Open Source is Eating the World...
Yes we know that modern firms and their workings are becoming **software-driven**, **software-managed** and even **software-defined** as they also become generally more digitized and automated. *Every firm is a software business*, every firm is a socially-empowered web-centric business today, or it needs to be if it wants to survive.

- Forbes Magazine  
  Apr 24, 2015

### Open Source is Eating the World...

While the software world has grown used to products and their vendors dominating for long stretches (think: Microsoft in operating systems and Oracle in databases), the **new world of open source** is moving at an **accelerated**, **Darwinian** pace, **leaving no one to rest on its laurels**.

**In this fast-changing open source world, how should enterprises decide where to invest?**

Matt Asay  
VP, Mobile at Adobe  
Former OSI Board Director  

masson@opensource.org
More and more major businesses and industries are being run on software and delivered as online services—from movies to agriculture to national defense. Many of the winners are Silicon Valley-style entrepreneurial technology companies that are invading and overturning established industry structures. Over the next 10 years, I expect many more industries to be disrupted by software, with new world-beating Silicon Valley companies doing the disruption in more cases than not.
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“Today you can’t build a product without using open source software,” said Ibrahim Haddad, head of the open source innovation group at Samsung Research America, a subsidiary of Samsung Electronics. Open source software has become so pervasive that it’s “eating” the software world, he said.

http://blogs.wsj.com/cio/2014/05/05/open-source-eating-software-world-samsung/
Can you name a company that does not rely on software to achieve their business goals, develop their products/deliver services, or manage operations?

Open Source is Eating the World...

Every firm is a software business

Agree?

leaving no one to rest on its laurels

Today, **practically every major piece of technology** you interact with on a day-to-day basis—from the web to your phone to your car—was **built using at least some form of freely available code**.

For 25-plus years, almost all enterprise software created was sold “top down.” Expensive sales reps in fancy suits traveled the globe to wine and dine C-level executives, evangelizing their proprietary software products in an attempt to convert them to a new view of the world.

In the past two decades there’s been a fundamental shift in decision-making power within the IT organization. While people at the CIO and VP of IT level still think they make decisions about what software the company uses, the reality is that developers more than ever hold the keys to the kingdom. Organizations of every kind are under intense pressure to build software better, faster, and cheaper. Developers are being asked to move at lightning speed and build software that scales for the masses. Open source software is brought into IT environments as developers seek to quickly solve new challenges and leverage recommendations from their peers. Usage spreads quickly within organizations and is firmly established before any vice president or C-level executives are aware.
1,313 RESPONSES:
64 COUNTRIES
22% C-SUITE
78% TECHNICAL

“NO sectors of the software industry will be invulnerable to disruption from Open Source” - FOSS / Black Duck

78% OF COMPANIES RUN ON OPEN SOURCE

LESS THAN 3%
DON’T USE OSS IN ANY WAY

2015 & 2016 Future of Open Source Survey Results
Open source software is software that can be freely used, changed, and shared (in modified or unmodified form) by anyone. Open source software is made by many people, and distributed under licenses that comply with the Open Source Definition.
Analytical Engine By Bruno Barral (ByB), 2009. CC BY-SA 2.5.

Atanasoff-Berry Computer By Manop, 2006. CC BY-SA 3.0.


7-inch reel of ¼-inch-wide audio recording tape. By Daniel P. B. Smith, 2005 CC BY-SA 3.0

ENIAC (Electronic Numerical Integrator And Computer) By Unknown, Public Domain
Originally **customers did not pay for software** or services separately from the very high price for leasing the hardware.

**Software was provided at no additional charge, generally in source code form**; services (systems engineering, education and training, system installation) were provided free of charge at the discretion of the IBM Branch office...


...one pivotal event in the growth of the business software products market was IBM's decision, in 1969, to price its software and services separately from its hardware.

On April 7, 1964, IBM introduced the System/360, the first large "family" of computers to use interchangeable software and peripheral equipment. It was a bold departure from the monolithic, one-size-fits-all mainframe. Fortune magazine dubbed it "IBM's $5 billion gamble."

An Open Letter to Hobbyists

February 3, 1976

To me, the most critical thing in the hobby market right now is the lack of good software courses, books and software itself. Without good software and an owner who understands programming, a hobby computer is wasted. Will quality software be written for the hobby market?

Almost a year ago, Paul Allen and myself, expecting the hobby market to expand, hired Monte Davidoff and developed Altair BASIC. Though the initial work took only two months, the three of us have spent most of the last year documenting, improving and adding features to BASIC. Now we have 4K, 6K, EXTENDED, ROM and DISK BASIC. The value of the computer time we have used exceeds $40,000.

The feedback we have gotten from the hundreds of people who say they are using BASIC has all been positive. Two surprising things are apparent, however. 1) Most of these “users” never bought BASIC (less than 10% of all Altair owners have bought BASIC), and 2) the amount of royalties we have received from sales to hobbyists makes the time spent of Altair BASIC worth less than $2 an hour.

Why is this? As the majority of hobbyists must be aware, most of you steal your software. Hardware must be paid for, but software is something to share. Who cares if the people who worked on it get paid?

Is this fair? One thing you don’t do by stealing software is get back at MITS for some problem you may have had. MITS doesn’t make money selling software. The royalty paid to us, the manual, the tape and the overhead make it a break-even operation. One thing you do do is prevent good software from being written. Who can afford to do professional work for nothing? What hobbyist can put 6-man years into programming, finding all bugs, documenting his product and distribute for free? The fact is, no one besides us has invested a lot of money in hobby software. We have written 6800 BASIC, and are writing 8080 APL and 6800 APL, but there is very little incentive to make this software available to hobbyists. Most directly, the thing you do is theft.

What about the guys who re-sell Altair BASIC, aren’t they making money on hobby software? Yes, but those who have been reported to us may lose in the end. They are the ones who give hobbyists a bad name, and should be kicked out of any club meeting they show up at.

I would appreciate letters from any one who wants to pay up, or has a suggestion or comment. Just write me at 1180 Alvarado SE, #114, Albuquerque, New Mexico, 87108. Nothing would please me more than being able to hire ten programmers and deluge the hobby market with good software.

Bill Gates
General Partner, Micro-Soft

IBM “PC” with Open Architecture

IBM PC 5150 with keyboard and green monochrome monitor (5151), running MS-DOS 5.0, by Boffy, 2005 CC BY-SA 3.0
Run the program as you wish, for any purpose (freedom 0).
Study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
Redistribute copies so you can help your neighbor (freedom 2).
Distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.
Hello everybody out there using minix –
I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewin since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them.

Linus (torvalds@kruuna.helsinki.fi)
PS. Yes – it's free of any minix code, and it has a multi-threaded fs. It is NOT protable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-(.
The “open source” label was created at a strategy session held on February 3rd, 1998 in Palo Alto, California, shortly after the announcement of the release of the Netscape source code. The strategy session grew from a realization that the attention around the Netscape announcement had created an opportunity to educate and advocate for the superiority of an open development process. The conferees believed the pragmatic, business-case grounds that had motivated Netscape to release their code illustrated a valuable way to engage with potential software users and developers, and convince them to create and improve source code by participating in an engaged community. The conferees also believed that it would be useful to have a single label that identified this approach and distinguished it from the philosophically- and politically-focused label "free software." Brainstorming for this new label eventually converged on the term "open source", originally suggested by Christine Peterson.

The Open Source Initiative protects and promotes open source software, development and communities, championing software freedom in society through education, collaboration, and infrastructure, stewarding the Open Source Definition, and preventing abuse of the ideals and ethos inherent to the open source movement.

Allison Randal, President (HP)
Deb Bryant (Red Hat)
Molly de Blanc (FSF)
Richard Fontana (Red Hat)
Leslie Hawthorn (Elastic)
Patrick Masson (Open Source Initiative)
Mike Milinkovich (Eclipse Foundation)
Josh Simmons (Google)
Paul Tagliamonte (US Digital Services)
Italo Vignoli (LibreOffice)
Stefano Zacchiroli (Univ. Paris Diderot)
Do you use open source software?

...in business

...for business

...personally
Do you use Open Source Software?

Apple.com | Ask.com
Bloomberg.com
Businessinsider.com
Craigslist.org | Google.com
Indeed.com | Paypal.com
Pinterest.com | Reddit.com
Tumblr.com | Wikipedia.org
Wordpress.com | Yahoo.com

web servers

Apache  54.5%
Nginx  28.1%
Microsoft-IIS  12.0%
LiteSpeed  02.3%
Google Servers  01.4%
IBM Servers  00.1%
Oracle Servers  00.1%
Do you use an iOS device?
The BSD portion of the OS X kernel is derived primarily from FreeBSD, a version of 4.4BSD that offers advanced networking, performance, security, and compatibility features.

Android leads the global phone market with a 76% market share. Android enjoys 64% of the global OS tablet market.

Drupal powers more than 12% of the world’s top 100,000 websites.

World’s most popular web browsers

60 million users, 50 billion page views/mo.

Are you an open source software user?

98.8%: Super Computers
96.6%: Public Servers
53.86%: Smart Phones
29.44%: Embedded Devices
1.47%: Desktop Computers

74,652,825 WordPress sites. WordPress accounts for 18.9% of all self-hosted websites.
Facebook doesn’t sell software, but it’s arguably the largest open source software company in the world.


It comes as a surprise to many people that PayPal runs such a large financial services company on an open source platform.

http://www.ecommercetimes.com/rsstory/59898.html

Every Tweet you send and receive touches a plethora of open source software.

https://opensource.com/business/15/9/at-interview-chris-aniszczyk-twitter

Today we’re excited to announce that we’re open sourcing reddit.

https://redditblog.com/2008/06/17/reddit-goes-open-source/

Netflix both leverages and provides open source technology focused on providing the leading Internet television network.

http://netflix.github.io/

Are you an open source software user?


Open source has been a key part of the Amazon story.
“Linux is a cancer that attaches itself in an intellectual property sense to everything it touches.”
- Microsoft CEO Steve Ballmer
http://www.theregister.co.uk/2001/06/02/ballmer_linux_is_a_cancer/

Who can afford to do professional work for nothing? What hobbyist can put 3-man years into programming, finding all bugs, documenting his product and distribute for free?
- Microsoft CEO Bill Gates

“Microsoft loves Linux”
- Microsoft CEO Satya Nadella
Why are all these companies using open source?
Enterprise software is not a key differentiator...

How many of you select your bank because they have a single, configurable, easy to use dashboard to visualize near real-time status of the entire delivery pipeline.

How many of you subscribe to a newspaper because they have methods of generating dynamic 3D graphics using JavaScript, accelerated through hardware.

How many of you shop only at stores with a platform for building universal React/Node.js applications with standardized structure, best practices, and modern technologies baked in.

How many of you selected Ualbany because of their learning management system, email or human resources systems.
Software may be eating the world, as Marc Andreessen posits, but open-source software seems to be eating itself. And at a far faster clip. While the software world has grown used to products and their vendors dominating for long stretches (think: Microsoft in operating systems and Oracle in databases), the new world of open source is moving at an accelerated, Darwinian pace, leaving no project to rest on its laurels.

In this fast-changing open source world, how should enterprises decide where to invest?
How should enterprises decide where to invest?

Business Value
Infrastructure, Operations, Strategy

Implementation
Company, Culture, Community
Bringing you yesterday's technology ...tomorrow

MITRE

United States Navy

Defense Acquisition University
"Build vs. buy: That mantra is very different now; we've changed that to: 'Download, build, buy'. We are huge adopters of open source software and also increasingly large scale contributors to open source software."

Martin Chavez, CIO, Goldman Sachs

http://www.cio.co.uk/insight/it-strategy/using-open-source-in-enterprise-3628364/
"Build vs. buy: That mantra is very different now; we've changed that to: 'Download, build, buy'. We are huge adopters of open source software and also increasingly large scale contributors to open source software."

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http://www.cio.co.uk/insight-it-strategy/using-open-source-in-enterprise-3628364/
Infrastructure Benefits

Try Before You Buy
No Acquisition Costs
Multiple Instances
Broader Support Options
Breaks the Hardware Upgrade Cycle
Faster Implementation
Lower Total Costs of Ownership

Technical Benefits
Higher Quality
Greater Security
Better Reliability
Technical Audibility
Better Decision-making
Standards-based
Standards-setting
Customizable
Reduced Development Time

Business Benefits
Increased Pace of Innovation
Avoid Vendor Lock-in
Mitigates Long-term Risks
Business/Operational Continuity
Operational Consistency
Emphasizes Concepts not Products
Organizational Audibility
Community Audibility
Participates in Project Governance
Professional Development
Higher Quality Staff
Greater Recruitment
Community Access
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Try Before You Buy
(Test drive)
assess one, or many, options, before investing.
With the advent of cloud-based delivery architecture and the 'try-before-you-buy' model, open source business monetization is now a reality.

Ray Estevez, CIO, V12 Group
**Infrastructure Benefits**
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**No Acquisition Costs**

no licensing fees
Because it is open source, there are **no licensing fees** and enhancements are created for free by developers worldwide, which will also result in substantial cost savings for ongoing enhancements.

David McClure
Associate Administrator
Office of Citizen Services and Innovative Technologies
U.S. General Services Administration

http://www.gsa.gov/portal/mediald/185247/fileName/FY13_OCSIT_Annual_Report_Final.action
Multiple Instances
(no per copy/user fees)
can extend use on demand without additional costs or contract negotiations.
Even with the commercial Enterprise version, there are no up-front licensing costs, which means lower capital outlay—much lower, when you compare it to big-gun proprietary databases like Oracle and Microsoft, whose per-CPU license costs run anywhere from $25,000 to $40,000. MySQL Enterprise support and maintenance cost less too, with savings from $2,000 to $5,000 annually.

Tina Gasperson
CIO Magazine
Broader Support Options

options range from local internal resources, to communities of practice, and multiple commercial vendors rather than a single commercial provider (the developer)
But with Moodle and uPortal, we have found healthy communities around them and all types of support options available, even ones offering services on an hourly basis.

Theresa Rowe
CIO, Oakland University

http://downloads.realviewtechnologies.com/1105Media/Campus%20Technology/September%202013.pdf
open source software is often designed to require less resource intensive hardware.
...we replaced those 60 Sun boxes ($240,000 a pop and a $25,000 yearly maintenance fee) with 80 $4,000 Intel servers and a commodity operating system, Linux. The Intel boxes are less powerful than their Unix counterparts, so [e-Trade] just bought more of them.
Faster Implementation

- no procurement process

Infrastructure Benefits
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- No Acquisition Costs
- Multiple Instances
- Broader Support Options
- Breaks the Hardware Upgrade Cycle

Technical Benefits
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The flexibility of using open source products reduces time of delivery of services to the fleet.
Lower Total Cost of Ownership
(cumulative of other benefits):
no licensing fees, no procurement process, competitive support contracts (even none with internal), no forced SP upgrades, re-purposed legacy hardware, greater scaling
The White House committed to adopting a Government-wide Open Source Software policy that will support improved access to custom software code developed for the Federal Government, emphasizing that using and contributing back to open source software can fuel innovation, lower costs, and benefit the public.

Tony Scott
CIO, United States of America
https://sourcecode.cio.gov/
Technical Benefits

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- Greater Recruitment
- Community Access
Higher Quality

large groups of diverse peers co-create independently around shared interests
Collaborative software development—including the use and release of Open Source Software—can reduce costs, reduce development time, and improve overall quality, including security (through increased transparency and mass peer review).

Dan Massey
HOST Program Manager
Cyber Security Division
Science & Technology Directorate
Department of Homeland Security

Greater Security

vulnerabilities can be discovered more quickly (the more folks with access to the code, the more likely issues are to be discovered) with the best solutions applied to address issues (more folks involved can offer a greater variety of approaches, ideas solutions)
DoD security depends on (OSS) applications and strategies, and that a hypothetic ban would have immediate, broad, and in some cases strongly negative impacts on the ability of the DoD to analyze and protect its own networks against hostile intrusion.

Terry Halvorsen
CIO, United States Department of Defense
http://dodcio.defense.gov/Open-Source-Software-FAQ/
Better Reliability

bugs will be discovered and fixed more quickly (see, greater security)
Continuous and broad peer-review, enabled by publicly available source code, improves software reliability and security through the identification and elimination of defects that might otherwise go unrecognized by the core development team.

Terry Halvorsen
CIO, United States Department of Defense
http://dodcio.defense.gov/Open-Source-Software-FAQ/
Technical Audibility
ability to assess quality of code, architecture, development practices, etc.
Users could not evaluate the software without a legal agreement and speaking with a sales rep.

By open sourcing, you also get the benefit of having your code peer-reviewed and tested, giving potential technical customers an independent check on what they are being promised by the sales team, helping build confidence in your technology.

Dan Mihai Dumitriu
CEO and CTO, Midokura

https://enterprisersproject.com/article/2015/7/why-we-changed-our-software-proprietary-open-source

Dr. Andy Phillips
CTO, LMAX Exchange

Better Decision-Making

meritocracy (best approach) is implemented leading to higher quality
The trust is a big supporter of the move towards open source within the NHS and always considers open source options first when procuring IT. We want to not only gain more efficient patient care by using the most advanced EPR available but at the same time, achieve value for money through an open and collaborative roadmap for ongoing software development.

Steven Bloor
CIO, Blackpool Teaching Hospitals
British National Health System Foundation Trust
http://www.cio.co.uk/insight/it-strategy/using-open-source-in-enterprise-3628364/
Standards Based

**provides greater integration and interoperability (no proprietary specifications)**

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By moving away from proprietary standards, open source software has allowed unlimited numbers of developers to apply their ideas to a problem, boosting the opportunity for greater innovation and lower costs.

Don Duet
CIO, Goldman Sachs Group Inc
http://blogs.wsj.com/cio/2016/03/04/the-morning-download-goldman-sachs-bets-on-open-hardware/
Standards Setting participants are often directly involved in the development of new standards, or learn of them first.
Walmart is a cloud user, not a cloud provider. It makes sense for Walmart to release OneOps as an open source project so that the community can improve or build ways for it to adapt to existing technology.

Jeremy King
CTO and Head of @WalmartLabs, Walmart
http://www.cio.co.uk/insight/it-strategy/using-open-source-in-enterprise-3628364/
Customizable

Ability to modify base level functionality to meet unique local needs
Gaining a competitive advantage has emerged as a significant reason for adopting an OSS (open source software) solution, suggesting that users are beginning to look at OSS differently—*if they can customize the code to make it unique to their company, they have created a competitive advantage.*

Laurie Wurster
Research Director, Gartner

http://www.pcworld.com/article/219032/competitive_benefits_driving_businesses_to_open_source_software.html
Reduced Development Time
more contributors and contributions to solve problems, write code, test enhancements, document versions, etc.
Customers appreciate how open source allows them to 'try before you buy,' but they also see the open source world as evolving more rapidly than the proprietary world because of the sharing that takes place among developers.

Mike Tuchen,
Former Microsoft executive,
CEO, Talend

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Community Access
Increased Pace of Innovation

focus on creating differentiation, not on support of commodity systems/services
Samsung is going through a shift where there’s more **emphasis on software innovation**, and open source software is a faster path to innovation.

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Ibrahim Haddad  
Head of the Open Source Innovation  
Samsung Research America  
Samsung Electronics

http://blogs.wsj.com/cio/2014/05/05/open-source-eating-software-world-samsung/
Avoid Vendor Lock-in
not tied to, and controlled by any third party
and their direction, interests, plans, migrations, enhancements, upgrades, sunsetting, integrations, dependencies, etc.
Of course open source software is free to acquire, but this really isn’t the top reason for adoption, it’s much more about the flexibility to integrate and to be a part of a thriving community with multiple vendor support options, eliminating lock-in.

Mark Collier
CIO, OpenStack Foundation
Mitigates Longterm Risk
no chance of discontinuing development/support due to purchase, or a new version (and thus forced migration to stay up to date with support/service contracts)
When a commercial software company goes out of business or stops servicing a software product, you're out of luck. If any open source leader "leaves" a project or community, others take over.
Business/Operational Continuity

local organizational operations and practices are not disrupted through forced timelines for migrations, upgrades, enhancements etc.
Unlike the leading proprietary OS and its applications, Linux runs comfortably on legacy hardware (allowing for longer deployment / depreciation cycles).
Operational Consistency

business processes not tied to software functionality
It’s a cliché of the software industry: those who spend the gold get to steer the boat. If you’re a small customer of a significant proprietary software vendor, you better hope your product objectives align with the vendor or its large users; otherwise, your feature requests will get tossed in the circular file. With open source, you can directly interact with developers to present your use cases; if important enough, you can contribute code that implements your desired functionality.

Bernard Golden
CIO Magazine
A lot of open source projects start as small point solution initiatives, versus behemoth one-size-fits-all software packages. As a result, these solutions tend to be lightweight, focused and usually do a pretty good job of solving a problem.

Bryson Koehler
CIO & CTO, The Weather Company
https://enterprisersproject.com/article/2015/1/5-reasons-why-i-believe-open-source-and-you-should-too
Emphasizes Concepts, Not Products

end users are not tied to branded or copyrighted features, workflows, tools.
Open source tends to allow you to focus on narrow best-in-class solutions rather than broad and expensive commercial propositions.

We focus on capabilities and services that partners can bring to our business rather than commercial products to buy.

Tim Jones
CTO, Moneysupermarket.com
http://www.cio.co.uk/insight/it-strategy/using-open-source-in-enterprise-3628364/
Organizational Audibility

ability to assess how well the open source community, project and governance is aligned with local (adopting organization’s) needs/goals/expectations.
It may turn out that open source's greatest contribution to organizations is not its great products, but its great working practices. Take a look at where you can take advantage of community within your organization.

Bernard Golden
CEO, Navica
Community Audibility
ability to assess what the level of shared knowledge and experience is within the community; number of participants, contributors and committers there are in the project; what the level of adoption/deployments is.
Not only is the source code available, all of the design deliberations, etc., are out in the open, in contrast to the secretive processes of proprietary vendors. It’s easy to assess the product and its community and determine if using the product is a good decision.

Bernard Golden
CIO Magazine
Participate in Project Governance

anyone can contribute to defining the direction of the project: technical aspects, functionality/features priorities, decision-making, community practice, etc.

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Lower Total Costs of Ownership

Technical Benefits
Higher Quality
Greater Security
Better Reliability
Technical Audibility
Better Decision-making
Standards-based
Standards-setting
Customizable
Reduced Development Time

Business Benefits
Increased Pace of Innovation
Avoid Vendor Lock-in
Mitigates Longterm Risks
Business/Operational Continuity
Operational Consistency
Emphasizes Concepts not Products
Organizational Audibility

Community Audibility

Participates in Project Governance

Professional Development
Higher Quality Staff
Greater Recruitment
Community Access
The feedback we give to the development community of an open source project usually yields quick action in terms of feedback changes, feature requests, and bug resolution. It’s a refreshing change from working your way through three levels of support in a proprietary software company, all of which are about 43 layers removed from somebody actually writing code.
Professional
(personal & organizational)
Development Opportunities

individuals can gain experience through participation and organizations can gain prestige through contribution.

Infrastructure Benefits
Try Before You Buy
No Acquisition Costs
Multiple Instances
Broader Support Options
Breaks the Hardware Upgrade Cycle
Faster Implementation
Lower Total Costs of Ownership

Technical Benefits
Higher Quality
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Professional Development
Higher Quality Staff
Greater Recruitment
Community Access
Through both open source communities and collaboration, your tech team will get a better sense of the overall IT practices, resources and tools out there to best-serve your organization.

Dennis McCafferty
CIO Insight

Higher Quality Staff
experience, expertise is demonstrable and publicly viewable
Developers who shun open source may be missing out on opportunities to entice potential employers. The more you can do to demonstrate your ability to code, your work ethic, the types of technology you have experience in, the easier it's going to be for a hiring manager to assess you.

John Nagro
Director of Engineering, HubSpot

Greater Recruitment

A large population of developers within a community leads to greater choice in hiring.
Wal-Mart’s adoption of open source – both taking and giving back -- has helped it attract top-tier technical talent.

Jeremy King
CTO of Wal-Mart Global Ecommerce
Head of @WalmartLabs

If you want a team of engineers who are creative problem solvers looking to give your company a distinctive, differentiated edge, using open source is a great way to attract them.

Bryson Koehler
Chief Information and Technology Officer
The Weather Company
https://enterprisersproject.com/article/2015/1/5-reasons-why-i-believe-open-source-and-you-should-too
Community Access

ability to meet and network with like-minded people and organizations—peers.
Open source allows the company to tap into the mass combined knowledge of open source communities.

David Cooper
CIO, British Gas
OK, OK, great... but how?
To benefit from—and manage—this environment:

Acquire software at the same pace users can articulate needs.
Agile / Lean
Continuous Delivery
DevOps
Agile Project Management

Agile Project Management (APM) is a stark departure from traditional front-loaded project management processes, where success often hinges on the ability to identify all of the systems' needs before development begins.

The fundamental difference between front-loaded and lightweight approaches used in APM boils down to planning vs. practice.
Lean, or lightweight approaches do not attempt to plan for the entire project, but rather provide practices for undertaking tasks as they are identified.

“just enough”

“the enemy of good is perfect”
Continuous Delivery

An approach in which teams produce software in short cycles, ensuring that the software can be reliably released at any time. It aims at building, testing, and releasing software faster and more frequently.
DevOps
(Development + Operations)

Born of the need to improve IT service delivery agility, the DevOps movement emphasizes communication, collaboration and integration between software developers and IT operations.
Interests across the organization...
Measuring interests...
Measuring interests...
Measuring interests...
Measuring Interests...
Stakeholder Interests

Scope of Services

Capacity

Stakeholder Interests
Stakeholder Interests

Scope of Services
Capacity

Service Levels

Project Maturity

Fully Supported

Fully Defined

SL
LAMS
Desktop Sharing
Identity Management
e-Portfolios
Enterprise Wiki
Data Analytics
Graphics Annotation
Virtual Labs

Stakeholder Interests
Scope of Services

Capacity

Stakeholder Interests

Service Levels

1

2

3

Project Maturity

Fully Supported

Fully Defined

1

2

3

Desktop Sharing

LAMS

Identity Management

e-Portfolios

Enterprise Wiki

Data Analytics

Virtual Labs

Graphics Annotation

SL
APM / Continuous Delivery / DevOps Tools

Product Owners
Collaboration Platforms
Storytelling: User Stories & Use Cases
User Analytics
Product Owners

The Product Owner represents the voice of the community of interest. He/she ensures that the organization works on the “right things.”

The Product Owner collects user-centric items (typically user stories), prioritizes them and then places them in the product backlog.

Anyone can be a Product Owner, but is usually the first person to articulate a need.
Collaboration Platforms
User Stories

A user story is a requirements gathering method formulated as one or more sentences in the everyday or business language of the user. The user stories should be written by customers and are their main instrument to influence the development of a service or system.

User stories are a quick way of handling customer requirements without having to elaborate vast formalized requirement documents and without performing overloaded administrative tasks related to maintaining them.

The intention of the user story is to be able to respond faster and with less overhead to rapidly changing real-world requirements.
User Stories

As a ___________,
I want ________,
so that ______________.
User Stories

As a *stakeholder*,
I want *function*,
so that *test condition*. 
User Analytics
Thank you,

Questions, discussion?

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