



Free, Libre and Open Source Software

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What I'll Cover Today

1. What is open source?
2. Open Source in the FE sector
3. The UK policy context for open source
4. Engagement with open source
5. OSS Watch



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1. What is Free, Libre and Open Source Software?



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Free But Not As In Beer

“Free” in free software refers to freedom not free of cost.

Free, Libre and Open Source Software is not free of cost when you focus on total cost of ownership. (It often *is* cheaper, but not always.)

“Free” as in no-charge software is not necessarily “free software”

The issue of the double-meaning of “free” lead to the use of “libre” as an alternative term



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The FSF's Four Freedoms

- The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and **adapt it to your needs** (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can **help your neighbor** (freedom 2).
- The freedom to **improve the program, and release your improvements to the public, so that the whole community benefits** (freedom 3). Access to the source code is a precondition for this.



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The OSI Open Source Definition

- Freely Redistributable
- Source Code Included
- Derived Works Permitted
- Integrity of Author's Source Code (diffs and patches)
- **No Discrimination Against Persons or Groups**
- **No Discrimination Against Fields of Endeavour**
- Distribution of Licence (no additional licences required)_
- Licence Must Not Be Specific to a Product (or distribution)
- Licence Must Not Restrict Other Software
- Licence Must Be Technology-Neutral (no 'click wrap')_



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Open Source Initiative

- Over seventy licences are accredited by the OSI as meeting these criteria
- The most commonly used are the BSD (permissive) and the GPL (copyleft)
- For practical purposes **OSS Watch** defines its remit with reference to the OSI approved licence list



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Some Examples of OSS

- Android
- Firefox
- Wordpress
- OpenOffice
- MySQL
- Linux



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Open Source Hidden in Plain Sight

- Twitter (cassandra, mysql, hadoop, bootstrap...)
- Facebook (thrift, hive, cassandra...)
- Apple Safari and Google Chrome (webkit)
- Google (BSD, SSH, lots of Apache software)
- Microsoft Bing (hadoop, hbase)
- Mac OS X (apache, BSD, BerkeleyDB, OpenSSL...)



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Market Trends

- “Open source is the most significant all-encompassing and long-term trend that the software industry has seen since the early 1980s” - IDC
- “By 2012, more than 90 percent of enterprises will use open source in direct or embedded forms” - Gartner
- “By 2016, at least 95% of IT orgs will use nontrivial elements of open- source software in mission-critical IT portfolios” - Gartner
- “By 2012, 80% of commercial applications will include open source components” - Gartner



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.By the numbers: India saves and grows with free and open source software

In Kerala (an Indian state), the government replaced Windows software with FOSS on 50,000 desktops in school across the state. They saved nearly \$10.2 million USD.

The Life Insurance Corporation (LIC), one of the largest insurers in India, replaced their entire IT structure of 3,500 servers and 30,000 desktops with FOSS. They saved \$8.75 million USD.

The New India Assurance Company, with IT infrastructure of 1,500 servers and 7,000 desktops, saved \$16.67 million USD by adopting FOSS.

Ultimately, this study shows that by replacing approximately 50 percent of an Indian company's proprietary software with open source software, it can save close to Rs. 10,000 crore (which is \$1.8 billion USD).

Savings from open source motivate Hungarian Miskolc

The savings made possible by switching to open source help to get the civil servants in the city of Miskolc involved and enthusiastic about it, says Dr. János Kovács, head of the IT department. Hungary's fourth largest city reports that it is saving 3000 euro per user per year on licences for proprietary software.

Gov.uk: why this new government website really matters

The executive director of Government Digital Services explains why Directgov and Business Link have been replaced – and how

Most of Gov.uk software is open source – meaning the platform is not subject to licence payments, code delays from vendors nor proprietary lock-in. At a stroke this saves a fortune for the taxpayer, allows rapid changes to be made and allows us to switch technologies at the speed at which they emerge these days – which is daily.

French government to use PostgreSQL and LibreOffice in free software adoption push

The plan could see up to 10 percent of money saved on proprietary software licenses reinvested in improving free software

French government agencies could become more active participants in free software projects, under an action plan sent by Prime Minister Jean-Marc Ayrault in a letter to ministers, while software giants Microsoft and Oracle might lose out as the government pushes free software such as LibreOffice or PostgreSQL in some areas.

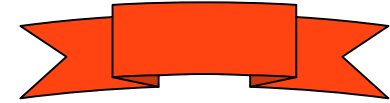
Study: open source provides schools with low-cost, high quality software

Open source can provide schools with high quality, well-functioning IT solutions at low cost, according to a case study done by VTT, a Finnish government research institute. The researchers looked at the use of Linux and other open source applications by the Kasavuoren Secondary School in Kauniainen, a municipality near Helsinki

Open source in government could save taxpayers hundreds of millions

A Canadian advocacy group has said that open source software could save government hundreds of millions of pounds. Getting Open Source Logic Into Government (GOSLING) say proprietary software is wasteful and disadvantageous to governmental transparency.

They say that the Canadian government is spending \$1.5 billion (£930 million) buying software when it should only cost a third of that. According to GOSLING, the disjointed and unnecessary development in governmental departments causes the waste.



In Summary, Open Source Software is...

- A flexible, often lower cost*, alternative to closed source software
- Used for almost all kinds of applications and systems
- Used by nearly all major companies and runs many high-profile websites and services

* Infoworld survey: 50% of companies >20% savings; 1% costs increased



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2. Open Source in FE

(I don't have stats for ACL and third sector)



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Lets mention the obvious!

moodle

The word 'moodle' is rendered in a large, orange, 3D-style sans-serif font. A black graduation cap with a tassel is placed on top of the first letter 'm'. A small yellow speech bubble with three horizontal lines is positioned above the final letter 'e'. The background features a faint, light blue circular graphic.

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Other common OSS products used in FE





**... And some less common ones
you might want to know about**

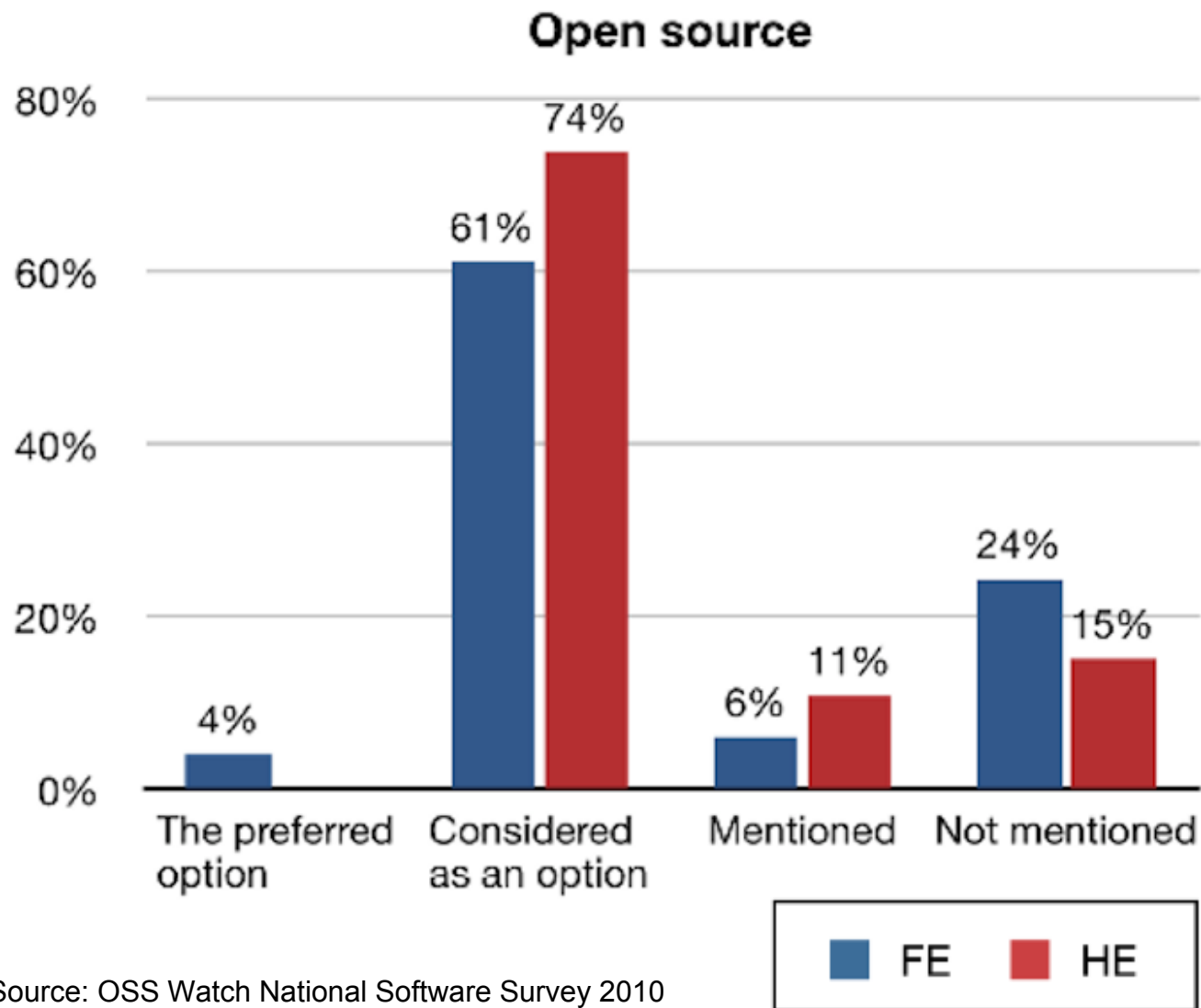


Open Source Lecture Capture & Video Management for Education



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Procurement and Selection Policies



Procurement and Selection Policies

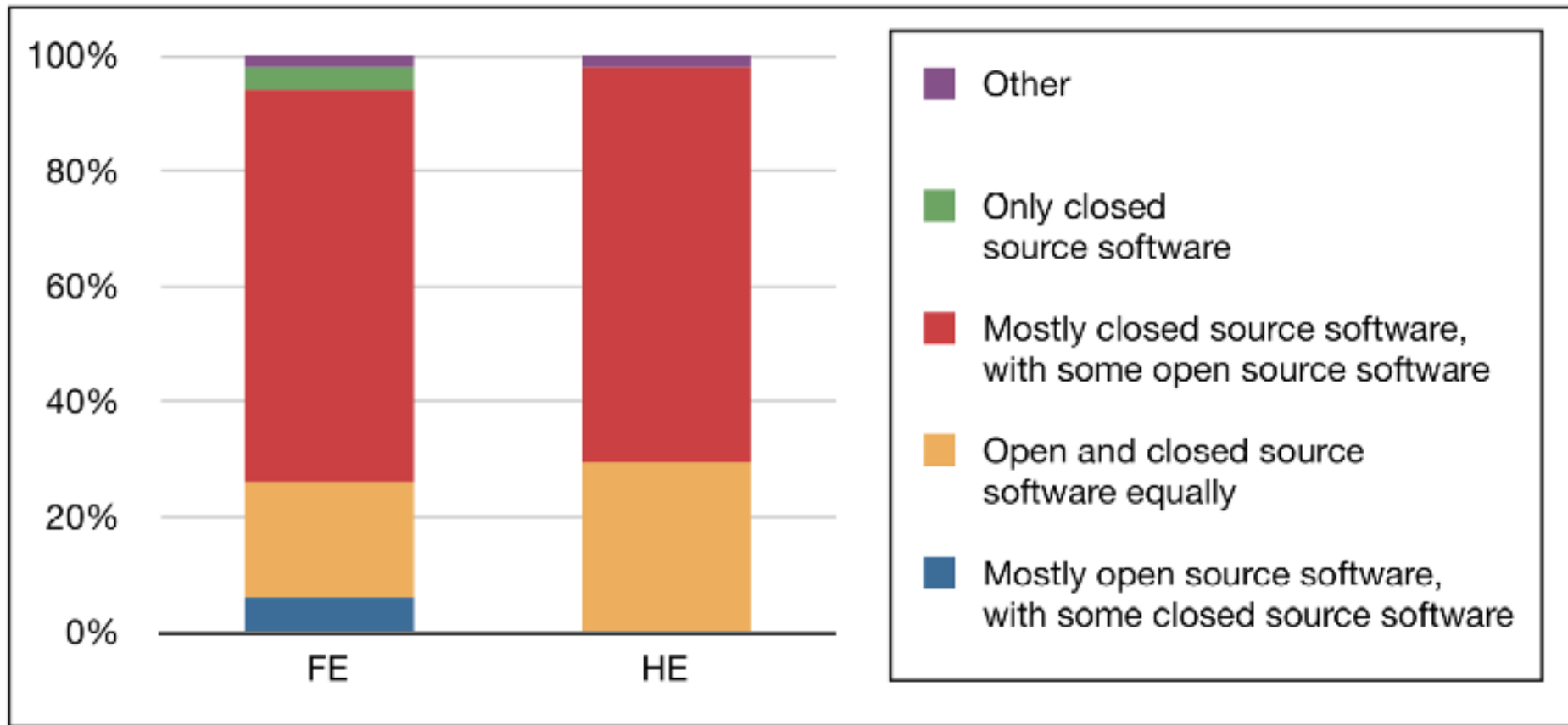


Figure 7: Software considered for procurement/deployment in practice (Q5)

Source: OSS Watch National Software Survey 2010

Replacement Cycle

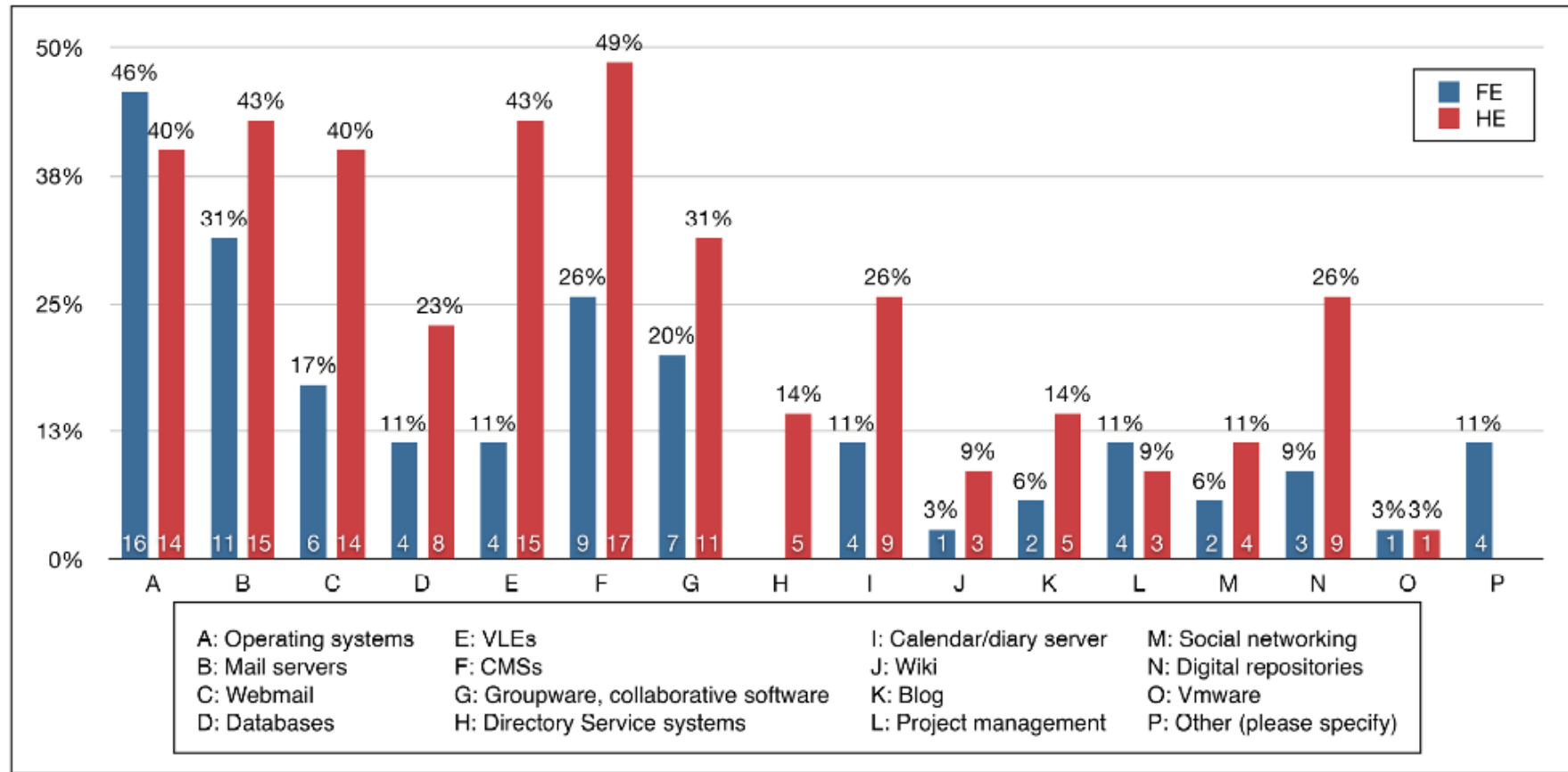


Figure 25: Software being considered for procurement/replacement on servers (Q21)

Source: OSS Watch National Software Survey 2010

Desktop Applications

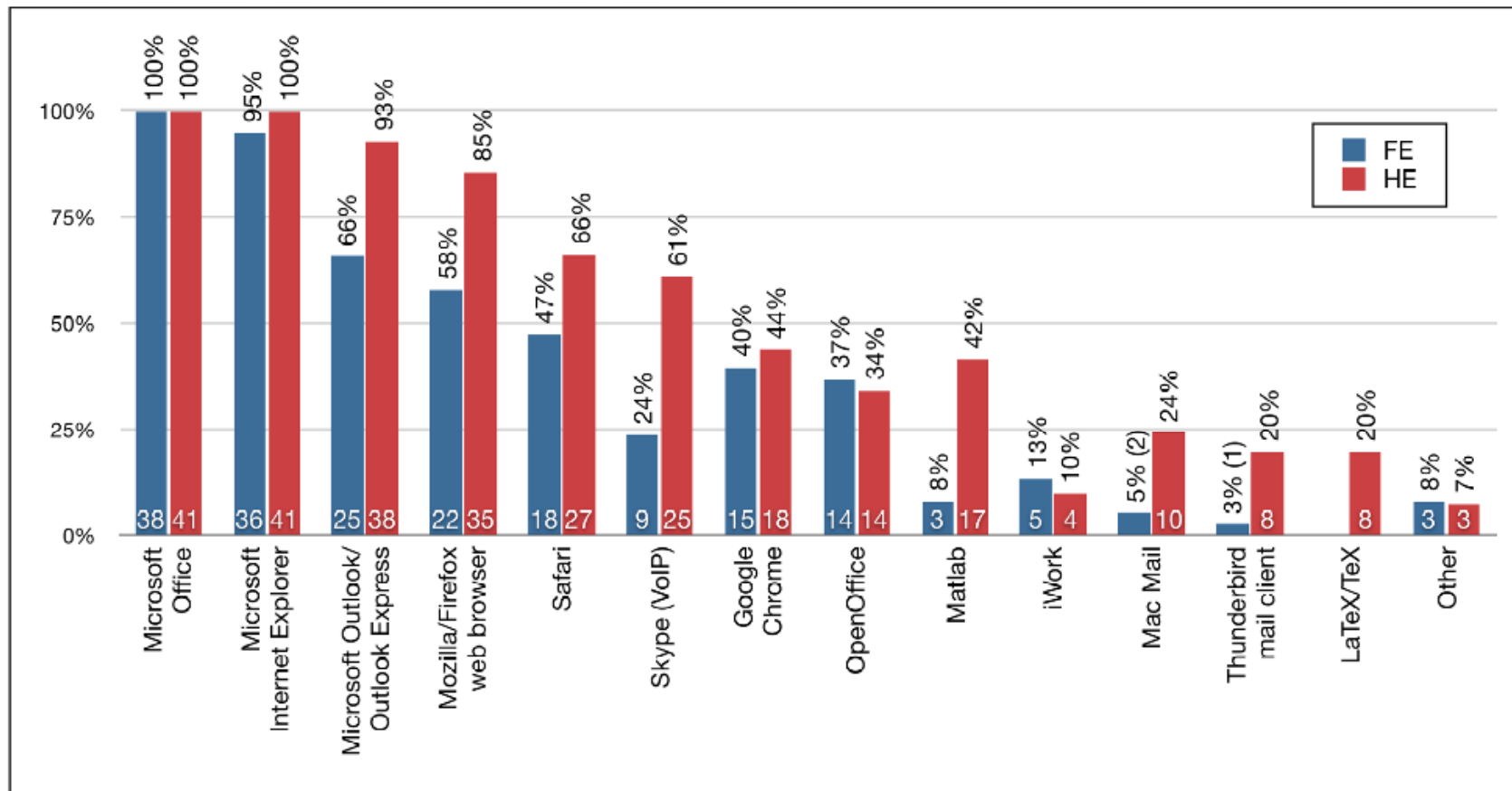


Figure 32: Software applications on desktop computers (Q27)

Source: OSS Watch National Software Survey 2010



Key criteria for software selection in FE

- Total Cost of Ownership
- Performance
- Meeting User Expectations
- Interoperability
- Support



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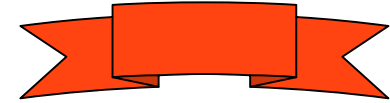


Reasons Given for NOT Adopting OSS in FE (for servers)

- Lack of support
- Interoperability and migration issues
- Lack of staff expertise/training needs
- Quality



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In Summary, in FE Open Source is...

- Well established for some kinds of applications, for example Moodle
- Not well known or used for other kinds of applications
- Of growing importance for central procurement
- Is often seen as good for learning and teaching, but raises issues of expertise and training



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3. UK Policy Context



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Government ICT Strategy

- Open Source gets 35 mentions in strategic implementation plan
- Part of strategic plan to reduce IT spend by £460m
- “32. For all relevant software procurements across government, open source solutions will be considered fairly against proprietary solutions based on value for money (VFM) and total cost of ownership. Success will be measured initially by a survey of each department’s compliance with the existing open source policy. Longer term, open source usage will be measured annually by the use of a departmental maturity model. The ICT Asset and Services Knowledgebase will be used to record the reuse of existing open source solutions, and the deployment of new open source solutions.”

<http://www.cabinetoffice.gov.uk/content/government-ict-strategy-strategic-implementation-plan>



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Government Procurement Policy

- (1) The Government will **actively and fairly consider open source solutions** alongside proprietary ones in making procurement decisions.
- (2) Procurement decisions will be made on the basis on the **best value for money solution to the business requirement**, taking account of total lifetime cost of ownership of the solution [...]



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...

- (3) The Government will expect those putting forward IT solutions to develop where necessary a **suitable mix of open source and proprietary products** to ensure that the best possible overall solution can be considered.
- (4) Where there is no significant overall cost difference between open and non-open source products, **open source will be selected on the basis of its additional inherent flexibility.**



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The OSS Options Document

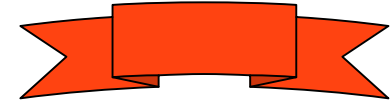
- Lists open source options for most common general software packages
- Key purpose is to prompt changes in procurement practice, e.g. to challenge solution suppliers to include OSS options
- Can be used in education procurement processes - *OSS Watch will produce short briefing note on this soon*



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Software type	OSS Options	Closed equivalent	Description	Examples of use
Enterprise Resource Planning (ERP)	<ul style="list-style-type: none"> • OpenERP • Openbravo 	<ul style="list-style-type: none"> • SAP, Oracle, Microsoft Dynamics, PeopleSoft, SAGE, SAP 	<ul style="list-style-type: none"> • Open ERP is commercially developed and supported. Modular capabilities include sales, CRM, project management, stock management, accounting and human resources. Also provides vertical industry specific applications over OpenERP. • OpenBravo is commercially developed and supported. Includes finance and accounting, sales, purchasing, inventory, procurement, manufacturing, projects, and business intelligence. 	<ul style="list-style-type: none"> • OpenERP customers include La Poste, Veolia, Danone, Oracle. Reference http://bit.ly/ej0HHR • OpenBravo 3 times winner of Infoworld software awards. Reference http://bit.ly/9K9Jyx • Open bravo customers include BBVA, Coapte French healthcare, Basque City Hall. Reference http://bit.ly/mClVN
Customer Relationship Managemnt (CRM)	<ul style="list-style-type: none"> • SugarCRM 	<ul style="list-style-type: none"> • Microsoft Dynamics, SageCRM, Salesforce 	<ul style="list-style-type: none"> • SugarCRM is a commercially successful CRM system providing sales-force automation, marketing campaign management, customer support, mobile device CRM and reporting. • In 2011, SugarCRM joined the IBM Global Alliance Portfolio for cloud solutions. 	<ul style="list-style-type: none"> • SugfarCRM customers from comms, financial, healthcare, public , professional services, manufacturing, technology and retail sectors include uzo (Portugal's largest telecoms provider), One Financial, HealthScreen (replacing Siebel), State of Oregon, InterAct (public safety and security), Thomas Cook, ThyssenKrupp, Avis, General

<http://oss.ly/co>



In summary, the UK context is...

- Active encouragement by government to consider open source
- Partly driven by considerations of cost, but also of flexibility and suitability



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4. Engagement with OSS

“The real value of open source software is that it allows communities to work together and solve problems”

- I. Wladawsky-Berger



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Levels of engagement

- Selecting and using software
- Engaging with and contributing to community
- Actively shaping the direction of the project

(Hey Scott, remember to talk about the Line Of Code That Could!)



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Types of engagement

- Documentation
- Translation
- Bug reports
- Suggestions for Usability and Accessibility Improvement
- Requirements
- Code



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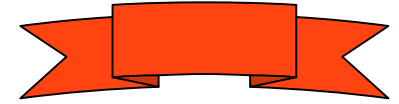


Community tools

- Issue tracking and bug reporting system
- Mailing lists
- Wiki, blogs, twitter, FB group...
- User groups
- Conferences, Meetups



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In summary, engagement with OSS is...

- Your choice
- Can improve the suitability and sustainability of the software you use
- Uses online tools
- Doesn't require software development skills to have an impact!



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5. OSS Watch



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What is OSS Watch?

- UK Open Source Advisory Service, funded by JISC and based at University of Oxford
- Non-advocacy
 - *Why is this important?*
- FE and HE



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What do we do?

- Provide balanced and accurate information on all aspects of open source
- Provide services including consultancy and training, for example on project proposals and sustainability of software developed by providers



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OSS Watch Resources

- Briefing Notes (continually reviewed, updated and improved)
- National Surveys
- Newsletter
- Blog
- Videos
- Presentations
- Events

(Hey Scott, remember to talk about teaching OSS!)



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OSS Watch Services

- Proposal Development
- Project Support and Sustainability
- Openness Evaluation
- Software Sustainability Maturity Model
- Training
- Consultancy

Many of our services are free to FE and HE



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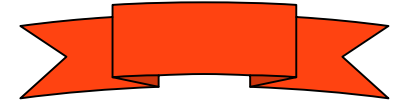


Working with you

- **RSCs**
- Info@oss-watch.ac.uk
- Follow us on twitter @osswatch
- <http://oss-watch.ac.uk> (main website)
- <http://osswatch.jiscinvolve.org> (blog)



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