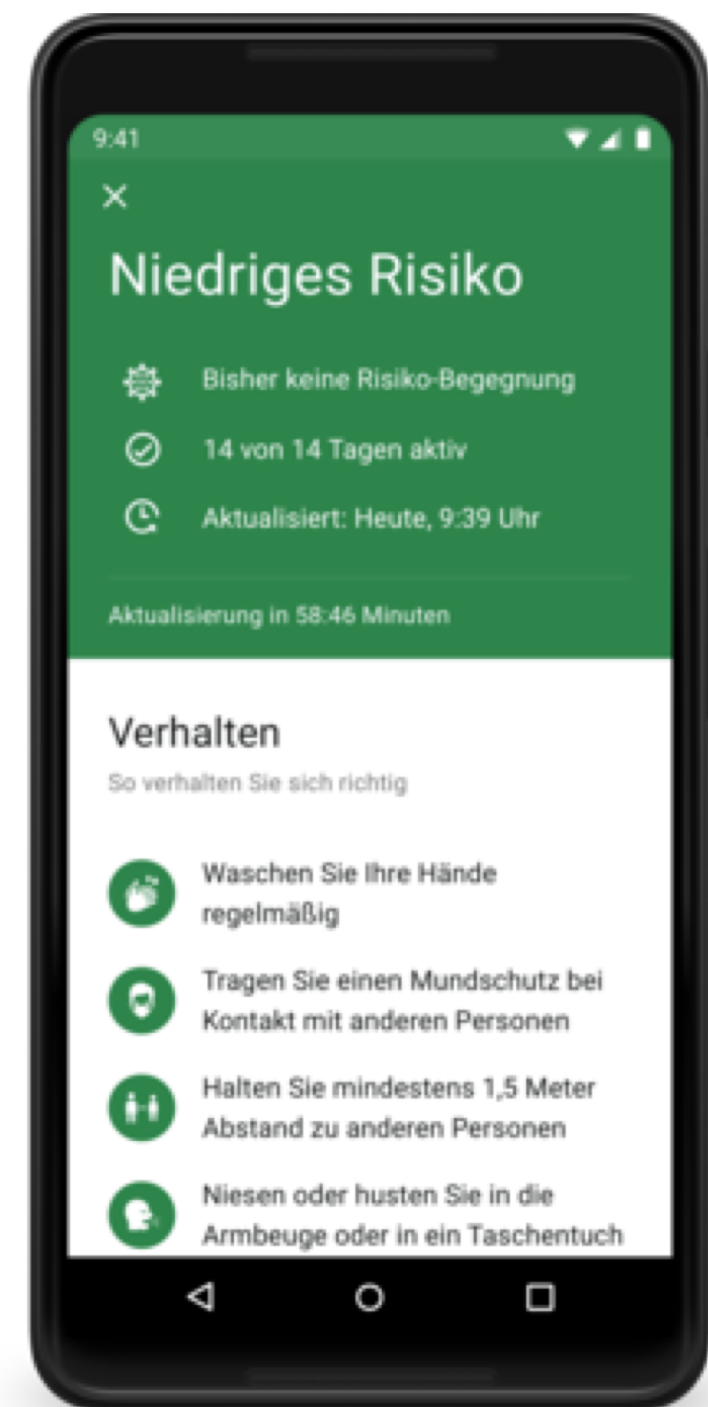
Corona-Wan-App: Tracing the Start of the Official COVID-19 Exposure Notification App for Germany

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Motivation

- Corona Pandemic remarks a very challenge for our society
- **App-based contact tracing has never been used** and isn't understood
 - Main goal: Suppress further spread ($R < 1$)
 - **Success depends on** isolation & **app adoption** (Fraser et al., Nature'20)
- **Our goal: we study the official Corona Warn App for Germany**
 - **How does the society react to it based on network traffic at the hosting DC**
 - Currently 16.6M downloads → 20% population

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- App-
 - M
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But downloads do **not**
tell the whole story!

understood

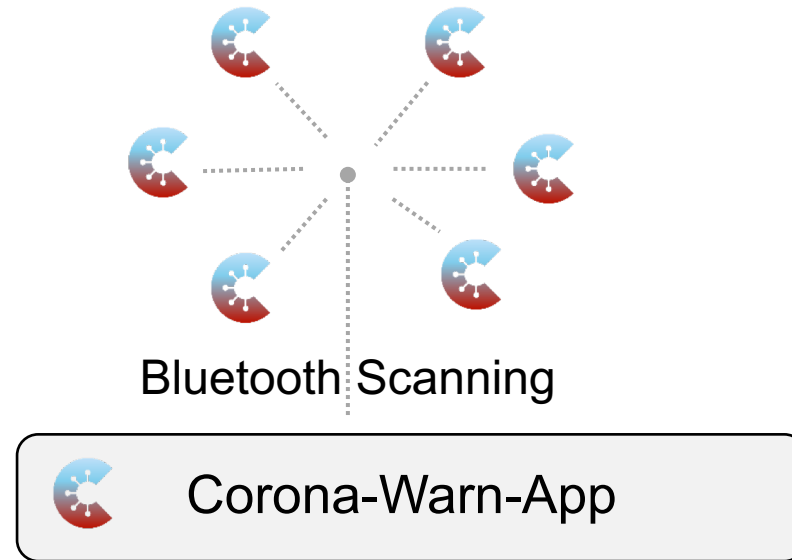
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- Our goal is to measure user behavior & app interest.
 - How to measure user behavior & app interest?
 - Current state of the art

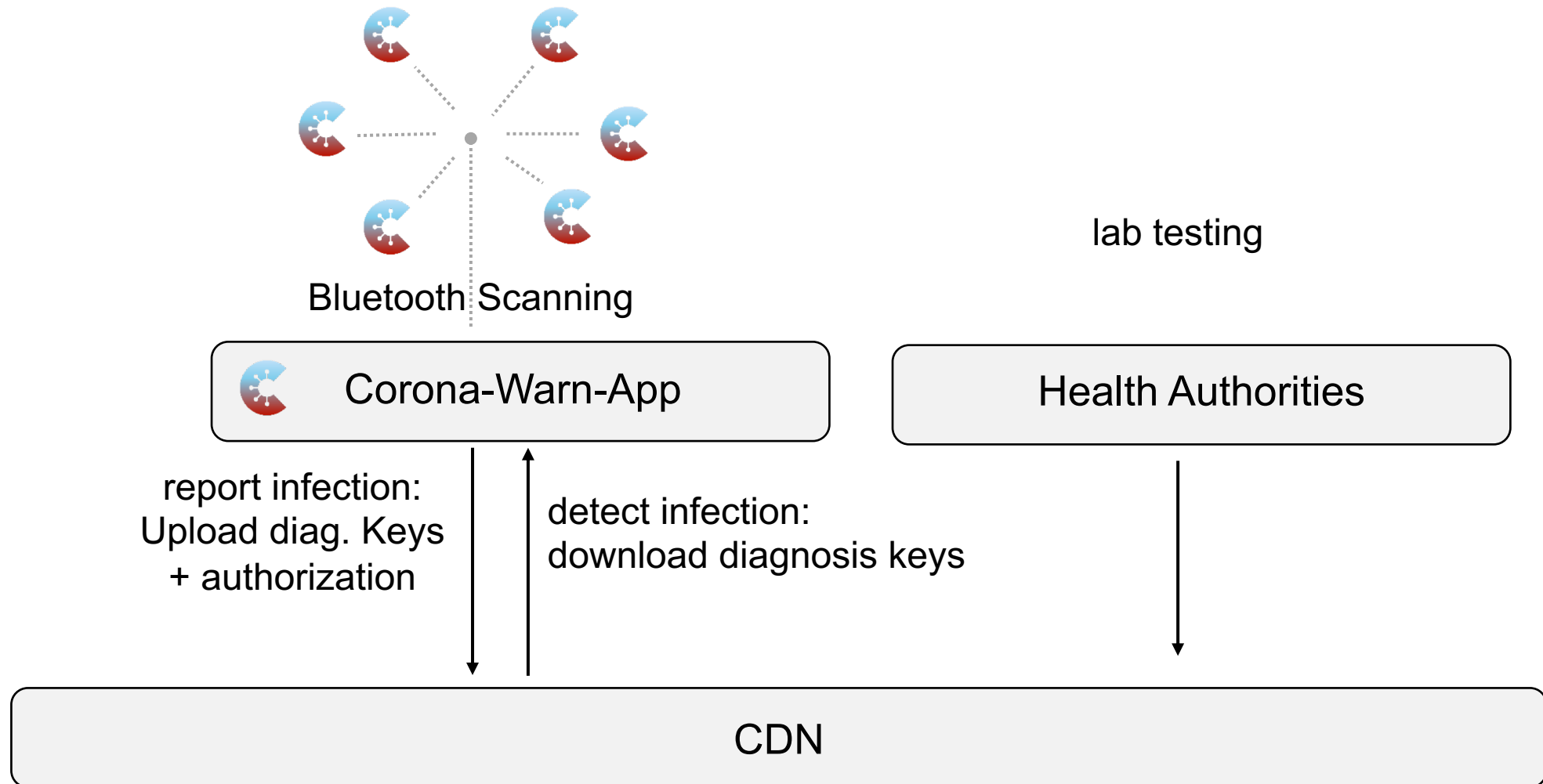
We are measuring
user behavior & app interest.

many
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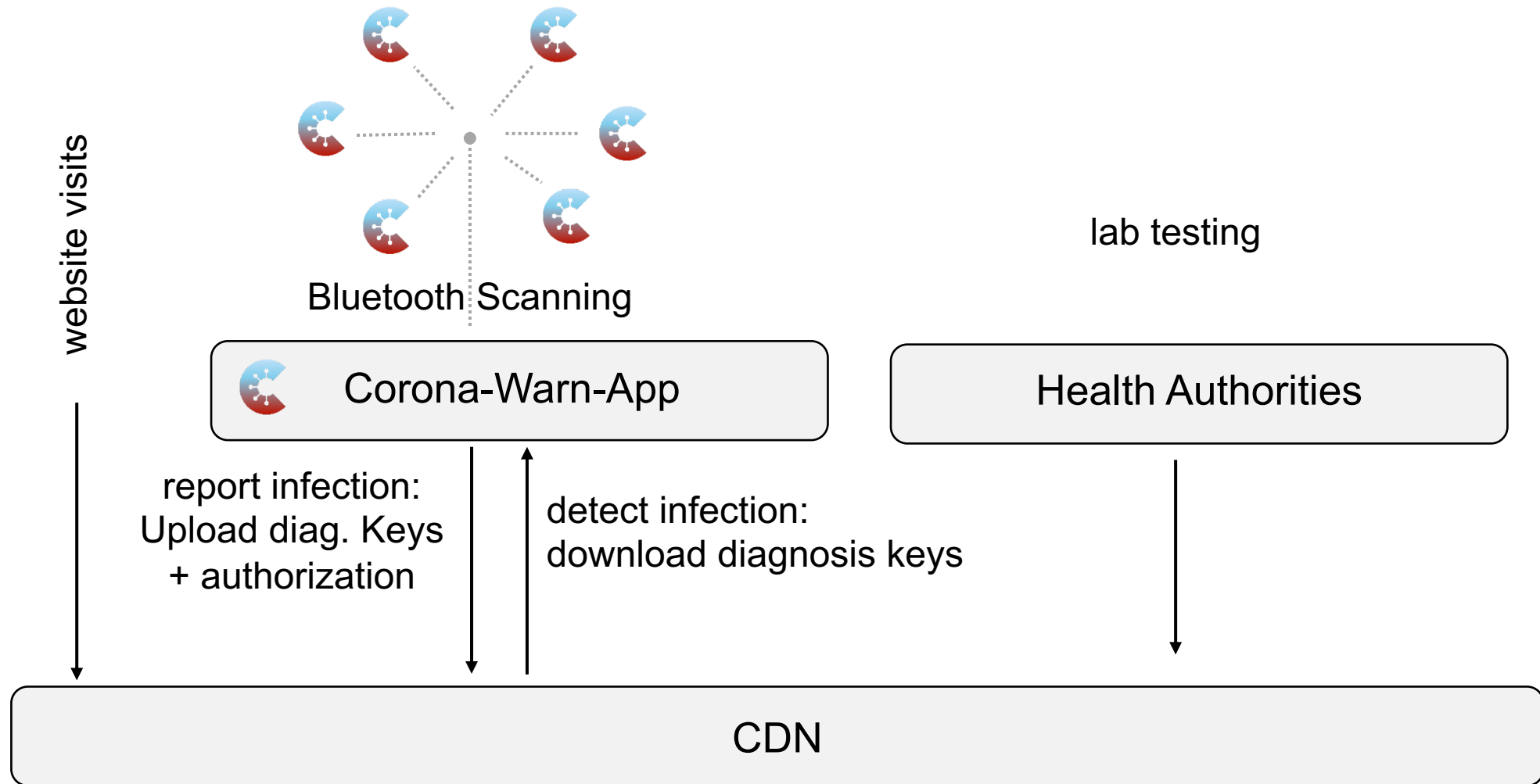
App & Measuring Usage Approach



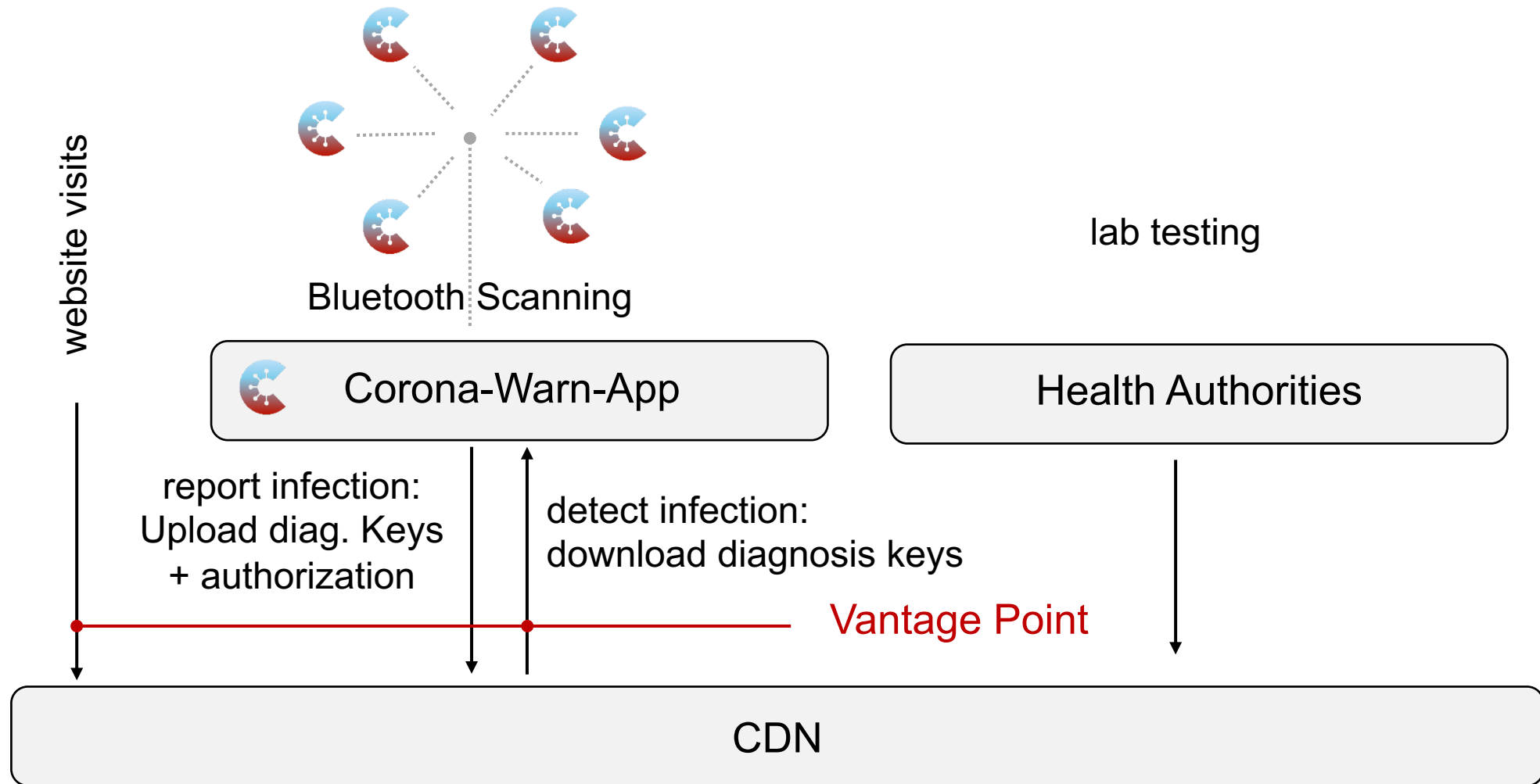
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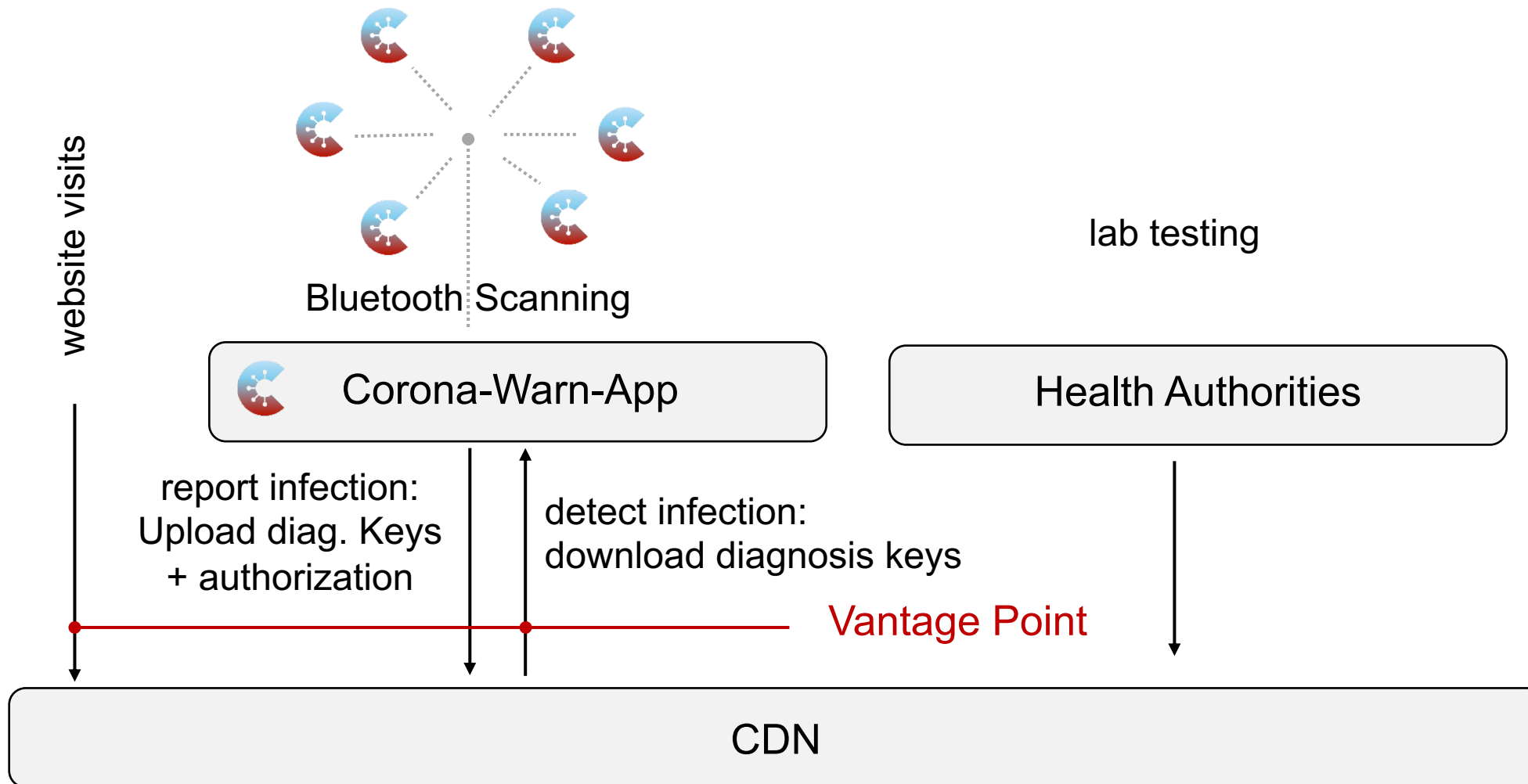
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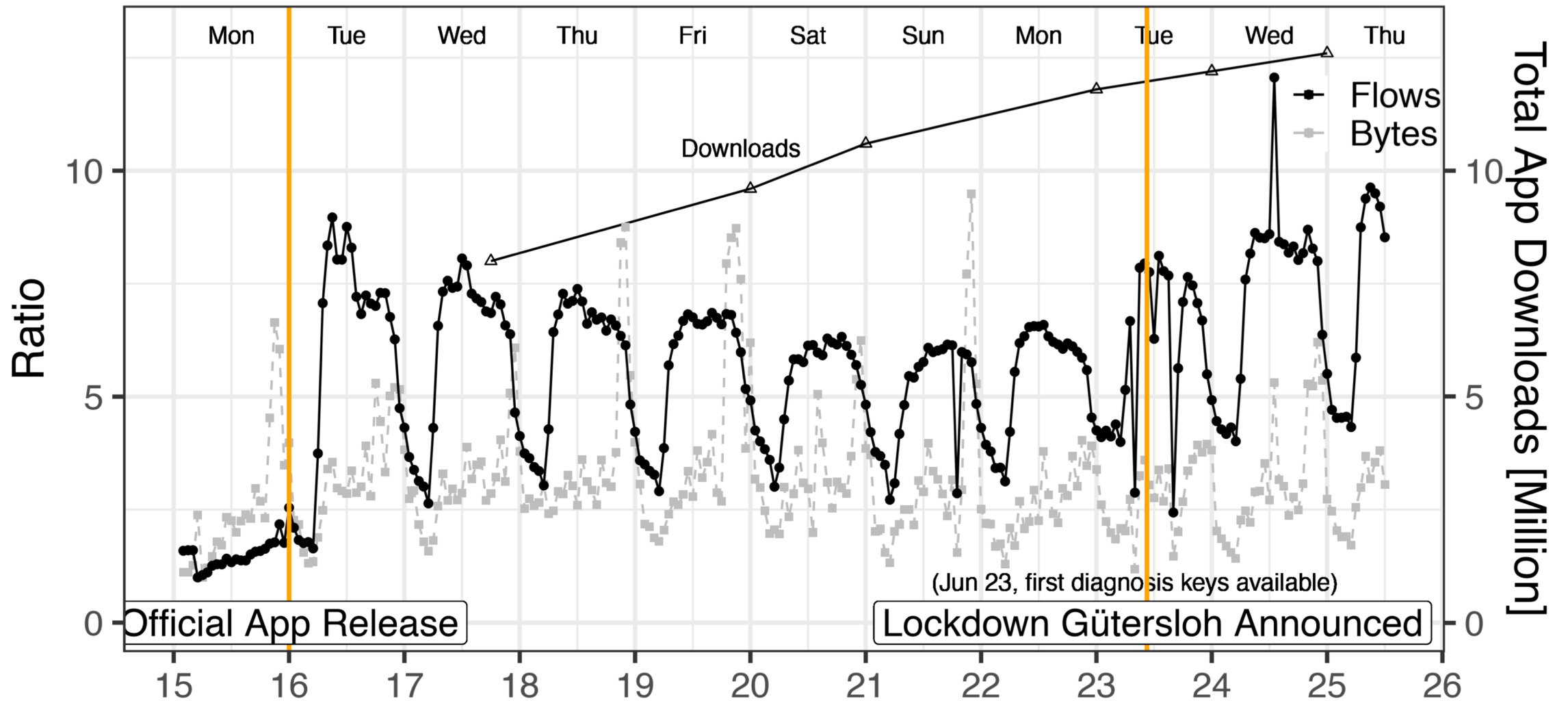


Data Collection

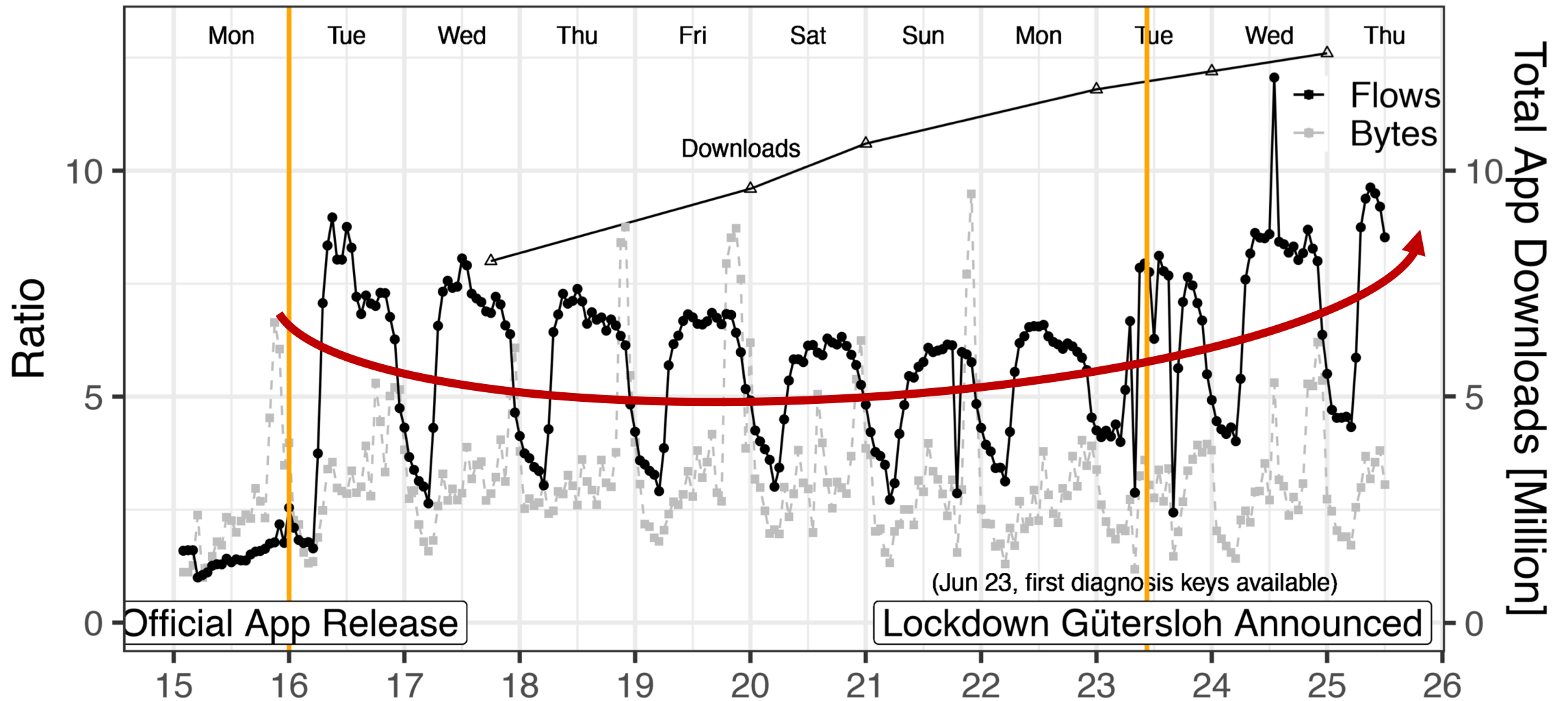
- Sampled Netflows towards CDN
 - IPv4 only
 - HTTPS (port 443)
- 3.3 M matching flows

lab testing

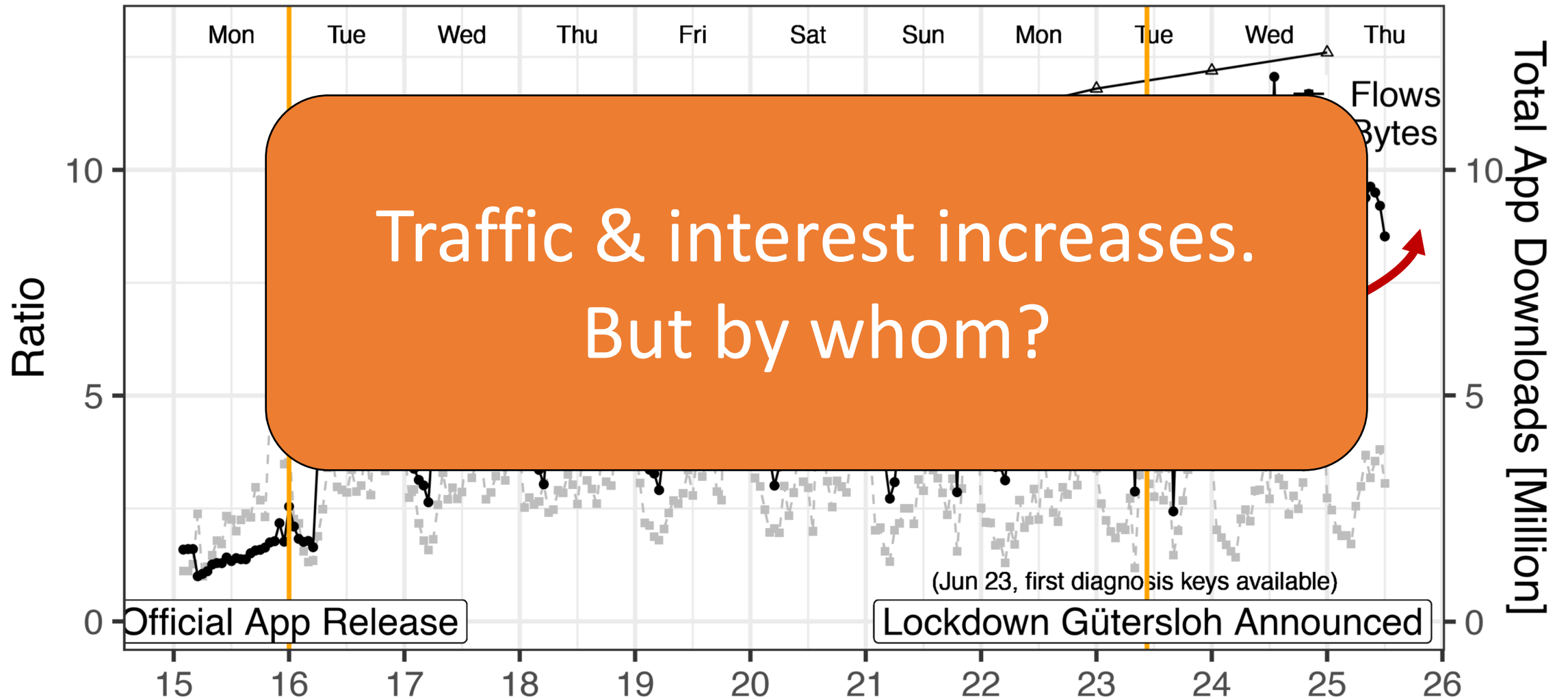
Measured Traffic & App Downloads



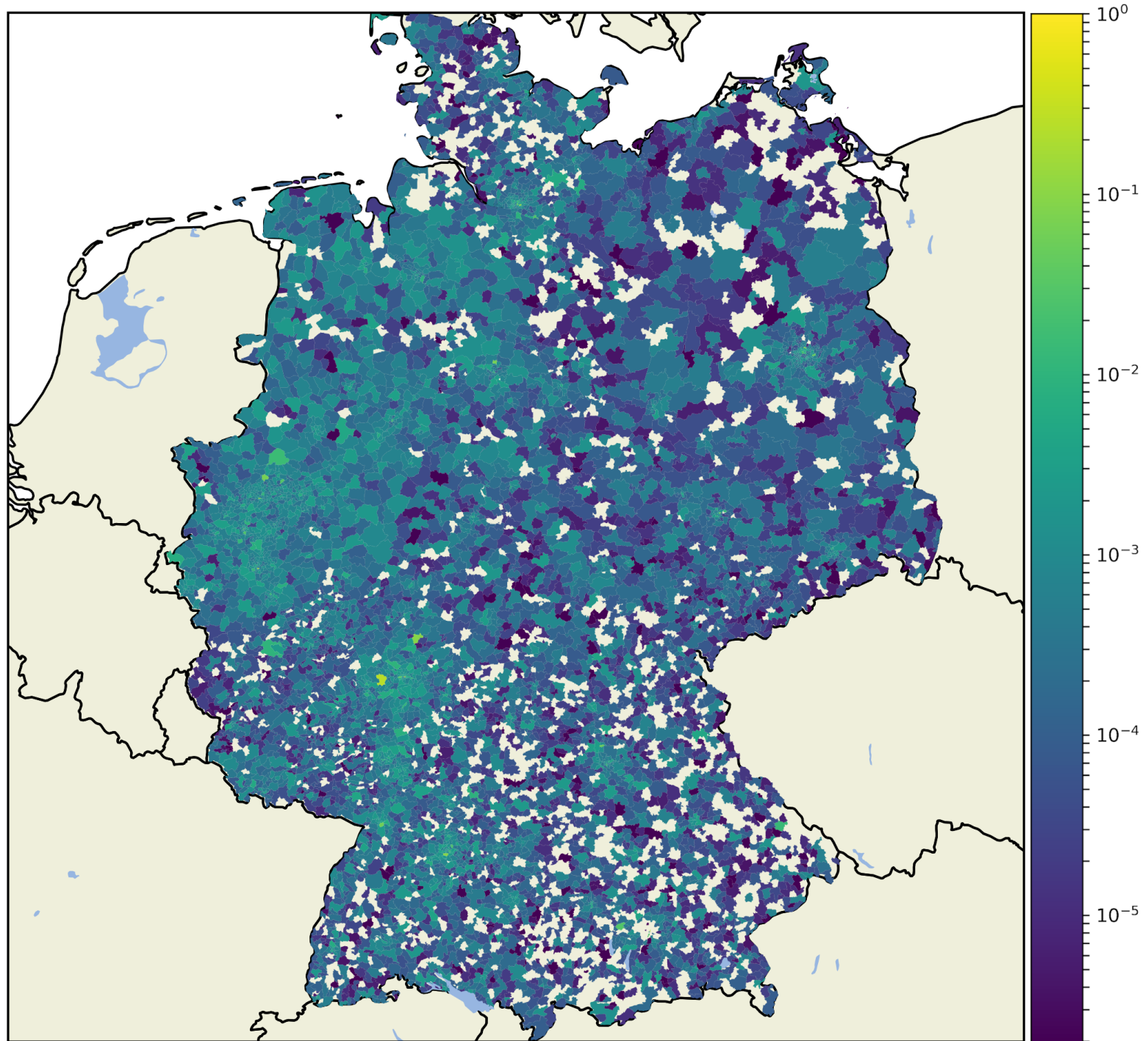
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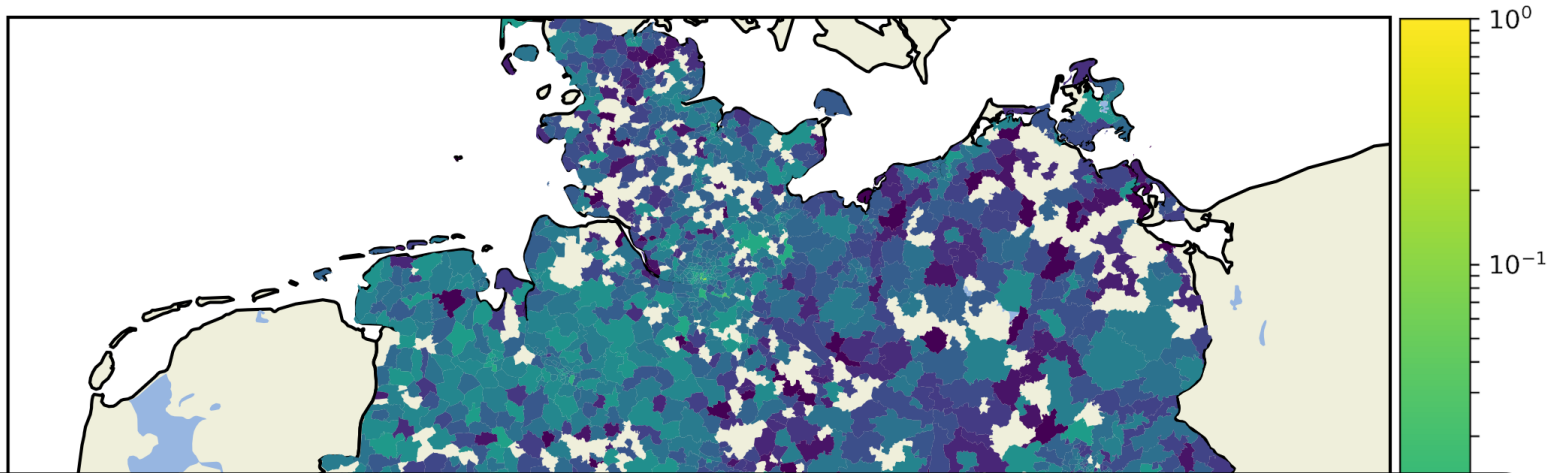
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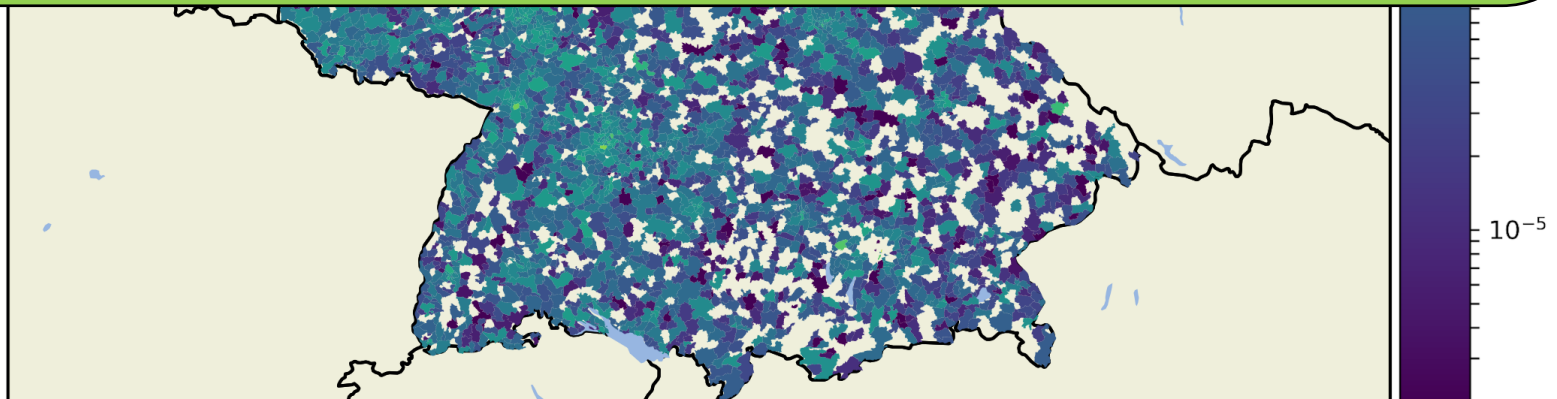
Geographic App Interest



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Good News:
Interest across the whole country



What's really interesting: User behavior!

- Do outbreaks increase local usage? – As of today: No.
- Do outbreaks increase country-wide usage? – As of today: Possibly.
- Does news/media increase usage? – As of today: Possibly.
- Can we derive measures to increase usage for the good?

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Lots of work todo...