Protecting Users' Data on Smartphones Against Loss and Theft

Ildar Muslukhov, Yazan Boshmaf, Konstantin Beznosov, Cynthia Kuo, Jonathan Lester
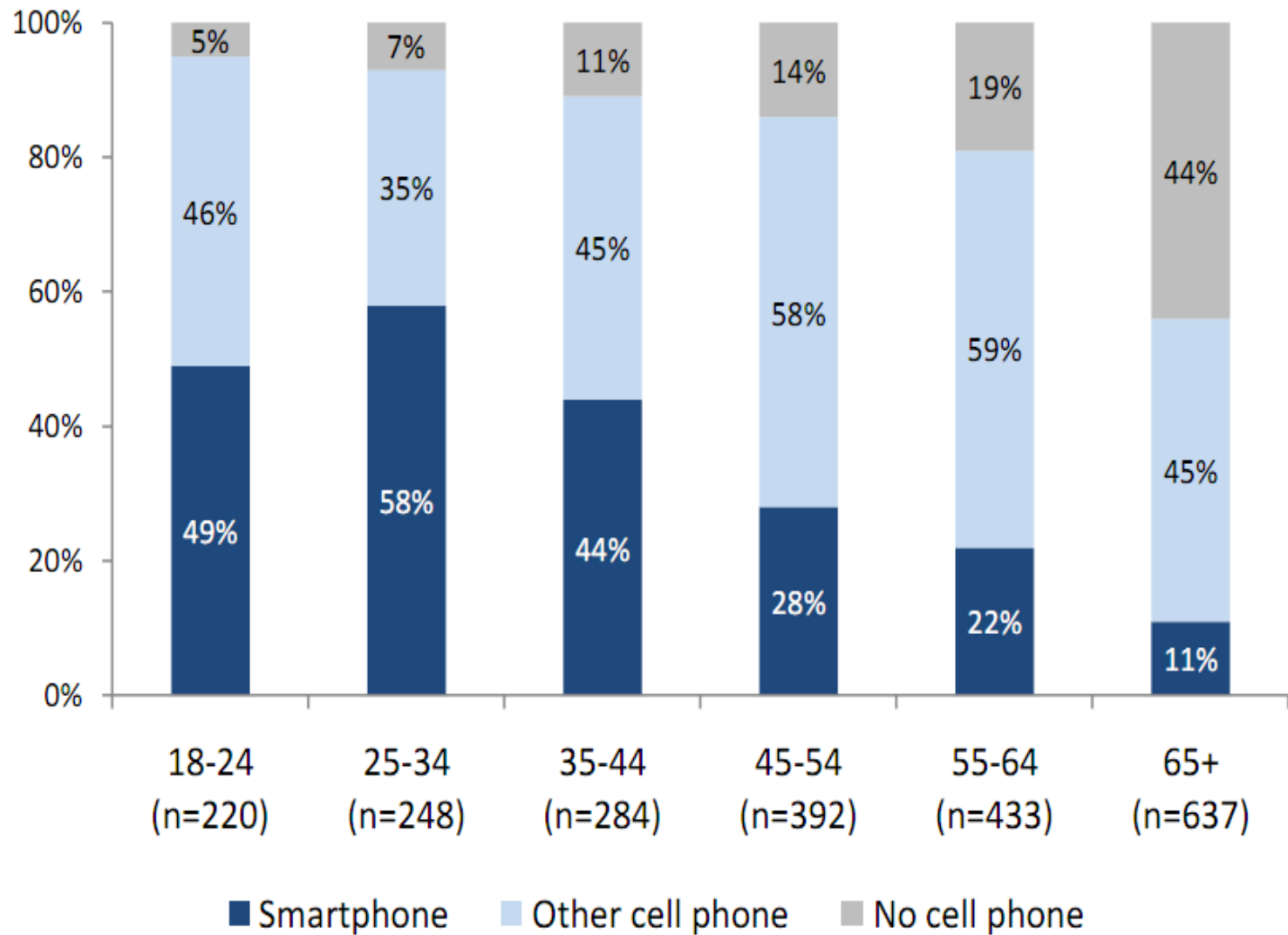
What if …

Damage

Loss

- Loss of valuable data
- Revealing sensitive data
- Impersonation

96% of US population use cell phones

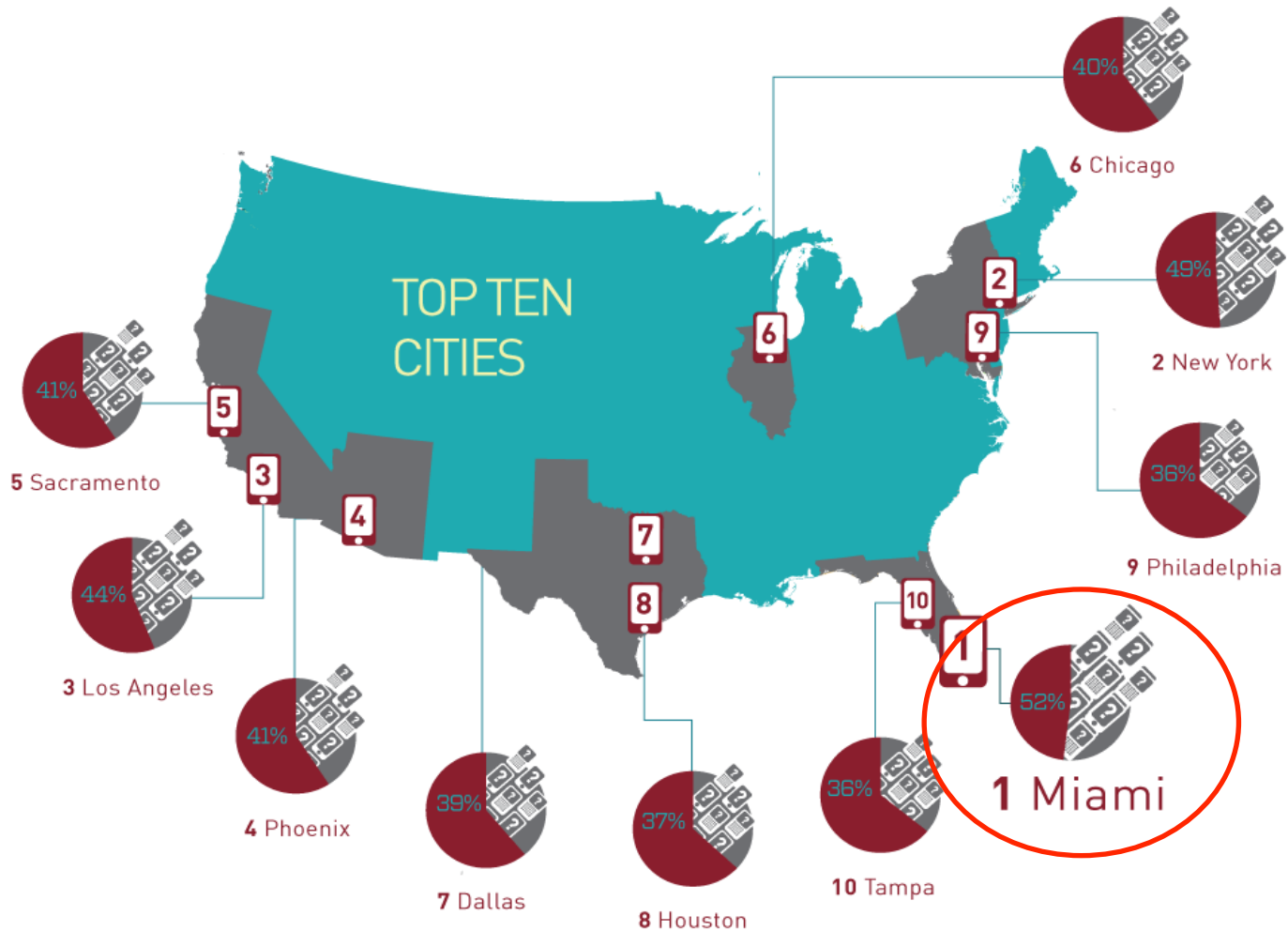Source: Lookout Mobile Security , "Lost and found", 2011

35% of US Adults owns a smartphone
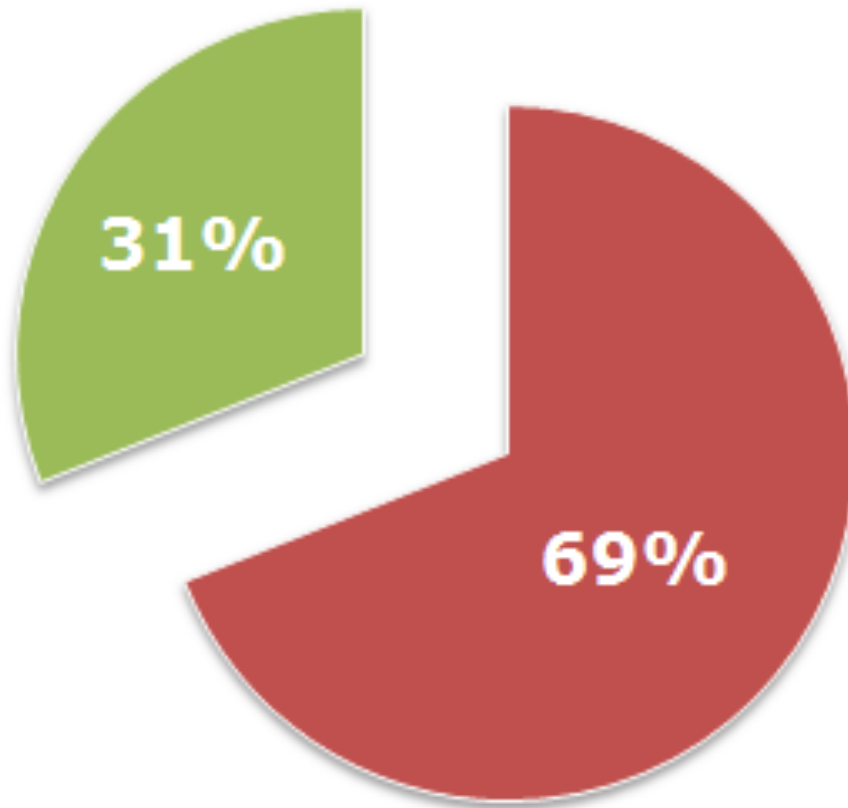
THE TOP 10 U.S. CITIES FOR CELL PHONE LOSS OR THEFT ARE...

(By what percent of the city's population has experienced cell phone loss/theft)

TOP TEN CITIES

40% — **6** Chicago

49% — **2** New York

41% — **5** Sacramento

44% — **3** Los Angeles

41% — **4** Phoenix

36% — **9** Philadelphia

39% — **7** Dallas

37% — **8** Houston

36% — **10** Tampa

52% — **1** Miami

Source: Lookout Mobile Security , "Lost and found", 2011

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■ Prefer Local Storage ■ Would use Cloud Storage

Source: Iulia Ion, Niharika Sachdeva, Ponnurangam Kumaraguru, and Srdjan Capkun, "Home is Safer than the Cloud! Privacy Concerns for Consumer Cloud Storage," in *SOUPS*, Pittsburgh, 2011.

Our Approach

- Data Protection System
  - User-Centered Design
  - Requirements Analysis
- Exploratory study
  - Semi-structured Interviews
  - Online Survey