



MAGENTA SECURITY

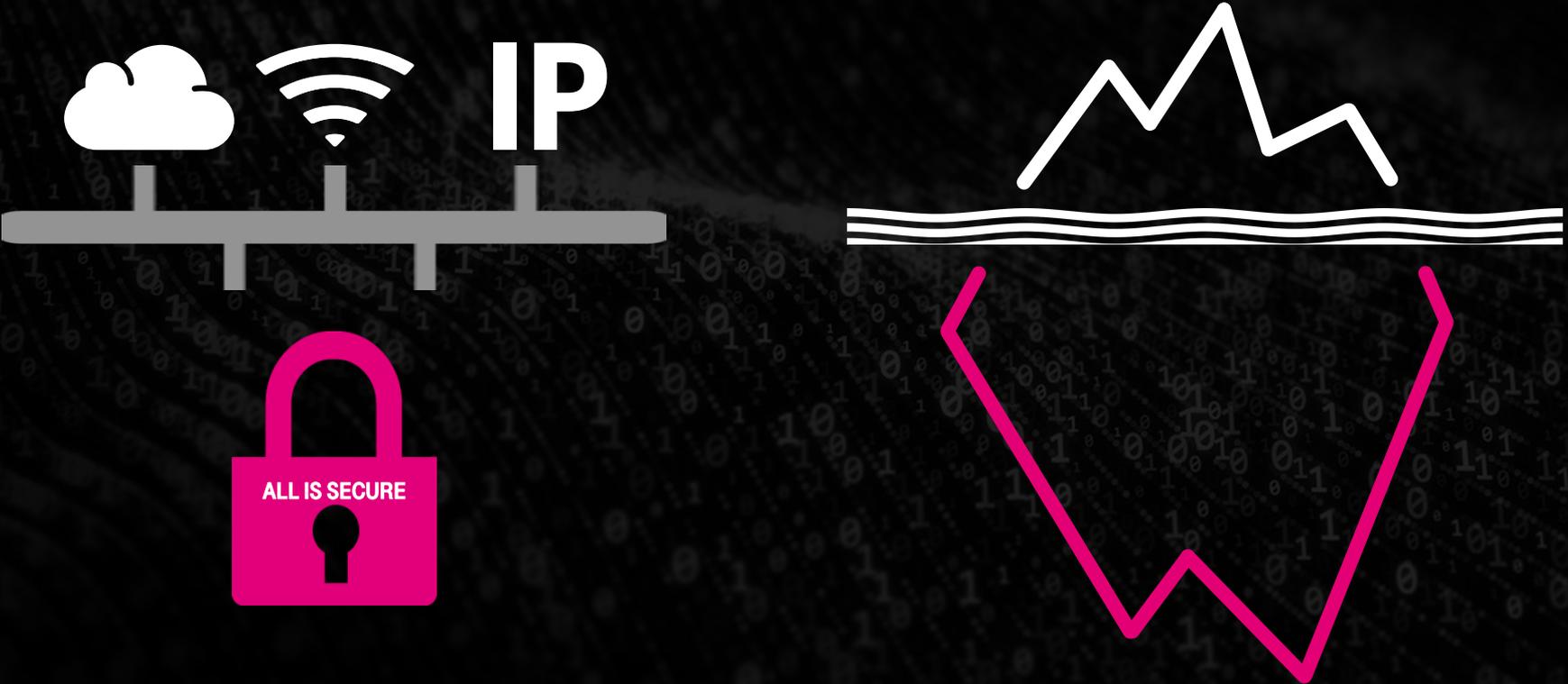
**PRESENT AND UPCOMING
CYBER SECURITY THREATS**

THOMAS TSCHERSICH

 THOMAS TSCHERSICH

 @TTSCHERSICH

SECURITY IS THE FOUNDATION OF DIGITAZATION





**... BUT HOW DOES
REALITY
LOOK LIKE?**

GERMANY:

**CYBER
ATTACKS**

**ARE REAL AND
INCREASING**

**EVERY 3
MINUTES**

A COMPANY IS ATTACKED

60%

**OF ALL CYBER ATTACKS ARE
DIRECTED AGAINST MID-SIZE
BUSINESS**

**ALMOST
55 BN. €**

**DAMAGE OF THE GERMAN
ECONOMY PER YEAR**

... LET'S HAVE A CLOSER
LOOK ...

ATTACKS ON CRITICAL INFRASTRUCTURE ARE REAL!

SEP 2010



Destruction of industrial plants

**ATTACK ON
IRANIAN
NUCLEAR
PROGRAM**

MAY 2015



Complete exchange of IT

**ATTACK ON
GERMAN
PARLIAMENT**

DEC 2015



80.000 people without power

**ATTACK ON
UKRAINIAN
POWER GRID**

NOV 2016



900.000 people without internet

**BOTNET-
ATTACK ON
HOME ROUTERS**

MAY 2017

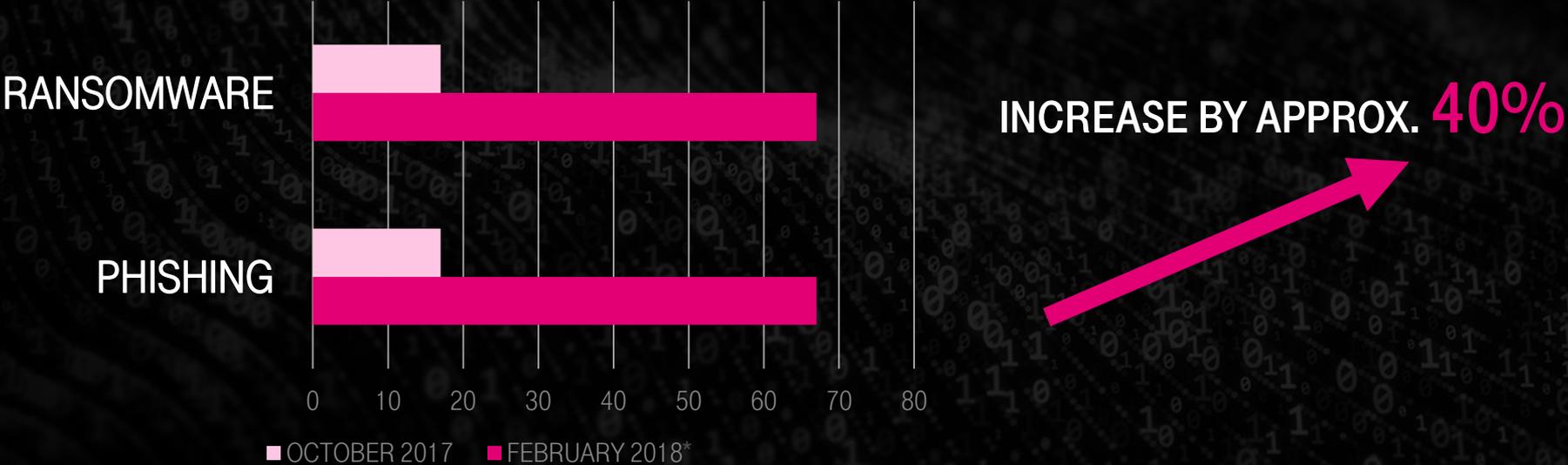


Long-lasting IT outtages

**RANSOMWARE
ATTACK ON
DESKTOP PCs**

COMMON ATTACKS ON CRITICAL INFRASTRUCTURE

AMOUNT OF ATTACKS WITHIN 5 MONTHS

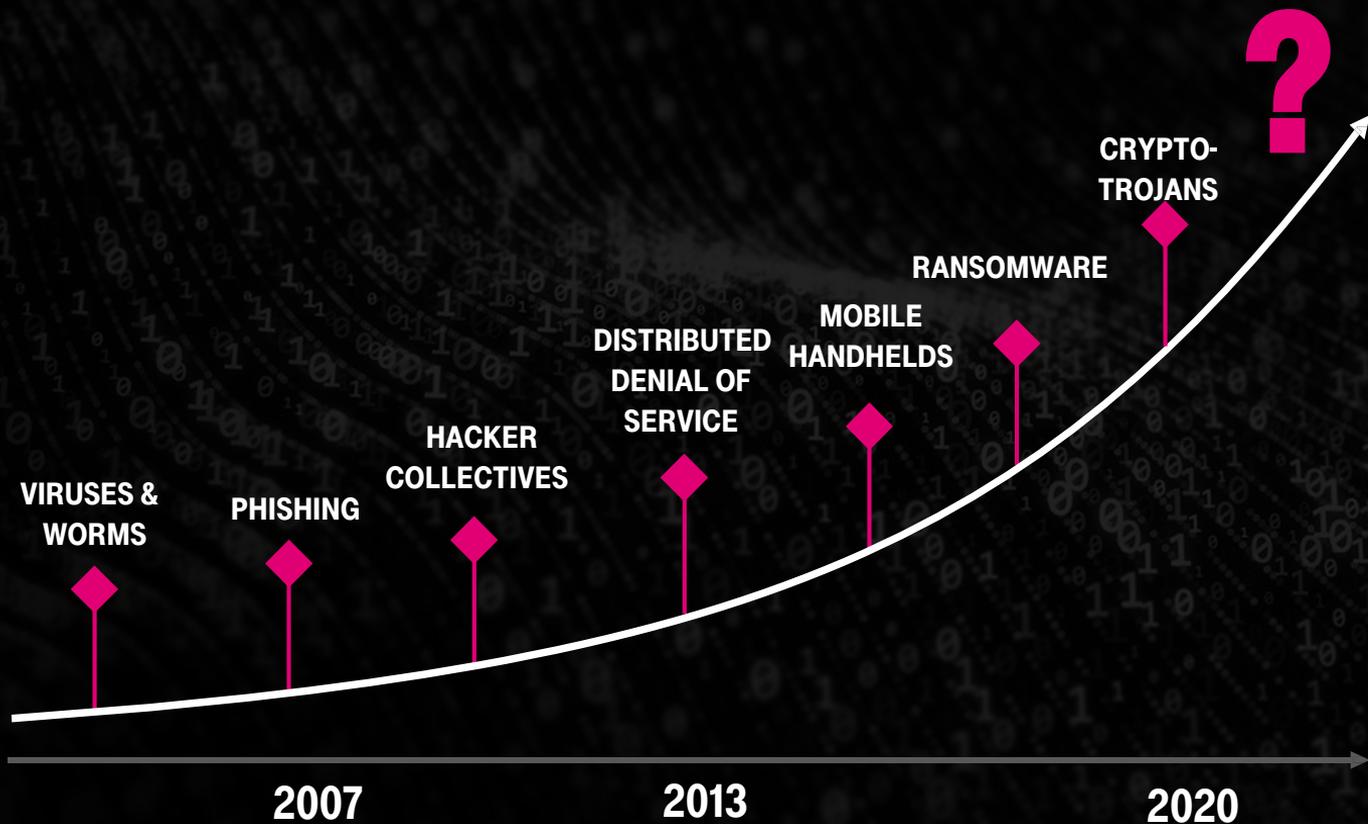


* PERIOD OF COLLECTION; AMOUNT OF ATTACKS COMPARED TO EACH OTHER



**... LET'S TALK ABOUT
ATTACK(ER)S ...**

ATTACKS ARE EVOLVING OVER TIME



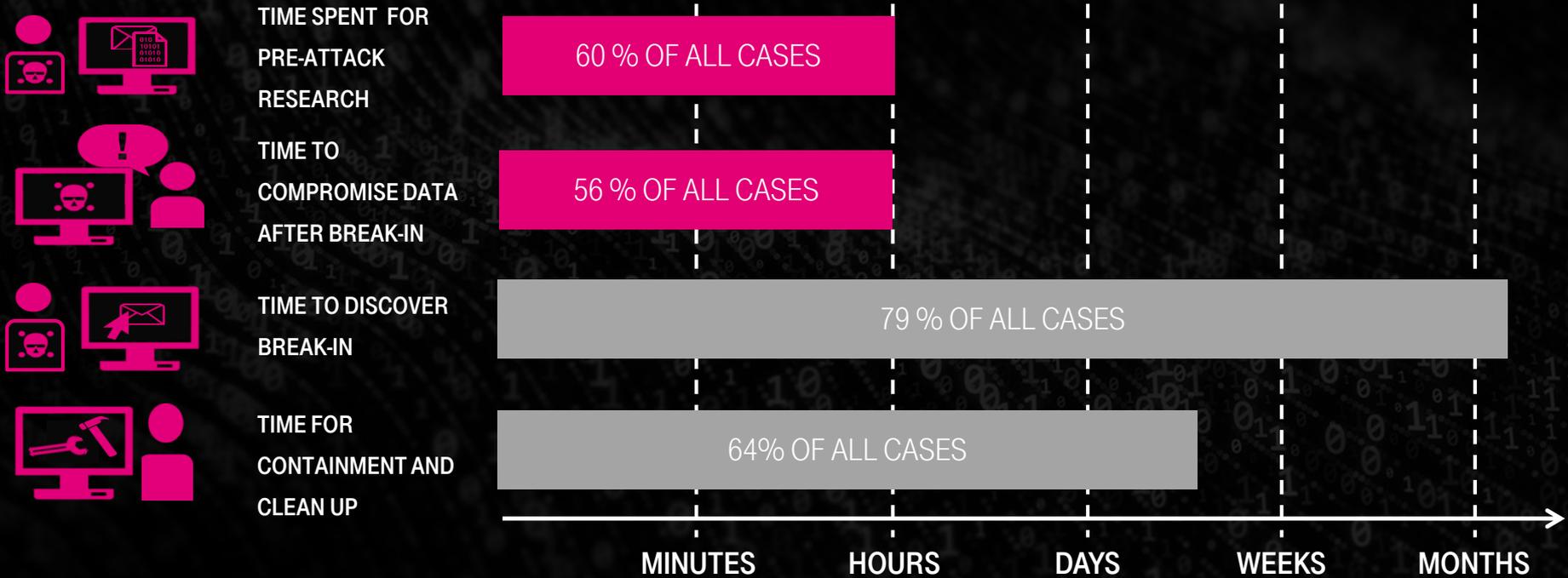
VARIOUS ATTACKERS BUT SAME METHODS

	CLASSICAL HACKERS	ORGANISED CRIME	HACKTIVISTS	INTELLIGENCE SERVICES
MOTIVATION 	FAME AND HONOR, FUN AND GAMES	FRAUD, BLACKMAIL, MONEY LAUNDERING	EXPRESSING POLITICAL OPINIONS	ESPIONAGE, SABOTAGE
RESOURCES 	USUALLY INDIVIDUALS	WELL-ORGANIZED GROUPS, WORLDWIDE DISTRIBUTION, VAST FUNDING AVAILABLE	WELL-ORGANIZED GROUPS, WORLDWIDE DISTRIBUTION	STATE-CONTROLLED, “UNLIMITED” FUNDING
EXAMPLES 	DEFACING WEBSITES, REPORTING VULNERABILITIES TO THE PUBLIC, ...	PHISHING, DDOS, SPAM, ...	DDOS, INFORMATION LEAKAGE, ...	TARGETED ATTACKS, DDOS, ...



... HOW DO **THEY** WORK?

ATTACKERS ARE FASTER THAN DEFENDERS



ATTACKERS ARE INNOVATIVE AND CONTINUE TO EVOLVE



ZERO DAY EXPLOITS



RANSOMWARE



ATTACKS ON
AUTONOMOUS
VEHICLES



ATTACKS ON
FIRMWARE

**90% OF CORPORATE NETWORKS ARE PROTECTED
BUT ONLY 10% OF INDUSTRIAL NETWORKS**



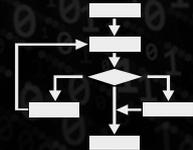
ATTACKS ON POWER/
HEATING SYSTEMS



ATTACKS ON
CLOUD SERVICES



SPEAR PHISHING &
FAKED IDENTITIES



ATTACKS ON
PRODUCTION PLANTS
(SCADA SYSTEMS)



**ARE DEFENDERS
PREPARED?**

HAVE YOU EVER SEEN THAT?

Wana Decrypt0r 2.0

Oops, your files have been encrypted! English

What Happened to My Computer?
Your important files are encrypted.
Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

Can I Recover My Files?
Sure. We guarantee that you can recover all your files safely and easily. But you have not so enough time.
You can decrypt some of your files for free. Try now by clicking <Decrypt>. But if you want to decrypt all your files, you need to pay.
You only have 3 days to submit the payment. After that the price will be doubled. Also, if you don't pay in 7 days, you won't be able to recover your files forever. We will have free events for users who are so poor that they couldn't pay in 6 months.

How Do I Pay?
Payment is accepted in Bitcoin only. For more information, click <About bitcoin>. Please check the current price of Bitcoin and buy some bitcoins. For more information, click <How to buy bitcoins>.
And send the correct amount to the address specified in this window. After your payment, click <Check Payment>. Best time to check: 9:00am - 11:00am

Payment will be raised on
5/16/2017 00:47:55
Time Left
02:23:57:37

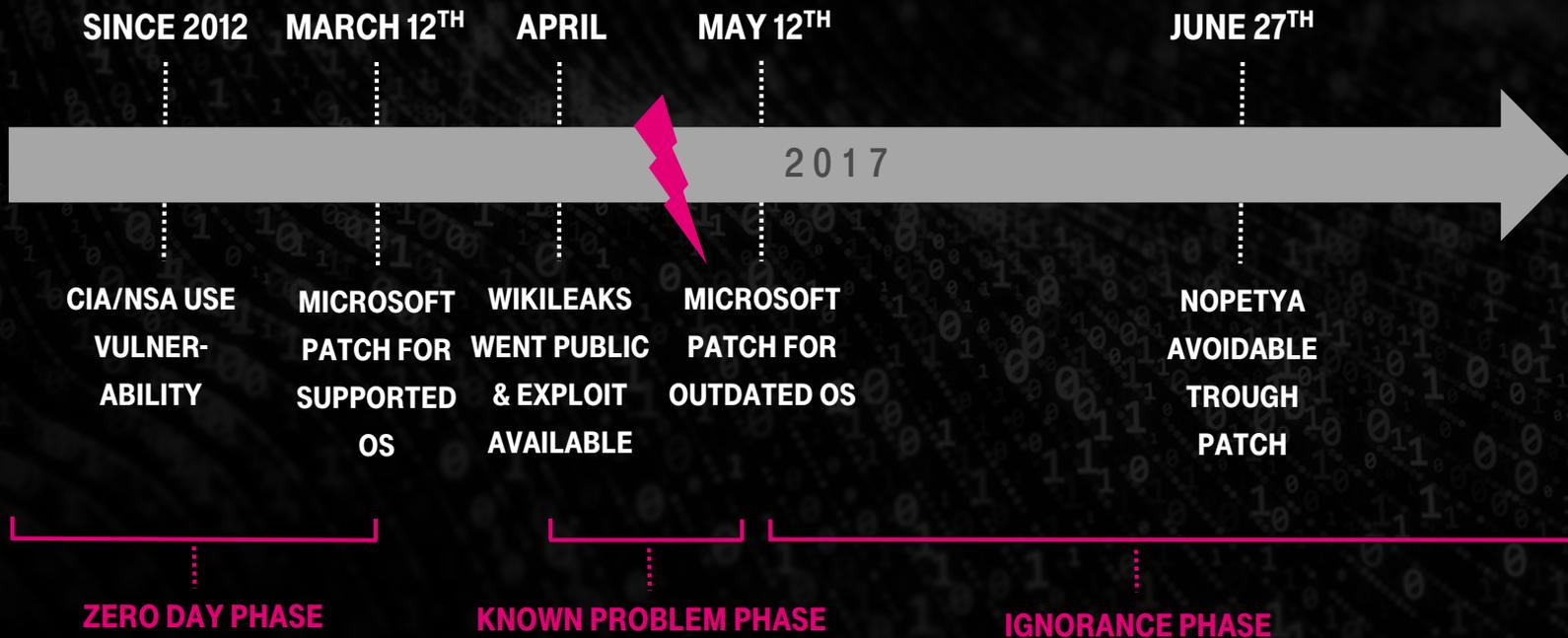
Your files will be lost on
5/20/2017 00:47:55
Time Left
06:23:57:37

About bitcoin
How to buy bitcoins?
Contact Us

Send \$300 worth of bitcoin to this address:
12t9YDPgwueZ9NyMgw619p7AA8isjr6SMw Copy

Check Payment Decrypt

WANNACRY: ANATOMY OF A ZERO-DAY VULNERABILITY



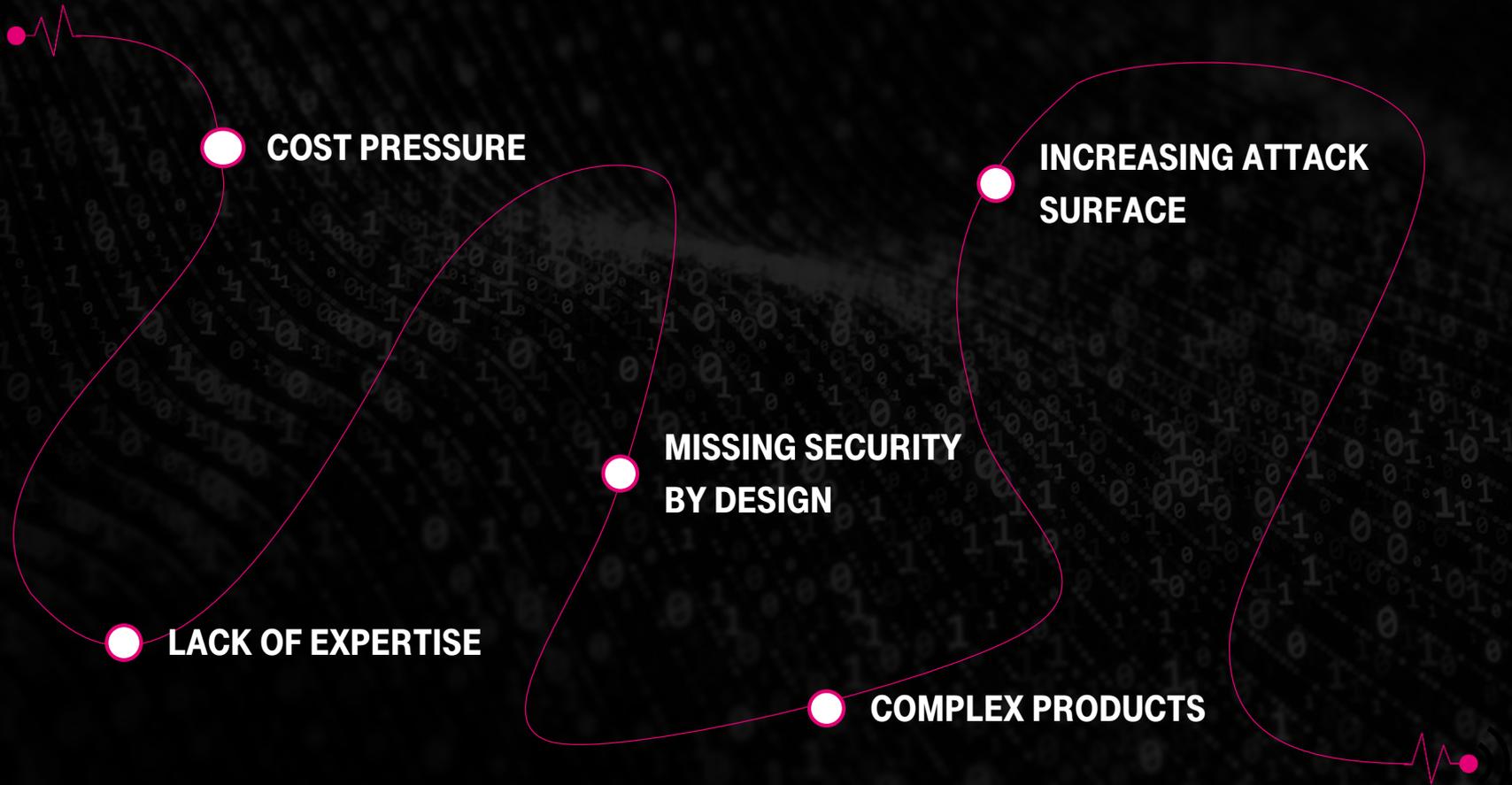
THE ONLY ANSWER IS... TO PATCH!





**...SO WHAT ARE
THE CHALLENGES?**

TODAY'S BIGGEST CHALLENGES FOR SECURITY





**...AND WHAT IS
THE WAY OUT?**

FUTURE TRENDS IN CYBER SECURITY

- **COOPERATION BETWEEN INDUSTRY, RESEARCH AND POLITICS**
- **RESPONSIBILITY DURING THE WHOLE DIGITAL SUPPLY CHAIN**
- **EXCHANGE REGARDING VULNERABILITIES**
- **CERTIFICATION & UPDATE REQUIREMENTS**
- **PRODUCER'S LIABILITY**





**MAGENTA
SECURITY**



THANK YOU!

T-SYSTEMS INTERNATIONAL GMBH

TELEKOM SECURITY