



MOBILE CASTLING: MORE FREEDOM. LESS SECURITY?

EGONS BUŠS
Security Director

lmt 

OVER 70 YEARS COMPUTERS HAVE BECOME MORE HUMAN-FRIENDLY



1946

First electronic computer ENIAC unveiled



1975

MITS Altair 8800 sold, coining the phrase "personal computer"



1981

Osborne 1, first mass produced portable computer (weight 8kg)



2000

Ericsson R380, combines functions of a phone and a PDA, first device called "a smartphone"



2007

Apple CEO Steve Jobs unveils the iPhone, ushering in a new era of smart devices

POWER AT OUR FINGERTIPS



1966

**Apollo Mission
Guidance Computer**

CPU: 2 MHz

RAM: 4 KB

FLOPS: 0

(couple hundred basic operations per second)



2016

Galaxy S7

CPU: 2.3 GHz

RAM: 4 GB

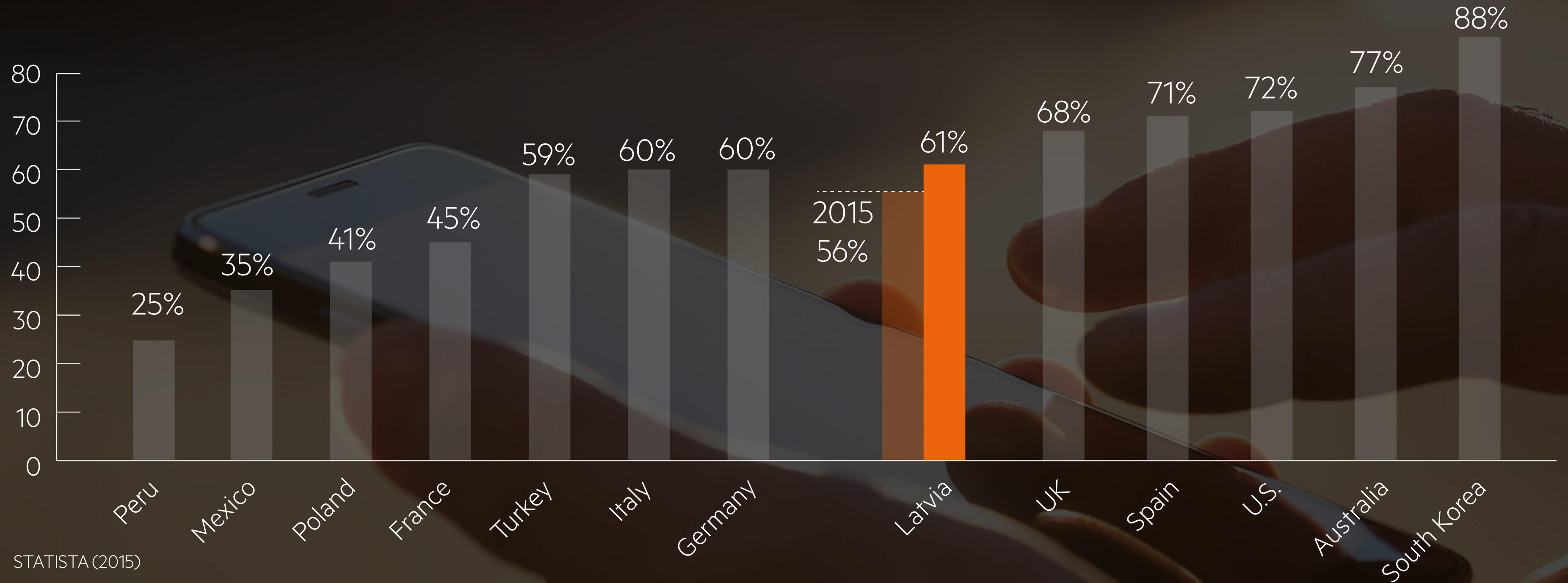
GFLOPS: 400-500

100'000'000x



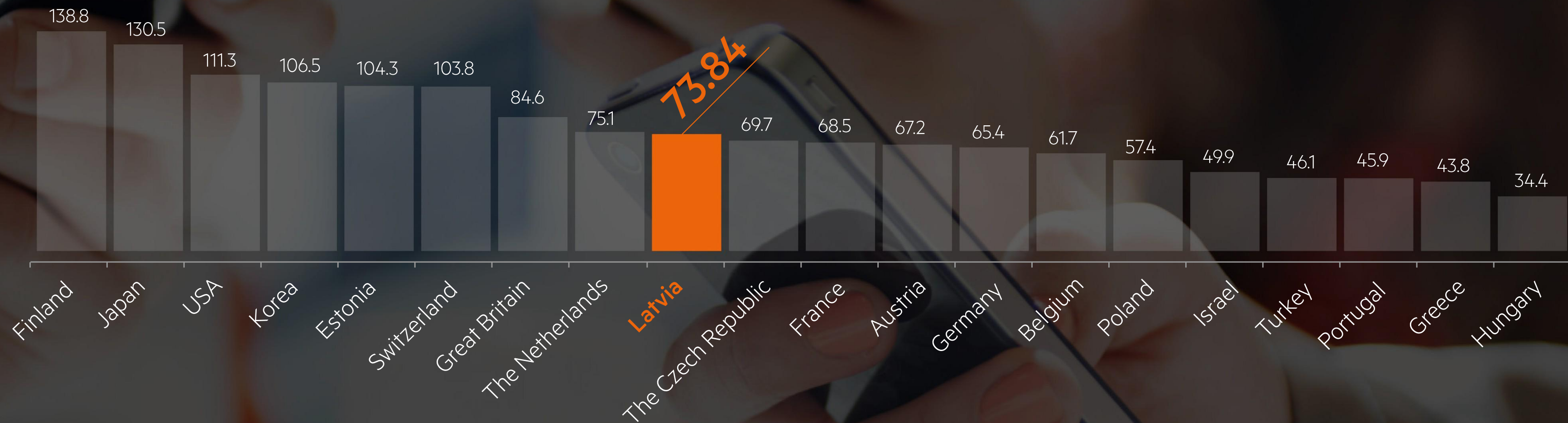
WE ARE LIVING IN THE AGE OF SMARTPHONES

SMARTPHONE PENETRATION WORLDWIDE BY COUNTRY, 2015



LATVIA IS ACTIVELY USING MOBILE TECHNOLOGIES

AMOUNT OF 3G/4G WIRELESS BROADBAND SUBSCRIPTIONS PER 100 INHABITANTS



SOURCE: OECD BROADBAND MOBILE CONNECTIONS OUTLOOK (2015)

BRING YOUR ONE DEVICE



65% of Latvians use a company-assigned smartphone for private



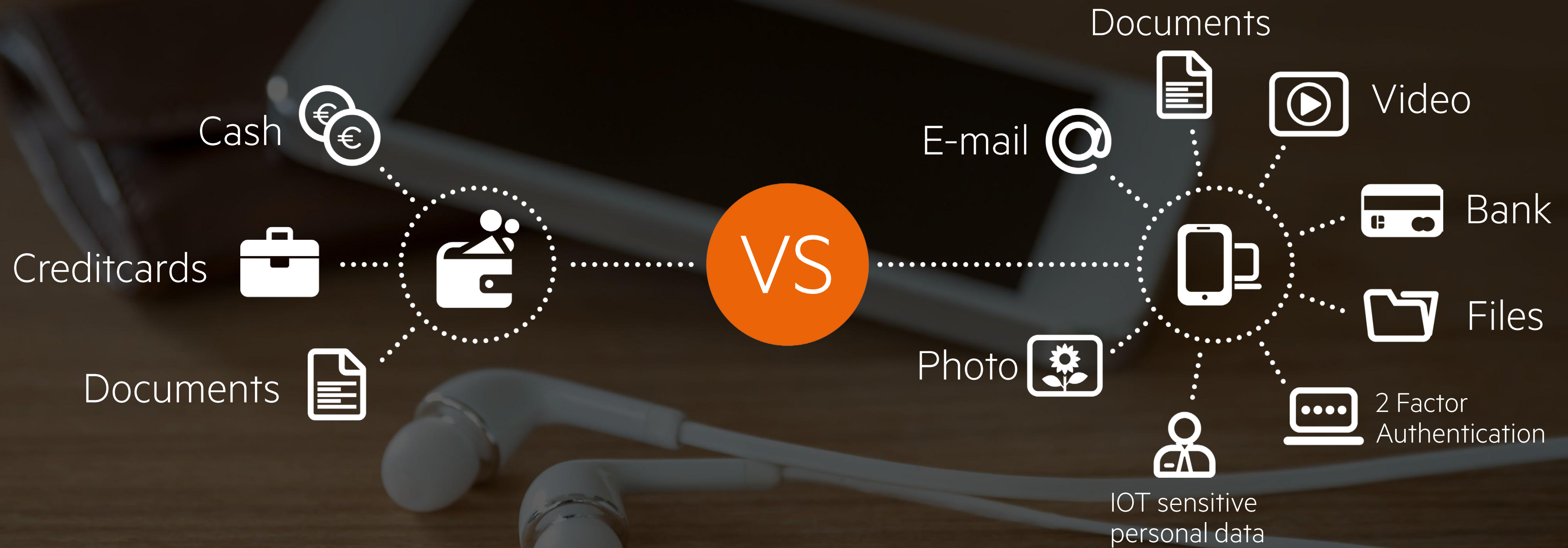
Only 20% of Americans use their smartphone exclusively for personal use



People are more willing to work with just one device, even if it means using their own rather than a company-assigned one

SAMSUNG LIVING BUSINESS, GFK (2014), PONEMON INSTITUTE (2016) HARVARD BUSINESS REVIEW (2016)

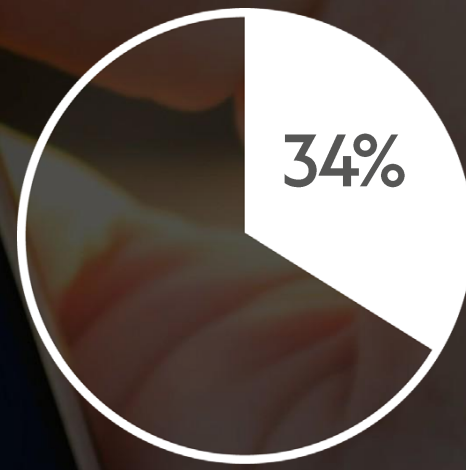
THE CONTENT OF SMARTPHONE IS MORE VALUABLE



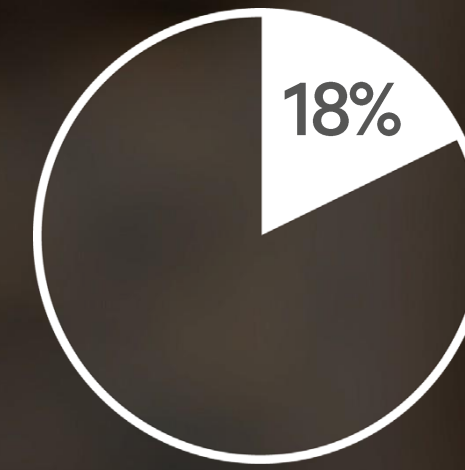
FEELING SAFE UNTIL FIRST DATA LOSS



1 in 6 people in Latvia have no protection for their work devices



34% use their PIN lock for their work devices



18% use a screen lock figure for their work devices

SAMSUNG LIVING BUSINESS, GFK (2014)

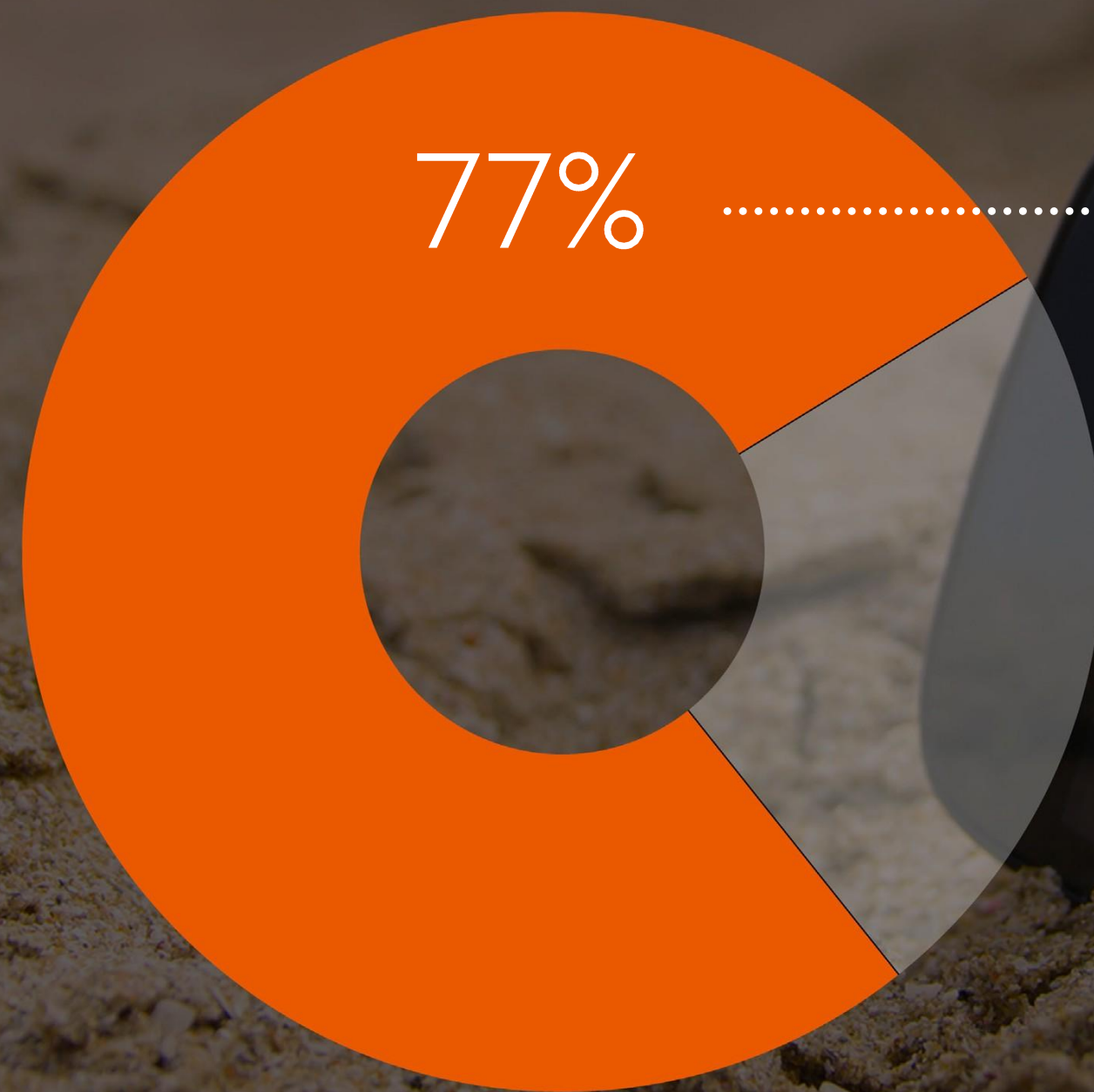
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WHAT'S IT LIKE IN YOUR COMPANY?

AMOUNT OF LOST PHONES IN LATVIA

13024



77% ARE
NEVER FOUND

JANUARY - AUGUST 2016,
DATABASE OF BLOCKED PHONES IN LATVIA

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RECOMMENDATIONS FOR SAFE USAGE ON MOBILE DEVICES:



Security code for unlocking the screen of the device



Antivirus

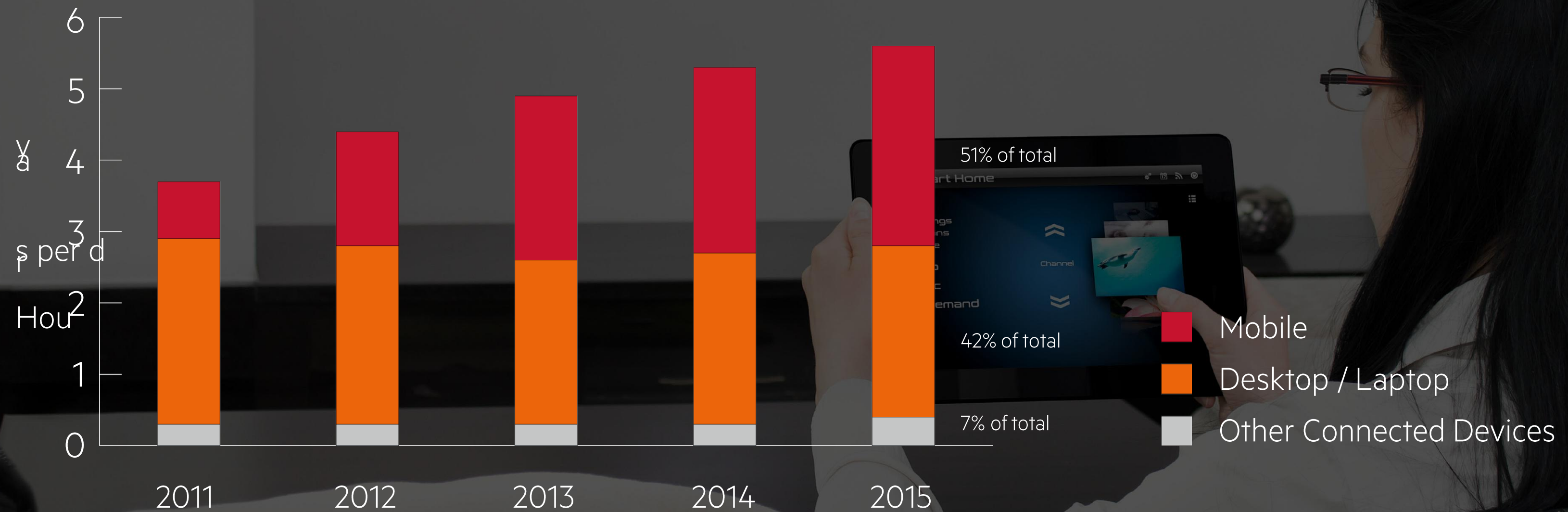


Using verified apps



Secure passwords

TIME SPENT ON MOBILE SCREENS GROWING PAST TIPPING POINT



KPCB INTERNET TRENDS REPORT, USA (2015)

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THE LMT MOBILE NETWORK - FOR LMT CLIENTS



INFRASTRUCTURE

THE BROADEST 4G/4G+
NETWORK

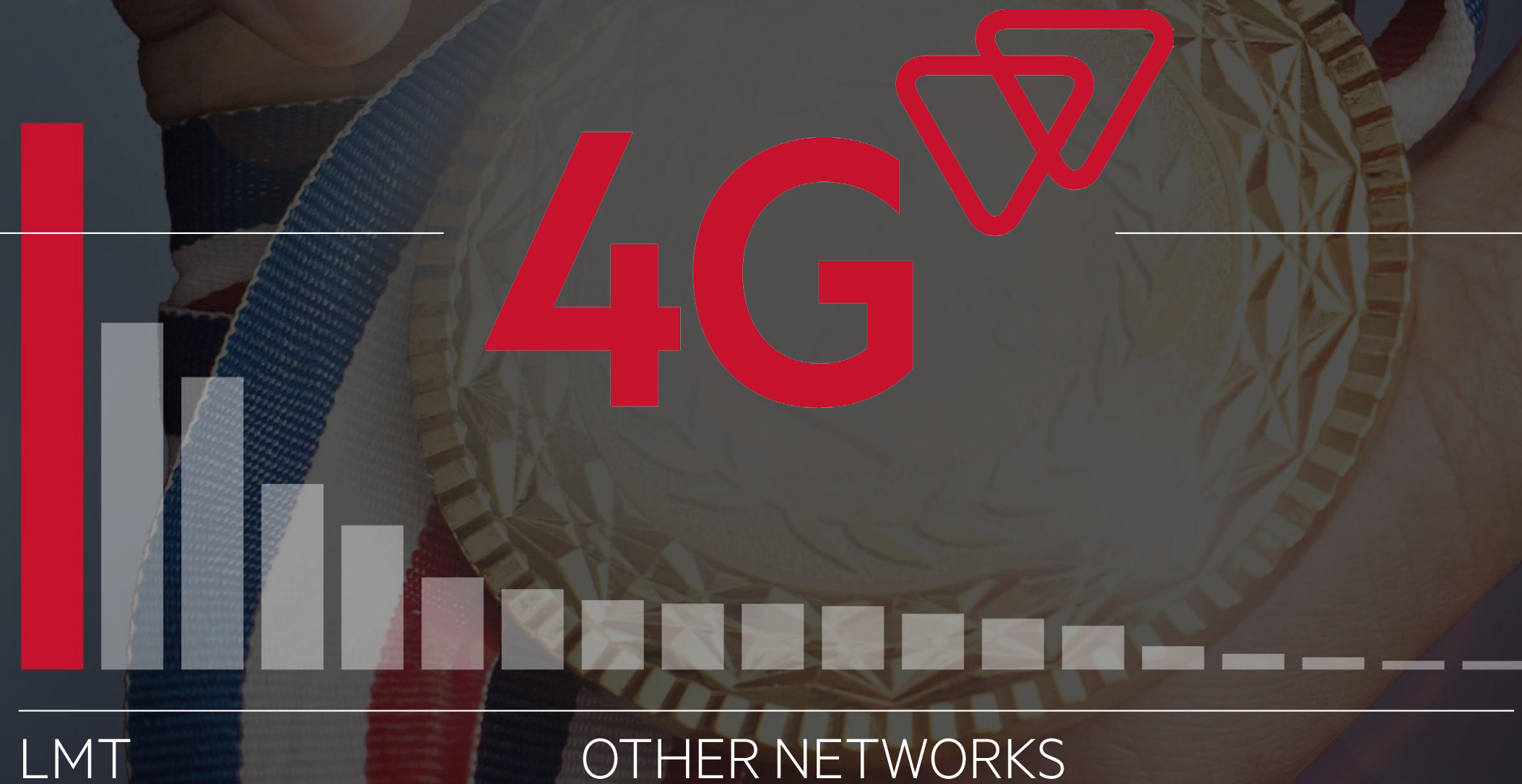


NO BARRIERS

LIMITLESS TARIFF PLANS

LMT USERS - MOST ACTIVE 4G DATA USERS

GLOBAL 4G USE



NSN 4G USE MEASUREMENT IN VARIOUS NETWORKS (2014)

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PUBLIC WIFI NETWORK USE IN DATA THEFT



- SNIFFER SOFTWARE
- ARP SPOOFING
- SIDEJACKING / SESSION HIJACKING
- WIPHISHING
- AD HOC / PEER TO PEER NETWORKS
- ROGUE AD HOC NETWORKS

LATVIAN STATE POLICE URGES USERS TO BE MINDFUL OF FREE WIFI HOTSPOTS



RECENT MOBILE THREATS IN LATVIA



Jan 2016:
Complaints of
unauthorized high-cost
SMS from a large
number of GSM devices



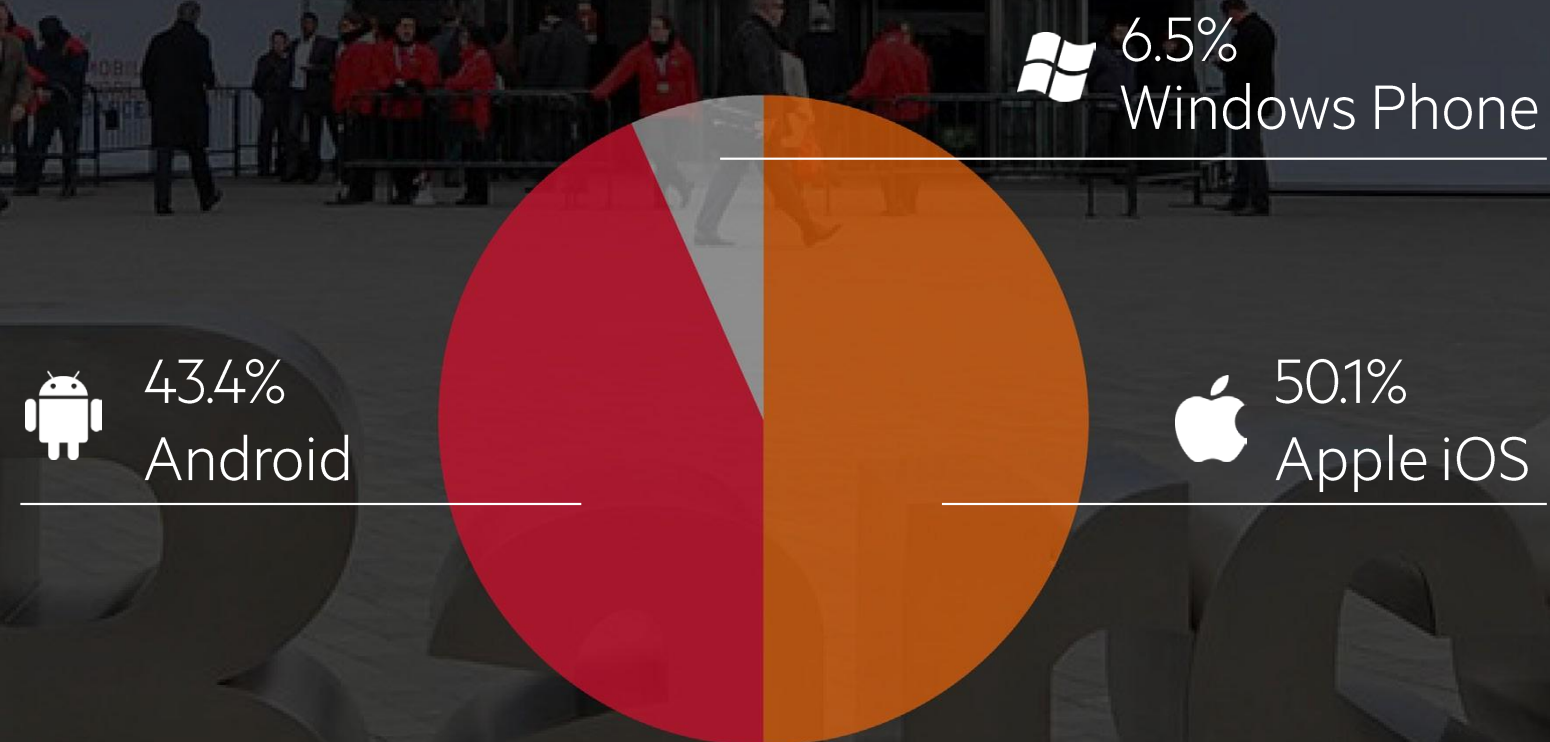
Feb 2016:
200 unauthorized SMS
sent from a single
device



Q2 2016:
Many reports of
vulnerabilities on
Android devices

THE PROS ARE NOT IMMUNE EITHER

- Avast set up rogue hotspots during MWC16
- SSID names “Starbucks”, “Airport_Free_Wifi_AENA”, and “MWC Free WiFi”
- 2000 unique users in 4h



AVAST (2016)

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KIBERSAHS FREE WIFI



CASE STUDY: VK, BIGGEST DATA LEAK OF 2016



- 100 MILLION USER DETAILS STOLEN:
 - first and last names
 - email address
 - phone numbers
 - passwords
- 92/100 OF RANDOMLY SELECTED EMAIL ADDRESSES CORRESPONDED TO ACTIVE ACCOUNTS
- DATA POSTED ON SALE FOR 1 BITCOIN (\$570)
- VK DENY THE BREACH

CASE STUDY: YAHOO, ONE OF THE BIGGEST SECURITY BREACHES OF ALL TIME



- 500 MILLION USER DETAILS STOLEN:
 - Names
 - Email addresses
 - Phone numbers
 - Dates of birth
 - Passwords and security questions
- YAHOO MAY HAVE WITHHELD THE INFORMATION FROM LAW ENFORCEMENT FOR ALMOST 2 MONTHS

CASE STUDY: HACKER STEALS THOUSANDS OF PHOTOS FROM BRITISH ROYAL FAMILY MEMBER'S ACCOUNT



- PIPPA MIDDLETON'S ICLOUD ACCOUNT HACKED, AROUND 3000 PHOTOS STOLEN
- THEFT INCLUDES KATE MIDDLETON'S CHILDREN PHOTOS
- HACKER TRIED SELLING THE PHOTOS TO MEDIA FOR 50,000 POUNDS
- OTHER ROYAL FAMILY PHONES AND ONLINE ACCOUNTS HAVE BEEN PREVIOUSLY HACKED AS WELL

RIO 2016 OLYMPICS - MASSIVE PHISHINGS



- FAKE WIFI NETWORKS TO STEAL PERSONAL DATA
- DISCOVERED IN RIO GALEÃO AIRPORT, BIGGEST SHOPPING MALLS, STARBUCKS AND HOTELS
- MALWARE DESIGNED TO STEAL INFORMATION OR TAKE CONTROL OF YOUR MOBILE DEVICE. MASQUERADES AS A LEGITIMATE OLYMPICS APP, SUCH AS “RIO 2016”, “OLYMPICS RIO 2016”, “RIO 2016 OLYMPICS”, ETC.

BASICS OF MOBILE SECURITY HYGIENE

HOW TO ENSURE DATA SAFETY AND PRIVACY



Install apps only
from official shops



Regularly update
firmware



Trustable
internet

SAMSUNG LIVING BUSINESS, GFK (2014), PONEMON INSTITUTE (2016) HARVARD BUSINESS REVIEW (2016)

THE SECURITY TOOLS ARE HERE



MDM:

VPN, Sandboxing, Device encryption, Remote wipe, Passcodes, Screen lock duration



MAM:

app control, secure browser, e-mail & attachment management

SMARTPHONE THREATS ON THE RISE

60% SMARTPHONES NOW MAJORITY OF INFECTIONS IN MOBILE NETWORKS



Android still the main
targeted platform



6% of infections in iOS,
first time in TOP20
threat list

WHAT'S DRIVING MOBILE SECURITY THREATS?



SPEED



POWER



STORAGE



Online shopping



Personal finance management



Paying bills

MOBILE SECURITY CHALLENGES IN 2016

HOW TO ENSURE DATA SAFETY AND PRIVACY



Monthly security updates for Android, but manufacturer responsibility in rolling out updates lead to delays



Malware continues to slip on to app stores



Cybercriminals expand efforts to mobile space

INTEL SECURITY, MOBILE THREAT REPORT (2016)

HOSTAGE CRISIS IN YOUR POCKET

2014



4x



2016



KASPERSKY LAB (2016)

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A MULTI-LEVEL MOBILE SECURITY APPROACH IS REQUIRED IN 2016



NETWORK



DESKTOP



MOBILE

NEXT LEVEL OF TRAFFIC

GLOBAL DATA TRAFFIC FORECAST



CISCO VISUAL NETWORKING INDEX (2016)

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NEXT LEVEL - 5G INTERNET FOR IOT AND SMARTWORLD

What 5G is about



WE WILL
BE LEADERS
WITH 5G AS WELL!

5G 

THANK YOU!