OWASP, the Life,the Universe and the ElePHPhants

AFUP/MOZILLA/OWASP Meeting @Mozilla Paris
5th June 2014

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http://www.google.fr/#q=sebastien gioria

- Innovation and Technology @Advens && Application Security Expert
- OWASP France Leader & Founder & Evangelist
- Application Security group leader for the CLUSIF
- Proud father of youngs kids trying to hack my digital life.

Twitter :@SPoint/@OWASP_France

Agenda

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- Application Security :
  - where we are (no bullshit)
  - where we are (hopefully) going ?
- Open Web Application Security Project ?
- Major projects you can use

Why Application Security ?

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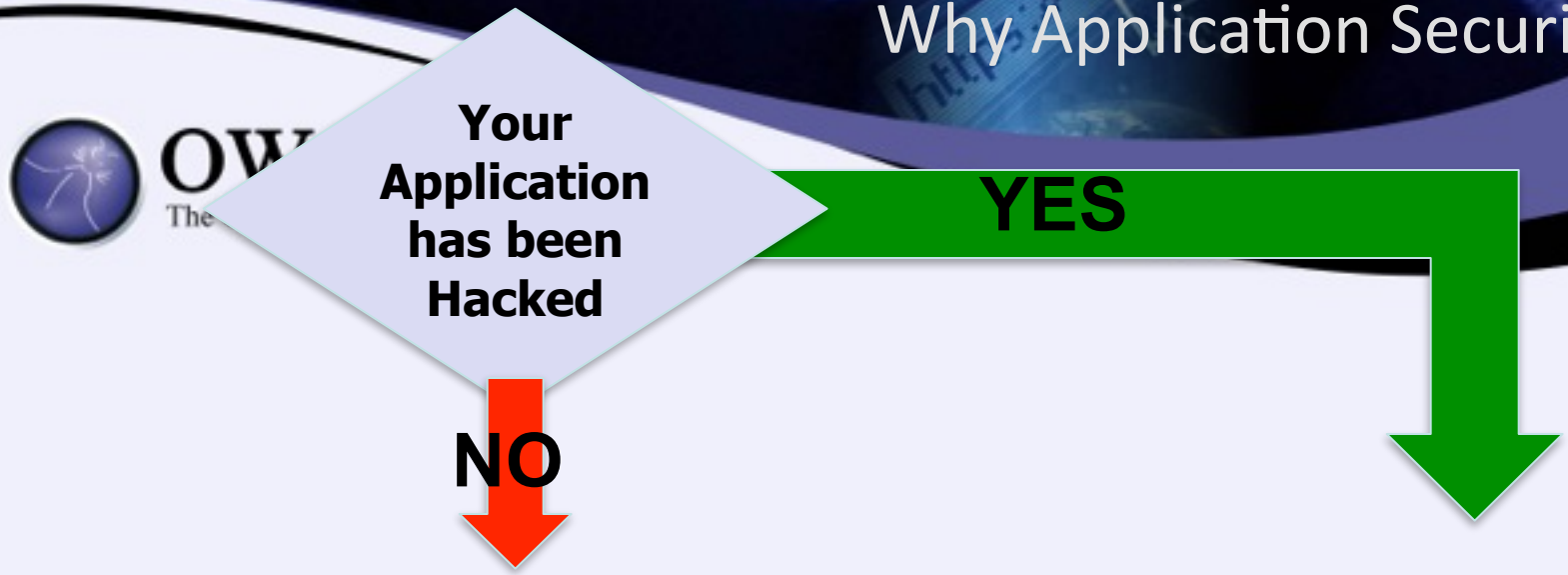
Why Application Security ?

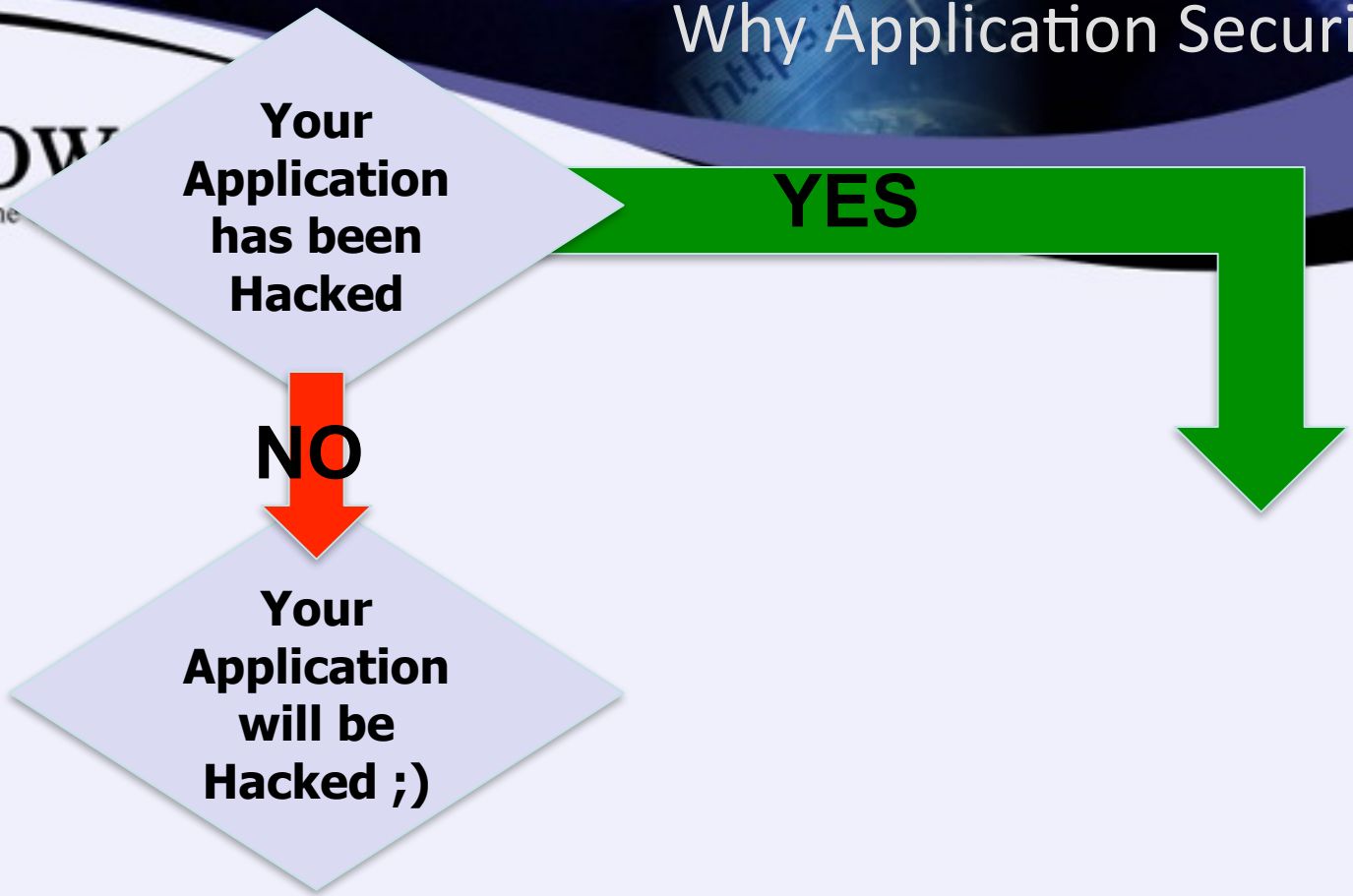
Your Application has been Hacked

Why Application Security ?

Why Application Security ?



Why Application Security ?



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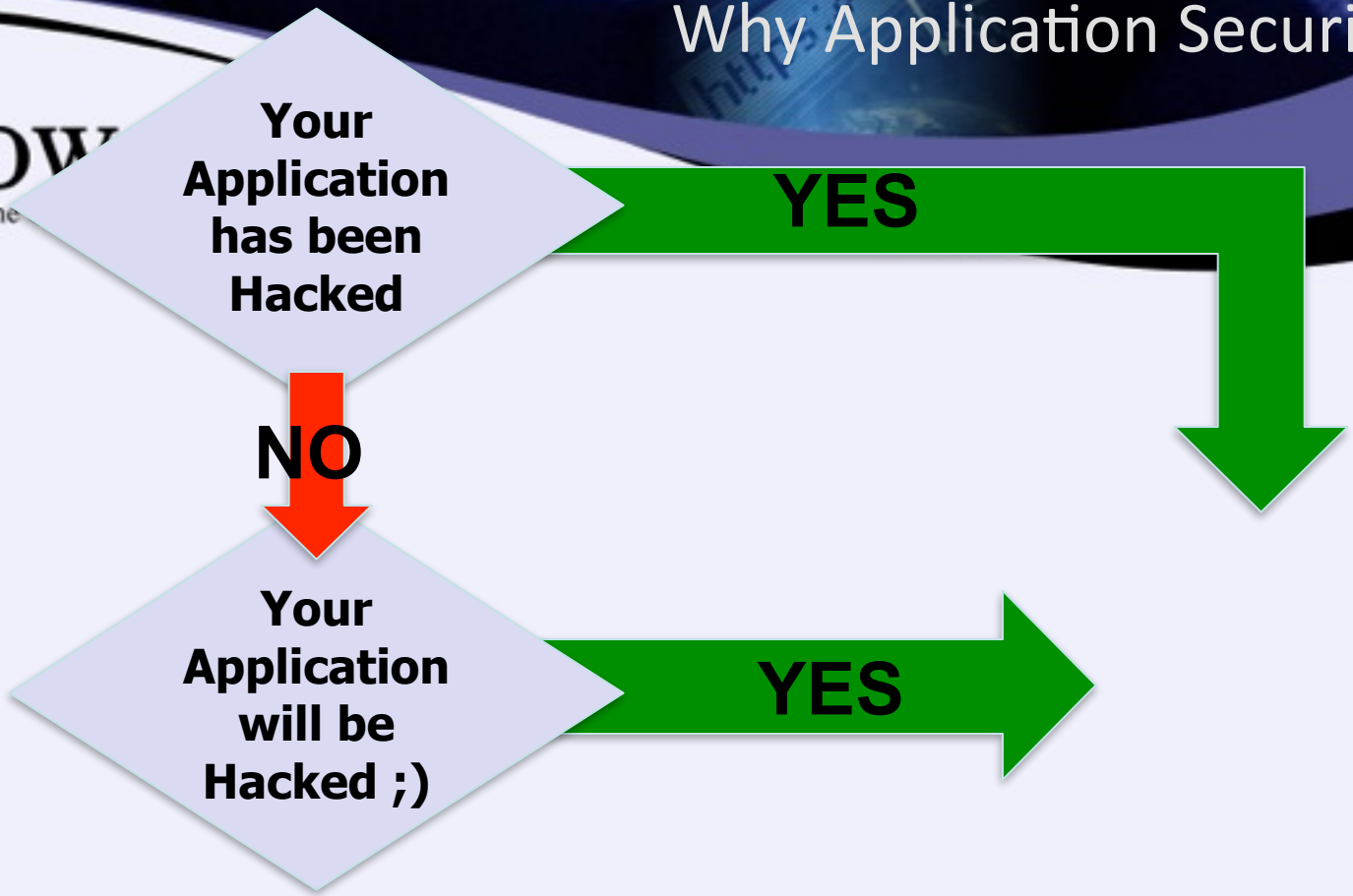

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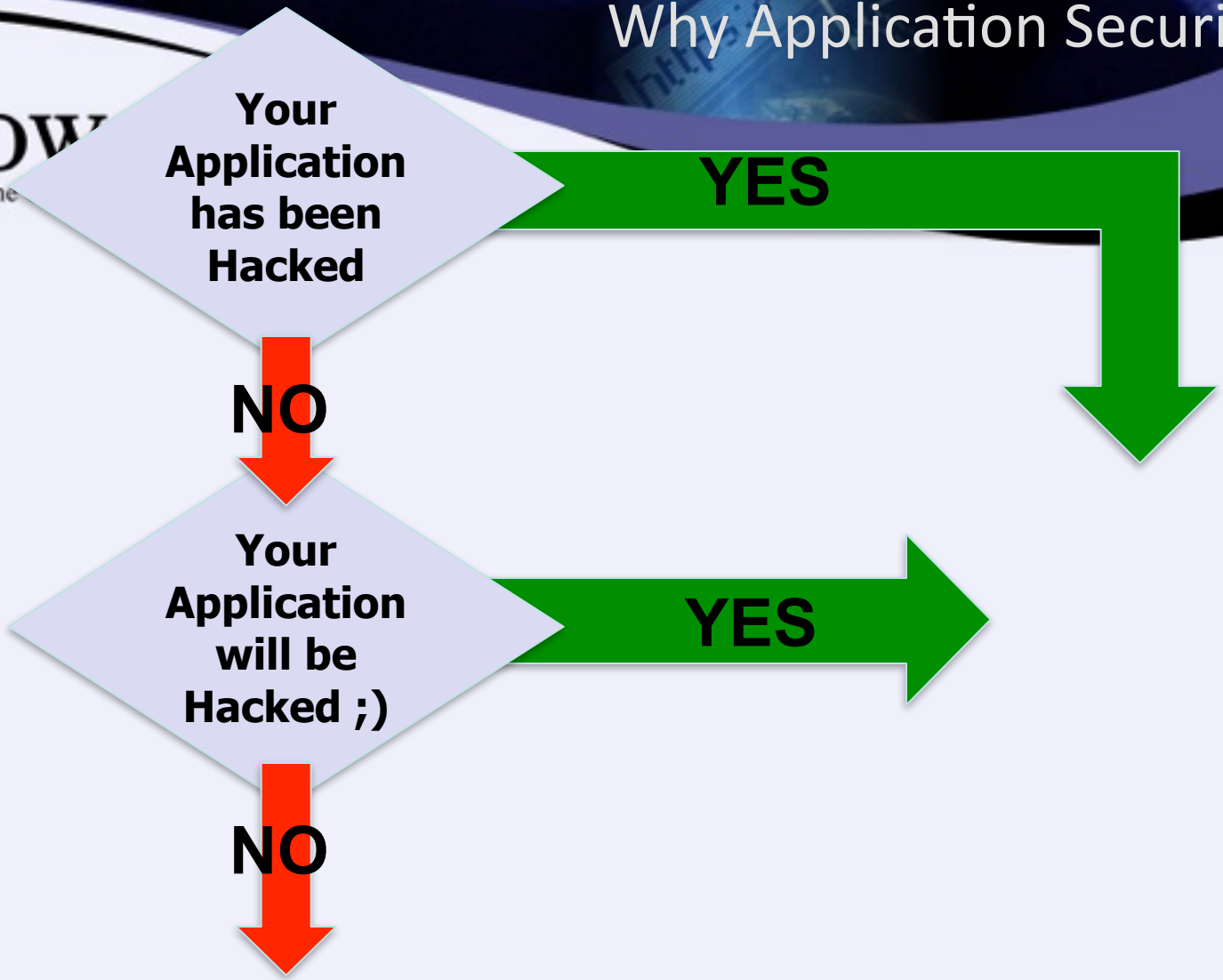
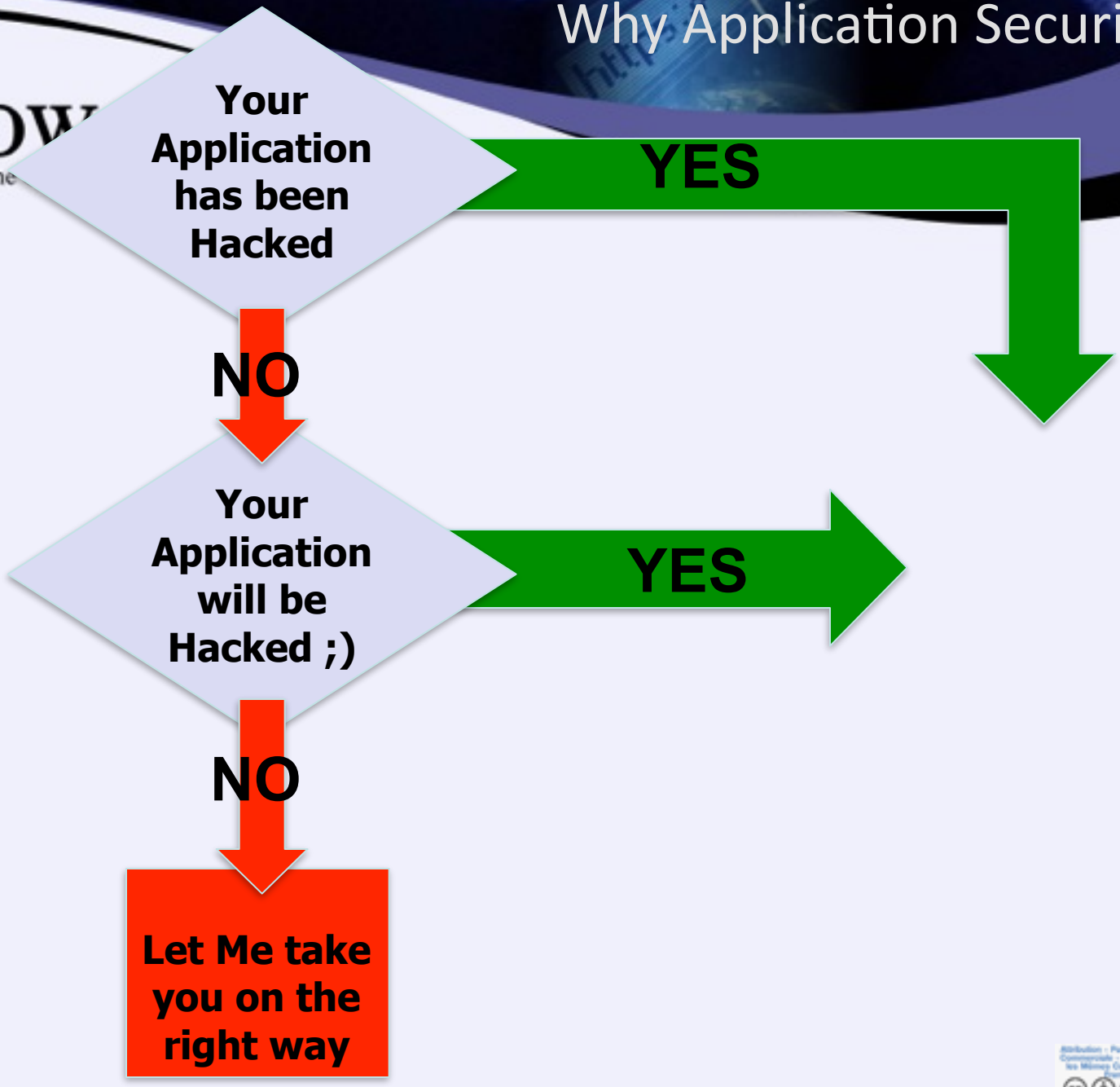
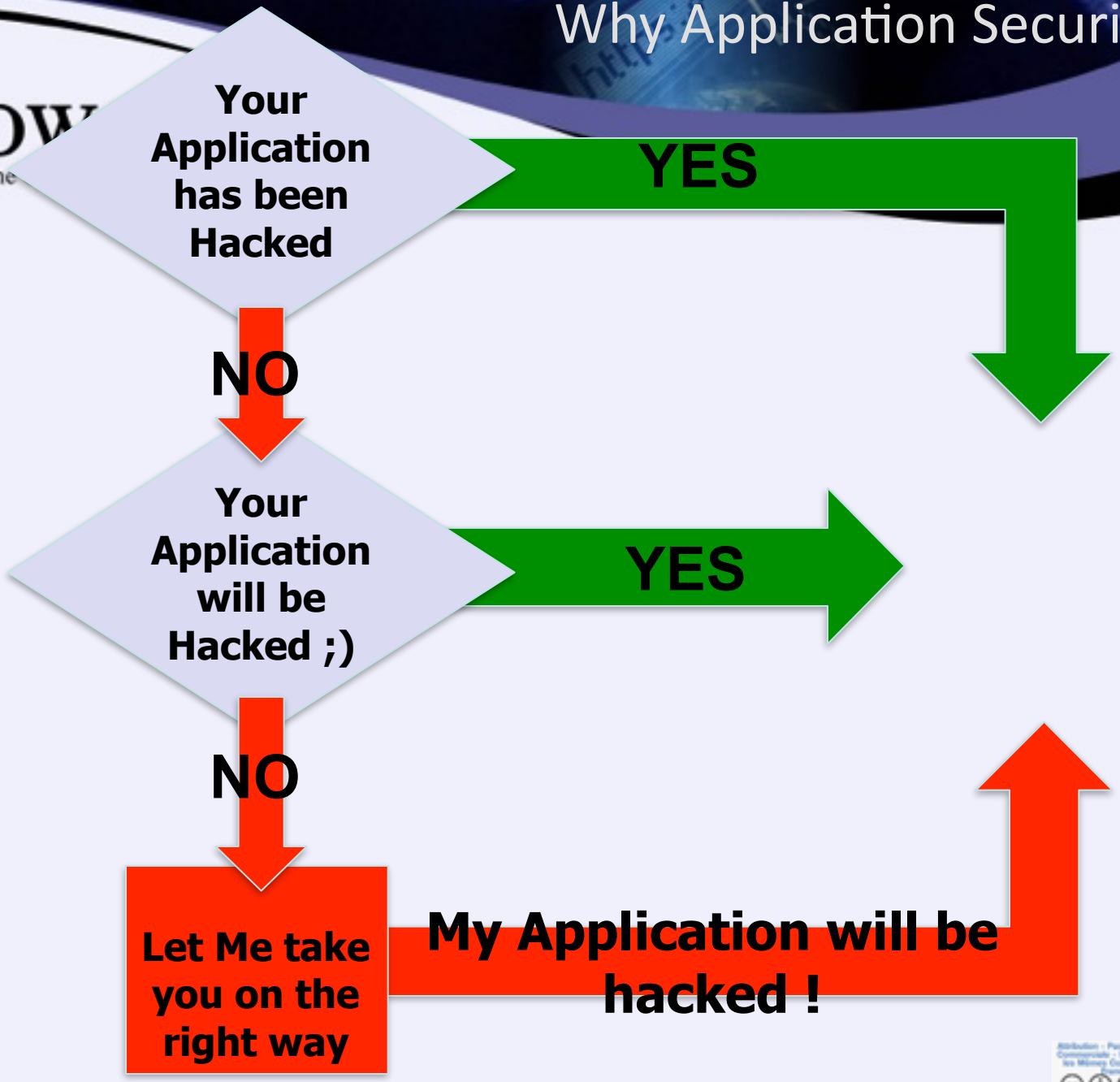


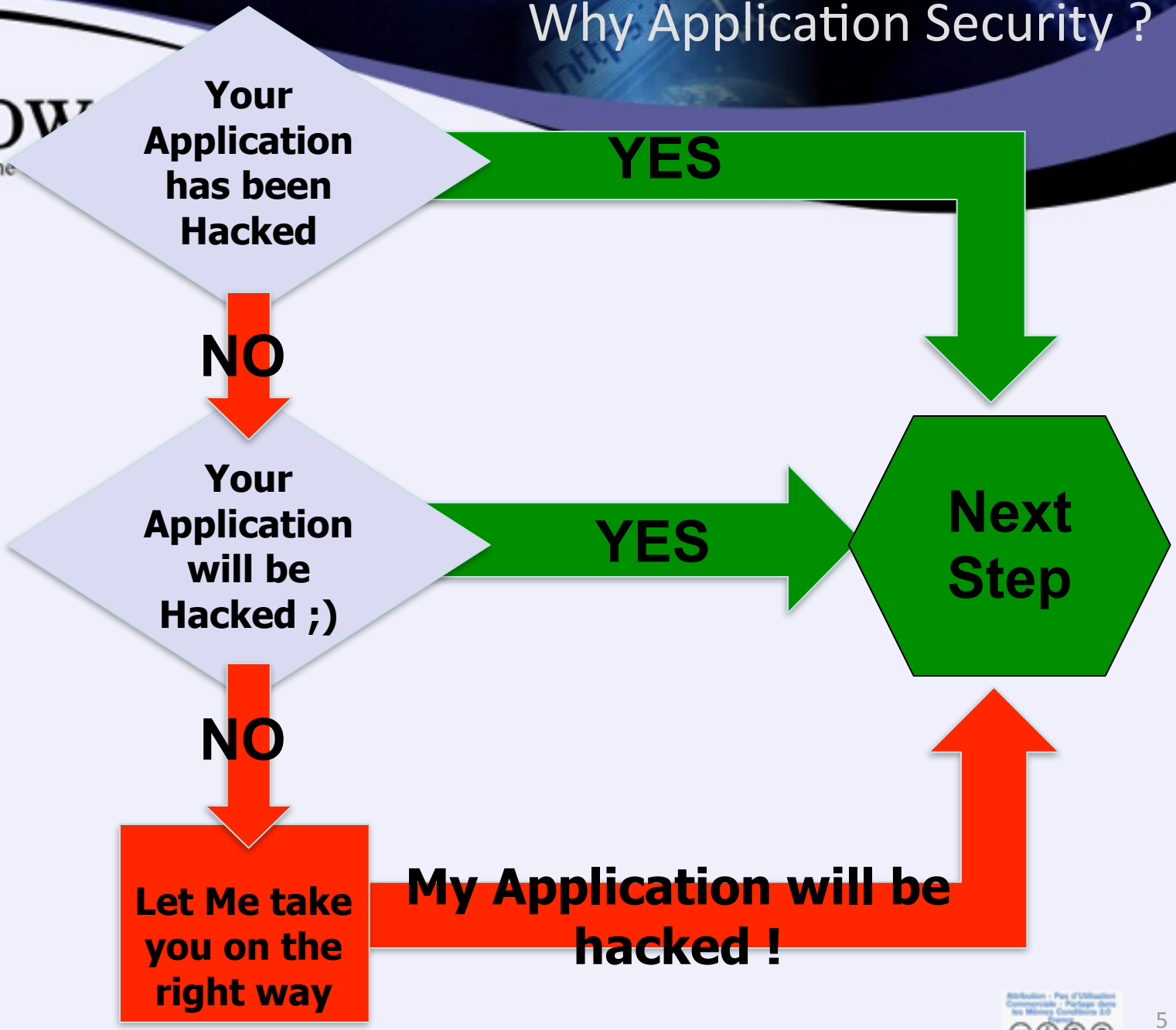
Why Application Security ?



Why Application Security ?



Why Application Security ?



First form in PHP

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First form in PHP

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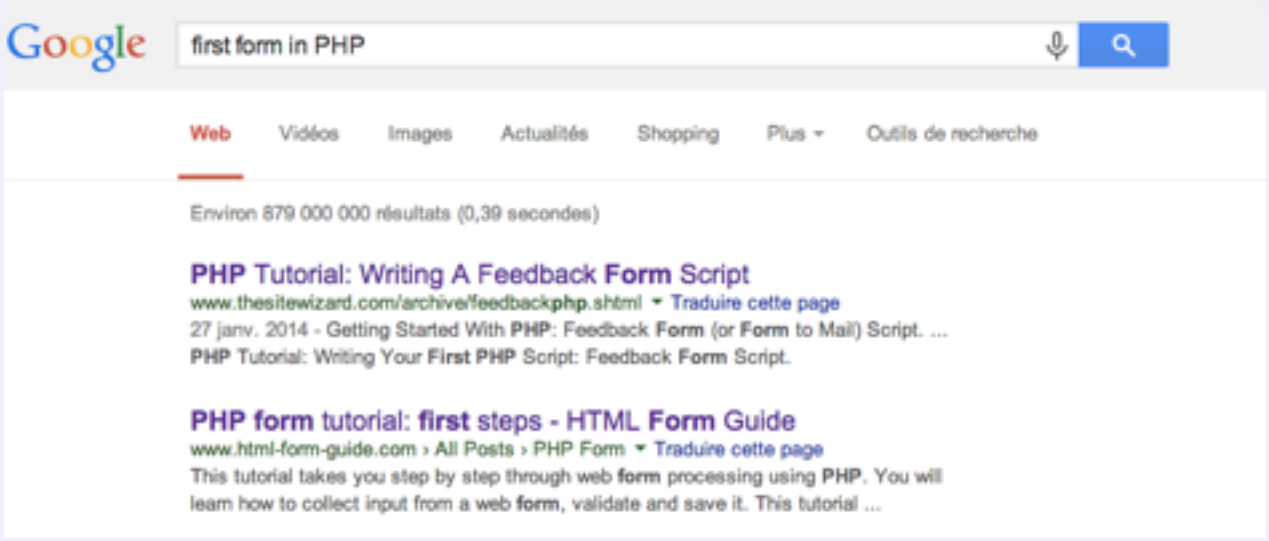

First form in PHP


```
<?php
  $email = $_REQUEST['email'] ;
  $message = $_REQUEST['message'] ;

  mail( "yourname@example.com", "Feedback Form Results",
    $message, "From: $email" );
  header( "Location: http://www.example.com/thankyou.html" );
?>
```

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How to create a login page in PHP and Mysql

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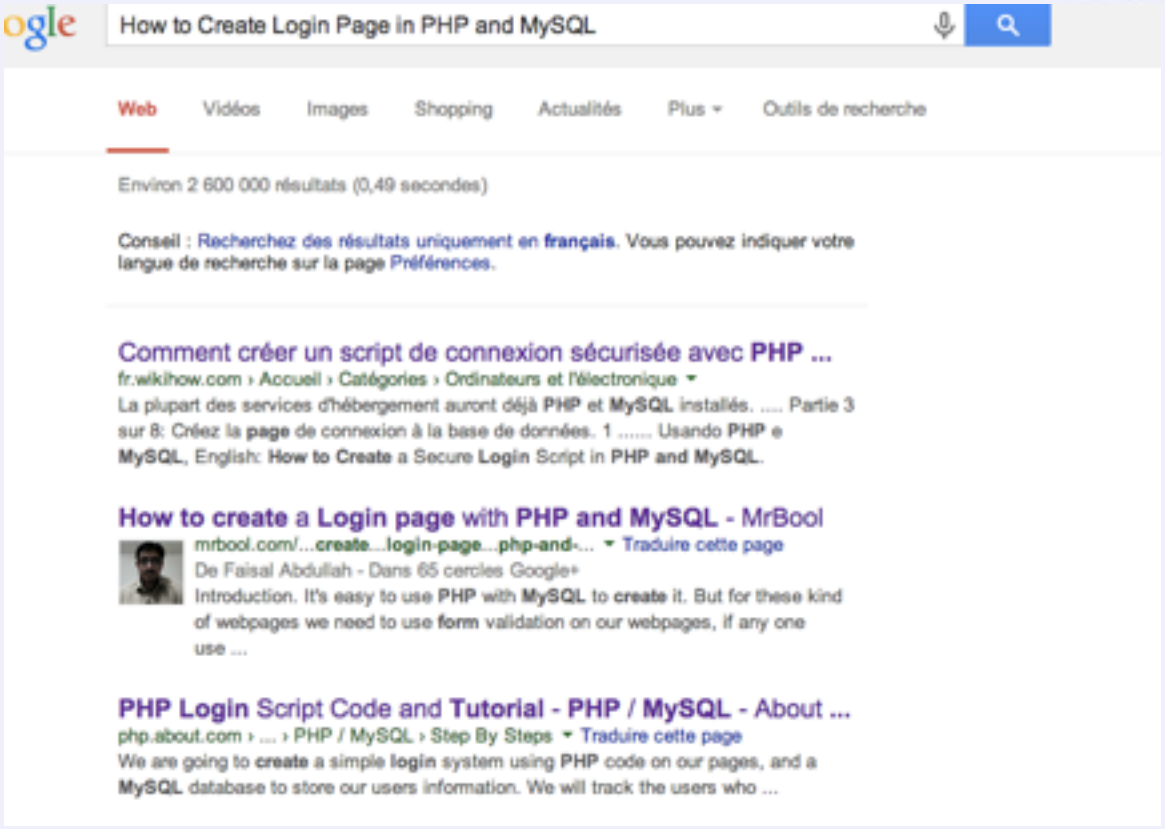

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```php
<?php
define('DB_HOST', 'localhost');
define('DB_NAME', 'practice');
define('DB_USER','root');
define('DB_PASSWORD','');

$con=mysql_connect(DB_HOST,DB_USER,DB_PASSWORD) or die("Failed to connect to MySQL: " . mysql_error());
$db=mysql_select_db(DB_NAME,$con) or die("Failed to connect to MySQL: " . mysql_error());
/* $ID = $_POST['user']; $Password = $_POST['pass']; */

function SignIn() {
        session_start(); //starting the session for user profile page
        if(!empty($_POST['user'])) //checking the 'user' name which is from Sign-In.html, is it empty or have some text
        {
         $query = mysql_query("SELECT * FROM UserName where userName = '$_POST[user]' AND pass = '$_POST[pass]'")
or die(mysql_error());
         $row = mysql_fetch_array($query) or die(mysql_error());

                if(!empty($row['userName']) AND !empty($row['pass']))
                {
                $_SESSION['userName'] = $row['pass'];
                        echo "SUCCESSFULLY LOGIN TO USER PROFILE PAGE...";
                } else {
                echo "SORRY... YOU ENTERD WRONG ID AND PASSWORD... PLEASE RETRY...";
                 }
        }
 }

if(isset($_POST['submit']))
{
 SignIn();
} ?>
```

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Game Over....

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- Did you have VoIP Phone ?
- Did you have IP Router / Broadband box ?
- Did you have smartphone ?
- Did you have customers / partners over Internet ?

Anything else ?

Why Application Security ?

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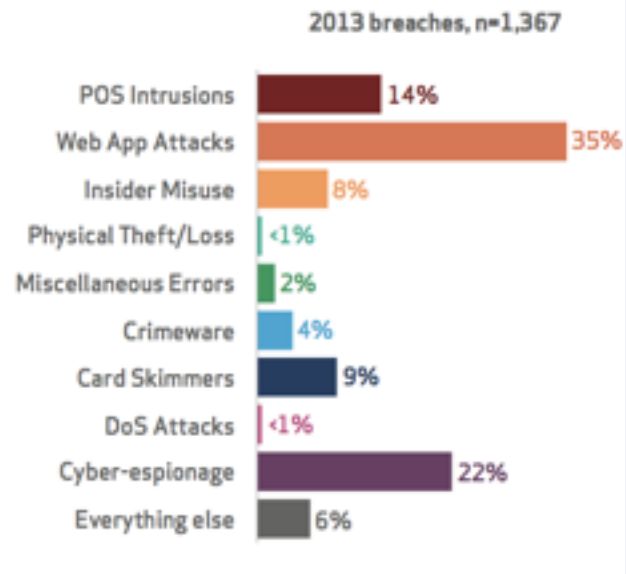
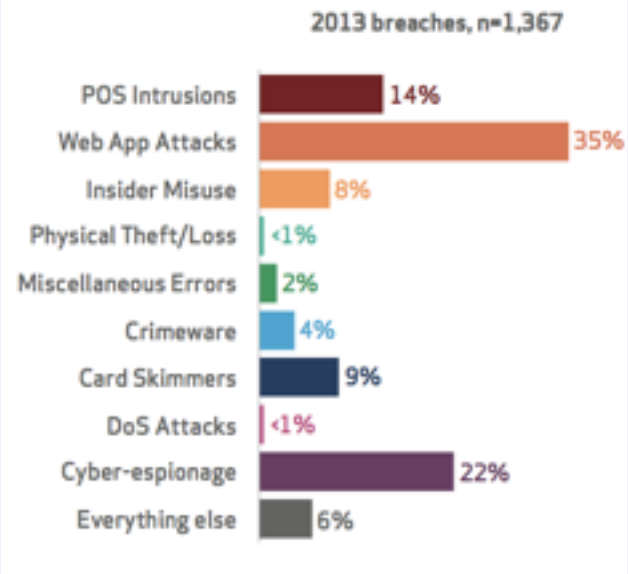
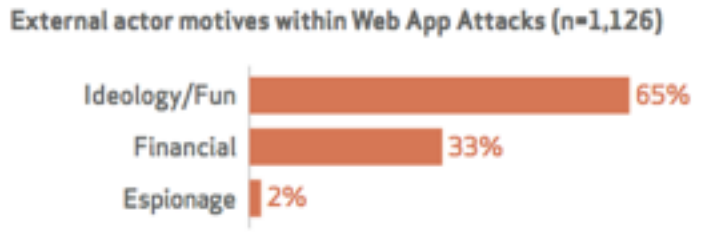
We are living in a Digital environment, in a Connected World

- Most of websites vulnerable to attacks
- Important % of web-based Business *(Services, Online Store, Self-care, Telcos, SCADA, ...)*







Who win ?

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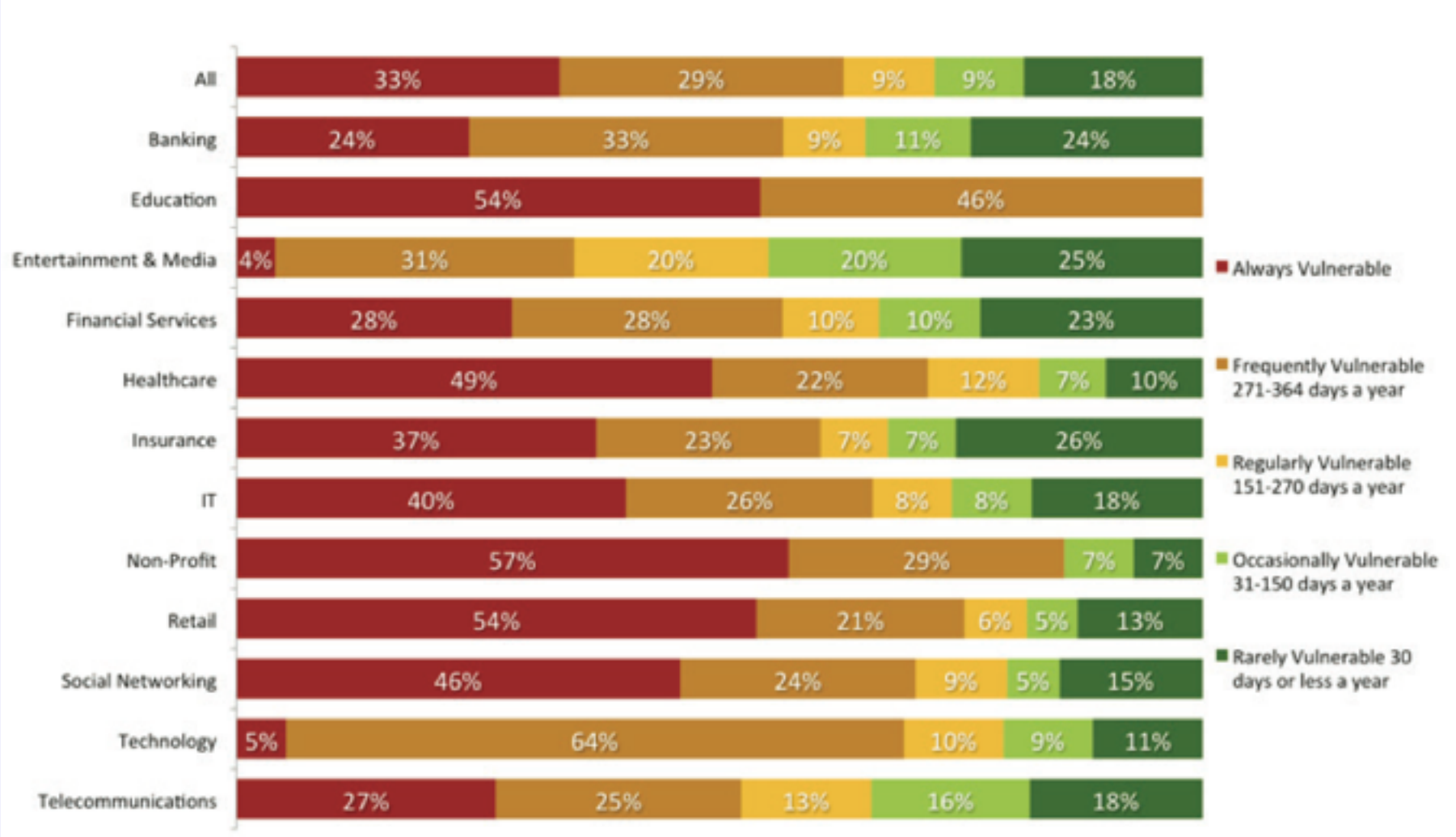

Vulnerabilities ?

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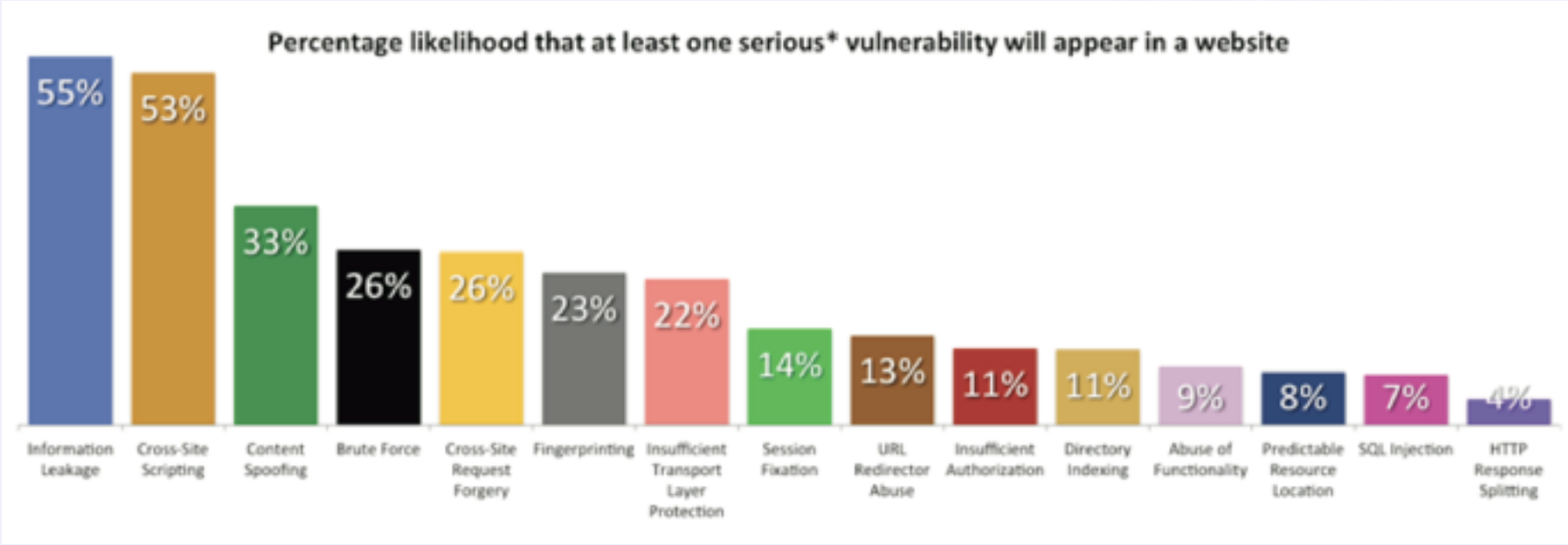

What is OWASP

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Mission Driven

Nonprofit | World Wide | Unbiased

OWASP **does not endorse or recommend commercial products or services**

What is OWASP

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Community Driven

30,000 Mail List Participants

200 Active Chapters in 70 countries

1600+ Members, 56 Corporate Supporters

Around the World

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200 Chapters, 1 600+ Members, 20 000+ Builders, Breakers and Defenders

What is OWASP

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Quality Resources

200+ Projects

15,000+ downloads of tools, documentation

Quality Resources

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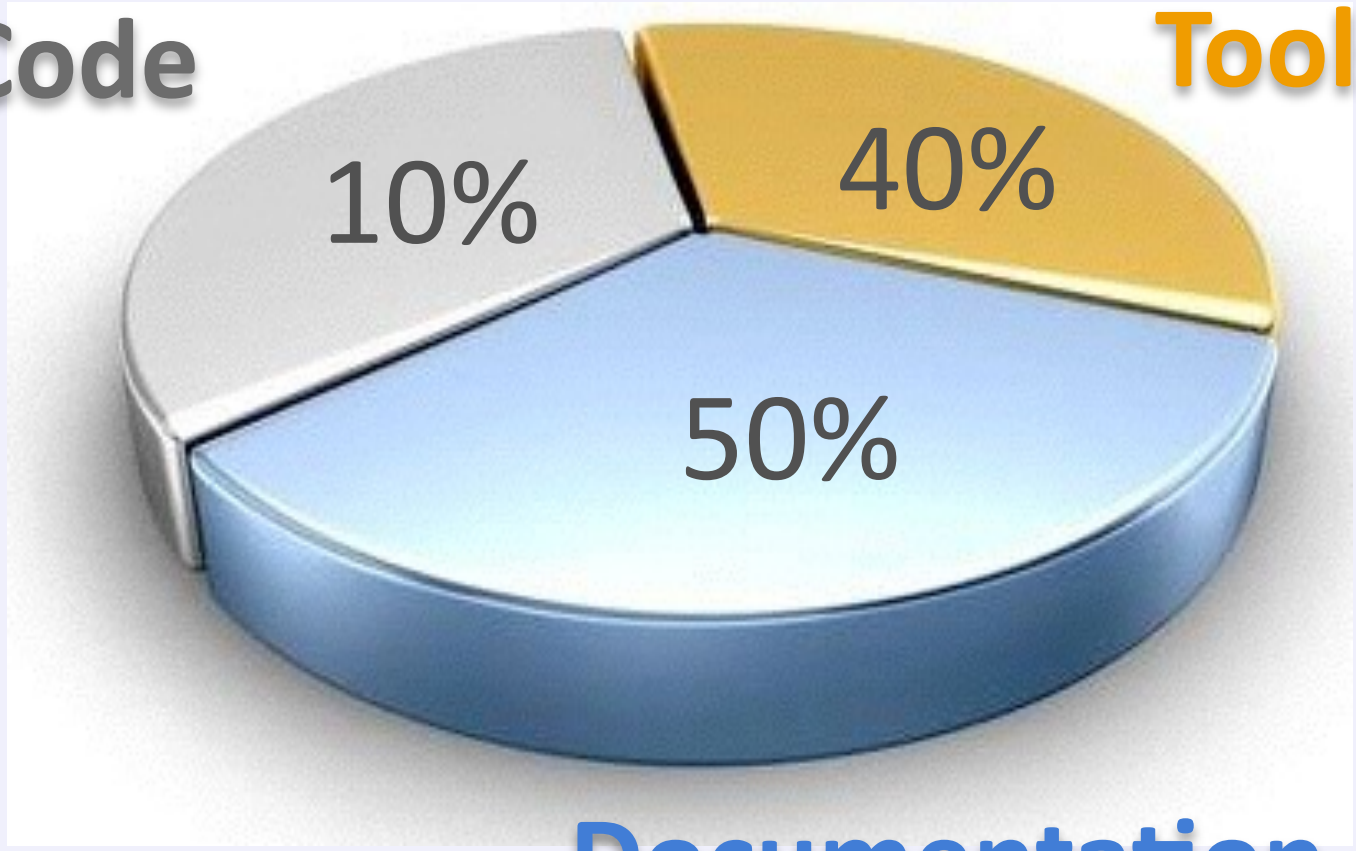

Security Lifecycle

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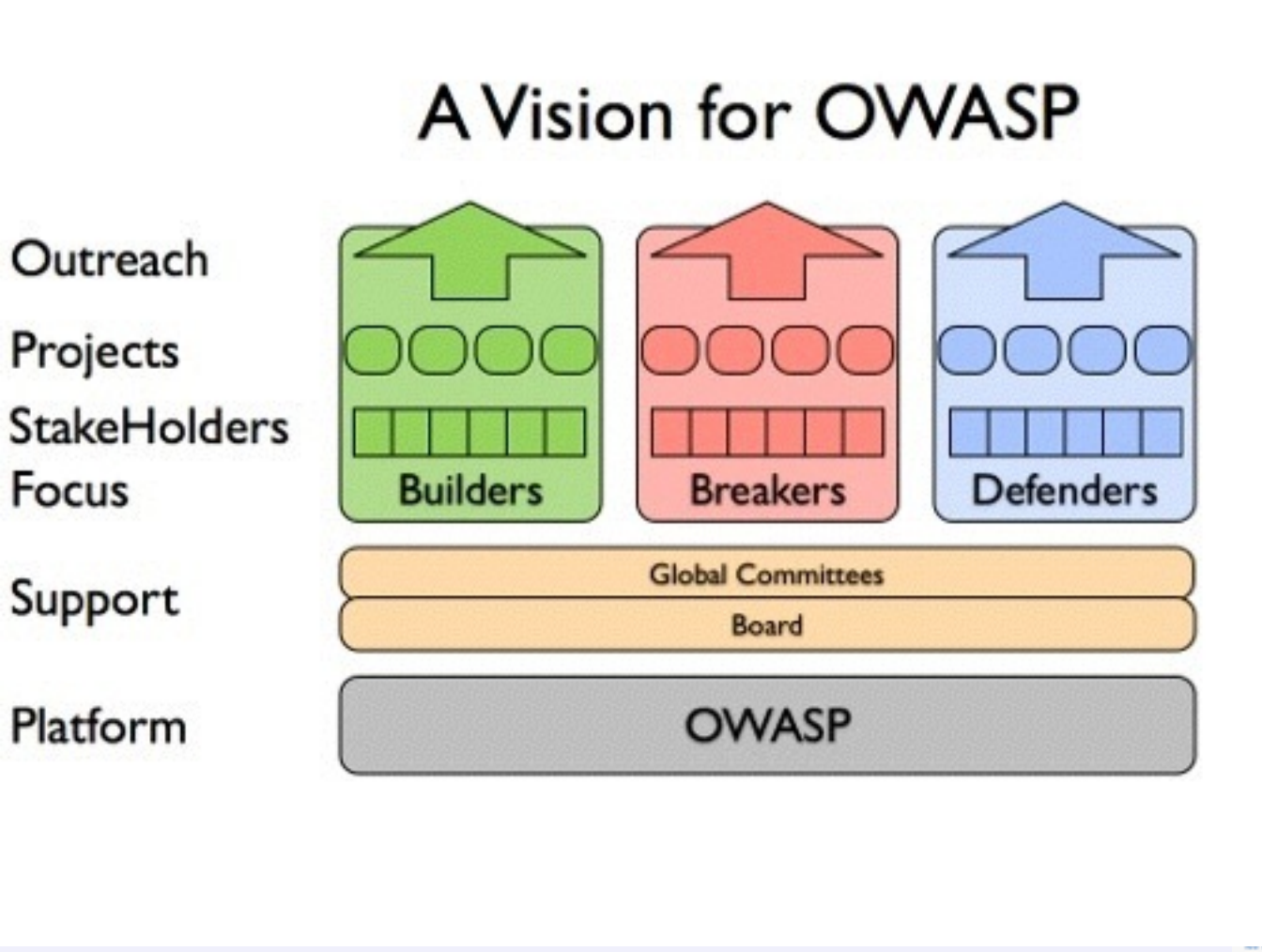

Security Resources

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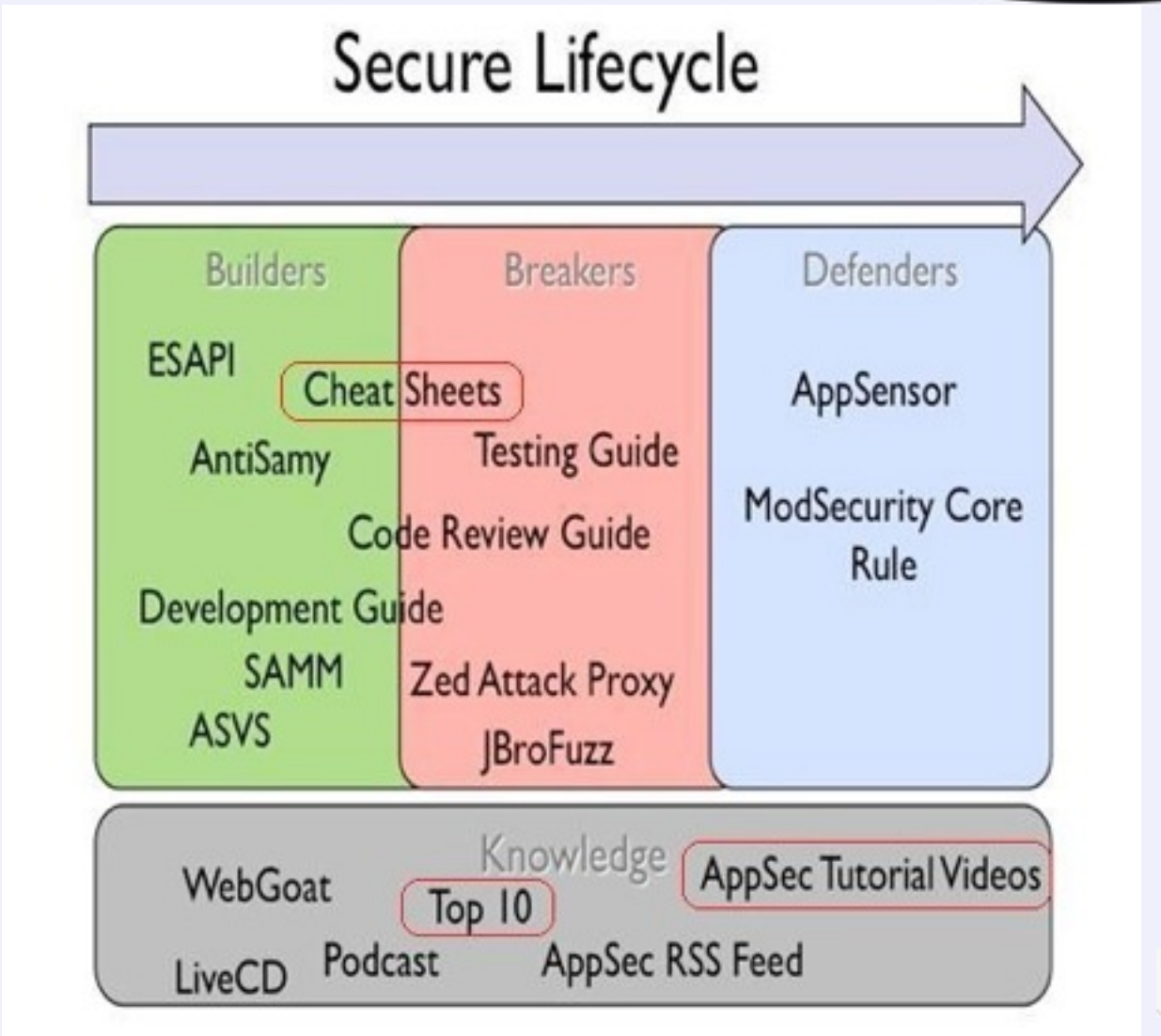

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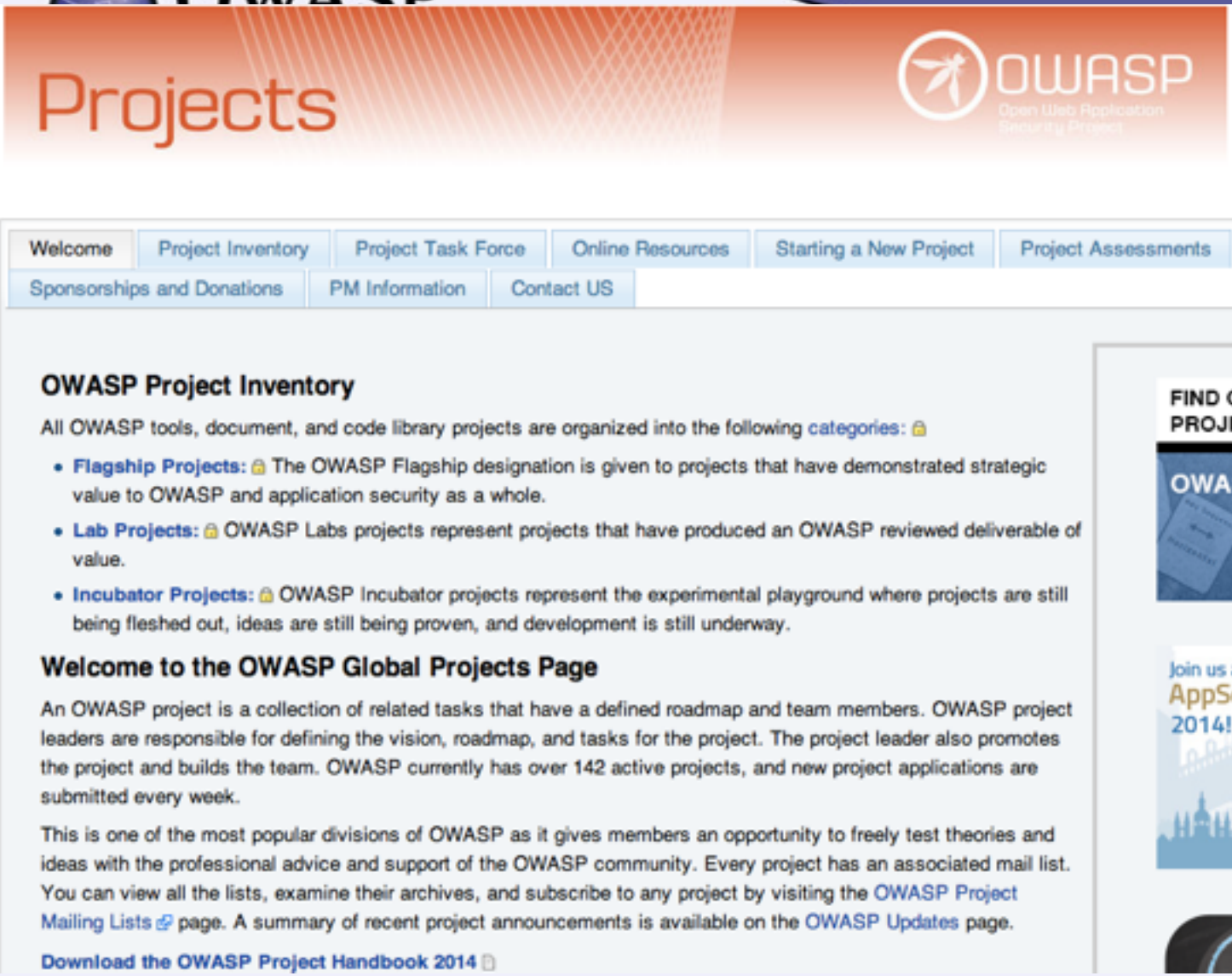
- News
- A Blog
- A Podcast
- Memberships
- Mailing Lists
- A Newsletter
- Apple App Store
- Video Tutorials
- Training Sessions
- Social Networking


OWASP Projects



OWASP Top10 2013

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A1: Injection	A2: Violation de Gestion d'authentification et de session	A3: Cross Site Scripting (XSS)	A4:Référence directe non sécurisée à un objet
A5: Mauvaise configuration sécurité	A6 : Exposition de données sensibles	A7: Manque de contrôle d'accès fonctionnel	A8: Cross Site Request Forgery (CSRF)
	A9: Utilisation de composants avec des vulnérabilités connues	A10: Redirections et transferts non validés	

OWASP Top10 2013

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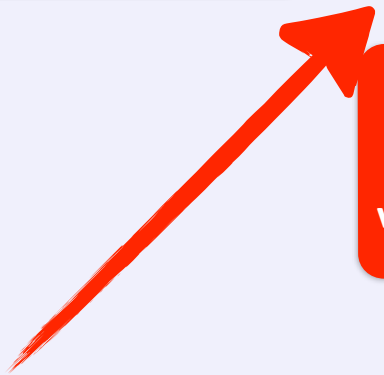

ex-A9(transport non sécurisé) +
A7(Stockage crypto)

OWASP Top10 2013

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ex-A9(transport non sécurisé) +
A7(Stockage crypto)

Cheat Sheets

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Developer Cheat Sheets

- **PHP Security Cheat Sheet**
- OWASP Top Ten Cheat Sheet
- Authentication Cheat Sheet
- **Cross-Site Request Forgery (CSRF) Prevention Cheat Sheet**
- Cryptographic Storage Cheat Sheet
- Input Validation Cheat Sheet
- **XSS (Cross Site Scripting) Prevention Cheat Sheet**
- DOM based XSS Prevention Cheat Sheet
- Forgot Password Cheat Sheet
- **Query Parameterization Cheat Sheet**
- **SQL Injection Prevention Cheat Sheet**
- Session Management Cheat Sheet
- **HTML5 Security Cheat Sheet**
- Transport Layer Protection Cheat Sheet
- Web Service Security Cheat Sheet
- Logging Cheat Sheet
- JAAS Cheat Sheet

Mobile Cheat Sheets

- IOS Developer Cheat Sheet
- Mobile Jailbreaking Cheat Sheet

Draft Cheat Sheets

- Access Control Cheat Sheet
- REST Security Cheat Sheet
- Abridged XSS Prevention Cheat Sheet
- Password Storage Cheat Sheet
- Secure Coding Cheat Sheet
- Threat Modeling Cheat Sheet
- Clickjacking Cheat Sheet
- Virtual Patching Cheat Sheet
- Secure SDLC Cheat Sheet
- Web Application Security Testing Cheat Sheet
- Application Security Architecture Cheat Sheet

Enterprise Security API

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Project Leader: Chris Schmidt, Chris.Schmidt@owasp.org

Purpose: A free, open source, web application security control library that makes it easier for programmers to write lower-risk applications

Security controls that are included:
There are reference implementations for each of the following security controls:

- Authentication
- Access control
- Input validation
- Output encoding/escaping
- Cryptography
- Error handling and logging
- Communication security
- HTTP security
- Security configuration

PHP Version : https://code.google.com/p/owasp-esapi-php/

https://www.owasp.org/index.php/Category:OWASP_Enterprise_Security_API

OWASP PHP Security Project

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Project Leader: Abbas Naderi,
Abbas.Naderi@owasp.org

Purpose: OWASP PHP Security Project is an effort by a group of PHP developers in securing PHP web applications, using a **collection of decoupled flexible secure PHP libraries, as well as a collection of PHP tools.**

https://www.owasp.org/index.php/OWASP_PHP_Security_Project

Libraries Offered

- Basic Password Library
- Advance Password Library
- User Library and Management
- Crypto Library
- Password Library
- Database Library
- Download Manager Library
- HTTP Library
- Tainted Library
- Logs Library
- Session Library
- Core Library
- Scanner Tool

Tools Offered

- XSS Resolver
- SQL Injection Detector
- Taint Tracker

Damages Mitigated

- Brute Force Attacks
- Cross-site Scripting(XSS) Attacks
- SQL Injection Attacks
- Session Fixation, Session Hijacking, Session Guessing
- Encrypting sensitive information in configuration files
- Replacement of native PHP's faulty functions
- A secure PRNG (Pseudorandom number generator)
- Secure implementation of "remember-me" and "temporary password" features
- Capability to mark/disallow suspicious

Guides

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Development Guide: comprehensive manual for designing, developing and deploying secure Web Applications and Web Services

Code Review Guide: mechanics of reviewing code for certain vulnerabilities & validation of proper security controls

Testing Guide: understand the what, why, when, where, and how of testing web applications

https://www.owasp.org/index.php/Category:OWASP_Guide_Project
https://www.owasp.org/index.php/Category:OWASP_Code_Review_Project
https://www.owasp.org/index.php/Category:OWASP_Testing_Project

Zed Attack Proxy

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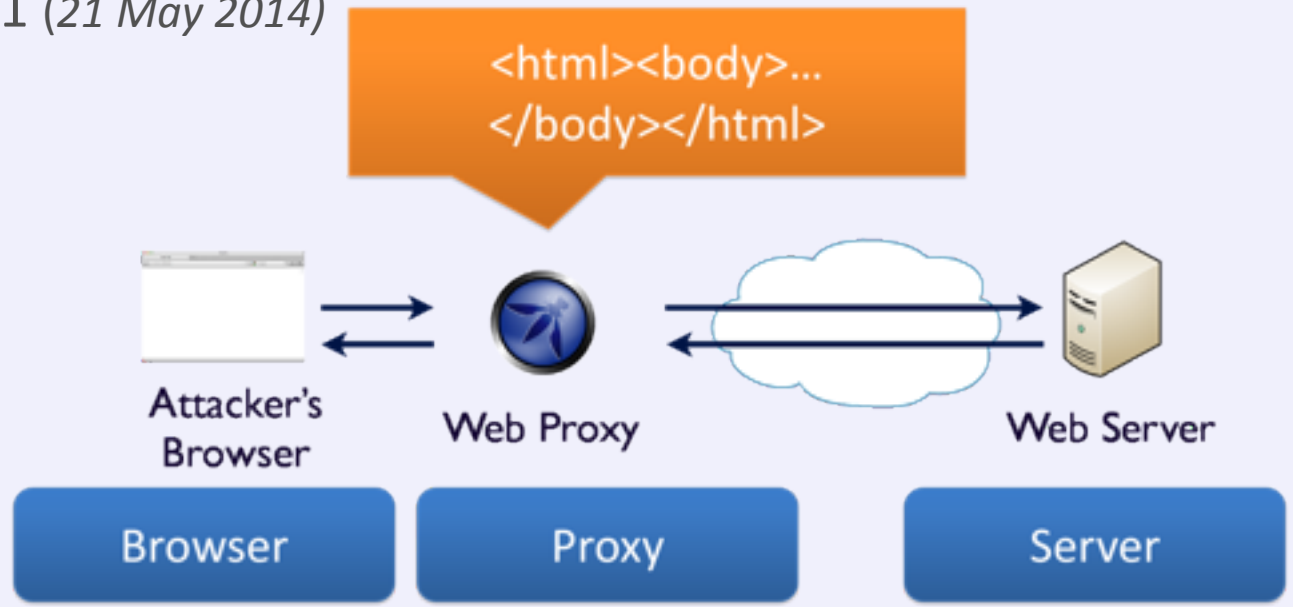
Project Leader: Simon Bennetts (aka Psiinon), psiinon@gmail.com

Purpose: The Zed Attack Proxy (ZAP) provides automated scanners as well as a set of tools that allow you to find security vulnerabilities manually in web applications.

Last Release: ZAP 2.3.1 (*21 May 2014*)



https://www.owasp.org/index.php/OWASP_Zed_Attack_Proxy_Project

The OWASP Secure Software Contract Annex

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Intended to help software developers and their clients negotiate important contractual terms and conditions related to the security of the software to be developed or delivered.

CONTEXT: Most contracts are silent on these issues, and the parties frequently have dramatically different views on what has actually been agreed to.

OBJECTIVE: Clearly define these terms is the best way to ensure that both parties can make informed decisions about how to proceed.

https://www.owasp.org/index.php/OWASP_Secure_Software_Contract_Annex

Dates

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- RSSIA Bordeaux : 20 Juin
  - HeartBleed revisited
- AppSec Europe 2014 - Cambridge :

- Java User Groupe Lille & Paris
  - Secure Coding for Java a la rentrée 2014
- Club 27001 /Paris - 25 Septembre 2014
  - Présentation de la norme ISO 27034

Soutenir l'OWASP

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- Différentes solutions :
  - Membre Individuel : 50 $
  - Membre Entreprise : 5000 $
  - Donation Libre
- Soutenir uniquement le chapitre France :
  - Single Meeting supporter
    - Nous offrir une salle de meeting !
    - Participer par un talk ou autre !
    - Donation simple
  - Local Chapter supporter :
    - 500 $ à 2000 $

License

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