

**IS YOUR FRIDGE
HELPING TO HACK
PENTAGON'S SERVERS?**

lmt 

WHAT IS INTERNET OF THINGS?



Augmented dashboard



Augmented gaming



Real time cloud access



Advanced monitoring



Self driving



Assisted driving



Logistics



Maintenance optimization



Work & game while traveling



4k Video



Real time work in cloud



Factory automation



Tracking / inventory systems



3D printing systems



Smart clothes



Smart watch



VR gaming



8k Video beamer



Connected home



Toll collection



Traffic steering & management



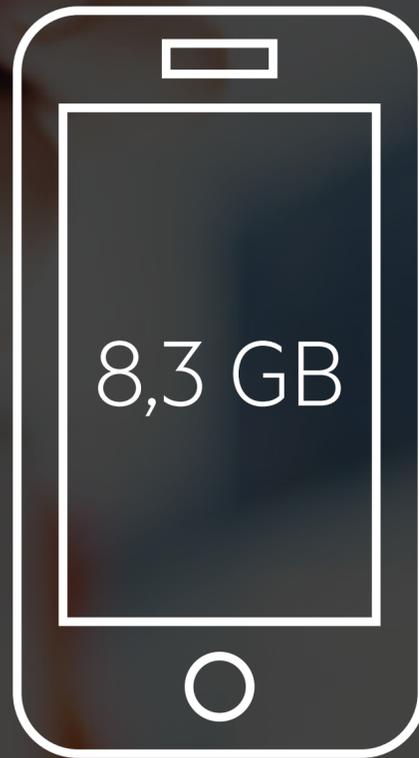
Smart grids

THERE ARE ALREADY BILLIONS OF CONNECTED "THINGS"

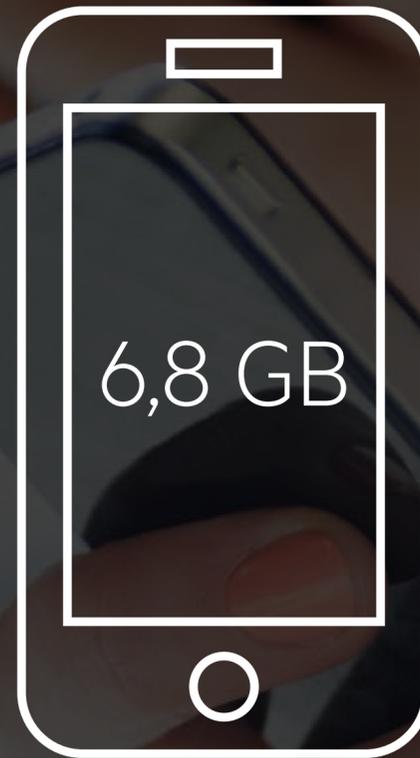


SOURCE: GARTNER, 2017

TOP 3 WORLDS LEADERS IN THE MOBILE DATA CONSUMPTION PER SIM CARD IN A MONTH



FINLAND



TAIWAN



LATVIA

NUMBER OF M2M SIM CARDS IN LATVIA IS INCREASING



HISTORY OF MALICIOUS IoT PROGRAMS



2008

HYDRA

The first malware program targeting IoT devices



2014

GAFGYT

An IRC backdoor capable of scanning IP ranges to find vulnerable devices



2015

TROJAN.LINUX.PNSCAN

A Trojan infecting vulnerable devices with the Tsunami backdoor



2016

MIRAI

and its clones Hajime, Remaiten, and Moose.



2017

BRICKERBOT

A bot infecting IoT devices and rendering them inoperable

MIRAI IS ALIVE. NON-PATCHED DEVICES
AND DEVICES WITH DEFAULT
PASSWORDS STAY VULNERABLE



ABOUT 6.7 MILLION BOTS JOINED THE GLOBAL MIRAI BOTNET IN 2016

A text-based MUD by [Oscar Popodokulus](#)



Europe made up nearly one-fifth of the world's total bot population

```
o account: register at yopmail.com rooted.com
nter user> yop
op
nter pass> yop
**

isconnected by server. |
ress any key to exit.
```

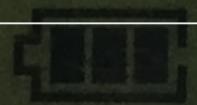
DEVICES AT RISK OF HACKING

HACKED SMART WATER METERING



H125468A

流量

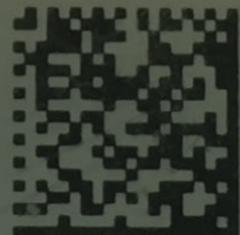


m³

16.8.30

ZN-UWM05

QUECTEL
BC95-CM BC95CMHA - 02 - STD
HA
Q1 - A0704 - MBA001
SN: MP86A08N1000061
Engineering Sample



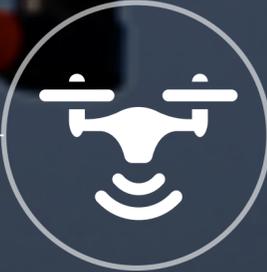
C8

JP5

RX

TX

HACKED DRONES



HACKED TRAFFIC LIGHTS



HACKED MEDICAL DEVICES



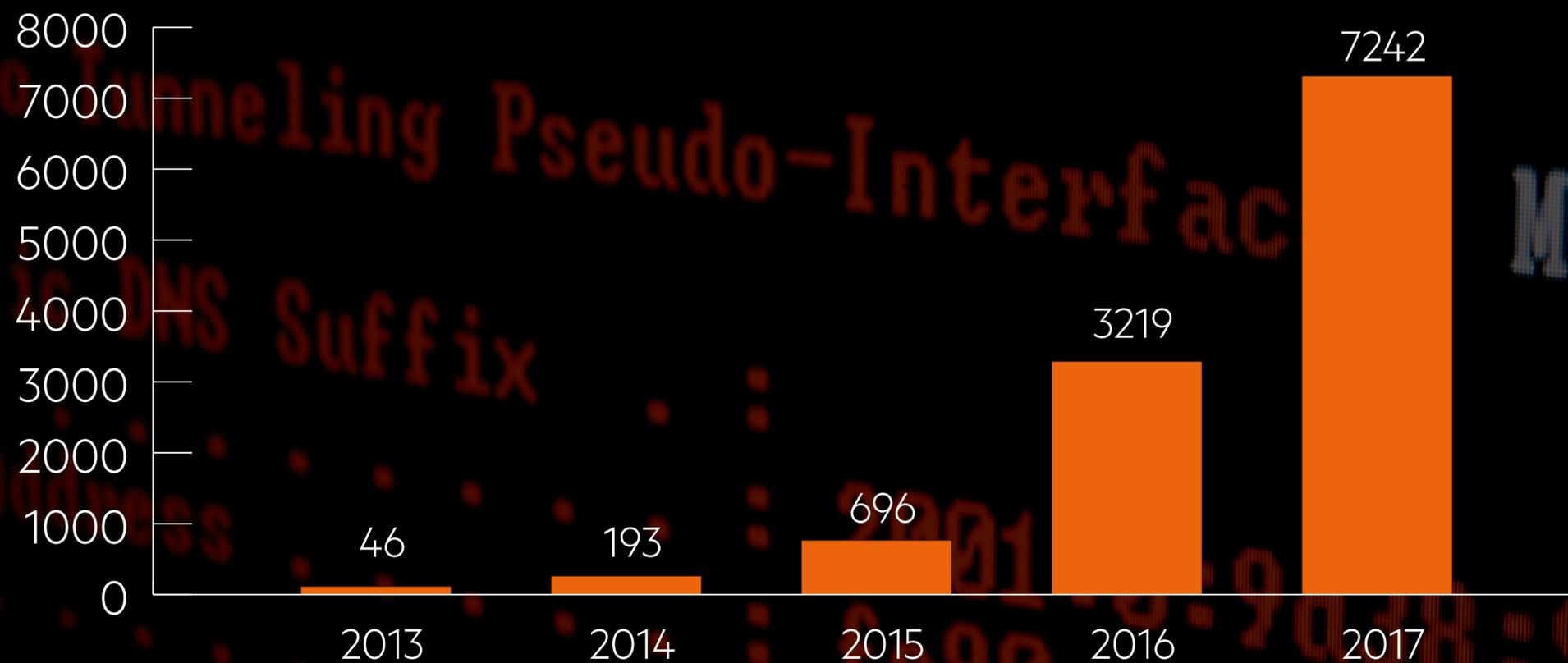
HACKED SELF-DRIVING CARS



HACKED CRITICAL INFRASTRUCTURE



KASPERKY LAB'S – AMOUNT OF DIFFERENT MALWARE SAMPLES FOUND FOR IoT DEVICES



SOURCE: KASPERKY LABS, 2017

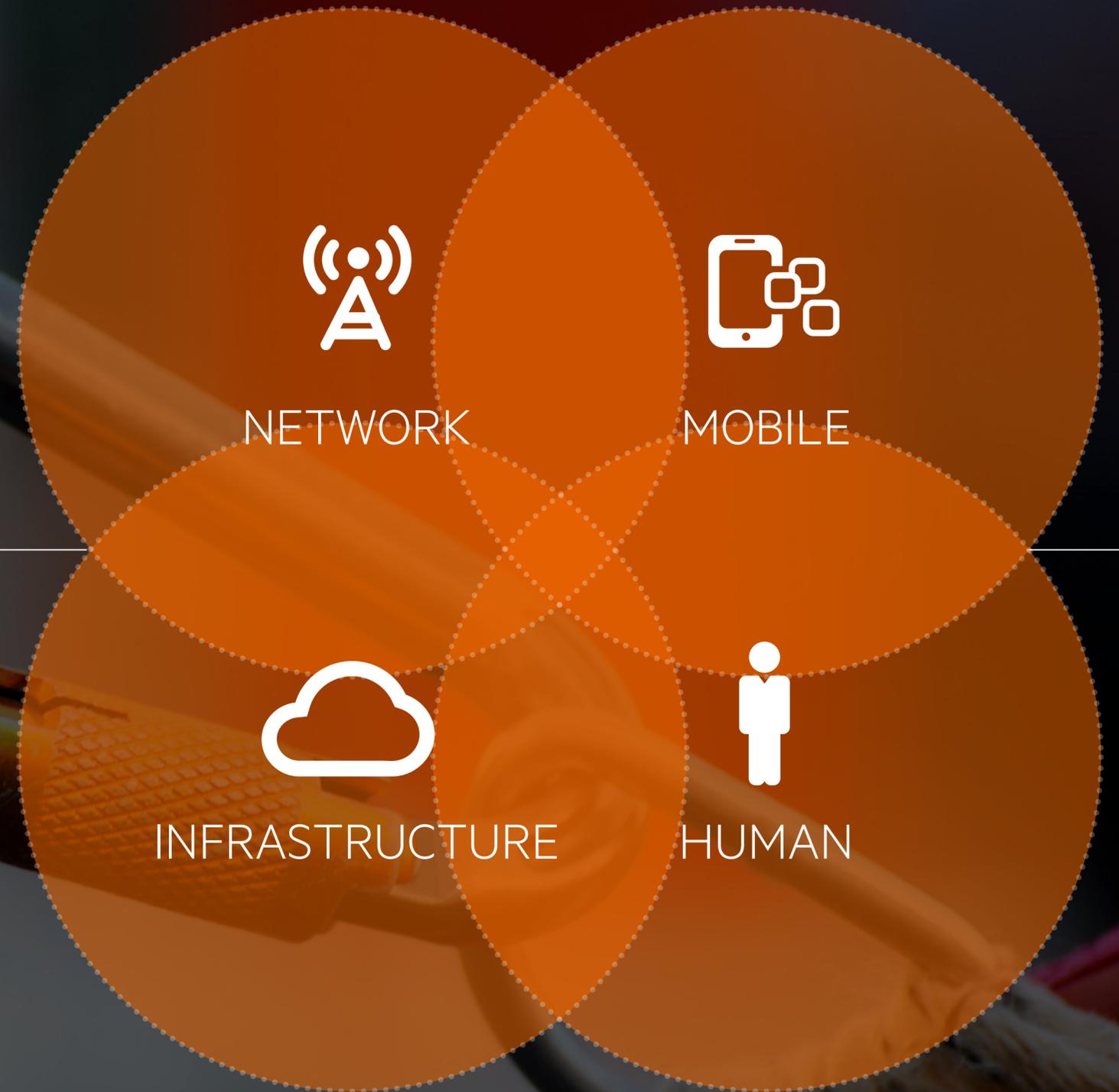
WORLD'S LARGEST BITCOIN EXCHANGE BITFINEX CRIPPLED BY DDOS ATTACK



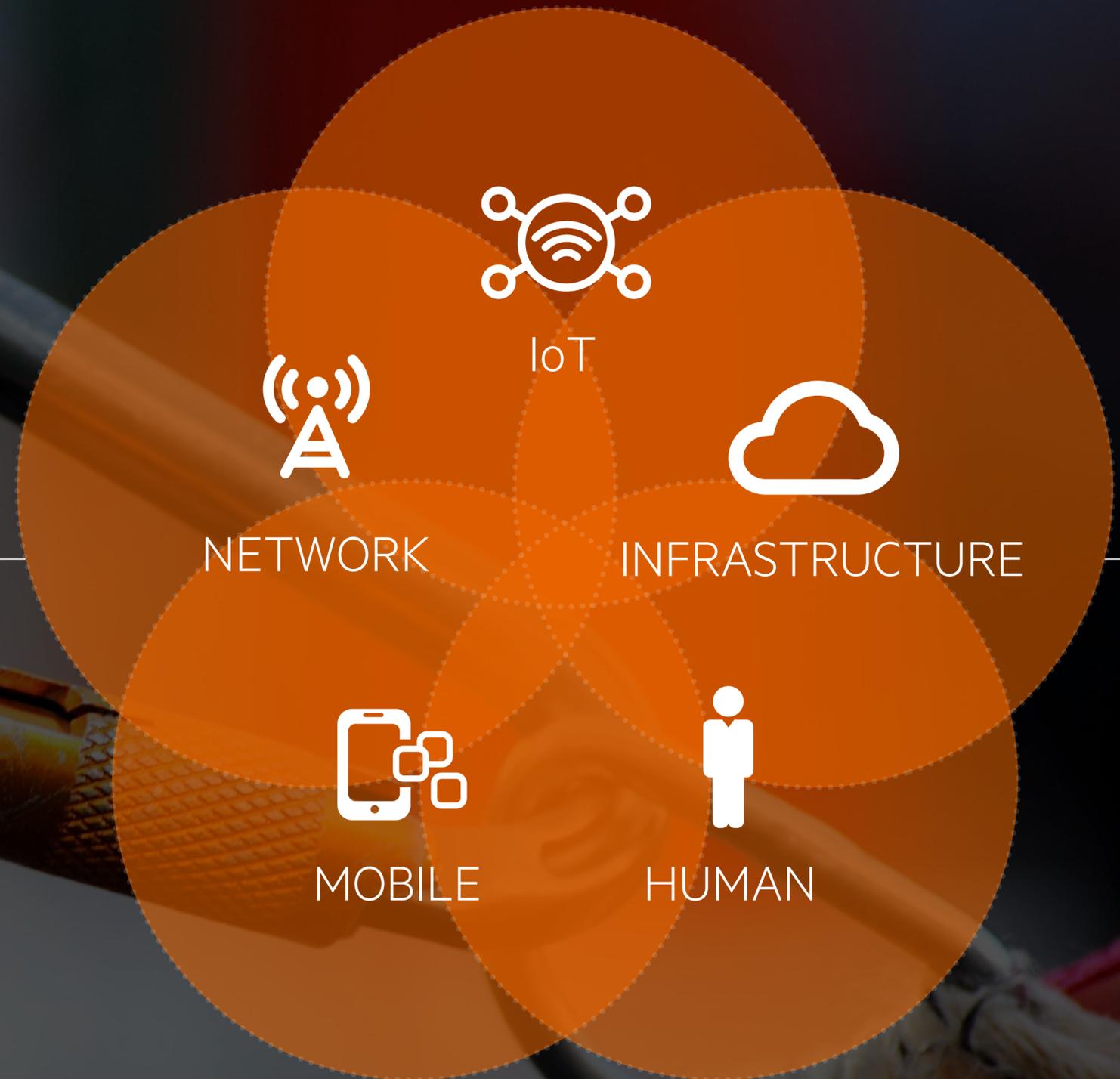
**IS YOUR FRIDGE HELPING
TO HACK PENTAGON'S SERVERS
OR HOW NOT TO BECOME
"INTERNET OF SH*T"?**



A SYSTEM IS ONLY
AS STRONG AS ITS
WEAKEST LINK



A SYSTEM IS ONLY
AS STRONG AS ITS
WEAKEST LINK



BE SMART WHEN CHOOSING YOUR NEW SMART DEVICE



Reliable
vendor



Reliable
seller



Safe
network

WHAT CONSTITUTES SECURE IoT USE?

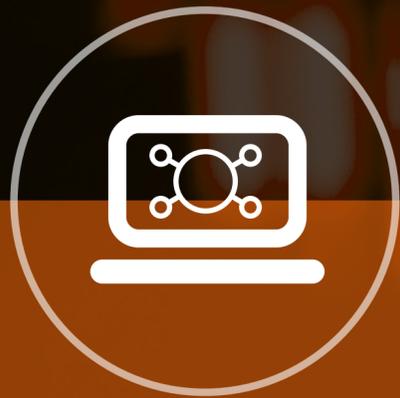


Secure data
processing node



Secure IoT system
management

SECURITY MANAGEMENT



IoT project



Risk Analysis



Risk Monitoring



Risk Management

LMT SOLUTIONS

NB IoT

Special
IoT channel



Private APN



Mobile device
management

5G

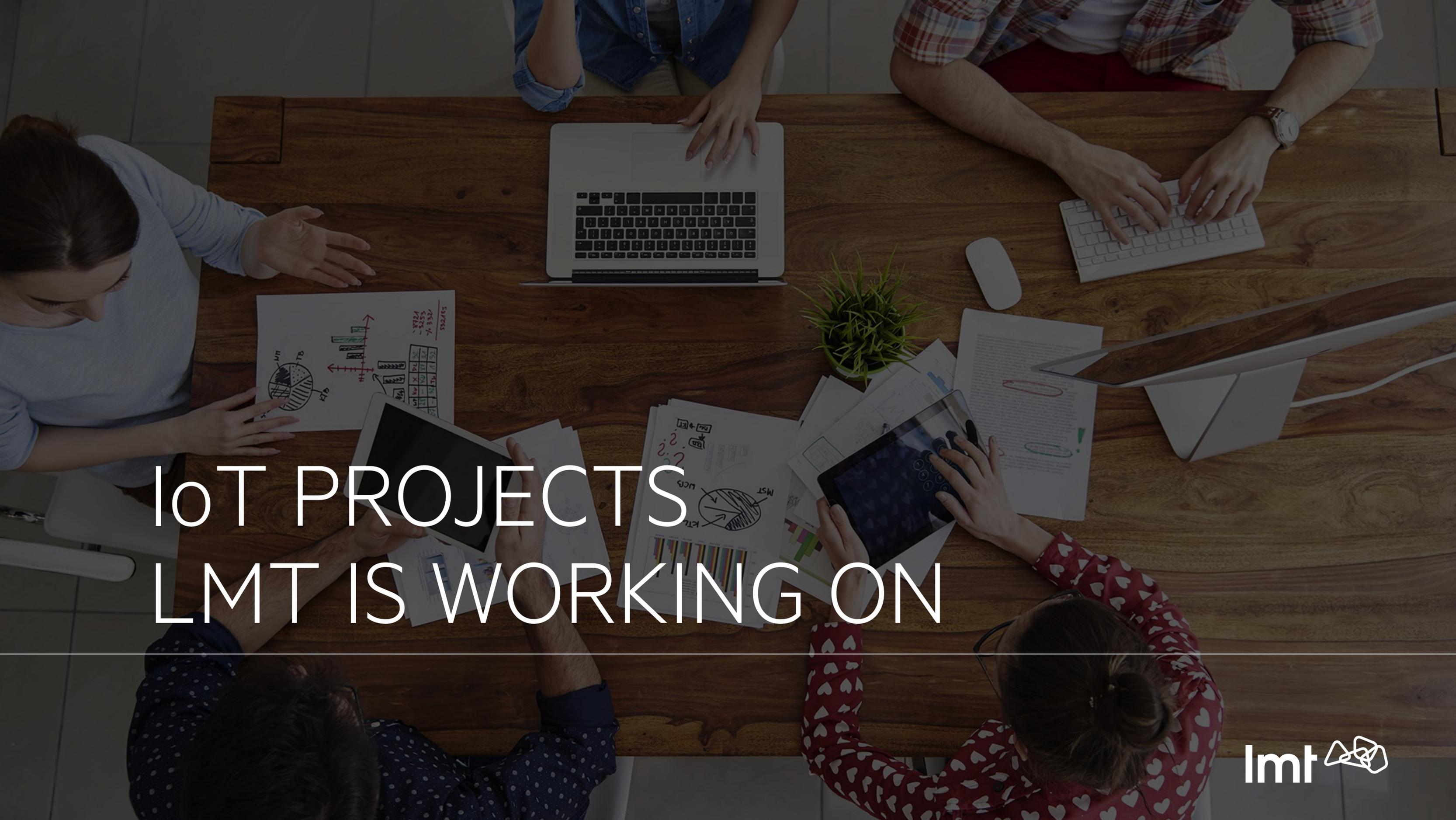
Imt 

1862

RĪGAS TEHNISKĀ
UNIVERSITĀTE

NOKIA

Imt 



IoT PROJECTS LMT IS WORKING ON

SELF-DRIVING CARS



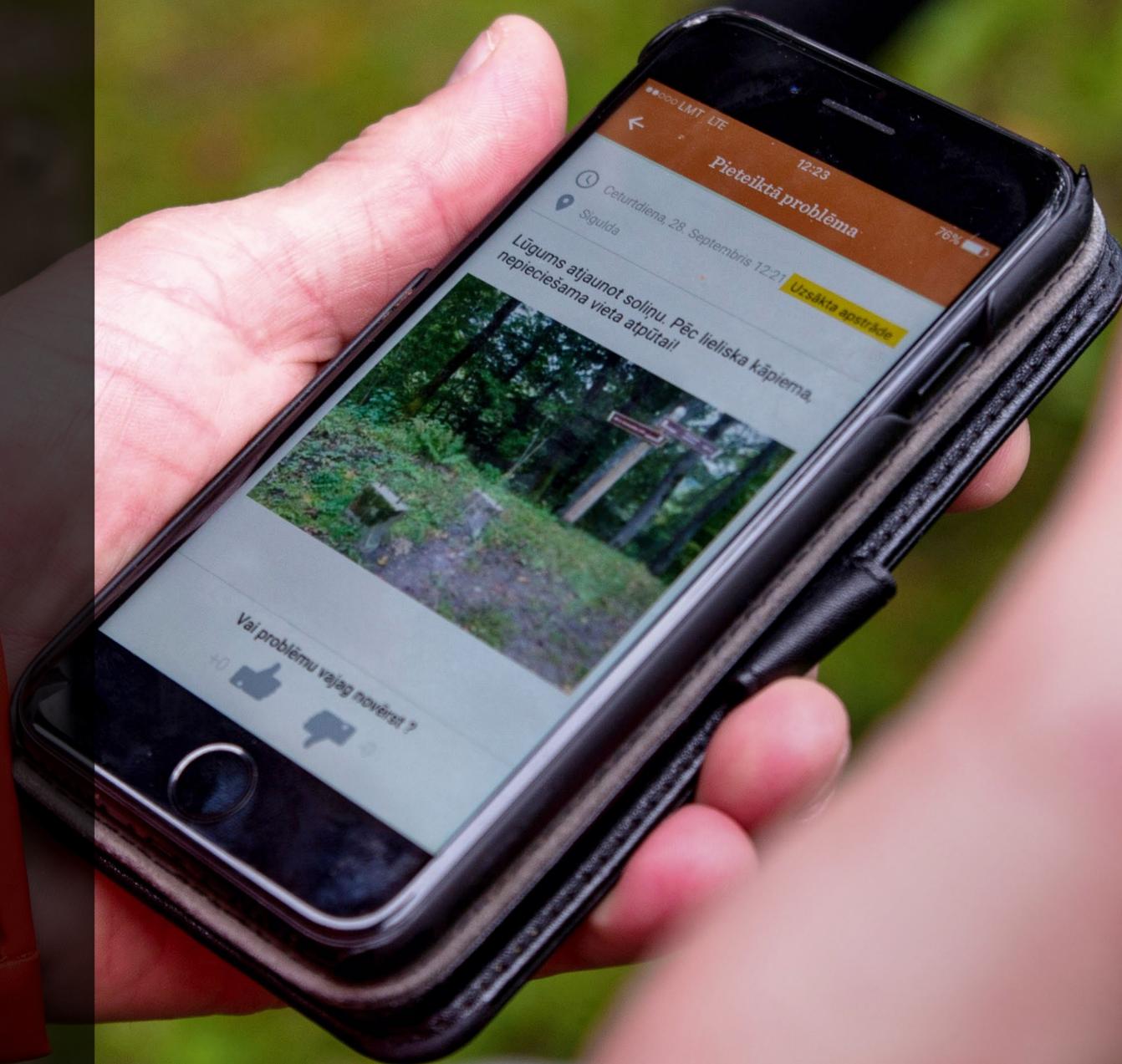
DRONES

Imt 
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SMART CITY SOLUTIONS



#VIEDSARGS

Defence projects for Latvia

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#VIEDSARGS

Defence projects
for Latvia



Secure information
platform

+

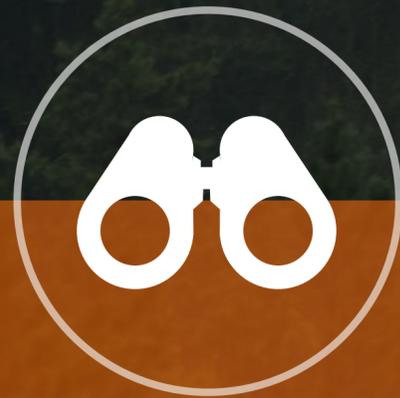


Internet of
Battlefield Things

INTERNET OF BATTLEFIELD THINGS



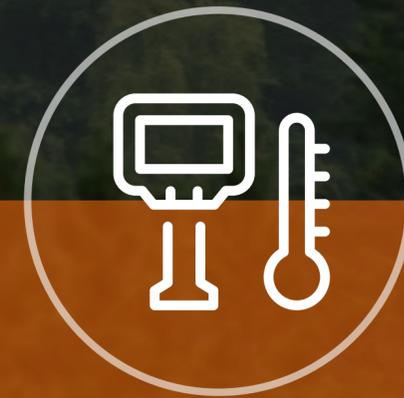
Acoustic ground
sensors



Mobile surveillance
cameras



Location
sensors



Thermal camera
video

Imt 

MOBILE
CYBERRANGE



Imt 

BUILDING TOGETHER
SECURE IoT SOLUTIONS