

10
Year
ANNIVERSARY

2016

the future of
**OPEN
SOURCE**

NORTH BRIDGE + BLACKDUCK THE COLLABORATORS 2016

PLATINUM COLLABORATORS



COLLABORATORS





AGENDA



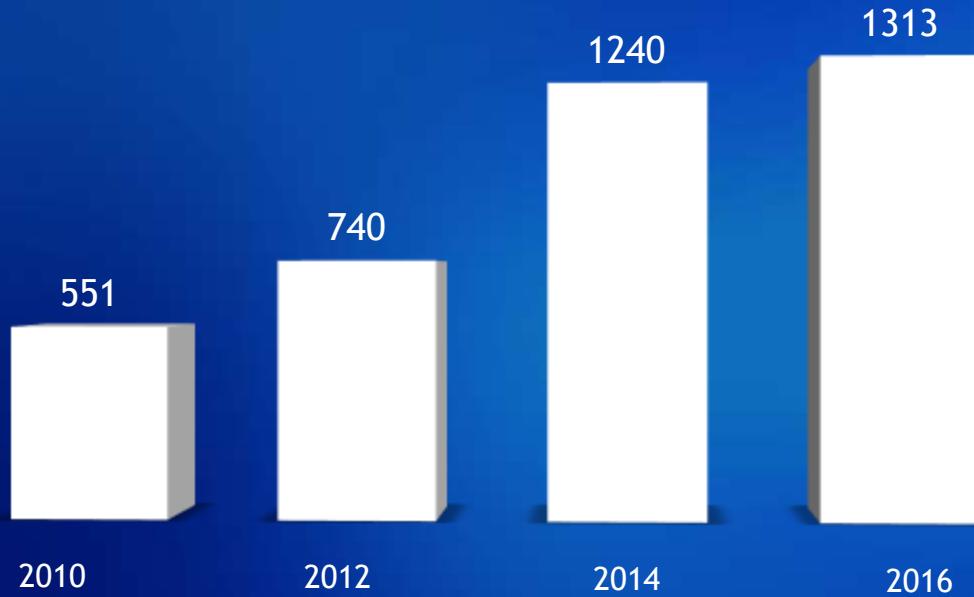


DEMOGRAPHICS

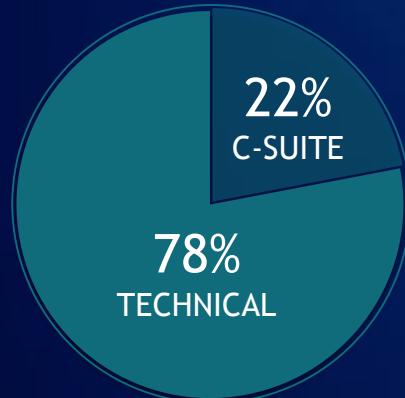




RECORD-BREAKING SURVEY



Supply Chain Manager Application Development Manager
Systems Architect/Engineer
Other
VP/Director, non IT
CIO/CTO
Chief Strategy Officer
CEO/Founder/
Co-Founder/President
General Counsel or Legal Department
Chief Security Officer/CISO
**Software Engineer/
Developer**
VP/Director IT
Analyst
COO/CFO/CMO
IT Infrastructure and Operations Manager



SURVEY RESPONSES
FROM 64 COUNTRIES





INSIGHTS



10
Year
ANNIVERSARY



 @PAULSANTINELLI

**PAUL SANTINELLI
GENERAL PARTNER
NORTH BRIDGE**

NORTH BRIDGE

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“ Open source today is unequivocally the engine of innovation; whether that's powering technology like operating systems, cloud, big data or IoT, or powering a new generation of open source companies delivering compelling solutions to the market ”

10
Year
ANNIVERSARY

A MILESTONE SURVEY- THE 10TH ANNIVERSARY

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THE FUTURE OF
OPEN SOURCE IS FULL
OF POSSIBILITIES





ONCE A TINY SPECK IN THE
TECH UNIVERSE, OPEN
SOURCE IN 2016 IS AMONG
ITS BRIGHTEST STARS

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Ubiquitous worldwide
Open software development IS the rule



FUTURE OF OPEN SOURCE SURVEY MILESTONES

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- 2008 NO sectors of the software industry will be invulnerable to disruption from Open Source
- 2011 First year when lower cost wasn't the number one answer for what makes Open Source attractive
- 2013 If software is eating the world, open source is eating the software world
- 2014 Open source is touching new people, new technologies, new economics



 @LOUSHIPLEY

LOU SHIPLEY PRESIDENT AND CEO BLACK DUCK SOFTWARE



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#FUTUREOSS



“ When the first survey launched 10 years ago, hardly anyone would have predicted that open source use would be ubiquitous worldwide just a decade later, but for many good reasons that's what happened. Its value in reducing development costs, in freeing internal developers to work on higher-order tasks, and in accelerating time to market is undeniable. Simply put, open source is the way applications are developed today.



STRATEGY



OPEN SOURCE ESSENTIAL TO DEVELOPMENT STRATEGY

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>65%

leverage OSS to speed
application development

>55%

leverage OSS for
production infrastructure



SECTION 1
STRATEGY

OPEN SOURCE ADOPTION PACE CONTINUES

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Use of OSS increased in

65%

of companies surveyed v.
60% in 2015



SECTION 1
STRATEGY

CONTAINER WAVE BEGINS TO BUILD

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76%

Have some plans to use containers



SECTION 1
STRATEGY



CONTAINERS FOR TESTING

36%
are using
containers for
testing





CONTAINERS FOR DEVELOPMENT

37%

are using containers for development



WHY USE OPEN SOURCE

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2

Competitive
features &
technical
capabilities

1

Quality of
solutions

3

Ability to
customize & fix



SECTION 1
STRATEGY



OPEN SOURCE IS CORE

Where Companies Are Using Open Source Today

1

Operating
Systems

2

Database

3

Development
Tools





OPEN SOURCE GETS PRACTICAL

Top 3 Technology Areas By Year

2015



2016





PUSHING TO THE DATACENTER

In the Next 2-3 Years Here Is Where We'll Find Open Source

2014



Cloud

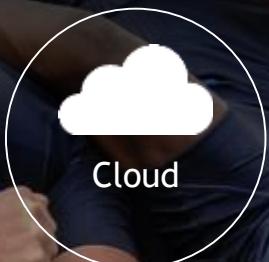


Content Management



Mobile

2016



Cloud



Database



Big Data



DRIVERS





THE OPEN SOURCE ADVANTAGE

More and more strategic

2015

Access to source code

Ability to customize
and fix

2016

Competitive Features

Freedom from vendor
lock-in

Freedom from vendor
lock-in

Quality of solutions

TCO

Ability to customize
and fix





COMMITMENT & PARTICIPATION



ARE YOU CONTRIBUTING?

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65%

of companies are contributing to open source projects

UP FROM 63% IN 2015



SECTION 3
COMMITMENT &
PARTICIPATION

COMPANIES SEE THE VALUE IN OPEN SOURCE



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67%

actively encourage
developers to
engage in and
contribute to open
source projects



SECTION 3
COMMITMENT &
PARTICIPATION



MORE DEDICATED RESOURCES ARE NEEDED



Only **1 in 3** companies have a full-time resource dedicated to Open source projects



WHY PARTICIPATE IN OPEN SOURCE

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67%

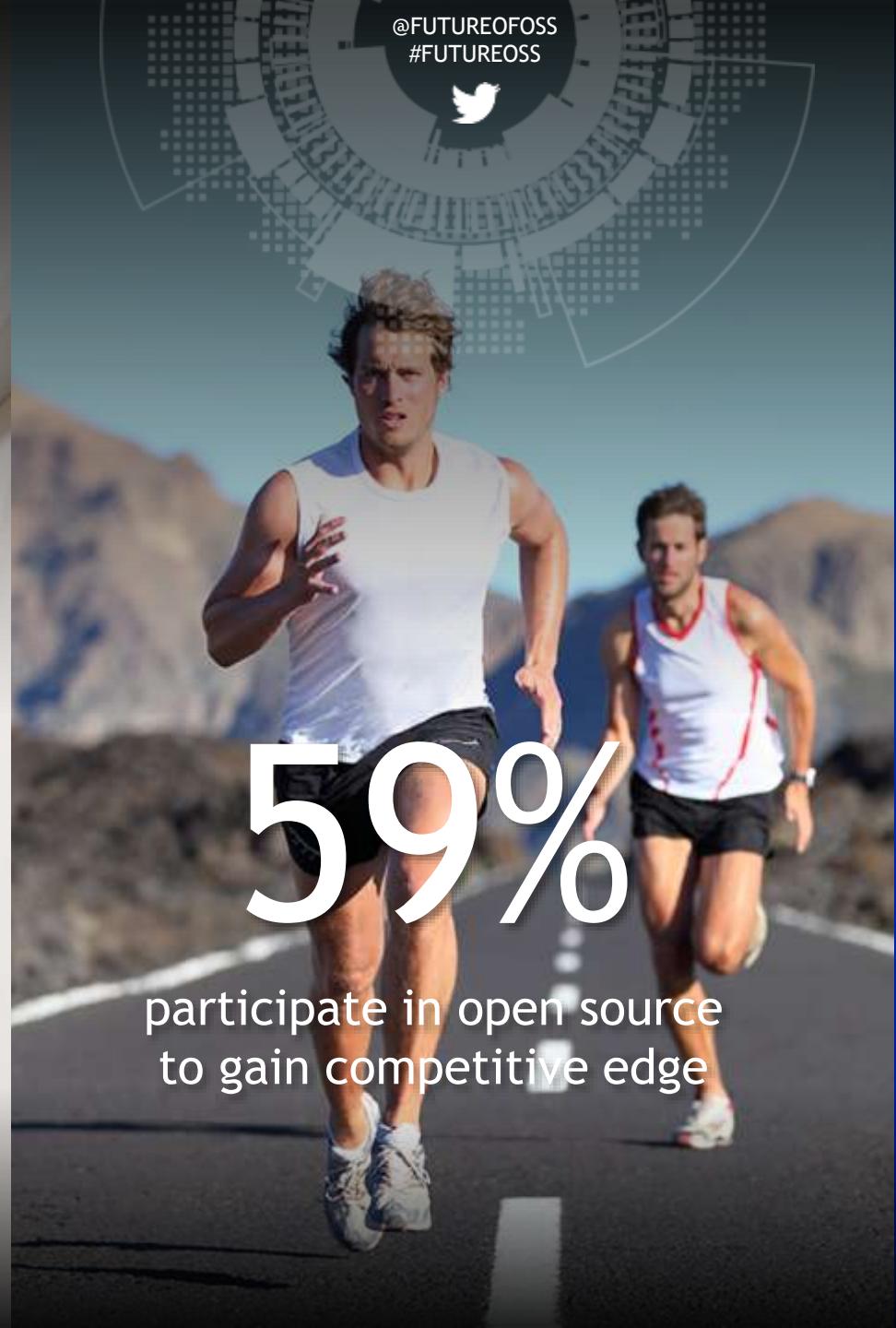
participate in open source
to fix bugs or add
functionality to a project



SECTION 3
COMMITMENT &
PARTICIPATION

59%

participate in open source
to gain competitive edge





FROM VALUES TO VALUE

Shift In Why Companies Participate In Open Source



2015

Reduce Development Costs

Competitive Advantage

Alignment With Company Mission & Values

2016

Fix Bugs or Add Functionality

Gain Competitive Advantage

Reduce Development Costs

MAJORITY OF DEVELOPERS ARE CONTRIBUTING TO PROJECTS

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34%

of companies have >50% of
their developers
contributing to one or
more open source projects



SECTION 3
COMMITMENT &
PARTICIPATION



BEST PRACTICES



GROWING OPPORTUNITY FOR POLICIES & PROCEDURES

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RULES

Nearly

50%

of companies have NO formal
policy for selecting and
approving open source code



EXISTING POLICIES RARELY ENFORCED

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Nearly 50%
of companies who have policies
either don't enforce them or
they can be bypassed



SECTION 4
BEST PRACTICES

A MORE EFFECTIVE OPEN SOURCE POLICY...

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69%

An active community supporting the open source projects

62%

Maturity of the open source project

41%

List of approved open source licenses, specific use cases





ACCOUNTABILITY & SECURITY





COMPANIES AREN'T TRACKING THEIR OPEN SOURCE CODE

47%

of companies don't have
formal processes in place
to track OS code



SECTION 5
ACCOUNTABILITY &
SECURITY

DETECTION & REMEDIATION OF OPEN SOURCE

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41%
of
vulnerabilities
are detected
and
remediated
manually

10%
of
vulnerabilities
are detected
and
remediated
through third
parties

19%
of
vulnerabilities
are detected
and
remediated
automatically



HOW ARE COMPANIES HANDLING KNOWN OPEN SOURCE VULNERABILITIES?

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Nearly
1/3

of companies have
no process for
identifying,
tracking or
remediating known
open source
vulnerabilities



WHO IS HANDLING KNOWN OPEN SOURCE VULNERABILITIES?

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In over
1/2

of all companies no one has responsibility for identifying and tracking remediation

Interestingly,
development organizations are 33% more likely
to be responsible for identifying and tracking remediation of known open source vulnerabilities than security organizations



SECTION 5
ACCOUNTABILITY &
SECURITY



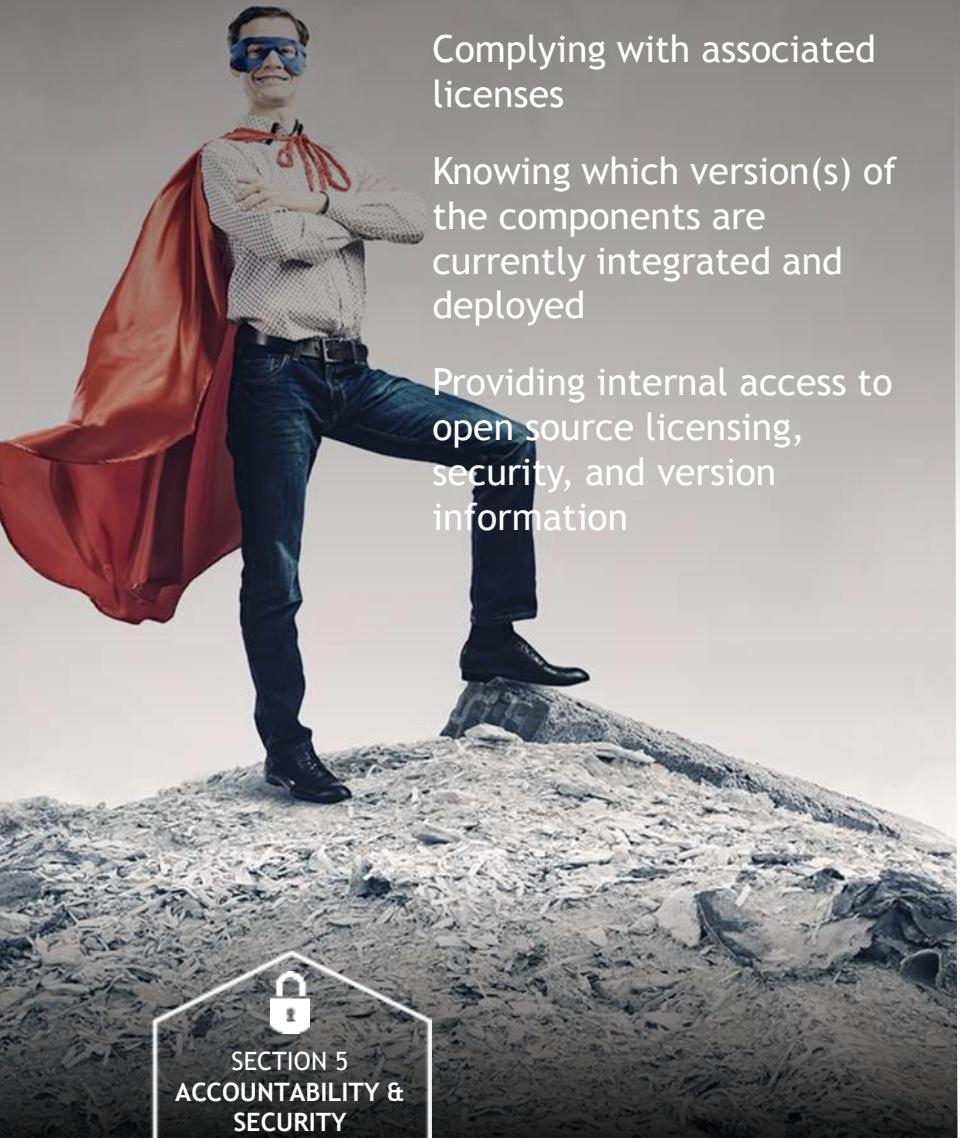
OPEN SOURCE MANAGEMENT

What's working...

Complying with associated licenses

Knowing which version(s) of the components are currently integrated and deployed

Providing internal access to open source licensing, security, and version information

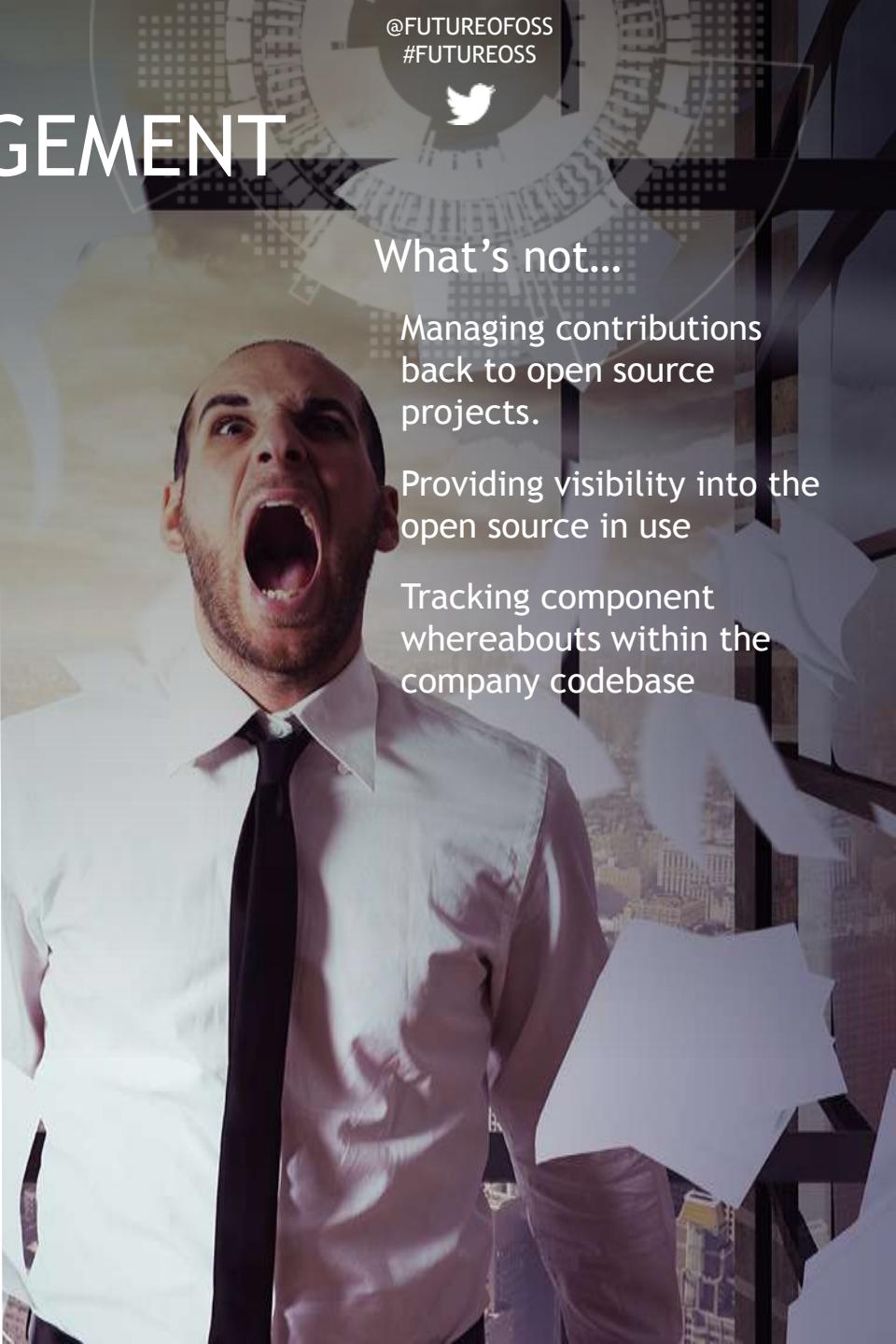


What's not...

Managing contributions back to open source projects.

Providing visibility into the open source in use

Tracking component whereabouts within the company codebase



UNDERSTANDING YOUR OPEN SOURCE CODE

Top ways companies review their code for open source

48%

Development teams manually keep track of open source use

30%

Ask developers about open source content

21%

Use third party tools to scan for open source content

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REVIEWING CODE FOR OPEN SOURCE CONTENT IS STILL HAPHAZARD

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58%

of companies are still reviewing code for open source content only under special circumstances



SECTION 5
ACCOUNTABILITY &
SECURITY

OPEN SOURCE VULNERABILITY DISCLOSURE

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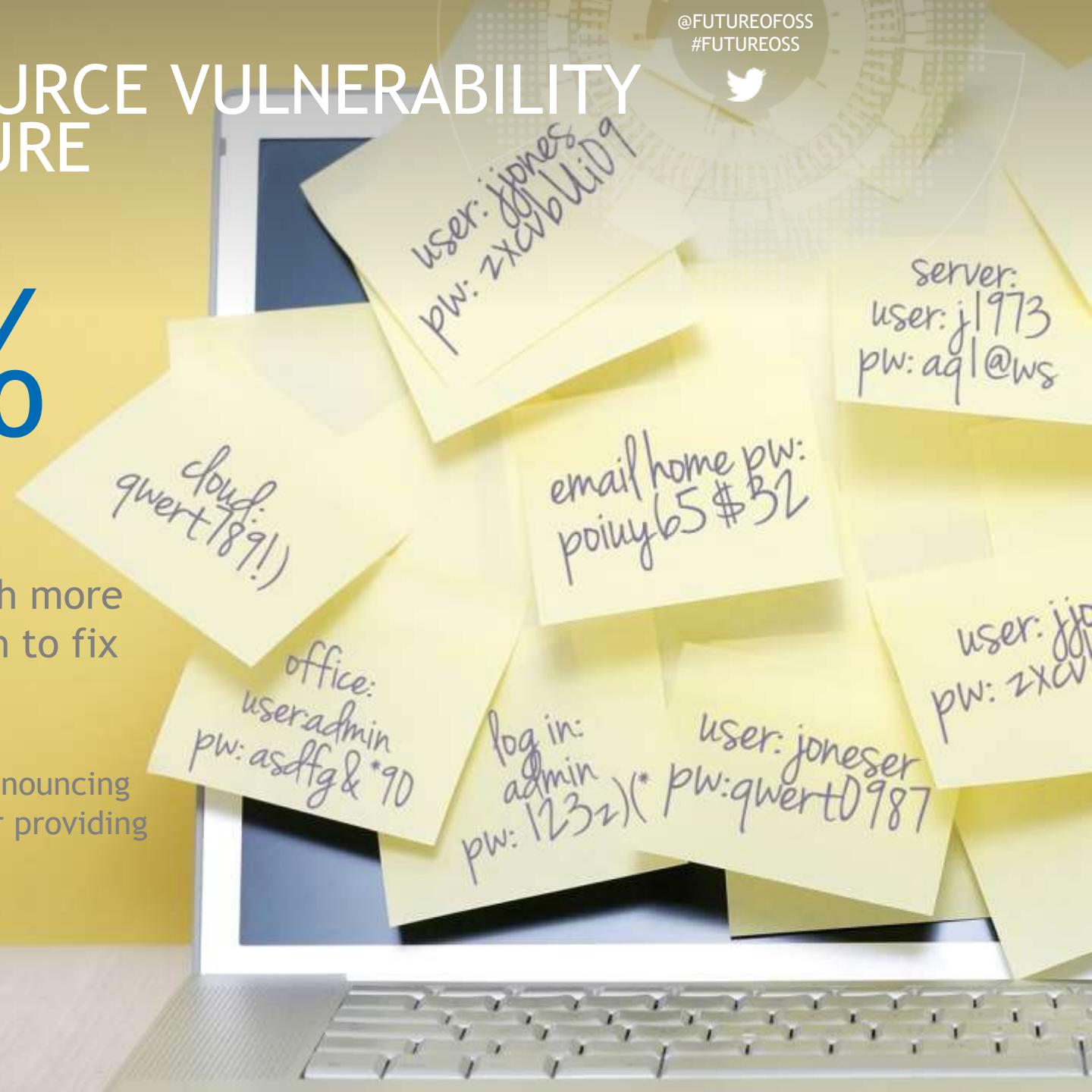


Fewer than

17%

are disclosing vulnerabilities responsibly with more than one month to fix the exposure

>50% are openly announcing the vulnerability or providing no disclosure at all





OPEN SOURCE VERSIONING SYSTEM USAGE



Proprietary
CVS

Git is the overwhelming
choice for versioning

73%



SECTION 5
ACCOUNTABILITY &
SECURITY



OPEN BUSINESS & INVESTMENT



OPEN SOURCE BUSINESS IMPACT IS CLEAR

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90%

of respondents say Open Source Improves:



efficiency



interoperability



innovation



SECTION 6
OPEN BUSINESS



HOW TO MAKE MONEY WITH OPEN SOURCE

In 2014

60% SaaS

50% Support Subscriptions

39% Custom Development

In The Next 2-3 Years respondents overwhelming said the following business models would generate the most value for open source vendors:

45% SaaS

42% Custom Development

41% Services/Support



NORTH BRIDGE IN OPEN SOURCE

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\$1.3B VALUATION UP 86% YOY

ACQUIA™

confer
strength in numbers

COUCHBASE

REVOLUTION
ANALYTICS

RIFTio

WPengine

@ACQUIA

@CONFERINC

@COUCHBASE

@REVOLUTIONR

@WPENGINE



SECTION 6
INVESTMENT



2016 INSIGHTS



1

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OPEN SOURCE IS PRE-EMINENT; IT IS TODAY'S ARCHITECTURE

THE FOUNDATION

for nearly all applications,
operating systems, cloud
computing, databases, big
data and more



SECTION 7
2016 INSIGHTS

2

OPEN SOURCE IS THE ENGINE OF INNOVATION

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Faster, more agile development

Accelerated time to market

Vastly superior interoperability





3

GREATER DIVERSITY OF BUSINESS MODELS

PROMISE TO DELIVER VALUE

to open source companies
than ever before



A photograph of a man rappelling down a large, light-colored rock face. He is wearing a red t-shirt, dark shorts, and climbing gear. A rope is attached to his harness and extends towards the bottom right. The background is a dramatic sunset or sunrise with orange, yellow, and purple hues.

4

CHALLENGES REMAIN

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Open Source Security and Management Practices Have Not Kept Pace With Rapid Adoption

In the Wake of High Profile Breaches, More Emphasis Likely on Security.



A large group of diverse people's hands stacked together in a circle, symbolizing collaboration and community.

5

PARTICIPATION AND CONTRIBUTION SECURE THE FUTURE OF OPEN SOURCE

Investing in the open source community spurs innovation, delivers exponential value and most of all, it's fun

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SECTION 7
2016 INSIGHTS

THANK YOU COLLABORATORS

NORTH BRIDGE +  BLACKDUCK

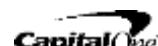
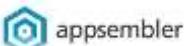
PLATINUM COLLABORATORS



Stay Open.



COLLABORATORS



COOLAN



FIND OUT MORE

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THE FUTURE OF OPEN SOURCE

[#FUTUREOSS](#) | [@FUTUREOFOSS](#)

NORTH BRIDGE

[HTTP://NORTHBRIDGE.COM/OPEN-SOURCE](#) | [@NORTH_BRIDGE](#)



[HTTP://WWW.BLACKDUCKSOFTWARE.COM](#) | [@BLACK_DUCK_SW](#)

OpenSource
Delivers

[HTTP://OPENSOURCEDELIVERS.COM](#) | [@OSDELIVERS](#)



CASE STUDY & QUOTES





 @DRIES @ACQUIA

DRIES BUYTAERT ACQUIA

Acquia®

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“ This year’s survey responses indicate what we’ve all been witnessing first-hand for a long time: the growing adoption of open source technologies. It is exciting to see more great examples of large global enterprises innovating faster with open source software and contributing back so others can benefit as well. Hubert Burda Media, for example, moved to open source Drupal and recently released Thunder, its first major contribution back to the open source community. This is the beauty of open source – one organization creates, and then countless other organizations can use and innovate on top of it. The possibilities are endless. ”



CASE STUDY FOR



CUSTOMER ● **Hubert Burda Media**

PROBLEM

For more than 100 years, Hubert Burda Media has cultivated a vast and diverse readership across its print publications. And while revenue streams from traditional channels are steadily declining, digital channels are fast on the rise. In fact, the sale of digital advertising has grown from 20-30% year-over-year. Burda needed an open cloud platform to deliver personalized experiences to each user and tap into new revenue streams from online subscriptions and digital ad sales.

SOLUTION

Burda developed and maintains a Drupal distribution called Thunder, customized with publishing and media houses in mind. Thunder standardizes editorial workflows, adds freemium versions of services like video transcription and online quizzes, and more. In addition, since Thunder is open source, other publishing houses large and small can use it and contribute their own improvements.

Thunder is still in public beta, but Burda has already migrated three brands which average nearly 2M monthly visits each. Most of the other German Burda brands, including Elle.de and Bunte.de, which have more than 20M monthly visits each, are on track to migrate to Thunder in the next 12 months.



@acquia

CASE STUDY



 @APPNOVATION

ARNOLD LEUNG APPNOVATION



“ The community that comes with open source is truly unique, rapidly evolving and focused on continuous improvement. Being engaged with this community is something that's really important for Appnovation and with the support of our customers, we're able to work on their project while at the same contribute code to the community.

Community-driven development will take open source to the next level of delivering best-in class technology solutions.

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CASE STUDY FOR



CUSTOMER ●



OUR WORK

O2e Brands (Ordinary to Exceptional) is based in Vancouver, BC, and includes three uniquely branded companies 1-800-GOT-JUNK?, WOW 1 DAY PAINTING and You Move Me. They are leaders in customer experience, innovation and franchise development with combined revenue of \$150M.

O2e Brands' objective was to create a single platform that would enable them to serve unique needs of each of their brands' websites while improving management and productivity.

PROBLEM SOLVED

O2e Brands gained a competitive advantage with their scalable, flexible and easily maintainable web and IT infrastructure, providing consistency, quality, and efficiency across each web property and significantly increasing the reliability to each sites' performance.

O2e Brands now has the ability to increase business agility, and to respond to market opportunities with speed, responsiveness, and creativity.



@appnovation

CASE STUDY



 @MMILINKOV @ECLIPSEFDN

MIKE MILINKOVICH, ECLIPSE FOUNDATION



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“ The next wave of open source development is being led by industrials and enterprises. We are seeing increasing commitment to open source by major players in Automotive, Aerospace, and Industrial as the way to promote open innovation and collaboration. Companies that participate in Eclipse Working Groups use open source to build scalable industry platforms that accelerate innovation, adoption, and time-to-market. These companies are creating new business models that are allowing them to succeed in emerging domains such as Cloud, and Internet of Things.



 @NAVINB @INFOSYS

NAVIN BUDHIRAJA, INFOSYS LTD.

Infosys

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“ Infosys believes Open Source software, and its corresponding ecosystem, will be a necessary enabler as enterprises embrace Digital to build a new class of consumer centric, real-time and connected applications. Infosys continues to build deep Open Source expertise and setup its Open Source program – OSSmosis with an objective of ‘nurturing Innovation through Open Source Adoption & Contribution’. The extensive use of Open Source in Infosys Information Platform (IIP) reflects Infosys commitment to the Open Source community.



CASE STUDY FOR **Infosys**

CUSTOMER ●

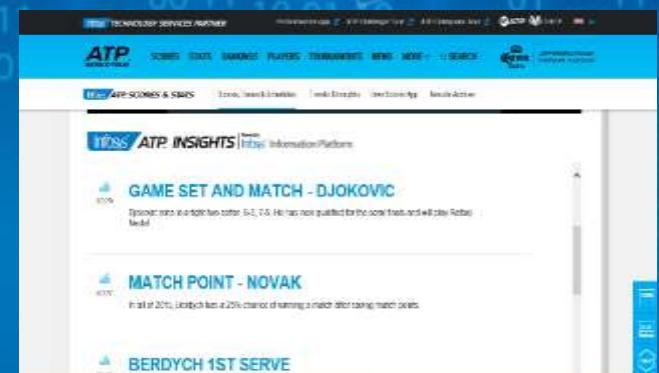


OUR WORK

Knowledge curation efforts on umpire data captured by ATP across all tournaments over the last 12 months and 5 years of the Hawkeye data from the Barclays ATP World Tour Finals. This was done using just 2 nodes of 8 Core CPU and 16GB RAM for hardware, IIP processed voluminous data of over 240,000 records (12 million data points) in near real-time. Insights-as-a service was provided through machine learning algorithms for predicting speed of shots against each other for both forehand and backhand, serve-speed at different time slices, Point winning shots, Winning statistics at different surface types, Holding statistics at different game scores, Double fault, match winning streaks, first serve return, match points saved for each player, Fatigue indexes, Serve Analysis based on hawk eye data etc.

PROBLEM SOLVED

High probability factors influencing match outcomes were published as insights, in real time, on ATPWorldTour.com for tennis fans all over the world.



@Infosys

CASE STUDY



 @DENEALPHA @LIBREOFFICE

MARINA LATINI, THE DOCUMENT FOUNDATION



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#FUTUREOSS



“ Open Source software for personal productivity is growing on a global scale, based on the progress of projects such as LibreOffice and on the support of open standards which improve interoperability. At The Document Foundation, we see an increasing number of migrations from proprietary solutions, in enterprises and public administrations worldwide.



CASE STUDY FOR



CUSTOMER

Italian Defence
Support Staff

RESPONSIBILITIES

The Italian Defence Support Staff is the organ of the Italian armed forces responsible for the military and technical infrastructure of the Italian Ministry of Defence. One of the tasks of the organization is the choice of the application software deployed on the 120,000 PCs used by the armed forces on a daily basis.

OBJECTIVES

Providing a free office suite for personal productivity, reducing dramatically the license cost while offering the same feature set and the same level of security. Moving to a standard document format (ODF) to foster interoperability.

SOLUTION

Deploy LibreOffice on 120,000 PCs between 2016 and 2020, based on the collaboration agreement with Associazione LibreItalia (representing the LibreOffice Italian community).



SOLUTION

- Communication to Top Ranks
- Training to Trainers
- Training to Internal Support Staff
- Training to IT Leaders in Departments
- Seminars to Top Ranks
- Screening of Third Party Applications
- Analysis of Training Needs
- Test on Pilot Departments
- Migration to LibreOffice of first 5,000 PCs





 @JZEMLIN @LINUXFOUNDATION

JIM ZEMLIN THE LINUX FOUNDATION



“ Open source is being used by all of the world’s leading technologists to advance computing. Understanding how to manage these shared resources requires a new level of understanding and best practices. This survey and report will be helpful to an increasing number of open source professionals who we are working with to establish, build and sustain the greatest shared technologies of our time. ”

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 @BSPECTOR @MIRACLHQ

BRIAN SPECTOR, CEO, MIRACL



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“ Everyone knows open source projects reflect a variety of perspectives and address a wider range of solutions than industry offerings tend to. Understanding the internet security framework is broken, MIRACL and NTT have jumpstarted the necessary change by opening up our respective crypto libraries and code to enable the power of the open source developer community and close vulnerabilities of outdated legacy security certificates. Collectively, we will make the web more secure for all.



 @SJMACKINTOSH @OPUSVL

STUART MACKINTOSH, OPUSVL

OPUSVL
...

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“ Open Source has become the default technology foundation for businesses in both private and public sectors and we can see Government policy evolving further in this direction. Going forward, I expect to see an increase in commercial models which support the export of Open Source and greater spend within the Open Source marketplace as a whole.



 @BGRACELY | @WIKIBON

BRIAN GRACELY LEAD CLOUD ANALYST WIKIBON

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#FUTUREOSS



“ Directly or indirectly, open source is having a significant impact on every aspect of IT. At Wikibon, we see companies transforming towards Digital Business, and open source software is a key enabler. Understanding how to work collaboratively with open communities is becoming a core skill needed for any company hoping to succeed in the 21st century.



siliconANGLE



WIKIBON



theCUBE