



# TRENDS IN OPEN SOURCE: MOBILE AND BIG DATA DOMINATE WHILE SECURITY CHALLENGES ABOUND

December 2014



# COMPANY BENEFIT: LESS IS MORE

**Gartner**

Publication Date: 24 January 2011

## Survey Analysis: Open Source Software in the Adoption and Use of IT

Laurie F. Wustler, Bob Igoe, Zeynep Gartner conducted a primary research survey (excluding technology and service providers) to determine current usage habits. Results suggest that the goal was to determine current usage habits. Results suggest that the goal was to determine current usage habits. Results suggest that the goal was to determine current usage habits.

### Key Findings

- All responding organizations
- Executed in some degree
- Consistently used in some degree
- Strategically used in some degree
- Used only as prototyping
- More than half the organizations (IT strategy, with nearly 50% shorter development time)
- The top corporate-wide (1) data management architecture, governance
- Only one-third of respondents remain open source OSS adoption.
- OSS makes up most portfolio (application) proportion of internal
- Nearly half the respondents part of their business

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### WHITE PAPER

#### Managing Open Source Software for Business Agility

Sponsored by Black Duck

Maïnde-Cécile Balthus  
September 2012

#### IN THIS WHITE PAPER

Software drives business redefinition and innovation, yet managing a disparate array of application components deployed across a range of platforms is costly, inefficient, and inherently risky. Global 2000 (G2000) organizations increasingly leverage code from a vast array of sources — including internally built, open source, outsourced, commercially built, and customized applications. Open source software (OSS) provides tremendous opportunities for efficient code creation, yet organizational strategies to manage open source — in conjunction with other sources for software — remain woefully inadequate when they exist (and usually they don't exist) and aren't used consistently. In addition, open source is driving platform evolution (e.g., mobile with Android, cloud infrastructure with Open Stack, and vertical industries, such as automotive with the OSEK/VDX database for embedded real-time systems) at the same time as mobile software demand, as part of corporate branding and brand adoption, are increasing dramatically. Executives, managers, and development teams must drive coordination and decision making in this complex, dynamic environment. But managing these software assets is challenging due to a variety of factors.

- Companies typically have low visibility into the origin and policy management of the OSS code on which their businesses depend. OSS is different from other code used by organizations because it comes from an external source that is both outside the IT group's control and outside the control of a supplier with which IT is likely to have a formal or contractual relationship.
- Open source makes up 30% or more of the code at major G2000 organizations and is increasingly viewed as a resource, with recent research suggesting that the majority of software acquired in the next five years will be open source. (OSS includes both software components from which applications/products and services are built, and tools that are used to build software, tools such as Selenium and CI are being adopted as well.)
- Complex sourcing with open source, offshoring, outsourcing, and geographically distributed internal development teams drives the need to collaborate well and manage dispersed software impacts effectively. Control of open source components is especially important given that open source typically circumvents established acquisition processes. These disparate sources of software tend to be fractured organizationally and geographically.
- Manual, disparate methods of user access to applications — including desktops, mobile platforms, and services in the cloud — add to the complexity and cannot address this coordination problem.

“Open Source is a **‘silver bullet’** that allows simultaneous improvement along the dimensions of the “iron triangle” of **cost, schedule, features.**”

**Jeffrey Hammond,**  
Forrester



Average

Best in class

# OPEN SOURCE IS BECOMING UBIQUITOUS

**By 2016, Open Source Software Will Be Included In Mission-critical Applications Within 99% Of Global 2000 Enterprises**



**Reasons Why Enterprises Choose Open Source<sup>(1)</sup>**

70% of Enterprises use Open Source for More Than Just Cost Savings

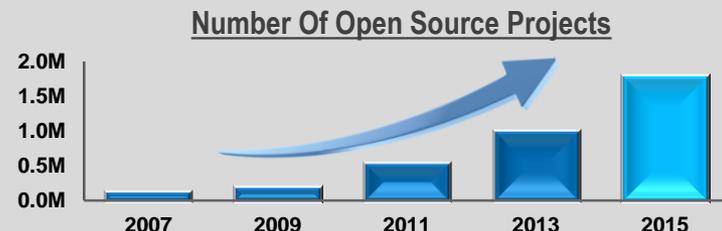
**Tech Titans Depend Heavily on Open Source**



**Every Major Tech Trend Is Impacted by Open Source**



**Growth in Open Source Projects Follows Moore's Law<sup>(2)</sup>**



(1) Gartner Report: "Market Trends: Open-Source adoption in the SMB market."

(2) As per Black Duck KnowledgeBase.



# FUTURE OF OPEN SOURCE SURVEY KEY LEARNINGS

# FUTURE OF OPEN SOURCE SURVEY

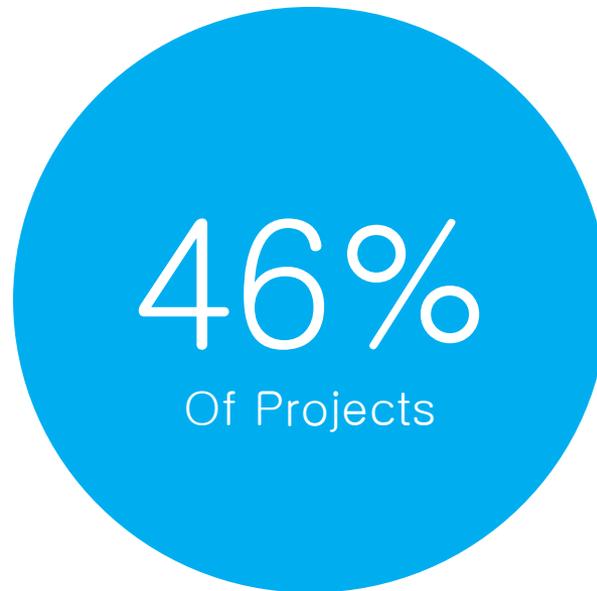


NORTH BRIDGE  
venture partners  
growth equity

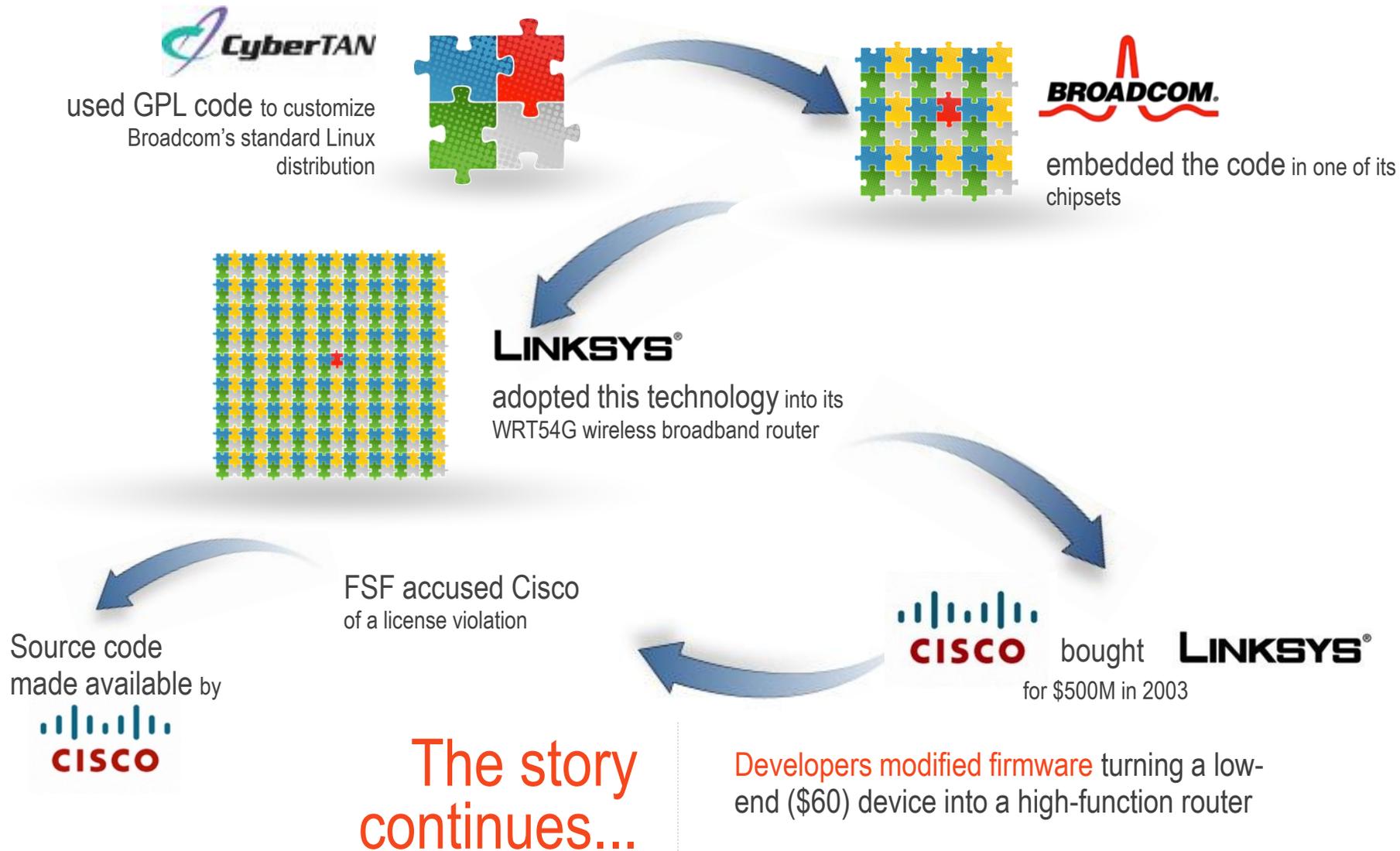


# GENERAL PUBLIC LICENSE

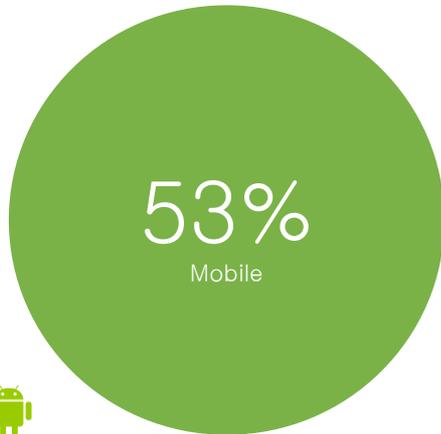
The GPL family of licenses accounts for 46 percent of projects



# WHY GPL IS OF CONCERN

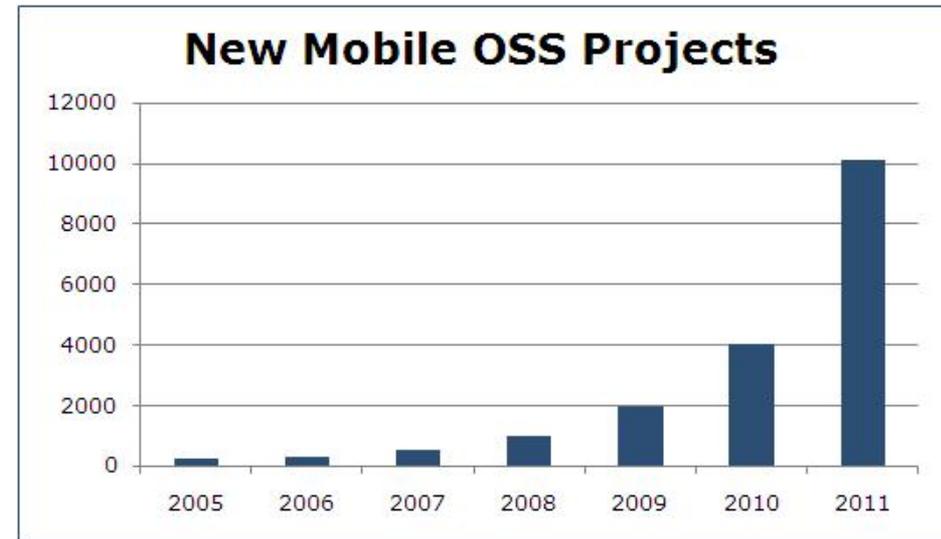


# FAST GROWING MOBILE

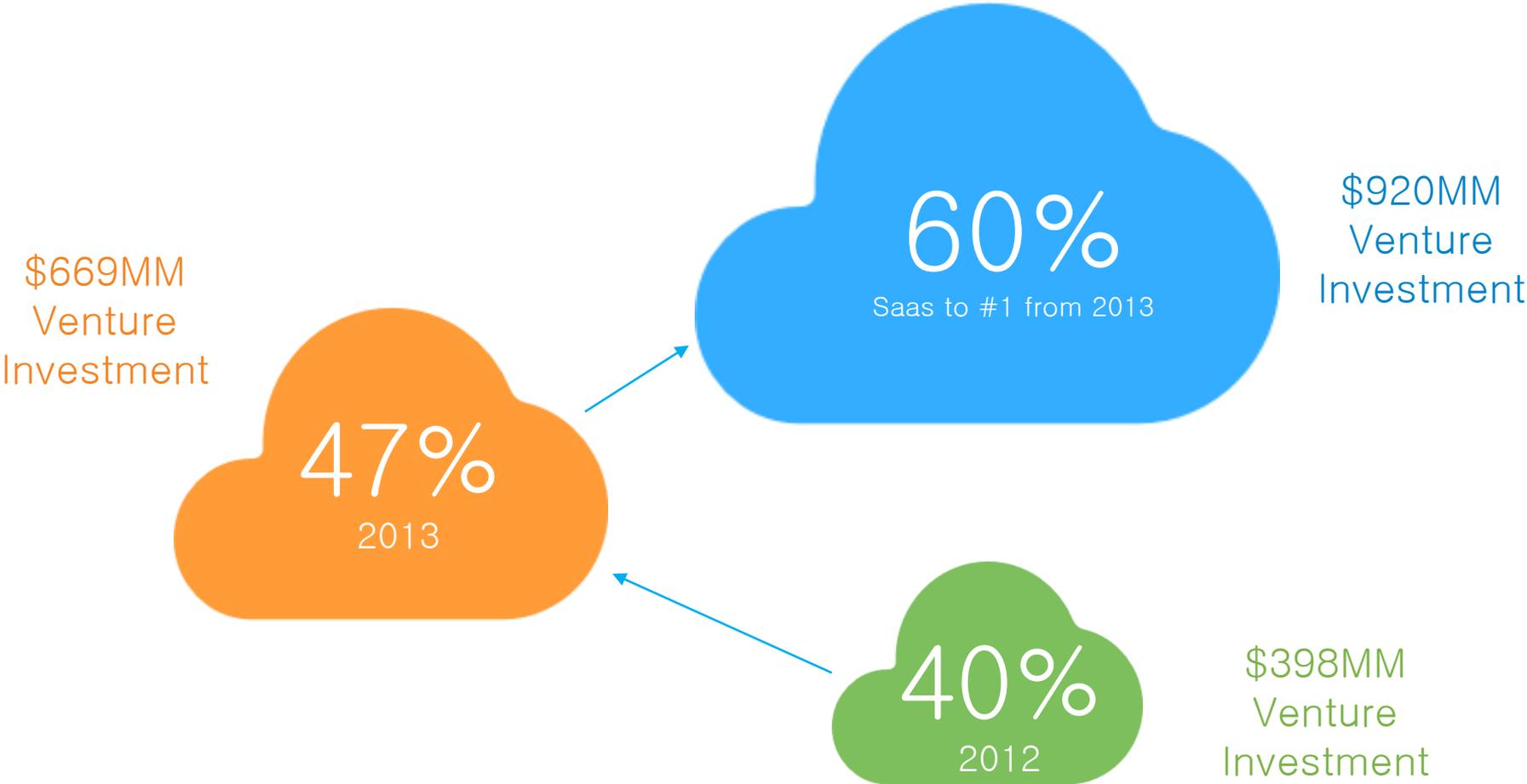


**TIZEN**<sup>™</sup>

Driven by open source



# RISE OF SAAS



# OSS: THE BASIS FOR SAAS BUSINESS MODELS...



amazon

NETFLIX

Constant Contact

Google

skype

YAHOO!

LinkedIn



ebay



...free, but not a free lunch

## SAAS Considerations

- Legal
  - Mainly new licenses
- Security
  - In OSS components
- Operational
  - Version management
- Strategic
  - Keeping options open



# THE NEXT WAVE IN OPEN SOURCE: BIG DATA, ANALYTICS, AND BUSINESS INTELLIGENCE

# THIS WAVE AND BEYOND

Black Duck's Future of Open Source Survey found the embrace of open source is expanding beyond the early adopters



# LOOKING FORWARD – WHERE *WILL* OPEN SOURCE DOMINATE?

## Drones



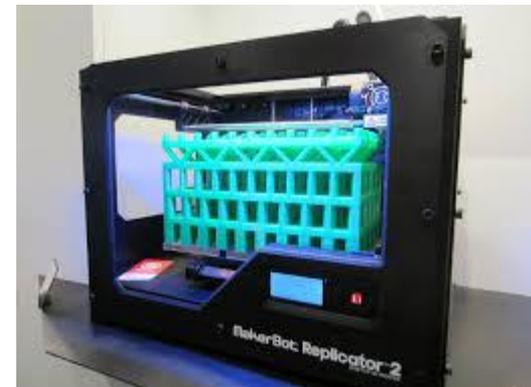
## Video Gaming



## ERP



## 3D Printing



# EXPANDING OSS MARKETS



76% Academic institutions



67% Government agencies



45% Healthcare organizations

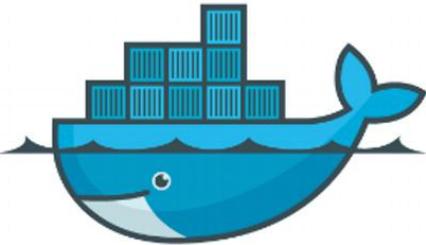


# DOCKER: THE NEXT WAVE IN VIRTUALIZATION



[2013 Open Source Rookies of the Year](#)

# DOCKER WITH BLACK DUCK



License



security



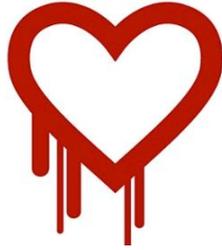


# SECURITY: THE ELEPHANT IN THE ROOM

# OSS SECURITY CASE STUDY

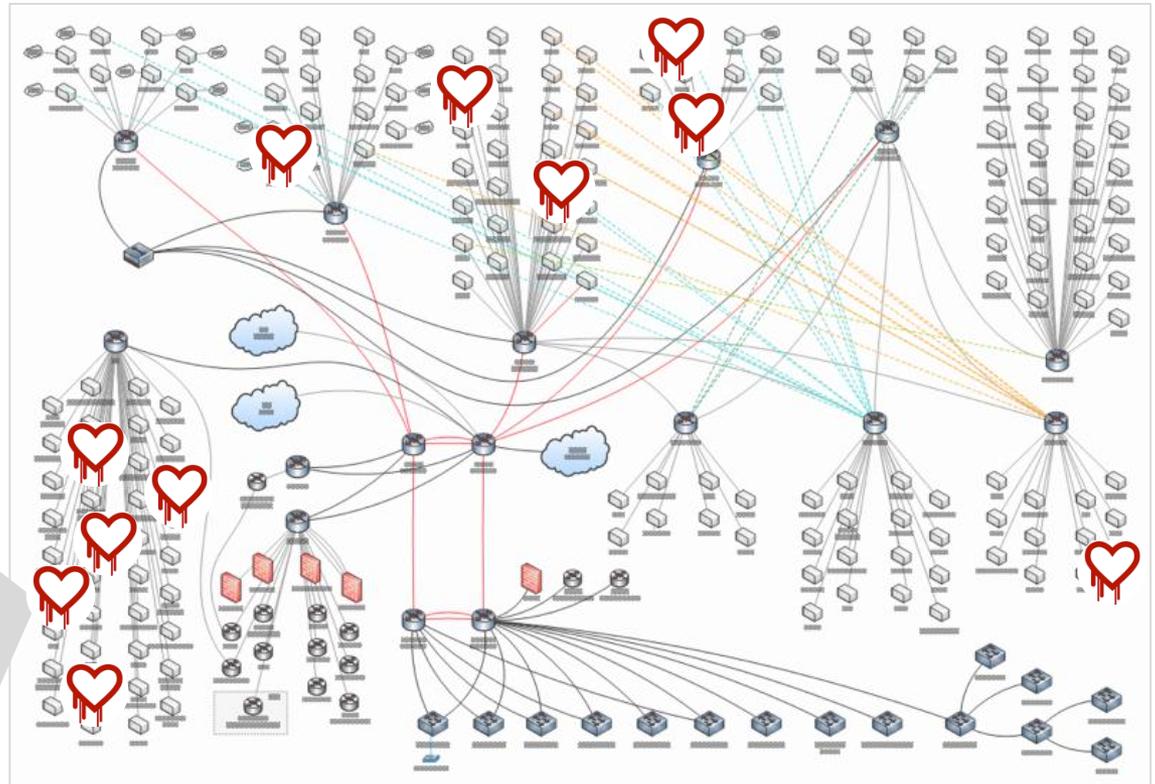


1.  
Identify



**THE WALL STREET JOURNAL.**

2. Track  
Down



# OPERATIONAL RISK

## Corporate Catalog Risk Profile

OVERALL RISK

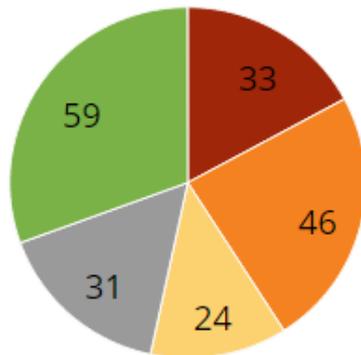
OPERATIONAL RISK

ACTION PLAN

DETAILS

filter: Business Unit = Mobile Technologies;IT ✕

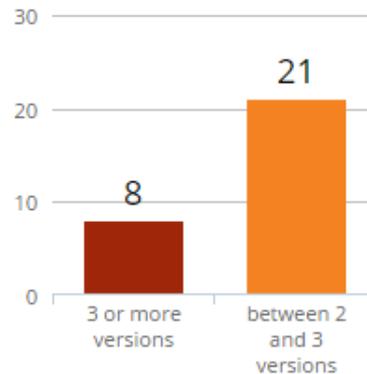
Version Status



Version Status indicates a combination of the version age and how many releases it's behind the latest release.

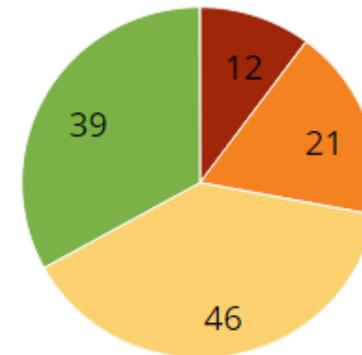
33 components have a HIGH Risk Version Status: At least 48 months old and at least 10 releases behind.

Versions in Use



Versions in Use, or Version Proliferation, indicates how many different versions of the same component are in use.

Activity Status



75 components: No community data available.

Activity Status is an analysis of commit and contributor activity.

21 components have a MEDIUM Risk Activity Status: NO commit activity for the past 12 months, or there is only 1 contributor.

# HOW SHOULD ORGANIZATIONS APPROACH SECURITY?

Awareness is the key

Visibility



Automation



Preparation for the unknown





# CONCLUSION

# OPEN SOURCE PROLIFERATION

- Open source is rapidly proliferating through everyday life. And these sectors are increasingly benefitting from the contributions of developers using open source.
  - Entertainment platforms
  - Mobile devices
  - Home appliances
  - Cars
  - Robotics
  - Wearables
- Venture capital investment in open source organizations increased from \$398 million in 2011 to \$920 million in 2013.
- We've gone from one billion connected places in 2000, to five billion connected people in 2010, to the promise of 50 billion connected "things" by 2020.