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THE PHP PROFESSIONALS

“PHP in the real world”

For lack of a less cliche title

Ivo Jansch

De Montfort University, March 26 2009

About me

- CTO at Ibuildings
  - Development using PHP (websites, applications)
  - ~85 people
  - Big projects (high traffic, multi-tier, clusters, high availability, large teams)
  - Consultancy (training, audits)
  - European focus (from offices in NL and UK)
- Geek!
  - Author of several Open Source projects
  - Blogger
  - Column in php|architect magazine
  - Interested in PHP, Web 2.0, Science

Contents

- A look at PHP
- PHP Development Lifecycle
- Case Studies
- PHP and Other Technologies
- Open Source
- Open Discussion

A look at PHP

Past & Present

Where did PHP come from?

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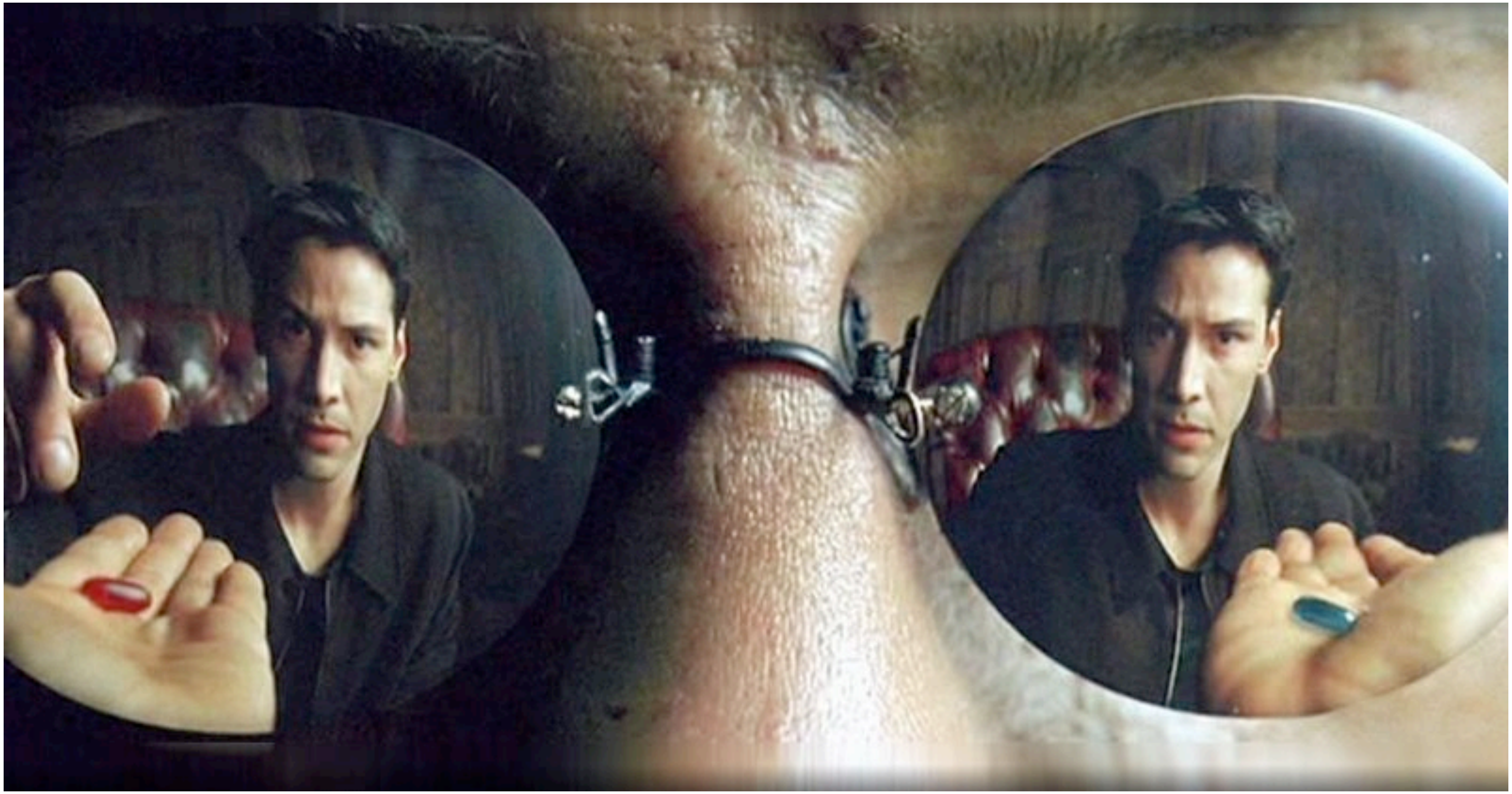
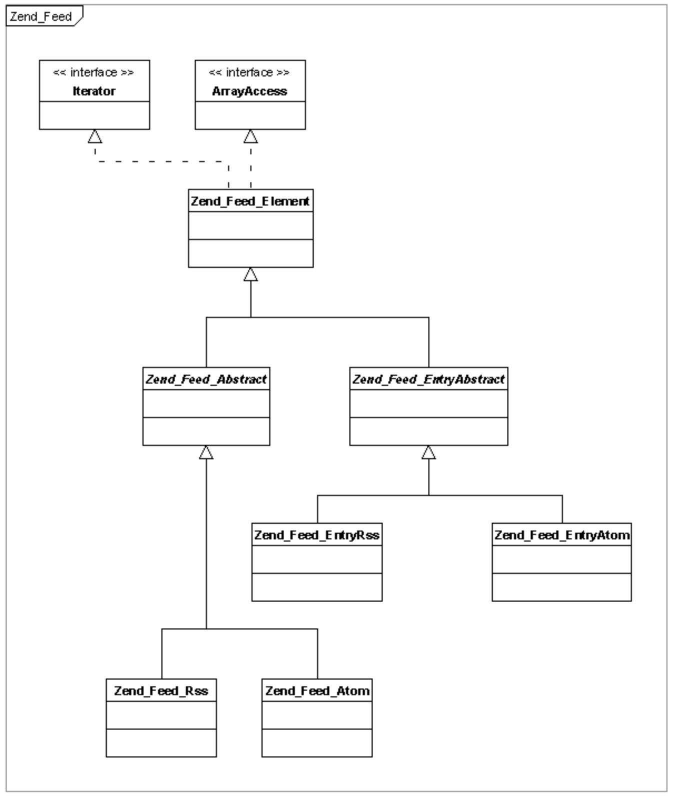
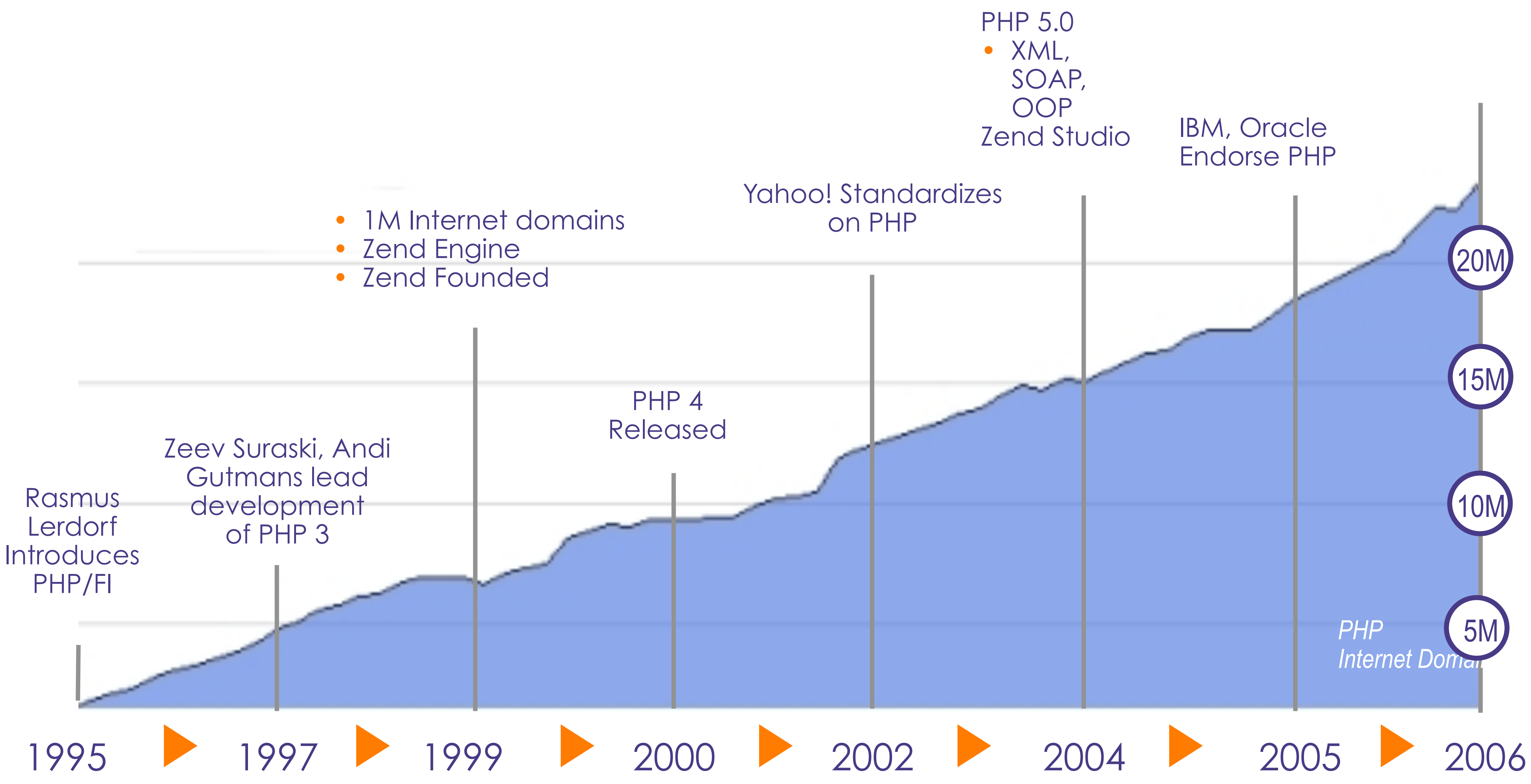
Welcome to the real world!



Where are we now?



History of PHP



Rasmus Lerdorf Introduces PHP/FI

Zeev Suraski, Andi Gutmans lead development of PHP 3

- 1M Internet domains
- Zend Engine
- Zend Founded

PHP 4 Released

Yahoo! Standardizes on PHP

PHP 5.0
- XML, SOAP, OOP

Zend Studio

IBM, Oracle Endorse PHP

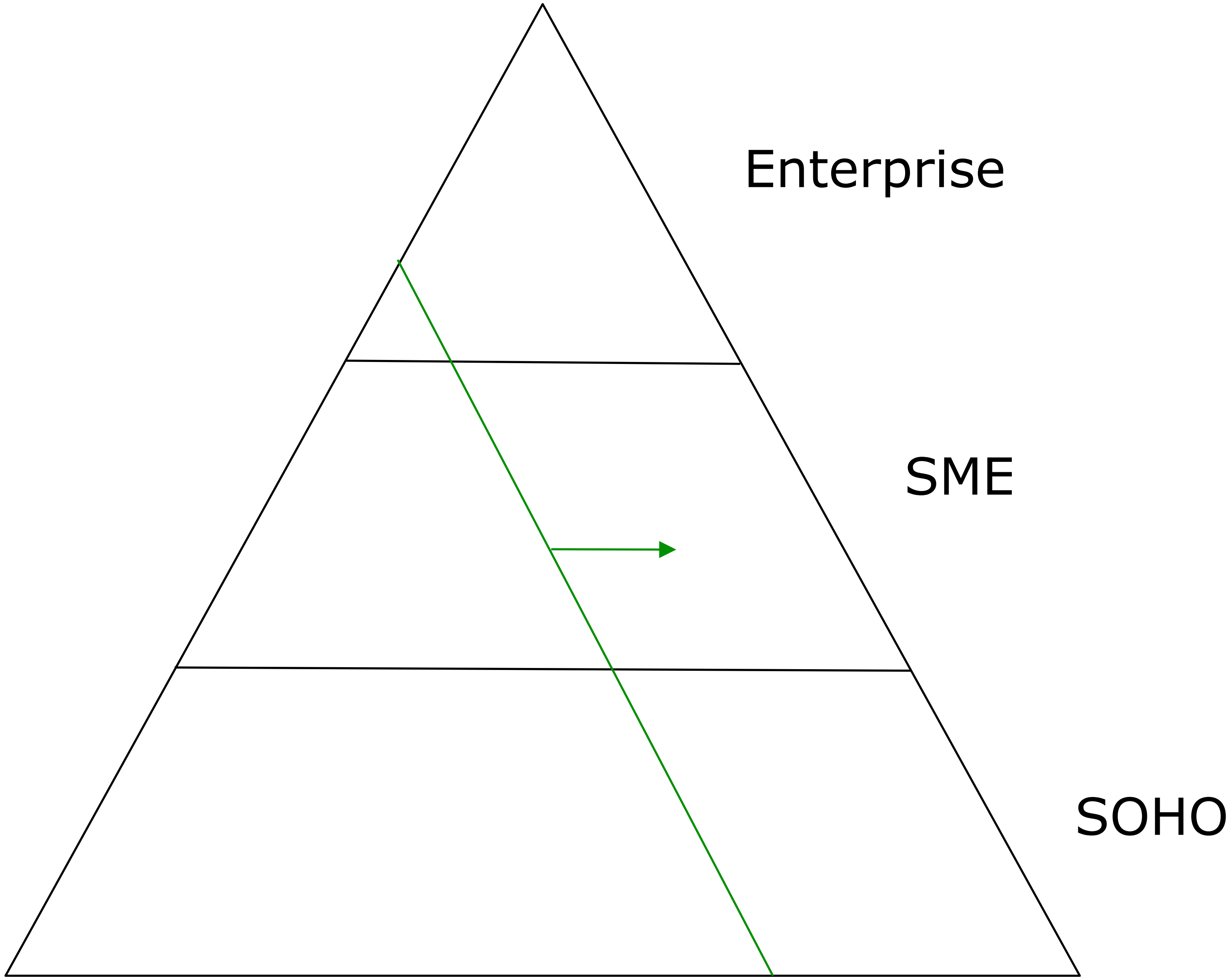
Why use PHP?

- Used by more than 25 million domains
- Made for the web
- Open Source
- Documentation
- Platform independent (Linux, Windows, Unix, …)
- Backed by Zend, Microsoft, IBM etc.
- Easy to learn
- Versatile
- Short time-to-market

PHP is everywhere

YAHOO!®
BT
NASA
orange™
hp®
invent
ups™
FIAT
Ladbrokes
BBC

PHP's Quest



PHP is everywhere

Top 10 internet sites in March 2009:

1. Google
2. Facebook
3. Windows Live
4. Yahoo
5. YouTube
6. BBC
7. Ebay
8. MSN
9. Wikipedia
10. Bebo

Source: Alexa.com

PHP is everywhere

Top 10 internet sites in March 2009:

1. Google	Python/C
2. Facebook	**PHP**
3. Windows Live	.NET
4. Yahoo	**PHP**
5. YouTube	Python
6. BBC	Java/**PHP**
7. Ebay	Java/**PHP**
8. MSN	.NET
9. Wikipedia	**PHP**
10. Bebo	Java

Common PHP misconceptions

- “PHP is for hobbyists”
  - Low learning curve
  - Proper software engineering => proper quality
- “PHP is insecure”
  - PHP is a language; it’s the programmer that implements security
- “PHP is not a real language”
  - It’s a dynamic scripting language; but a powerful one

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PHP Development Life Cycle

(or at least, the Ibuildings version)

Cowboy Coding

PHP Software Lifecycle

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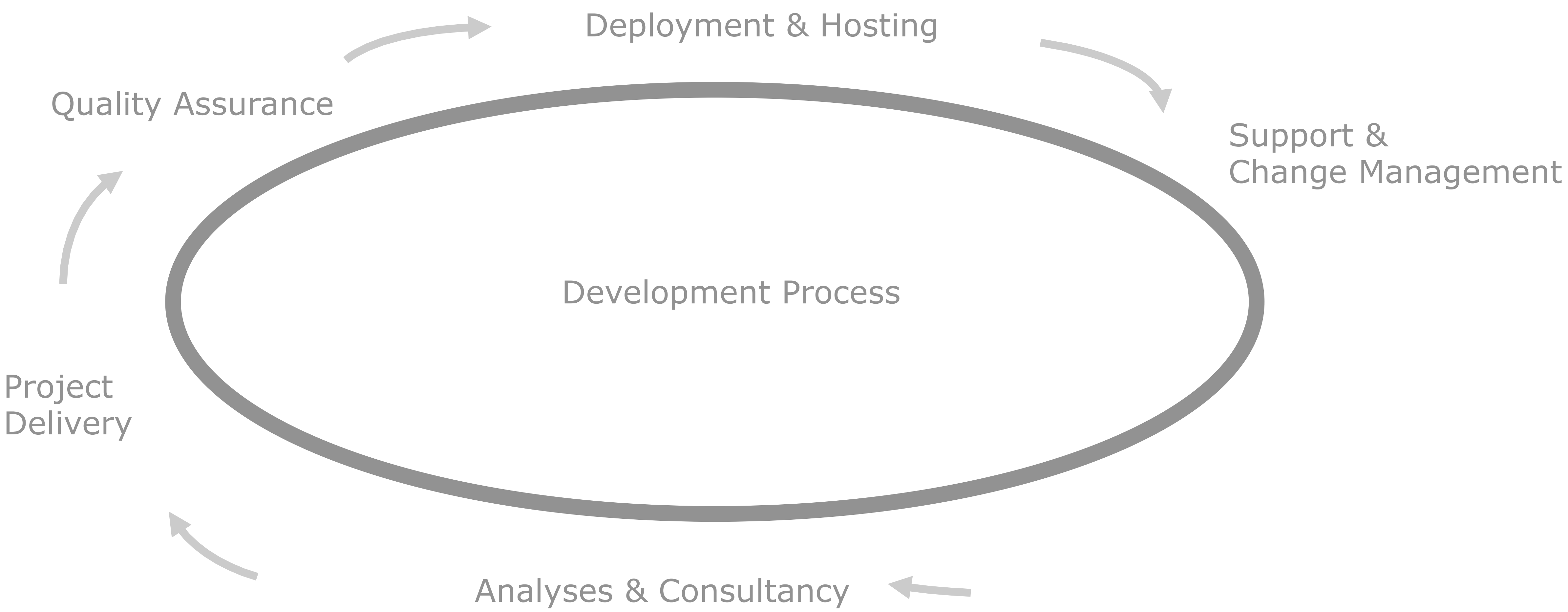

Deployment & Hosting

Support & Change Management

Analyses & Consultancy

Project Delivery

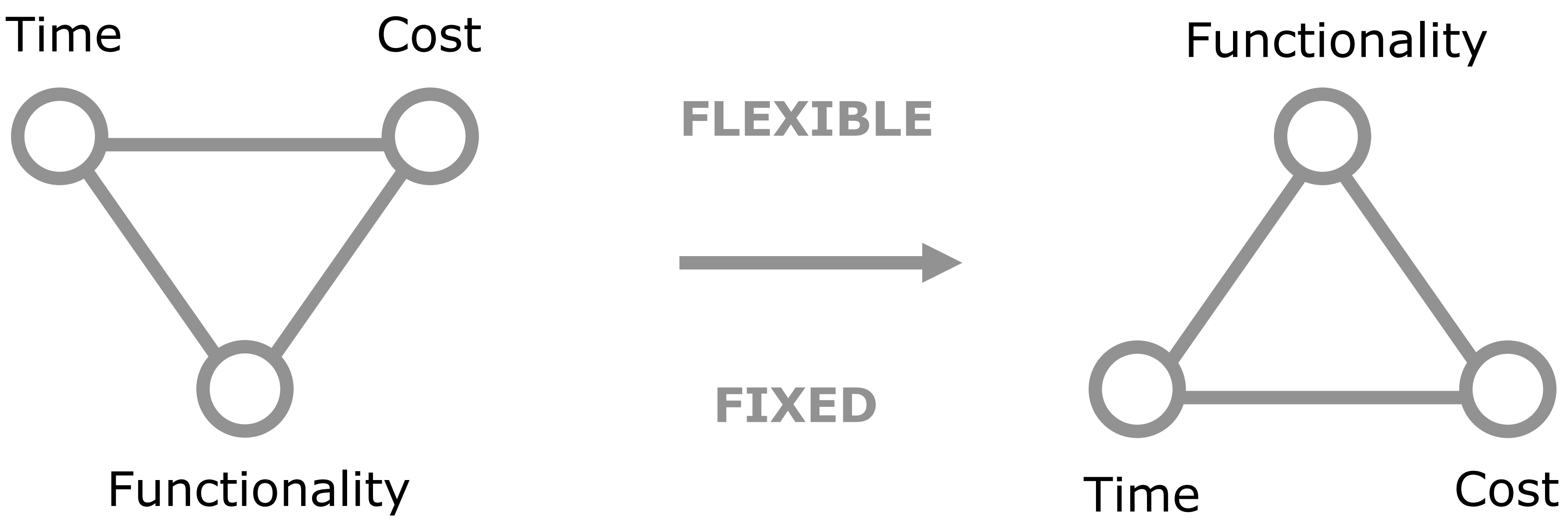
Quality Assurance

Development Process

Project Delivery Practices

- Iterative development Process
  - Based on fixed time and resources
  - **Flexible scoping** (functionality) & quality
- Project start phase
  - Project planning (releases/iterations/tasks)
  - Optional discovery & consultancy phase
  - Analysis & overall software design (Architecture)
  - Building custom development environment
- Steps for each iteration
  - Meeting to define iteration scope (in stories)
  - Estimate development effort
  - Development
  - Meeting with presentation of deliverables

Flexible Scoping



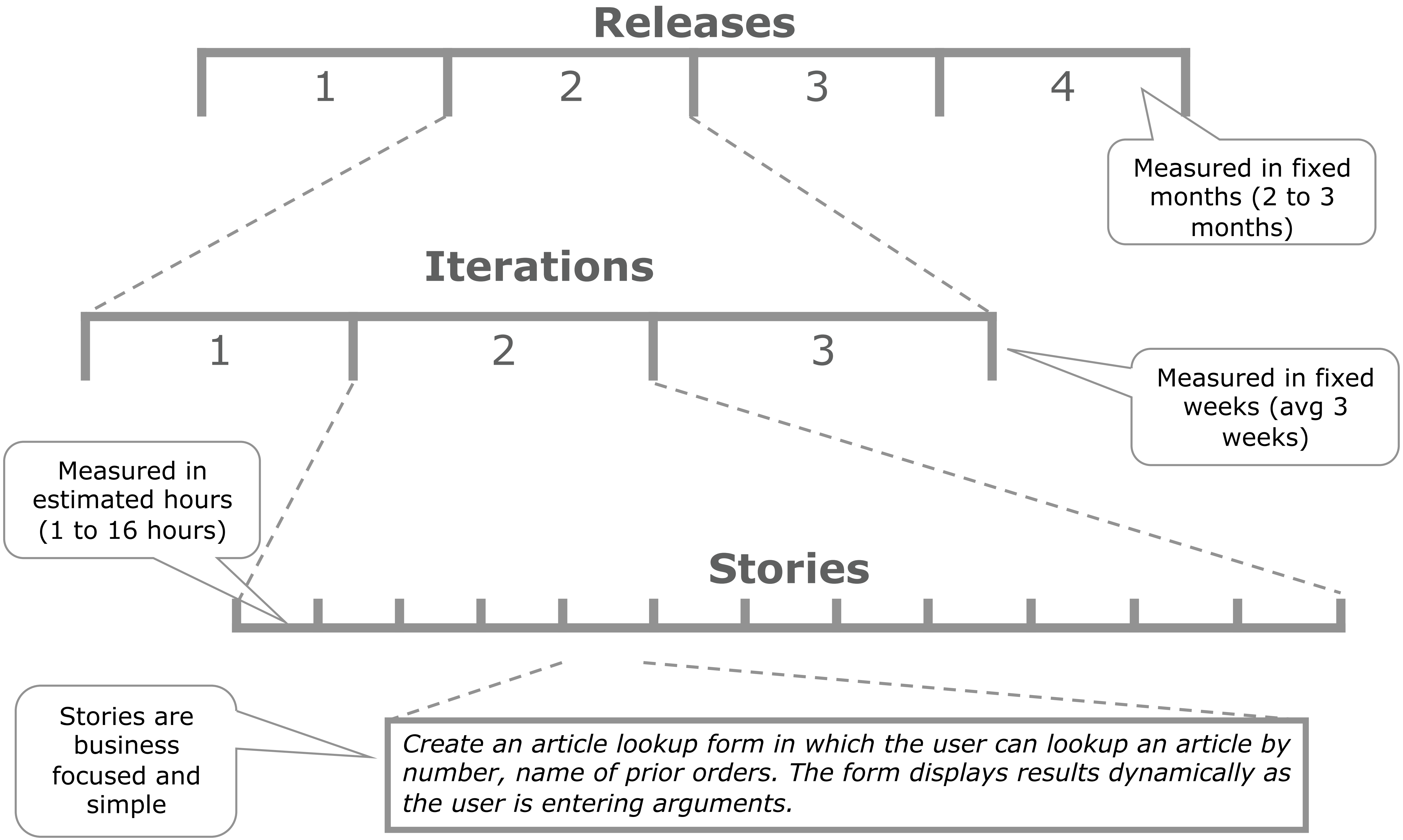
- 100% of requirements are delivered (even the unimportant ones)
- Less or no flexibility in changing the requirements or priorities after developments starts.
- Projects are delivered too late in many cases.
- Budget spending is difficult to manage.

> *"You know exactly what you get, but just not when or at what cost."*

- All business-critical requirements are delivered on time and within budget.
- Worst-case: Some non-critical requirements are not delivered.
- Based on fixed delivery dates and thus fixed costs.
- All of the budget is spend on that what is most important for your business.

> *"You know you'll get all business critical parts on time and within budget."*

Iterative Development



Measured in fixed months (2 to 3 months)

Measured in fixed weeks (avg 3 weeks)

Measured in estimated hours (1 to 16 hours)

Stories are business focused and simple

Create an article lookup form in which the user can lookup an article by number, name of prior orders. The form displays results dynamically as the user is entering arguments.

The first step

The first step

Think!

Architecture

- Software selection (frameworks, packages)
- Non functional requirements!
- Think ahead
- Beware of over engineering (YAGNI)

Quality Assurance

- QA process integral part of iterative development process
  - Flexible quality target levels
    - Based on actual quality requirements of clients
  - ‘Test first’ principle applied (Test Driven Development)
  - Software documentation
  - Bug tracking & knowledge base system
  - Debugging and profiling tools
- Testing method & practices
  - Automated testing (Unit testing and Web testing)
  - Manual testing
  - User Interface testing
  - Client environment testing (Browsers and Operating Systems)

A word on Frameworks

- Why use a framework?
  - Don’t reinvent the wheel
  - Good programmers are lazy
  - Even quicker time to market
  - Provides structure
  - Proven concepts

Frameworks

- Zend Framework
  - http://framework.zend.com
  - Component framework
  - “Use at will architecture”
- Symfony
  - http://symfony-project.org
  - Full Stack framework
  - Doesn’t reinvent the wheel
- ATK
  - http://www.atk-framework.com
  - Backend framework
  - Code minimization

Teamwork

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Important:

- Standardization of processes

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- Source Control (SVN)

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Case Studies

A few example PHP projects

Common Challenges

- Performance & Scalability
- Security
- Maintainability
- Time to Market

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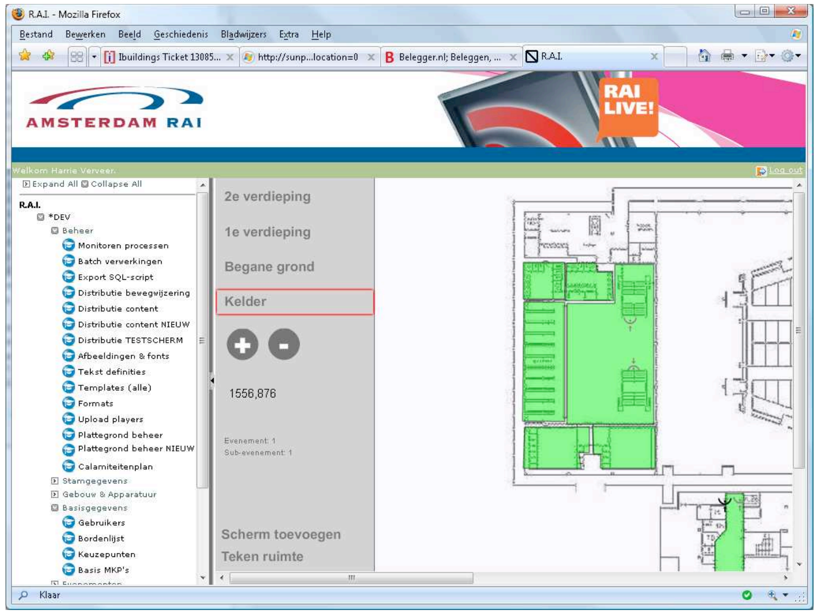
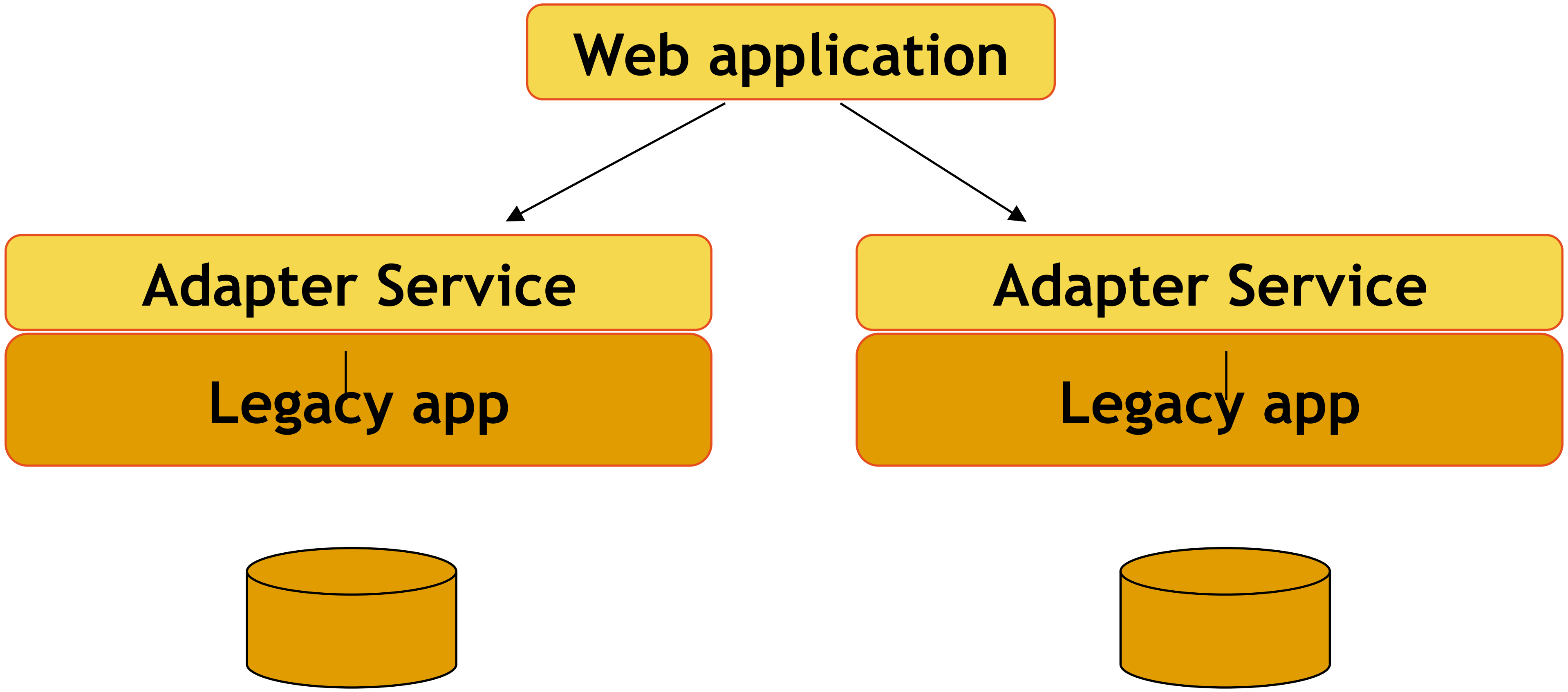
PHP and other technologies

There’s still hope for Java

Legacy applications



Case: Amsterdam RAI
System-i/AS400
legacy application



Web application

Adapter Service

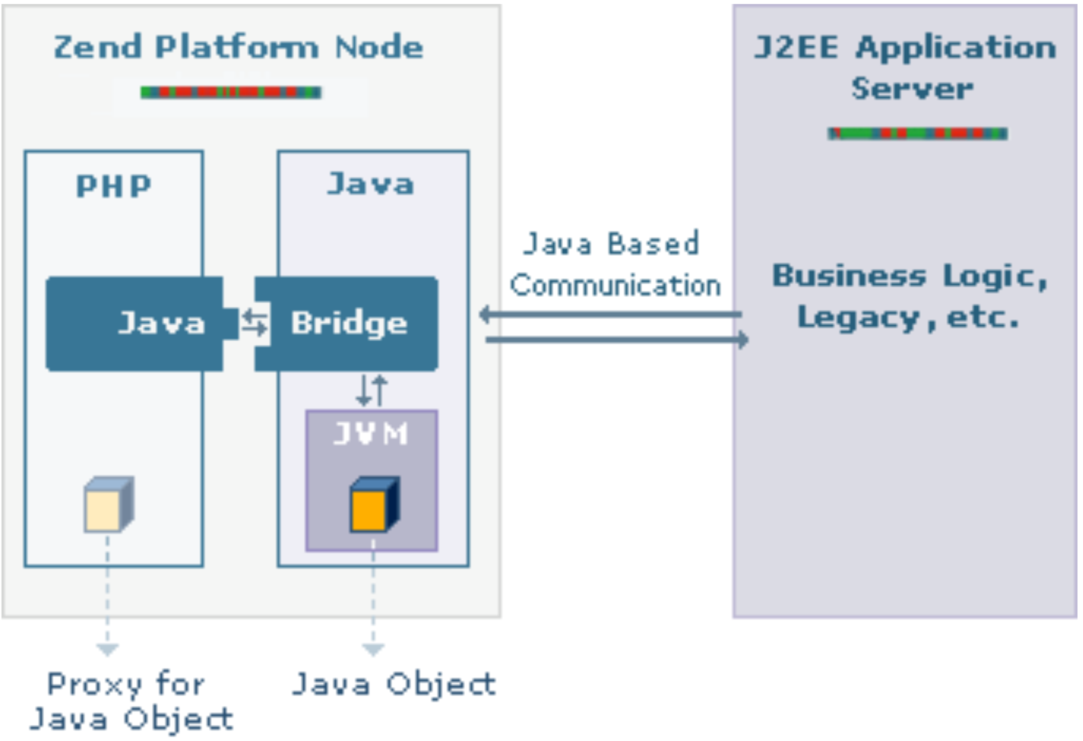
Legacy app

Adapter Service

Legacy app

‘Caffeinated PHP’

- **The Negatives**
  - PHP does not always have all of the functionality needed
  - Java development/implementation is more difficult than many situations require
- **The Positives**
  - PHP will do most of what you need to do, easier.
  - Java can fill almost any feature void in PHP for a web-based deployment



Source: Kevin Schroeder (Zend)

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Open Source

A bit of background information

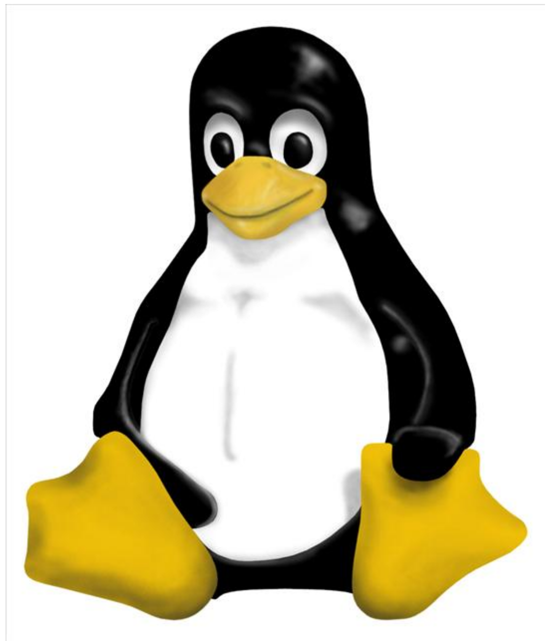
Open Source in a nutshell

- Access to Source Code
- Freedom to change
- Freedom to distribute
- Freedom to use

- Open Source Definition – www.opensource.org

- Speech versus Beer

Well-known examples



Open Source in the Industry

IBM®
Sun® microsystems
Adobe®
Microsoft®

History

< 1980	Software was always open
80s, 90s	Rise of commercial software, EULAs
1985	FSF founded by Richard Stallman
1991	Linus Torvalds' first version of Linux
1997	Eric Raymond's "The Cathedral & The Bazaar"
1998	Term 'Open Source' coined Netscape / Mozilla release OSI founded
1999	Red Hat goes IPO
2000-now	Adoption by industry

Business Models

- Knowledge model
  - Support
  - Training
  - Bespoke development
- Licence model
  - Commercial license
  - Dual licensing
- Indirect model
  - Projects, implementation
  - Lead generator for other products
  - Marketing instrument

Takeaways

If you were sleeping, just remember this

Takeaways

- Ibuildings is cool
- PHP is a serious language
- PHP is used in big, real world projects
- It’s important to have a good life cycle for PHP projects
- PHP can be used in conjunction with other technologies

Shameless Plug

- php|architect's Guide to Enterprise PHP Development
- ISBN: 978-0-9738621-8-8
- Order at phparch.com or amazon.co.uk

Questions ?

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Thank you!

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