



# Open Source BPM Hits The Mark For Delivering New Class Of Process Apps

## Introduction

Developers are at the epicenter of a massive shift in the business technology landscape. New disruptive business requirements are coming from all directions and requiring a level of application sophistication not seen before by development teams. In the face of this shift, development teams struggle to continue hand-coding custom applications, while also allocating sufficient time to embed sophisticated application logic and contextual awareness for applications that must function across different web and mobile platforms.

This Red Hat commissioned profile of software developers explores the challenges faced by application development teams today, based on Forrester's own market data and a custom study of the same audience.

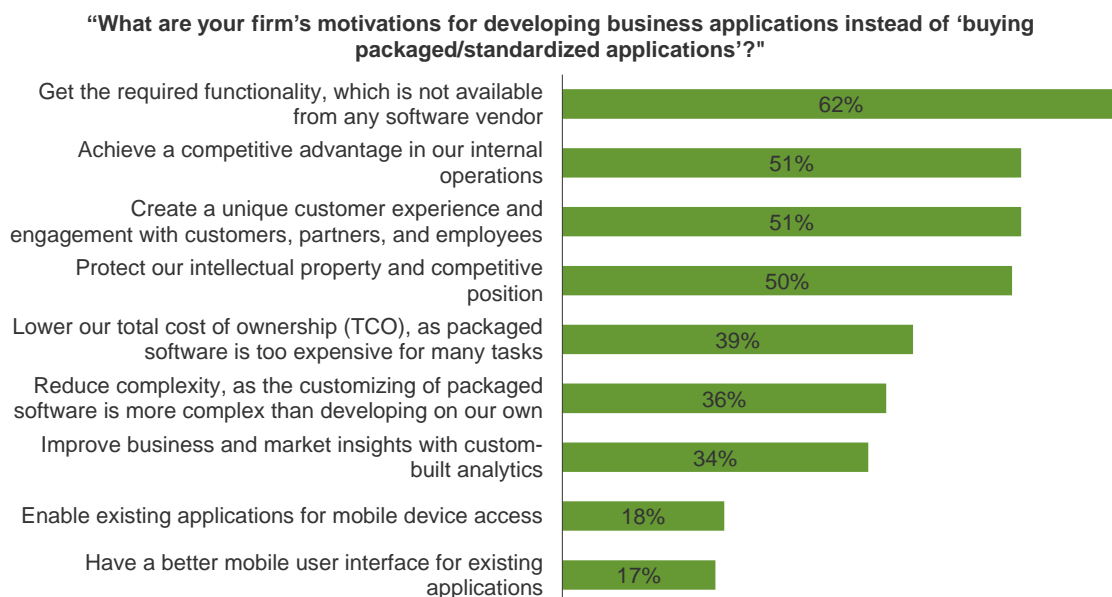
## Disruptive Drivers Force Teams To Shift Development Strategies

› **Competitive drivers make custom development an attractive option over packaged solutions.** Firms turning to custom development over packaged

applications listed “competitive advantage” and “unique customer experiences” as two of the top three drivers. These firms indicated that they increasingly need flexibility in their business applications to stay ahead of competitors and move into new markets (see Figure 1).

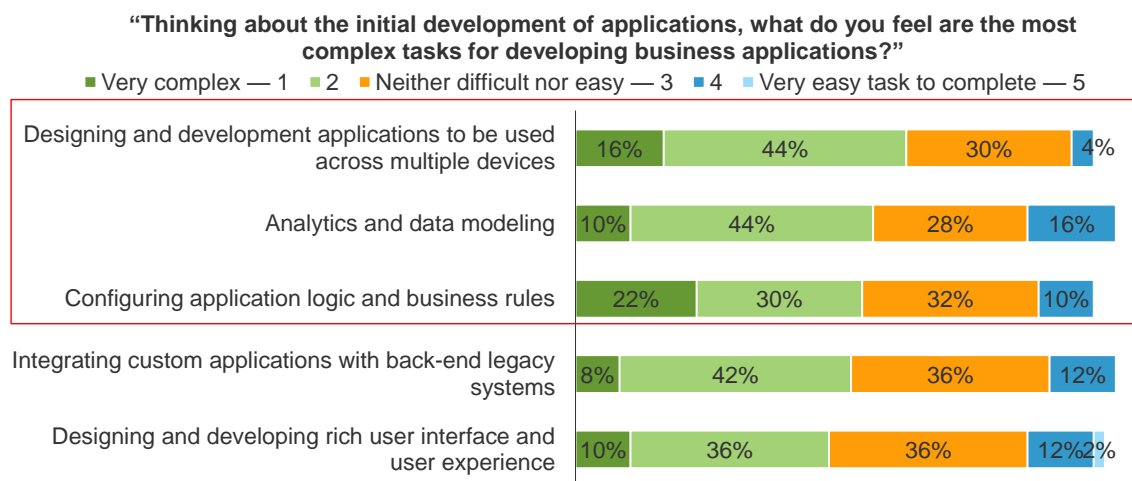
- › **Increasing complexity for developing multi-device apps.** Developers reported that designing and developing applications to work across multiple devices to be their most complex tasks; 60% reported that these tasks to be very complex to moderately complex. Analytics and data modeling came in second, with 54% of developers reporting these tasks to be very complex to moderately complex (see Figure 2).
- › **Data integration continues to drive maintenance complexity.** Developers reported that implementing updates and changes to application logic and business rules were the most difficult tasks for maintaining existing business applications; 56% indicated that maintaining and updating integration with back-end legacy systems was complex to very complex. And 38% indicated that maintaining up-to-date data models and analytics information was very complex to moderately complex (see Figure 3).

**FIGURE 1**  
**Custom Development Offers Firms A Competitive Advantage**



Base: 153 North American developers from firms with 1,000 or more employees who report custom development as a top organizational priority  
Source: Forrester Software Survey, Q4 2013

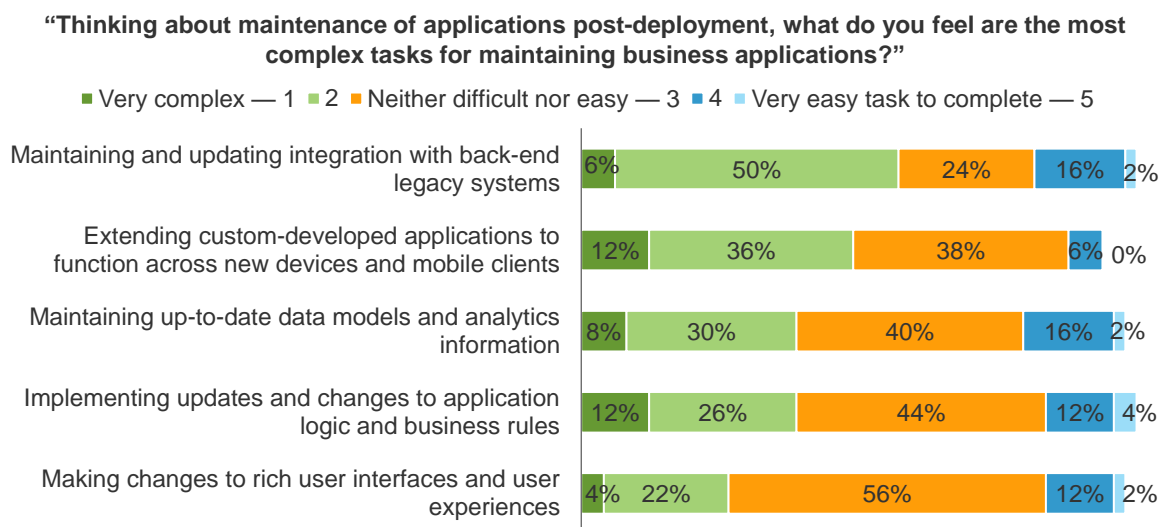
**FIGURE 2**  
Emerging Technologies Are Increasing The Development Complexity



Base: 50 US software developers from organizations with 1,000 or more employees

Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, September 2013

**FIGURE 3**  
The Complexities Of Application Development Continue After Deployment



Base: 50 US software developers from organizations with 1,000 or more employees

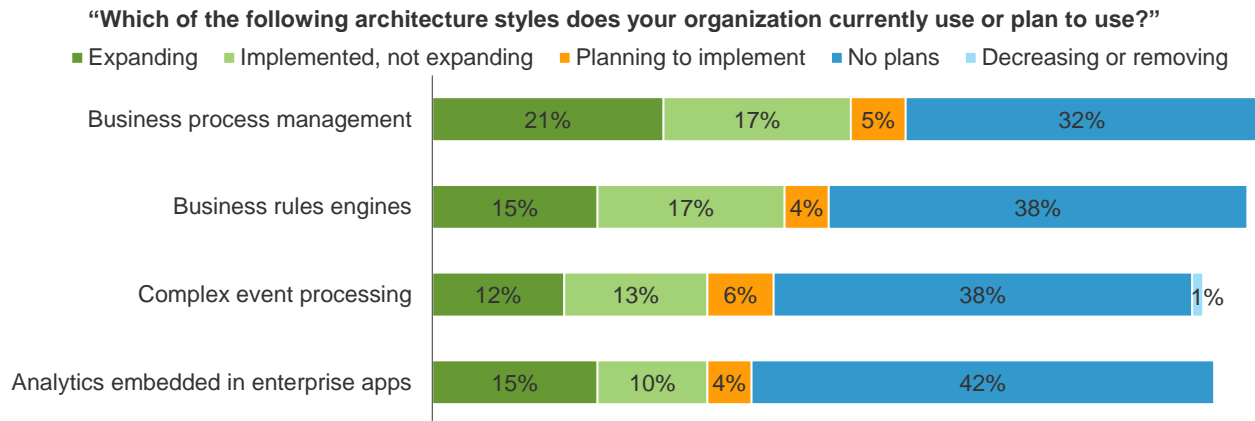
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, September 2013

## Accelerated Pace Of Change Demands Configurable Processes, Rules, And Analytics

With a dramatically increasing volume of business requirements and decreasing number of direct resources, development leaders are looking for new methods that emphasize more modern approaches to application development (see Figure 4). These new approaches help boost developer productivity, while also allowing the business to play a broader role in the application development process. But development leaders walk a tightrope trying to balance modern development approaches — such as configurable development and model-driven development — against the need for maximum flexibility and control available through hand-coding solutions.

- › **Analytics, collaboration, and automation drive future demand for custom development.** Business intelligence, collaboration, and business process management applications were in the top four types of applications that developers expect to see an increase in custom development.
- › **Configurable development can replace the bulk of hand-coding.** Most developers still hand-code workflow, analytics, and business rules — 42% indicated they primarily hand-code workflow, 40% indicated they hand-code analytics, and 40% indicated they hand-code business rules (see Figure 5).
- › **Developers have a blind spot for third-party platforms.** Only 10% of respondents have used BPM software, only 16% have used business rules software, and 30% used BI software. This highlights a missed opportunity for developers to minimize development and maintenance for standard functionality.

**FIGURE 4**  
Modern Development Approaches Are Beginning To Emerge



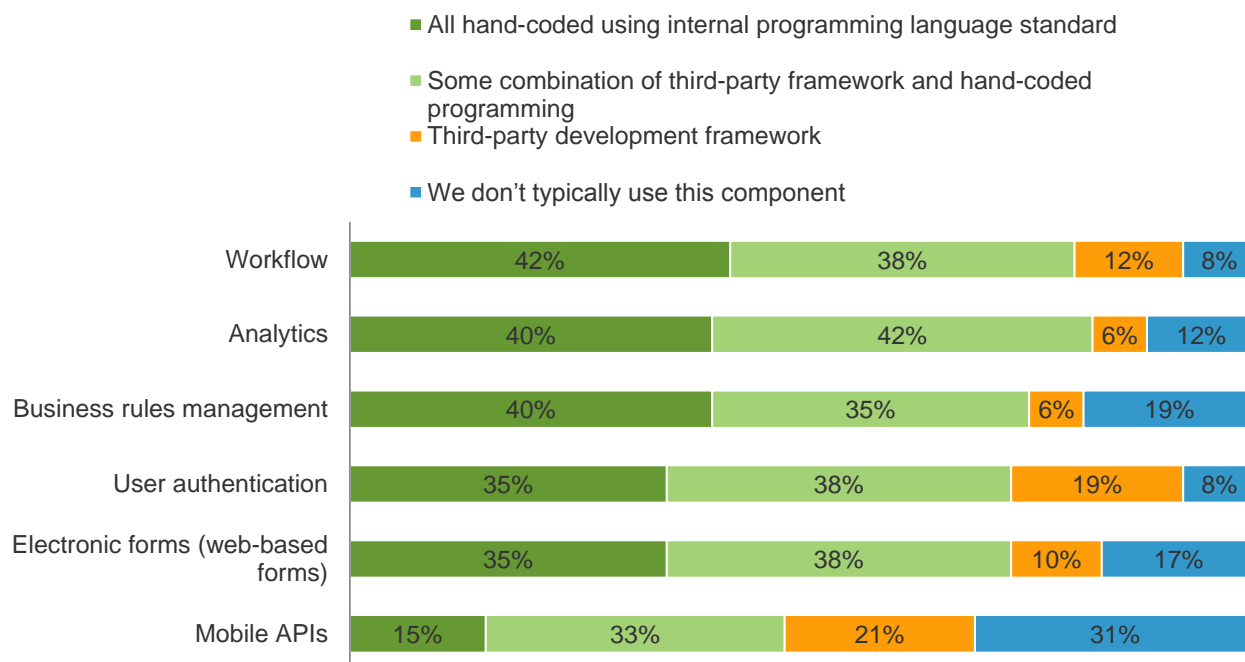
Base: 247 North American developers from firms with 1,000 or more employees

Source: Forrester Developer Survey, Q1 2013

FIGURE 5

## Hand-Coding Remains A Significant Task For Key Functions During Development

“What approach do you typically use to build in the following functionality for custom-developed business applications?”



Base: 50 US software developers from organizations with 1,000 or more employees

Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, September 2013

*“BPM and business rules allow us to collaborate more closely with business stakeholders and quickly validate new requirements and system changes.”*

— Development team lead, major healthcare provider

## Developers Consider Open Source BPM a Compelling Alternative To Hand-Coding

Taking on any new technology or platform can introduce new risks and costs, in terms of building new skills and competencies, vendor lock-in, and fit with internal

technology architecture and ecosystems. However, development team leads will need to look beyond common misconceptions about BPM and open source when evaluating different options for accelerating development and delivering more sophisticated applications.

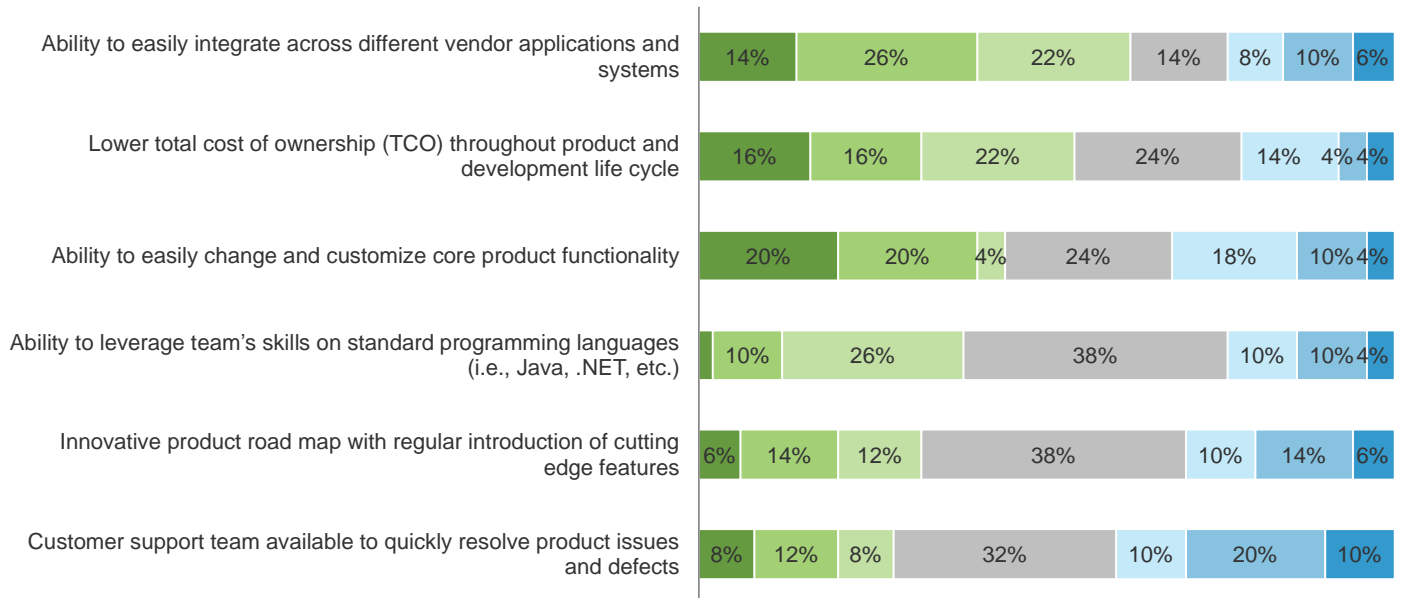
- **BPM learning curve shorter than expected.** Only 22% of respondents indicated they perceive BPM as requiring a very high to high level of effort for building competent skills. Compared to business rules at 33%, business intelligence at 30%, and collaboration at 24%.
- **Lower cost of ownership helps minimize risk.** Developers associate open source with overall lower cost of ownership throughout the development cycle; 54% associated open source in terms of lower cost of ownership. Additionally, developers associate open source with ability to easily customize core product functionality, 44% associated open source in this category (see Figure 6).

FIGURE 6

## Open Source Software Platforms Are Most Associated With A Lower Total Cost Of Ownership Compared To Proprietary Platforms

“Of the following priorities for your application development team, which ones do you most closely associate with open source solutions versus proprietary software platforms?”

■ Open source ■ Describes both equally ■ Proprietary



Base: 50 US software developers from organizations with 1,000 or more employees

Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, September 2013

## Conclusion

Today, development teams face demands to deliver increasingly complex applications. In the past, developers could negotiate tradeoffs between speed and flexibility based on business stakeholder priorities. However, business leaders now demand speed and flexibility, without any tradeoffs. Leading development teams turn to BPM to

help solve the speed side of the equation, but often feel locked in when it comes to flexibility and openness of the underlying architecture. Additionally, proprietary BPM solutions tend to require significant training and unique hard-to-find skills. Open source BPM platforms provide the right balance between speed and flexibility. Developers benefit most from open source BPM solutions that provide full-featured process modeling, analytics, and business rules capabilities.

## Methodology

This Technology Adoption Profile was commissioned by Red Hat. To create this profile, Forrester leveraged its Forrsights Developer Survey, Q1 2013. Forrester Consulting supplemented this data with custom survey questions asked of 50 US software developers from organizations with 1,000 or more employees around the challenges that are present during the development process. The auxiliary custom survey was conducted in September 2013. For more information on Forrester's data panel and Tech Industry Consulting services, visit [www.forrester.com](http://www.forrester.com).

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