Modernizing Legacy Applications on i5 with PHP

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The PHP Company

Key Priorities articulated by CTOs, CIOs and VPs of Engineering

- Leverage investment in System I infrastructure
  - **Expose DB2/400 data via the web**
  - **Webify green screen applications for end-users**
- Maximize leverage of i5 computing power
  - Move Windows/Linux based PHP apps to System I
  - Deploy new web based applications
- Mitigate and minimize risk/cost of migrations
- Retool RPG programmers and access lower cost development resources to address business needs
- Leverage benefits of open-source technologies - create portable applications

Why are organizations leveraging PHP to web-enable their legacy applications?

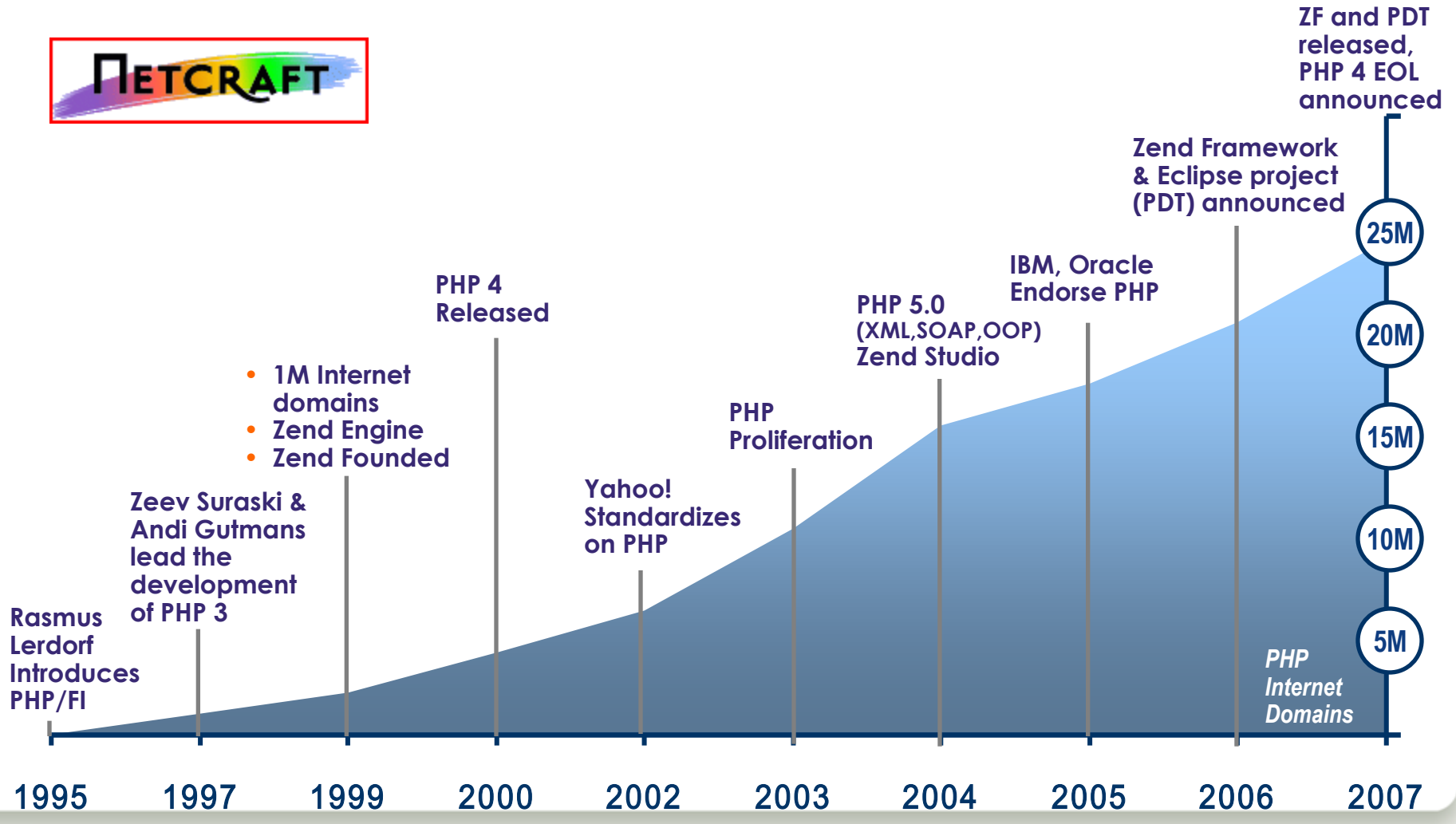
PHP enables organizations to …

- Expose critical DB2/400 data over the web
- Modernization of green screen applications
- Develop new web applications on i5
- Consolidate PHP apps on other platforms

Drivers for PHP growth

- **The Migration to Web Applications**
  - When did you last install a desktop application?
  - Emerging generation of software services (**Web2.0**)
  - PHP is the leading web development platform
- **Software buyers favor Open Source Software**
  - OSS adoption driven by cost of ownership benefits, freedom from vendor lock in, and superior software quality
- **PHP is the perfect Web Integration Platform**
  - Best support for browser based rich client applications (Ajax)
  - Strong support for Web Services, XML & legacy systems
  - Powerful **SOA** capabilities enable new IT approaches (“mashable assets”) for reducing application backlogs
- **PHP is backed by a very strong community**
  - ~ 1000 committers, ~ 4.5M developers (corporate/community)
  - Thousands of opensource projects and applications
  - Hundreds of thousands of commercial deployments
  - High profile PHP applications like Yahoo!, Flickr and YouTube

PHP new to the i5 Community, yet has developed over the past decade



Roughly 30% of the Internet runs PHP based applications

PHP Enabled Apache Servers: Research by 

(February 2008)

- **Total Servers: 27,374,802**
- **Apache Servers: 20,144,014 (73.6%)**
- **PHP Enabled Apache Servers: 7,656,379 (38%)**

Web Server Survey

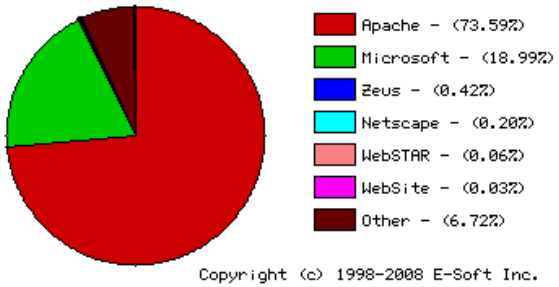
March 1st, 2008

Across All Domains

Market Share Change (Total servers: **27,374,802**)

Server[1]	February Count	February %
Apache	20,144,014	73.59%
Microsoft	5,197,748	18.99%
Zeus	114,605	0.42%
Netscape	55,014	0.20%
WebSTAR	16,540	0.06%
WebSite	8,156	0.03%
Other	1,838,725	6.72%

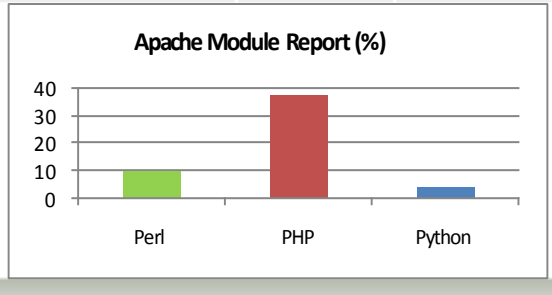
Market Share for February 2008 - Across All Domains



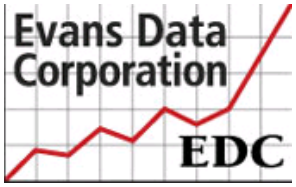
Apache Module Report

March 1st, 2008

Module	February 2008 Count	February 2008 %
PHP	7,101,170	35.25
mod_ssl	5,857,322	29.08
OpenSSL	5,836,988	28.98
FrontPage	3,415,401	16.95
mod_auth_passthrough	2,061,618	10.23
mod_bwlimited	2,061,117	10.23
mod_log_bytes	1,666,252	8.27
perl	1,475,141	7.32
PHP-CGI	555,209	2.76
Perl	528,285	2.62
mod_jk	516,572	2.56
mod_throttle	428,459	2.13
Python	388,962	1.93
mod_python	388,391	1.93



The Growth of Resources Experienced in PHP



Worldwide Developers	2006	%	2007	%	Growth%
Java	5,863	44%	6,806	47%	+16%
.Net	6,420	48%	8,176	57%	+27%
PHP	*4,634*	*35%*	*6,426*	*44%*	+37%
Total	13,315		14,461		

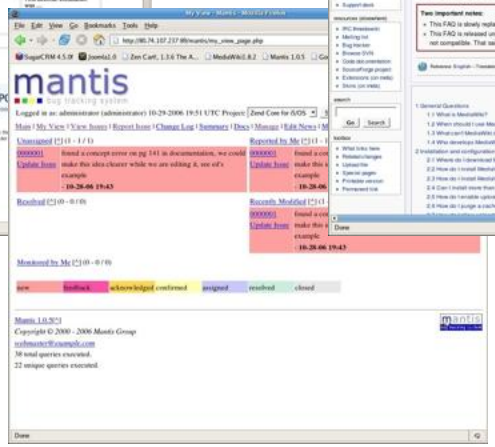
Packaged Business Applications available in PHP, and now can run on i5/OS

Content Management

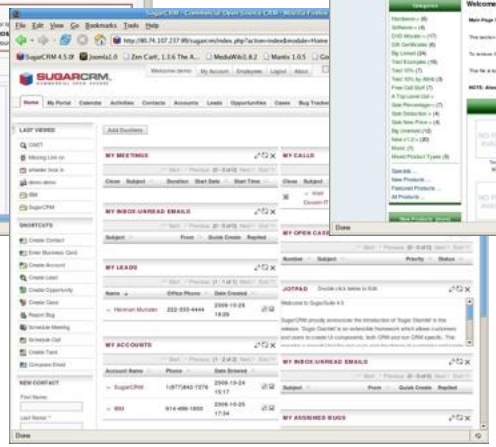
Wiki

E-Commerce

Bug Tracking



CRM



Commercial PHP Deployments

What are the key challenges facing organizations looking to build PHP based applications?

The new PHP based Application Infrastructure introduces Operational Instability …

System I Organizations are operationally mature …

Developer

- **Download PHP from PHP.net**
- **Download Editor and Apache Server**

Build PHP Application

- Fast!
- Easy

Try to Deploy

- Problems!
- Headaches!

Now What?

but when they decide to leverage PHP, they lack expertise and know how

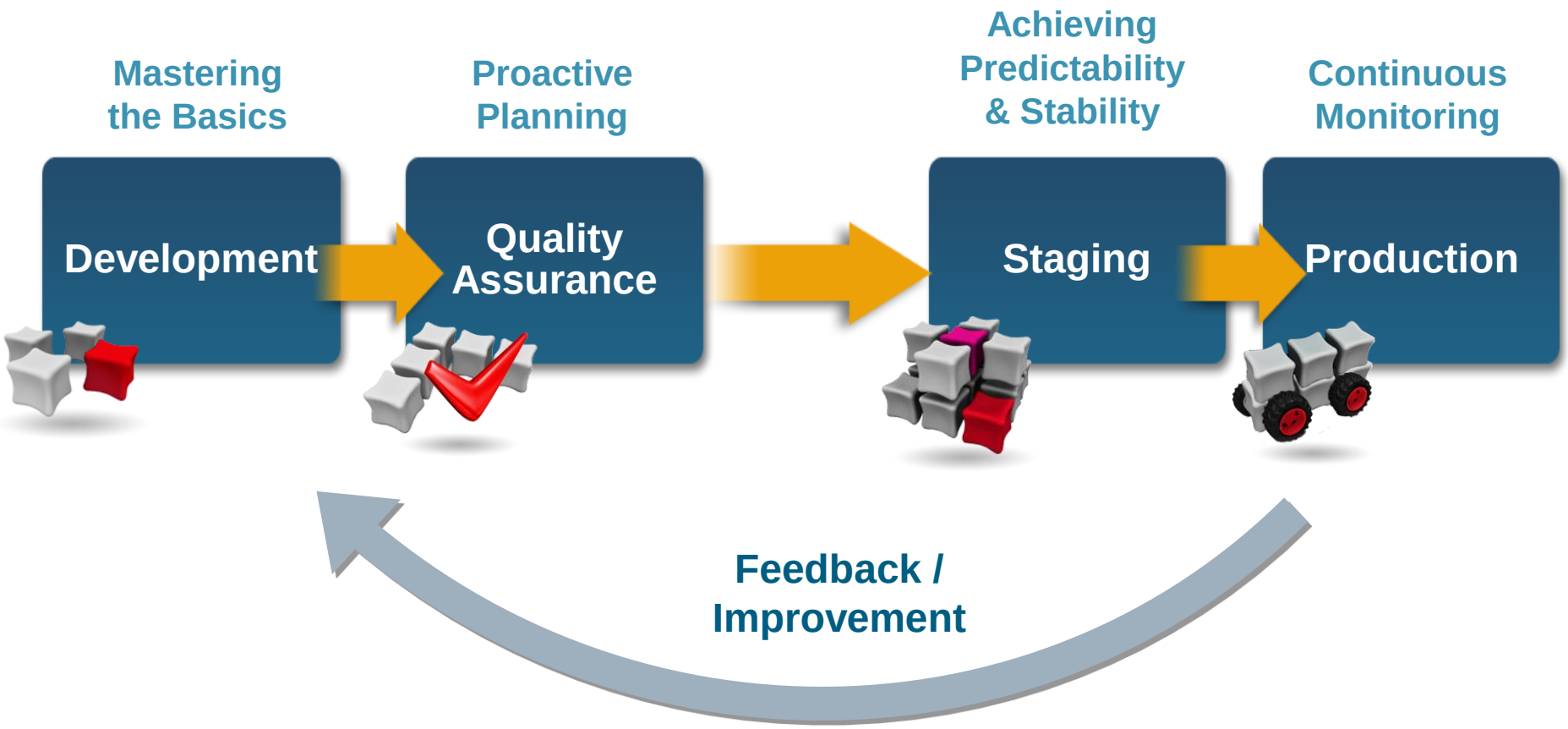
Challenges with ensuring Predictability through the Applications Delivery Lifecycle

- Scalability requirements for web based applications are not familiar to RPG programmers
- Web development introduces new security risks
- Deployment documentation is lacking

- Production operations lacks expertise to manage PHP apps
- Low deployment success rate
- Developers frequently involved in production issues

Chasm Between Development and Production Operations

Automation and Best Practices help create Predictability in the Applications Delivery Lifecycle



Moving consistently across phases increases operational predictability & performance

Mastering the Basics

- **Best practices and coding standards for web based applications**
- **Reusable code**
- **Architecture guidelines**
- **Consistent development environment**

Proactive Planning

- Repeatable, uniform testing
- Documentation standards
- Performance and scalability metrics
- Planning for Compliance

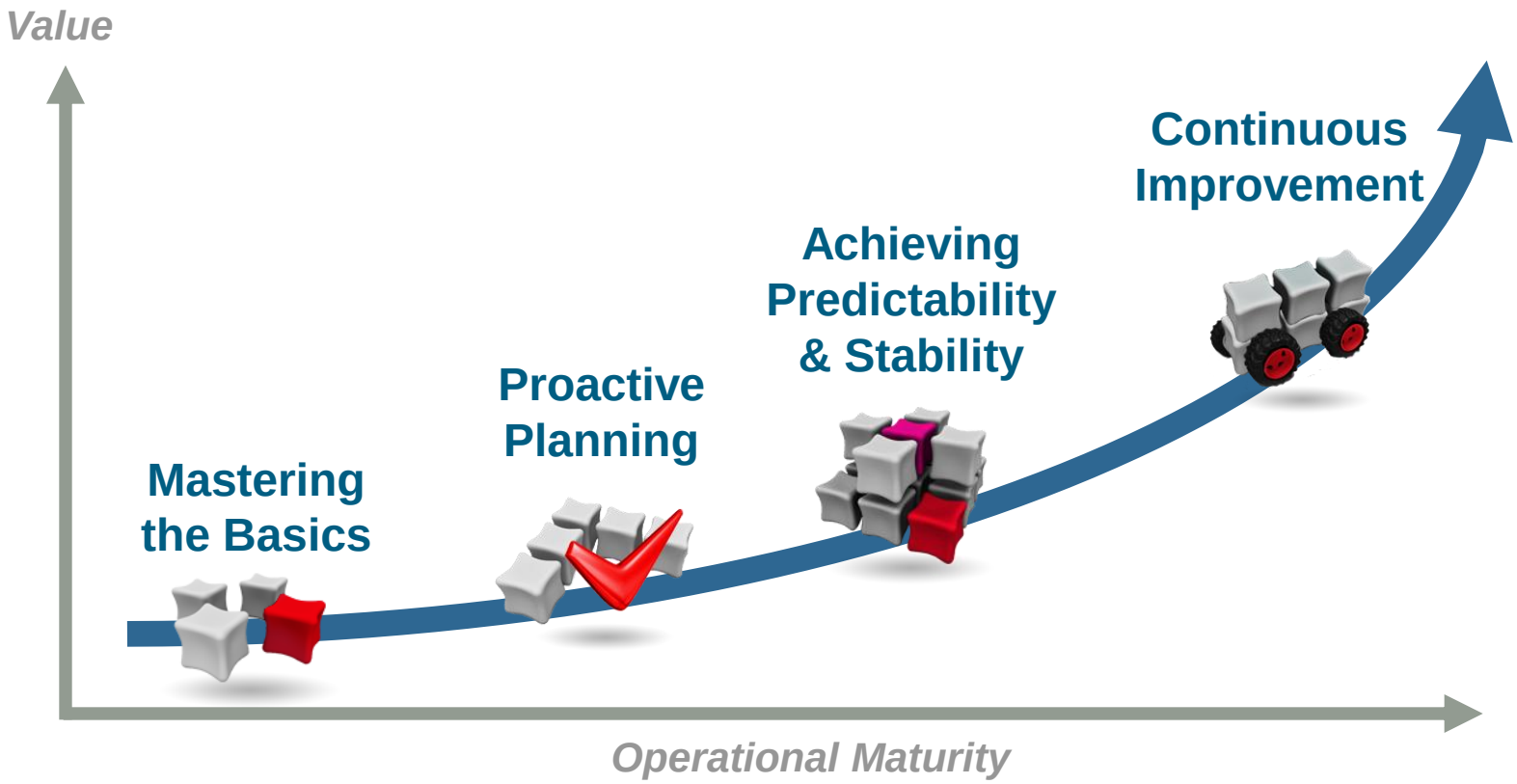
Achieving Predictability and Stability

- Deployment and maintenance standards
- Agreed-upon processes
- Proactive management
- Centralized monitoring
- Established, proven communication mechanisms

Continuous Monitoring & Improvement

- Delivering on SLAs
- Reducing MTTR via root cause analysis
- Increasing MTBF through Post incident reviews
- Configuration Mgmt through Maintenance & update profiles

Moving consistently across phases enhances Operational Maturity



Greater Maturity => Reduced Cost, Risk => Increased Uptime

How is your organization doing on these phases?

Mastering the Basics

- Best practices and coding standards
- Reusable code
- Architecture guidelines
- Consistent development environment

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Predictability & Stability

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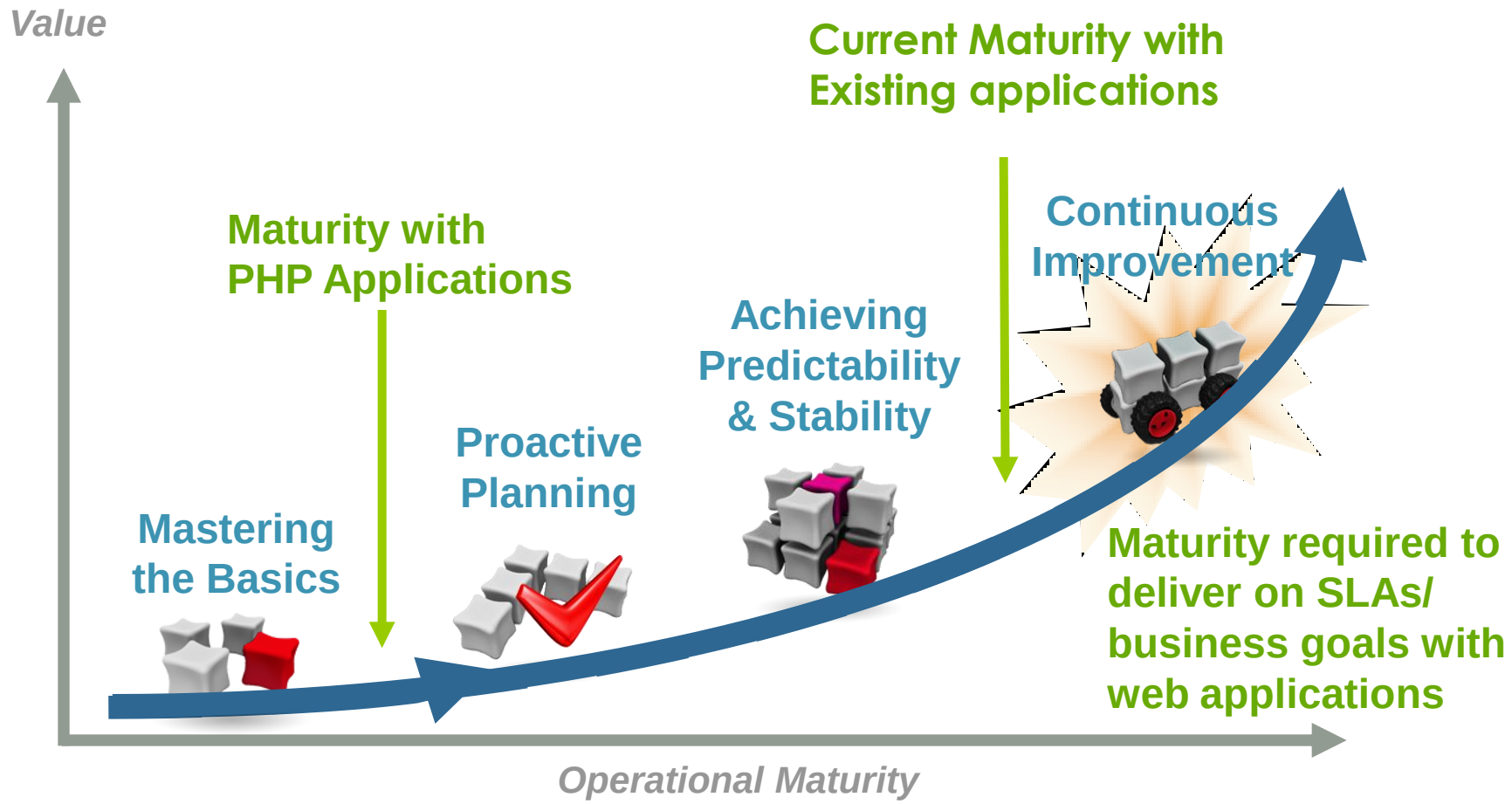
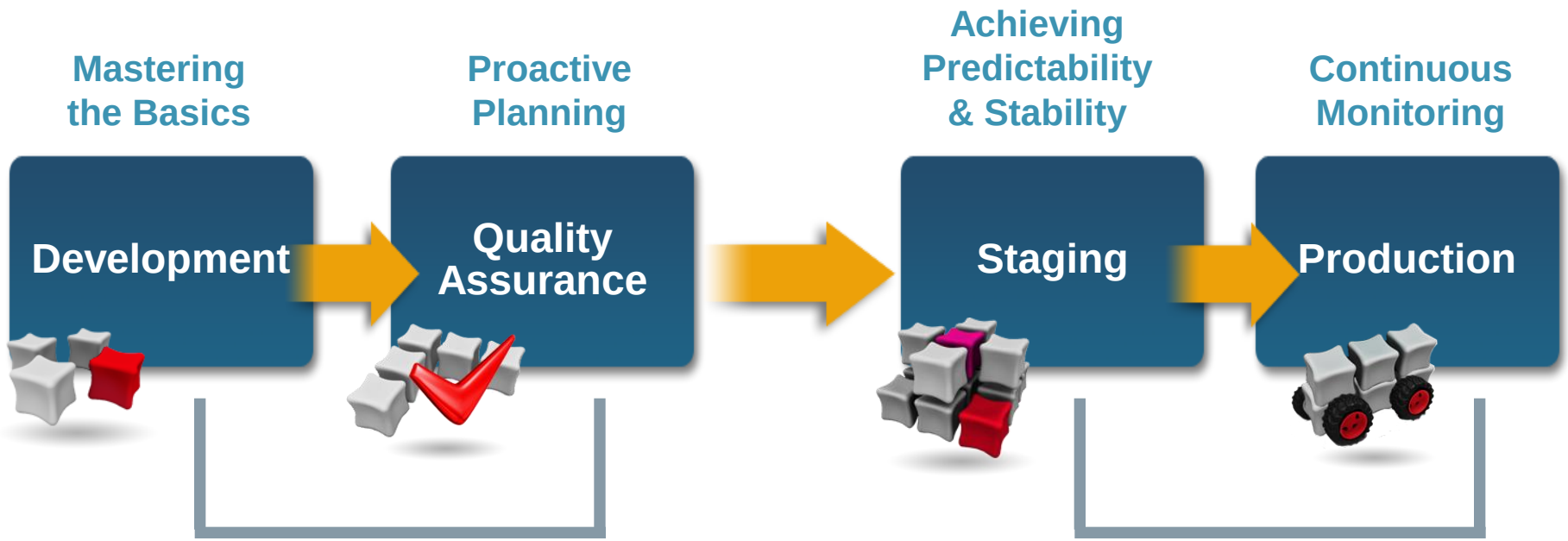
Where is your Organization on the Operational Maturity Curve?



Zend's solutions leverage automation to mitigate the Operational Maturity Gap

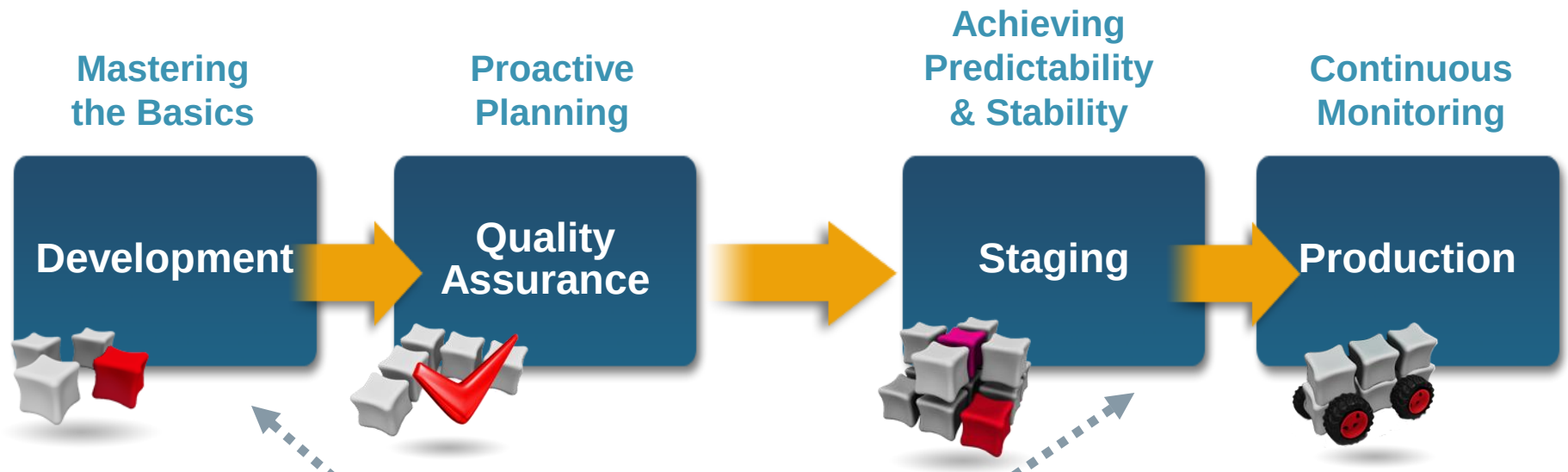
Zend Core: Ensuring Consistency Between Development and Production



- Consistent versions of PHP, extensions, database drivers
- Timely updates associated with security patches, bug fixes, new extensions/drivers

- Configuration Management across entire production infrastructure

Zend Framework: Enhancing Developer Productivity, Improving Code Quality

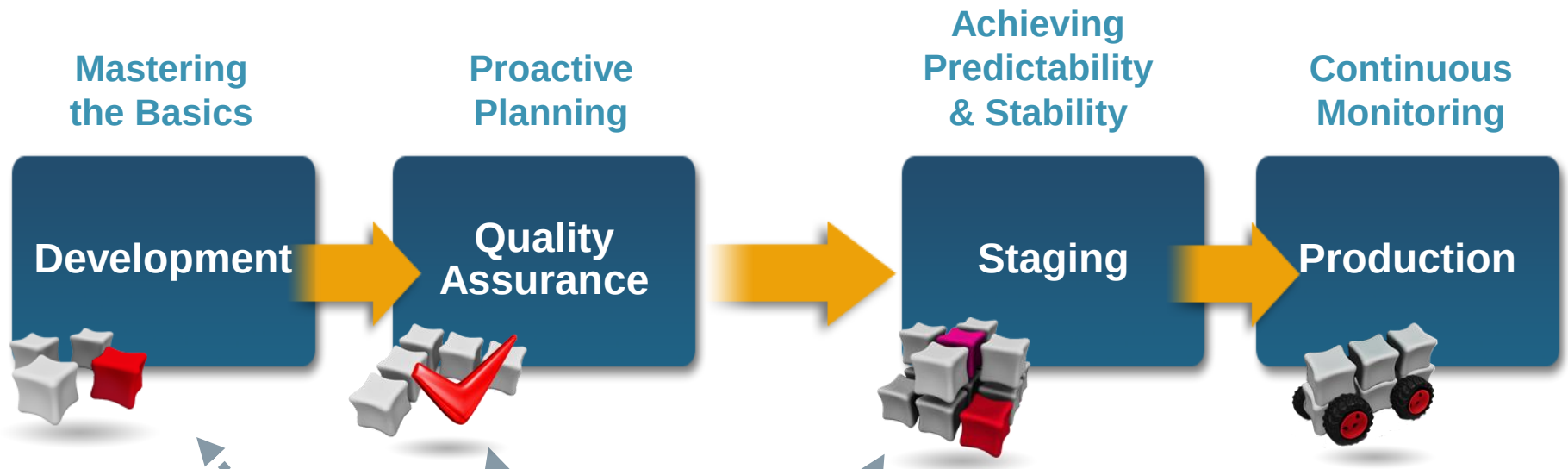


- **Rapid development**
  - Pre-built components
- **Iterative development cycles**
- **Developers focus on business specific functionality as opposed to infrastructure**

- **Higher deployment success rates**
  - Components rigorously tested by Zend and PHP community

ZEND FRAMEWORK

Zend Studio: Providing Developers Insight into Production Issues



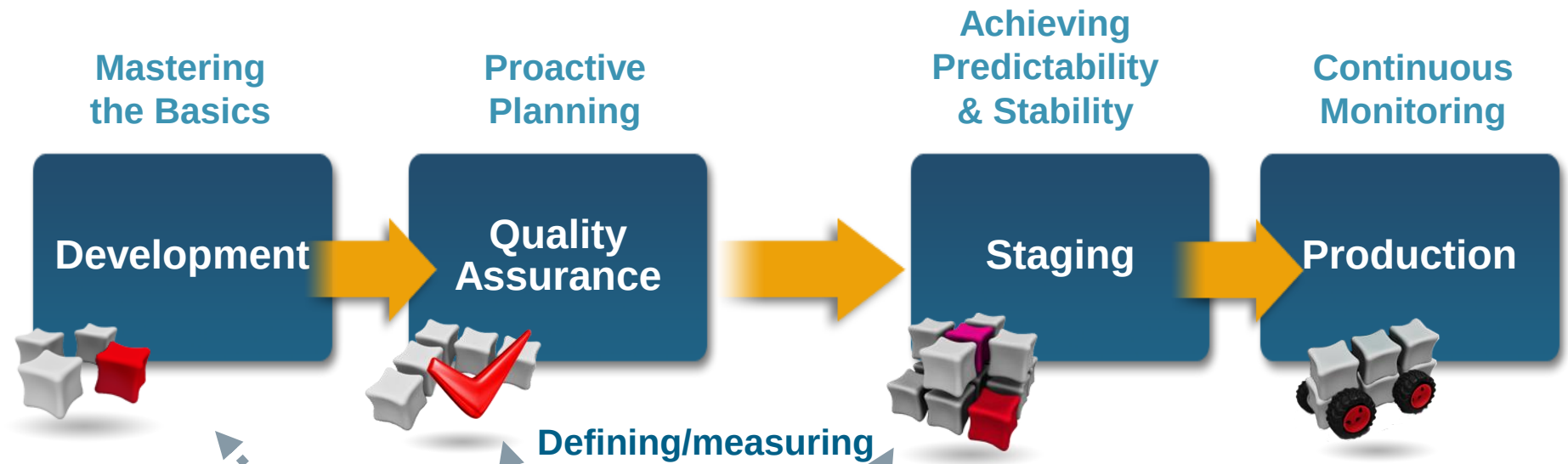
- Reusability
- Remote Debugging in Production
- Development best practices

Repeatable, uniform testing

Standards for deployment

- Root Cause Analysis
- Replicate Production problems in developer's environment

Zend Application Server: Delivering Proactive Management and Scalability in Production



Defining/measuring performance & scalability metrics

- Developing high performance code via Caching

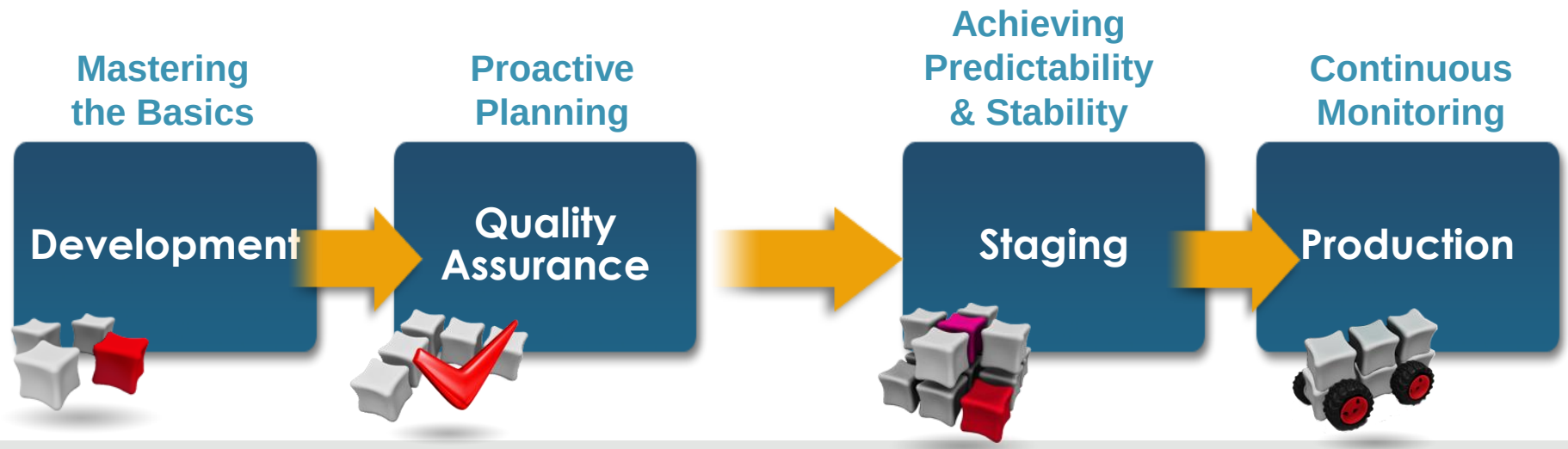
Manageability

- Web Enabling of 5250 Applications
- Proactive Monitoring
- Scalability
- Performance

Zend's Software Solutions

- How many PHP developers do you have?
  - **Developer Bundle**
    - Zend Core/Zend Framework
    - Zend Studio
    - Zend Platform (Development License)
    - Zend Gold Support
- How many production/staging servers do you have?
  - **Production Server Bundle**
    - Zend Core/Zend Framework
    - Zend Platform
    - Zend Platinum Support

Zend Services Align with phases of the Application Delivery Lifecycle



• PHP I: Foundations i5/OS • PHP II: Higher Structures	• Building PHP Apps with Zend Framework • Building RIA with AJAX	• Zend Certification	• Platform for Sys Admins • Building Secure PHP Applications
Training			
• JumpStart for i5/OS • Architecture & Design Consulting	• Remote Installation & Admin Services	• Migration Consulting	• Audits – Performance, security, architecture
Consulting			
• Gold Support			• Platinum Support
Support			

Goals of Jump Start for i5/OS

- **Bridge the knowledge gap between RPG and PHP**
- **Provide foundation for leveraging PHP applications to address business objectives**
- **Deploy a Proof of Concept addressing a current project/business need in 30 calendar days**

Delivery Milestones for Jump Start for i5/OS

Stage 1	Gather and Define	Gather business objectives, operational constraints & indentify POC target (current project need)
Stage 2	Deliver Training (On-site)	Quick Start : PHP for RPG developers PHPI : Foundations for i5/OS
	Develop Proof of Concept	Stand up and document a Proof of Concept with Checkpoints along the way
Stage 3	Knowledge Transfer and POC Delivery	Knowledge transfer on POC and make recommendations on future projects

Zend's solutions help organizations move up the maturity curve fast …