



Whalebone

DNS4EU: the journey to European digital autonomy

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Content overview

- **The DNS4EU Project**
- **What is Protective DNS?**
- **Threat Intelligence**
- **Regional analysis and public institutions**
- **Timeline**

Today's topic

DNS4EU and our mission

Whalebone is leading the European Commission's DNS4EU project, which aims to protect millions of European citizens.

The project aims at enabling public institutions to adopt measures that demonstrate the commitment to blocking the disruption of essential services, the compromising of critical infrastructure, and the cause of financial losses as well as data theft.

DNS4EU = safe, stable and private internet for Europe

The European Commission has tasked the DNS4EU consortium with the development and operationalization of the project.

Goal of ENISA:

Strengthen the digital security and independence of the European Union.

Challenge:

EU governmental institutions and citizens are not well protected with slow reaction on threats. Protections on DNS level are not located in EU.

Solution:

Create an independent EU-based DNS protection with real-time reaction on threats with easy distribution to the citizens and institutions.



DNS4EU consortium

Project leader

- Whalebone, s.r.o. ()

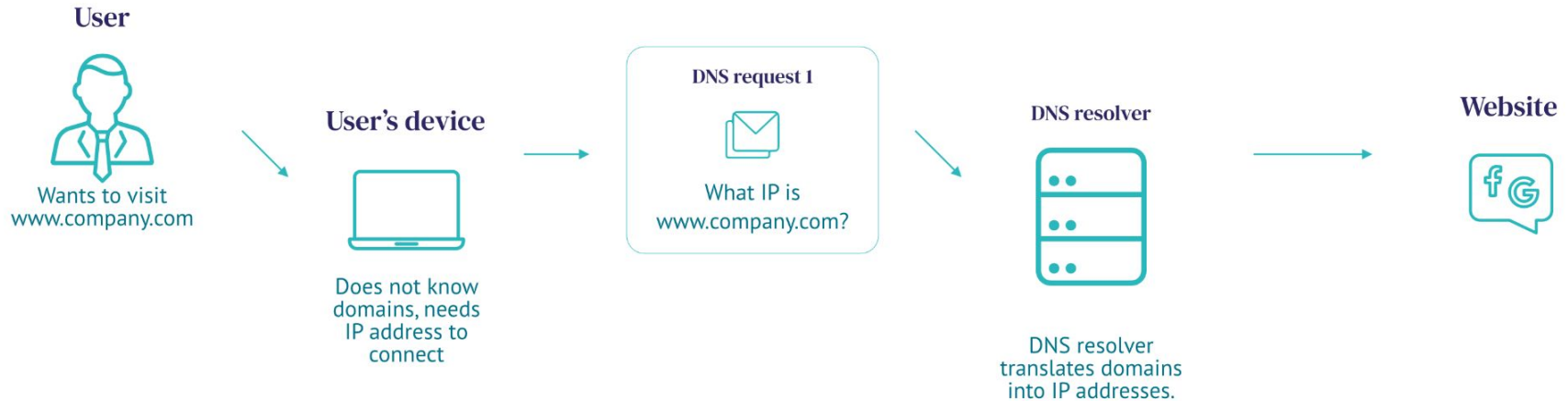
Consortium members

- CZ.NIC ()
- Czech Technical University Prague ()
- Time.lex ()
- deSEC ()
- Sztaki ()
- ABI Lab Centro di Ricerca e Innovazione per la Banca ()
- Naukowa i Akademicka Sieć Komputerowa ()
- Directoratul Național de Securitate Cibernetică ()

Associated partners

- Ministry of Electronic Governance ()
- CESNET ()
- F-Secure ()
- Centro Nacional de Cibersegurança ()

What is a DNS resolver?



- Translates domain names to IP addresses
- Without DNS, the Internet as we know it does not work
- That makes it a time- and tech-proof solution

The rise of Protective DNS (PDNS)

- Denying or obstructing attackers the use of domains can **significantly reduce** number of security incidents and improve early detection
 - phishing / smishing
 - malware hosting
 - C&C communication



Hacked Websites
(compromised)



Scam Websites
(spamsites)



Botnets
(command & control)



Desktop
computers



Smartphones



Servers



Laptops



Appliances



Cars



Malicious
Coin-miners

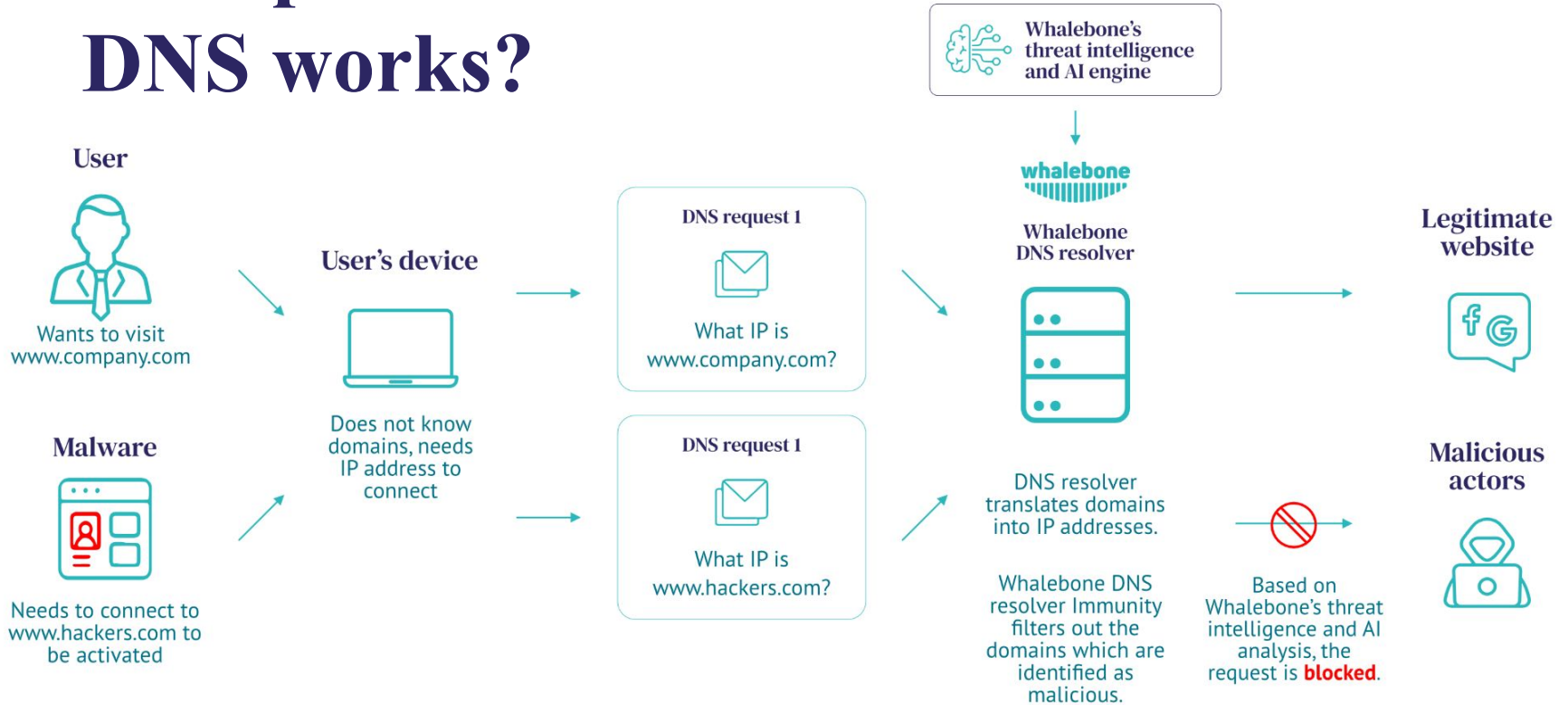


Fake emails



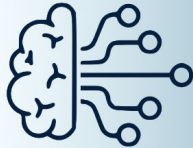
Malware

How protective DNS works?



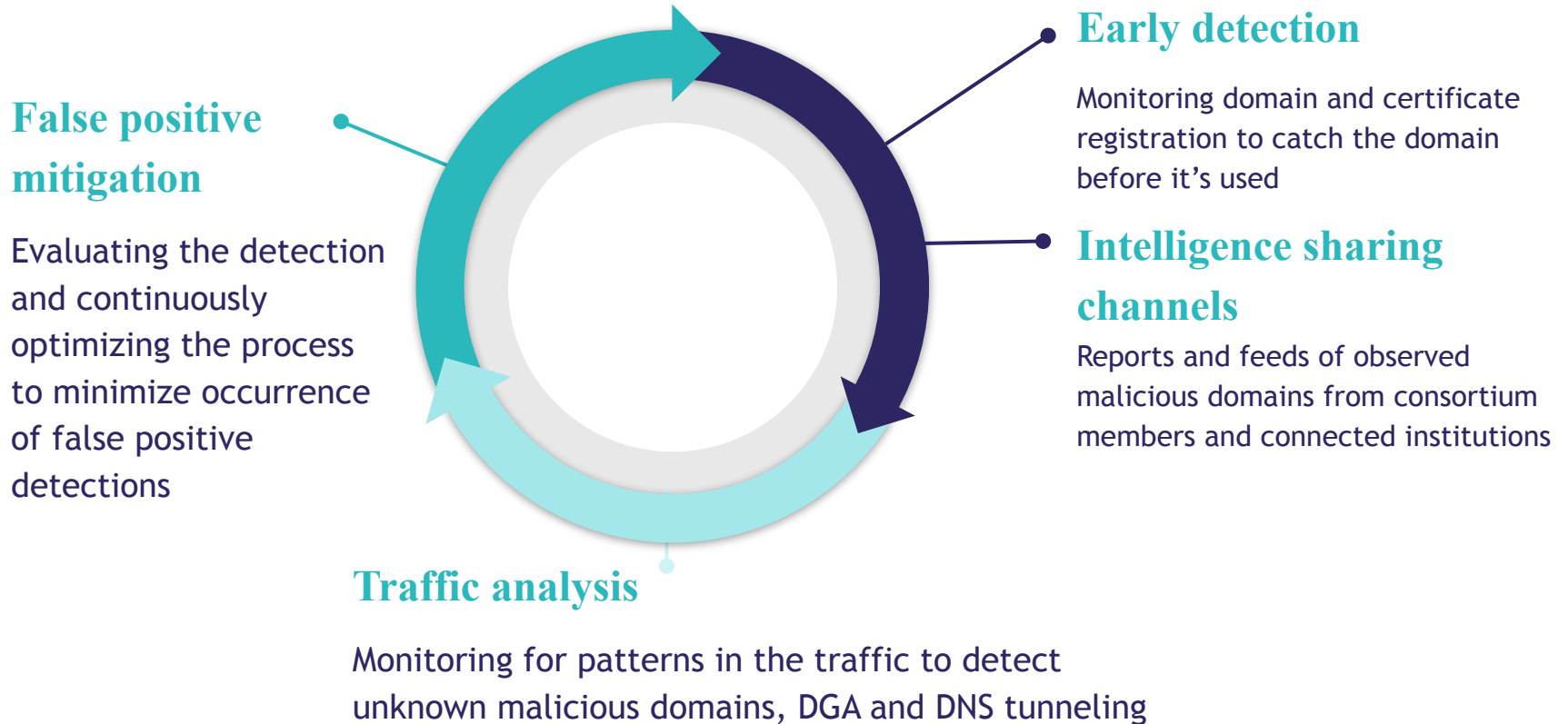
Basic pillars

**Input: Threat
intelligence data**



**Output: Protection
of millions of users
and organisations**

Threat Intelligence lifecycle



Threat Intelligence sharing

- **Sharing is caring!**
- DNS4EU provides central place to block DNS threats for millions of people
- Easy and automated connection
- Public & Private sector



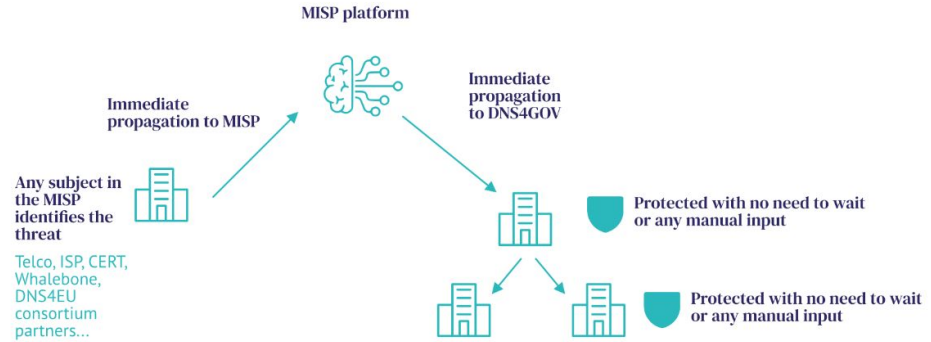
MISP platform

As a part of the DNS4EU project, Whalebone operates Malware Information Sharing Platform which connects CERTS to facilitate sharing of threat intelligence, creating unique database of regional threats.

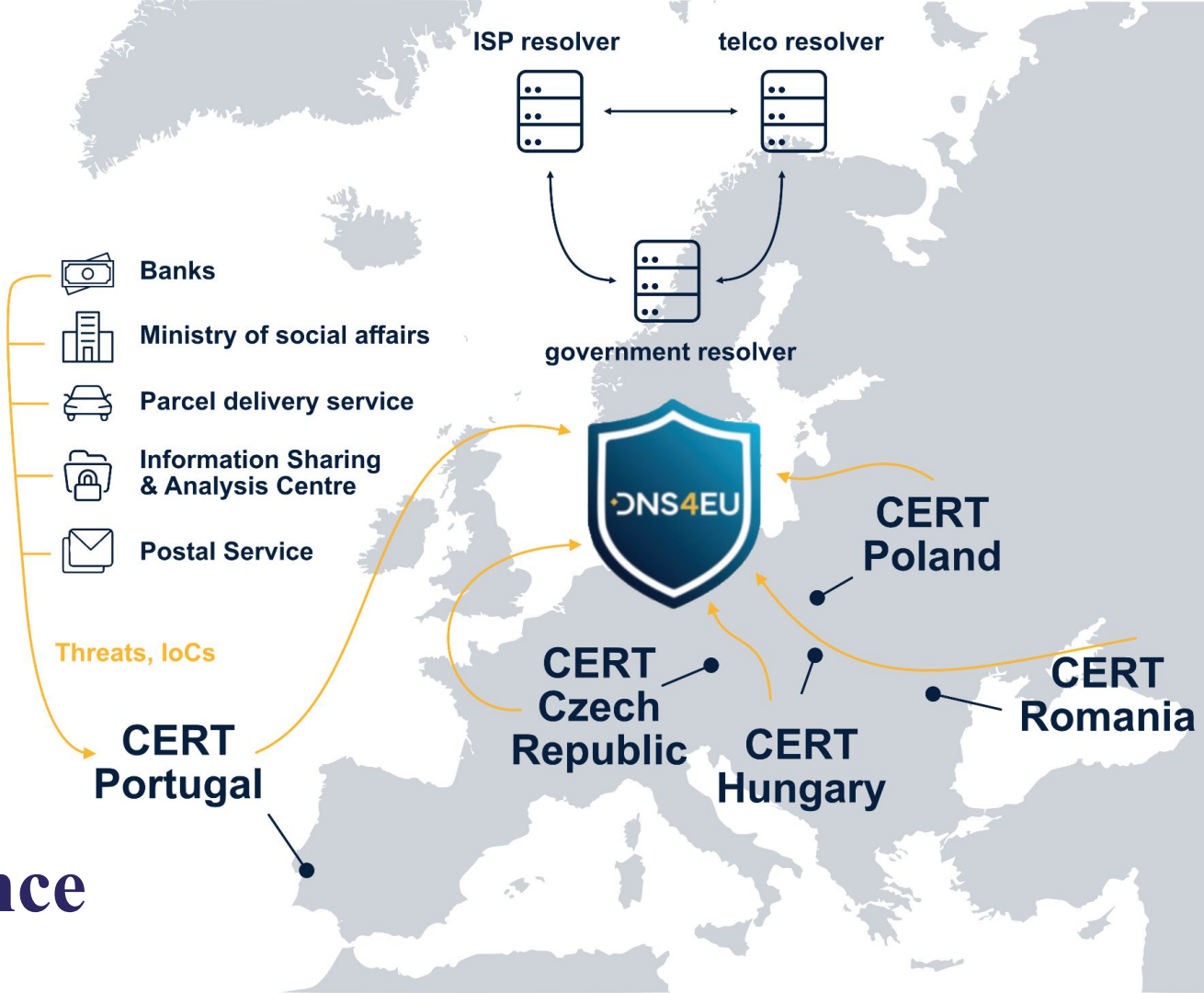
How it works now



How it works with MISP



Regional Threat Intelligence



DNS4EU / High level timeline

2023

**Preparations
and kick-offs**

- Technology, Security and standards compliance designs
- EU Backend deployment
- Research extension
- Reaching out to new operators and governments

2024

**Telco and Gov
deployments**

- Regional Threat Intelligence exchange setup
- Legislation and Security requirements compliance achieved

2025

**Attracting
end- users**

- Discoverability
- Attracting end-users
- Scaling the deployments as needed

2026+

**DNS4EU
post-project
continuation**

- Sustainability and continuous service improvement

Recap

1. The importance of PDNS
2. Research how to protect yourself and the importance of B2G as well as G2G cooperation
3. Join www.joindns4.eu/
 - [linkedin.com/showcase/dns4eu/](https://www.linkedin.com/showcase/dns4eu/)
 - twitter.com/dns4eu
 - facebook.com/dns4eu

Let's keep in touch!



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Thank you for your time!



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