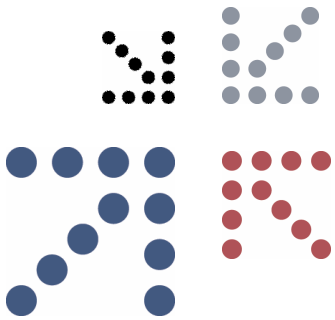
BDO Kendalls

CPA Australia

CPA Congress 2006: What is Open Source Software and When Can Business Use It?

Workbook



October 2006

Final

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Disclaimer

This workshop has been prepared solely for CPA Australia CPA Congress for the purpose of the workshop 'What is Open Source Software and When can Business Use It?" and should not be used for any other purpose without the prior written consent of BDO Kendalls.

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Purpose and Scope

About this Workshop

Open source software – often considered to be 'free' software - presents a unique opportunity for business. The quality of the software can be better than some commercial equivalents, and the ability to customise the software to suit your needs is very attractive. However, open source software presents some unique business challenges as well that can disrupt the business.

This session will introduce open source software and examine the opportunities for mainstream use of open source software through case study examples. The session will then examine the business issues that arise from the use of open source software. You will be provided with tools that allow you to assess whether your business should be using more open source software, or whether open source software – for your business – presents unacceptable business risks.

About the Presenter

Micheal Axelsen is the Director of Information Systems Consulting for BDO Kendalls, and is based in Brisbane. Micheal's role is to assist clients with building their information systems capabilities, improving the governance of IT and information management, and the strategic use of new technologies for business.

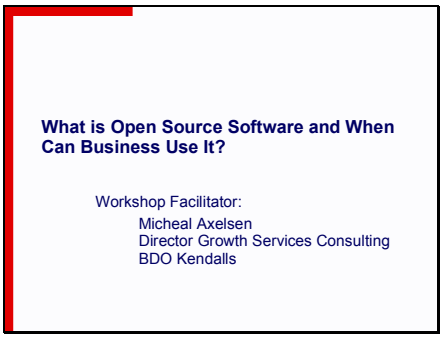
Micheal has had several articles published through his role as Chairman for the CPA Australia Information Technology & Management Centre of Excellence and in undertaking research. Micheal is a CPA as well as holding a Bachelor of Commerce (Hons) and a Masters of Information Systems.

About BDO Kendalls

BDO Kendalls is the leading adviser to growing businesses and the people behind them, driving clients' business success through innovation, practical solutions and personalised service. BDO Kendalls is a chartered accounting and professional services firm, and is a member of BDO International, with over 250 staff in Brisbane.

Introduction

Slide 1



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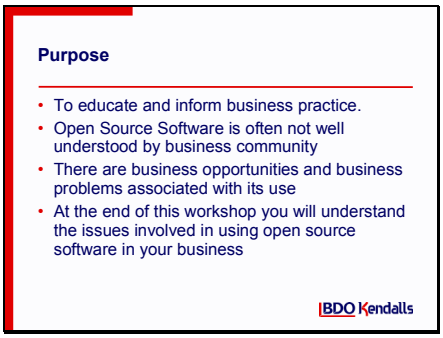

Workshop Overview

Presentation Notes

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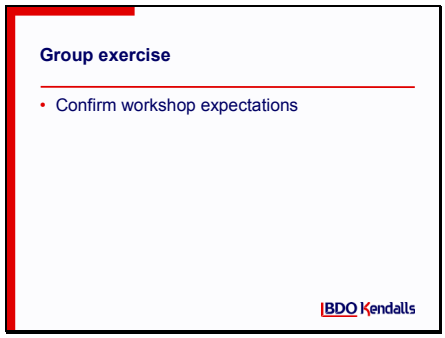
Slide 6



Group Exercise: Confirm Workshop Expectations

Instructions

Identify your top three "success goals" from today's workshop.

All participants will identify their top goal (if not already presented by another participant) until all goals have been articulated. These will be recorded as an audience contract for later review during the course of the workshop.

You may wish to record the full "audience contract" at the outset of the workshop.

The **goal** of this activity is to ensure that expectations are fully understood.

(5 minutes)

Activity

For today's workshop, please identify three of the most important goals that you need to achieve from today's workshop.

The facilitator will ask participants to identify the goals that today's workshop needs to address. If you like, record the group's requirements here:

Identifying Open Source Software

Presentation

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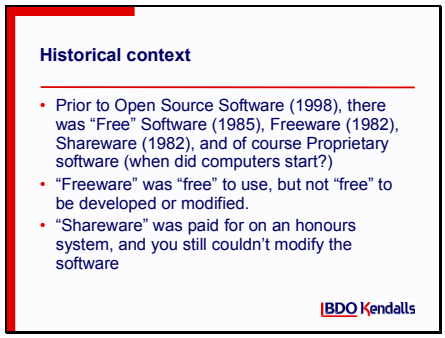

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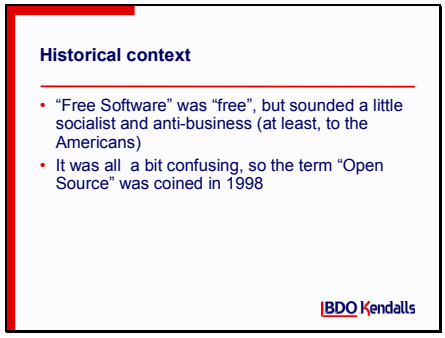

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Open source vs closed source

- The traditional software approach is 'closed' source software.
- Closed source software can only be maintained by the software developer, and the right to use the software is provided under a software license.
- Lotus 1-2-3 or Microsoft Word are examples of closed source software

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Definition – What is Open Source Software?

- What is "Open Source" software?
  - The programming source code is freely available
  - No fees are charged for the intellectual property of the software (may need to pay for the media)
  - Often many people undertake software development, but there are one or two "gatekeepers" for new code
  - No cost licensing does not mean zero cost, though!
- Microsoft doesn't do much Open Source
- IBM & Sun do support open source software

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Official definition

1. **Free Redistribution:** the software can be freely given away or sold.
2. **Source Code:** the source code must either be included or freely obtainable.
3. **Derived Works:** redistribution of modifications must be allowed.
4. **Integrity of The Author's Source Code:** licenses may require that modifications are redistributed only as patches.
5. **No Discrimination Against Persons or Groups:** no-one can be locked out.
6. **No Discrimination Against Fields of Endeavor:** commercial users cannot be excluded.

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Official definition (continued)

7. **Distribution of License:** The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.
8. **License Must Not Be Specific to a Product:** the program cannot be licensed only as part of a larger distribution.
9. **License Must Not Restrict Other Software:** the license cannot insist that any other software it is distributed with must also be open source.
10. **License Must Be Technology-Neutral:** no click-wrap licenses or other medium-specific ways of accepting the license must be required.

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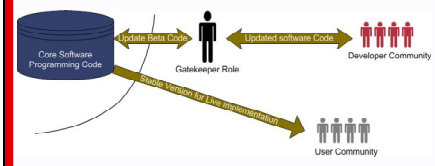
Open source examples

- Several mainstream examples of Open Source Software, with closed equivalents, include:
  - Linux (Microsoft Windows)
  - Open Office (Microsoft Office)
  - Apache (Microsoft Internet Information Services)
  - DotNetNuke (Microsoft Sharepoint)
  - Joomla (RedDot Content Management Server)
  - Php (Microsoft .Net)
  - Firefox (Internet Explorer)
- But there are more - Sourceforge has over 130,000 current projects and 1.4m users.

Slide 15

How open source projects work



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Small Group Exercise:
Identifying open source software

- Undertake comprehension exercise to identify ten different types of software in small groups of five to seven.

  Discuss and reflect back to major group.

Group Exercise: Identifying Open Source Software

Instructions

For each of the below ten software descriptions, identify and discussion if the software described is 'open source software'. This discussion is to take place in groups of five to seven.

The **goal** of this activity is to ensure that you are able to identify open source source software.

(8 minutes)

At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(4 minutes)

Activity

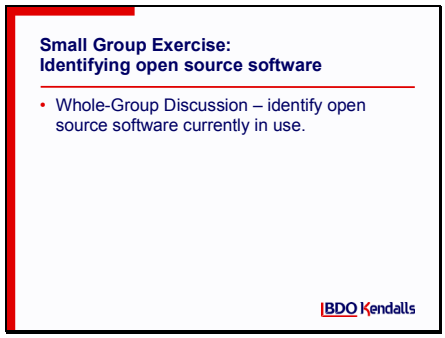
For each of the below, identify whether the software described is open source software.

#	Description	Comments
1.	• Software is sold in retail stores, and there is an active anti-piracy program • Source code maintained by developer's employees only. • Programming code is a closely guarded secret. • Application programming interfaces and customisation tools are provided with the software.	
2.	• The basic software is downloaded from the internet for no charge, but the 'professional' version with more features is available for sale. • Registration of the software is required, and the user agreement requires permission to contact you with sales opportunities. • Software can be customised by the downloader using provided development toolkits. • It is not possible to modify the core software.	

#	Description	Comments
3.	• Software is downloaded from the internet for no charge. • There is no registration required. • Programming code is downloaded and can be modified and installed. • There are regular calls for volunteers on the website to assist developers with the software.	
4.	• Programming code is able to be downloaded free of charge. • The license requires that any modified programming code developed be submitted back to the development team, and is owned by the original software development company. • New modules that provide extra functionality can be paid for, downloaded and installed on the software.	
5.	• Software is downloaded from the internet for no charge. • There is no registration required. • Programming code is downloaded and can be modified and installed. • There are regular calls for volunteers on the website to assist developers with the software. • The software requires the purchase of proprietary Microsoft SQL Server and Sharepoint to operate.	
6.	• Software source code is published on a Bittorrent site by a disgruntled ex-employee of the software developer and is available for immediate download. • The software developer has launched legal action against the disgruntled ex-employee.	

#	Description	Comments
7.	• A website has been built using open source software (e.g. writewiki and in-house customisations built on open source software). • The basic functionality of the website is free (you can pay a premium for ad-free usage of the service) • Content you upload to the website is subject to a licence agreement that assigns intellectual property in the content from you to the company.	
8.	• The application was built using open-source development tools. • The software is sold under a license agreement, and its programming code is not available.	
9.	• Software is downloaded from the internet for no charge. • There is no registration required. • Programming code is downloaded and can be modified and installed. • There are regular calls for volunteers on the website to assist developers with the software. • Documentation of the software is not provided with the programming code – hard-copy documentation can be purchased for $750 (this money is returned to the non-profit foundation developing the software)	
10.	• The fully-functional software can be purchased over the internet directly from the developer with a support and maintenance contract. • Alternatively, the same programming code can be downloaded in raw form or for installation for no charge from a separate website. • The software is developed by a for-profit company. Help desk services are not provided until your current support contract number is quoted. • The software is free for modification by the end user.	

Slide 17



Group Exercise: Identify your open source software in use

Instructions

Working in small groups, identify the open source software currently used within your business, of which you are aware.

The **goal** of this activity is to highlight the use of open source software already in use in organisations.

(8 minutes)

At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(4 minutes)

Activity

Identify open source software within your business.

Using Open Source Software

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Using Open Source Software

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Why open source software?

- Some people just plain hate Microsoft
- Some big-firms release software as open source (Sun, IBM)
- When many people collaborate, the quality of the final product can be excellent (cf "closed source" approaches)
- A great opportunity for technical types to develop skills and best practice
- Although they don't charge for their intellectual property, dollars can be made by consulting in the software itself

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Why open source software?

- Part-time volunteer programmers
- Task-focused and bite-sized chunks of work
- Gatekeeper, version control
- High quality for active projects
- No license fees – although consulting fees may be incurred
- No license management or growth incurred
- Adherence to standards

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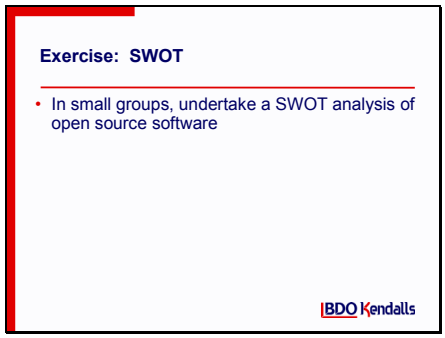

Group Exercise: SWOT Analysis Open Source Software

Instructions

Working in small groups, discuss and record strengths, weaknesses, opportunities and threats that you perceive that arise from the use of open source software.

The **goal** of this activity is to engage, identify, and discuss issues surrounding the use of open source software.

(10 minutes)

At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(5 minutes)

Activity

SWOT Analysis for Open Source Software:

Strengths	**Weaknesses**
Opportunities	**Threats**

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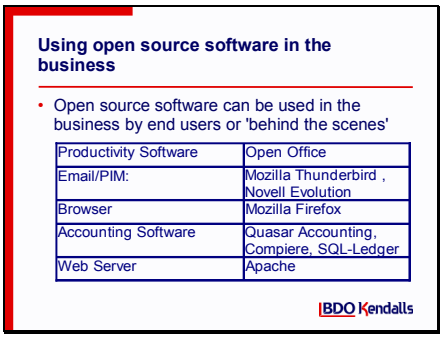

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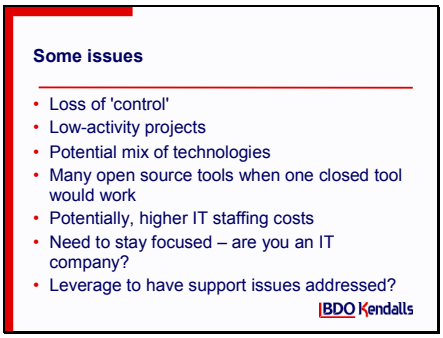

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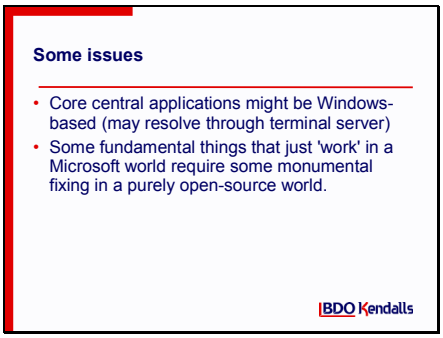

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Group Exercise: Identify Risks and Benefits

Instructions

Working in small groups, identify risks and benefits that you can see for using open source software within your business.

The **goal** of this activity is to ensure an understanding of issues arising from the use of open source software in your business.

(10 minutes)

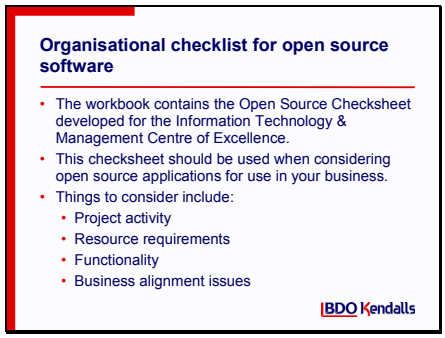
At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(5 minutes)

Activity

Risks and Benefits for the use of open source software within your business.

Slide 27



Refer to Appendix A.

Case Study Discussions

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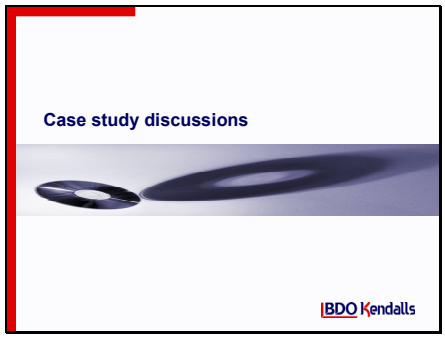

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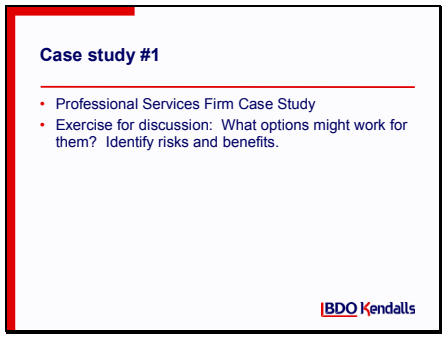

Group Exercise: Case Study #1

Instructions

Working in small groups, discuss the risks, benefits, and opportunities presented by open source software for the business described in the following case study.

The **goal** of this activity is to ensure an understanding of issues arising from the use of open source software in business.

(10 minutes)

At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(5 minutes)

Case Study

An accounting firm with 80 staff including an IT department of 3 IT support people. Currently the firm runs Solution 6 Tax, Caseware for audits, and Microsoft Office is the productivity program. Some staff use notebooks, and use the firm's Citrix server to access the timesheet program when they are working remotely.

Windows Server 2000 is the networking system in place, and Exchange Server is used for email. The firm's website is hosted externally by Webcentral.

Payroll is carried out by the firm's payroll clerk using Micropay, and MYOB prepares monthly management accounts. Timesheets are entered into MYOB Viztopia.

Like all accounting firms, staff are very busy and productivity is key to their success. The firm's partners are conservative and generally risk averse.

Activity

Risks, Benefits, and Opportunities:

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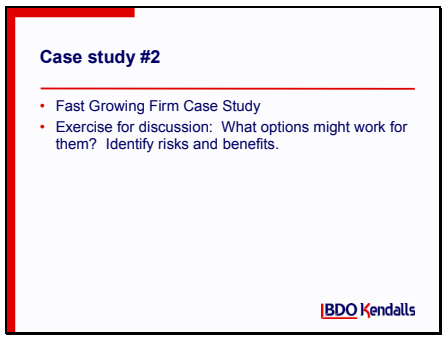

Group Exercise: Case Study #2

Instructions

Working in small groups, discuss the risks, benefits, and opportunities presented by open source software for the business described in the following case study.

The **goal** of this activity is to ensure an understanding of issues arising from the use of open source software in business.

(10 minutes)

At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(5 minutes)

Case Study

Minim Dairy's directors are very happy with themselves, having just received a national entrepreneurial award recognising the fast-paced growth of their business. They sell dairy products to food manufacturers and the farm sector from its base in Brisbane, concentrating on a niche market of smaller food manufacturers that are ignored by Minim's bigger competitors.

There are three core business units: Edible Ingredients division (skim milk powder, speciality dairy blends and bulk dairy products), Stockfeed division (supplying large stockfeed companies and farms), and Nutritional Supplements division (specialist dietary supplements such as whey protein isolate and lactoferrin).

The business has grown rapidly over the past three years (650% over three years, with revenues of $10.7 million last financial year), literally from the back of the directors' panel van. Growth has been driven by personal service and attention to detail by all staff members. The directors' growth aspirations require revenue of $30 million in three years' time.

The firm is small, having about 40 permanent staff, most of whom are delivery drivers and staff working in the plant.

The firm uses Quicken for preparing its accounts, and outsources payroll to a bureau service. Elaborate Excel spreadsheets are currently used by the sales manager to manage sales and customer details, although this system is acknowledged by all to be creaking at the seams.

Inventory management software is in place – based on Unix and built by a local software firm specifically for Minim Dairy. Microsoft Office is used by the small office team for documents. Email and the website are hosted on a Linux machine set up by the cousin of one of the directors; this cousin also wrote the firm's client extranet (through which clients can place orders and monitor their accounts) using php (open source software development tool) and an interface into the inventory management system.

Activity

Risks, Benefits, and Opportunities:

Conclusion

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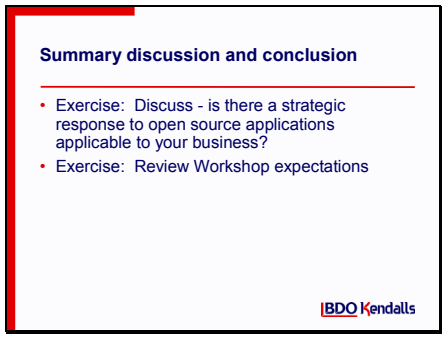

Group Exercise: Strategic Response

Instructions

Working in small groups, discuss potentially what a business (yours or a hypothetical business) should do in response to the opportunities presented by open source software.

The **goal** of this activity is to ensure an understanding of issues arising from the use of open source software in your business.

(10 minutes)

At the completion of the discussion, you will be asked to discuss within the workshop your conclusions.

(5 minutes)

Activity

Strategic response to the possibilities of open source software:

Group Exercise: Review Workshop Expectations

Instructions

Discussing as an entire group, confirm that expectations set at the outset were met.

The **goal** of this activity is to ensure that the workshop met participant goals.

(5 minutes)

Activity

Confirm expectations:

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Conclusion

- Thank you for your attention
- My contact details:

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b: www.michealaxelsen.com

Appendix A: Open Source Checksheet

Ref.	Criteria	Rationale	Assessment	
			Y	N
	Project activity			
1	Does the project at least have a Version 1.0 release?	Maturity		
2	Are there active project members actively updating the software	Development and Speed of Bug Correction		
3	Is the speed of response to issues/bugs, as indicated by monitoring user forums or email lists, adequate for your needs?	Speed of Response		
4	Have you set up a pilot of the software and identified no issues that are business-critical?	Identify Real World Problems		
5	Does mature documentation exist i.e. within one or two point releases of the software?	Adequate documentation		
6	Are online reviews of the open source project generally favourable?	Quality Assessment		
	Resource requirements			
7	Does adopting this software match your firm's existing skill sets, or are new skill sets[1] (training, new staff) required?	Keep staffing costs low		
8	Is the software able to run using existing infrastructure without modifications to your overall IT environment?	Keep hardware costs low		
9	Is there extensive third-party commercial support available for the software from multiple service providers?	Alternative Support models		
	Functionality			
10	Does the software address your business requirements?			

[1] e.g. MySQL when no-one has expertise in MySQL and SQL Server or Oracle will need to continue to be supported.

Ref.	Criteria	Rationale	Assessment	
			Y	N
11	Is the security model complete, comprehensive, and mature?			
12	Is there little customisation required to the software to address your business requirements?			
	Business alignment issues			
13	Do you understand the legal implications of the open source licensing regime, and is the license it compatible with your business goals[2]?			
14	Is there maturity within your organisation to the approach of adopting open source software? Does the idea have key stakeholder support?			
15	Is the tool written using common development environments and tools (e.g., Java, C++) so that the business could easily hire a programmer to maintain the software if the open source project were no longer developed?			
16	Can the implementation of the open source software be made to require little change and disruption to your business?			
17	Does the business area that uses this software not require mission-critical performance, response, and reliability?			

Although judgment and analysis is required on the part of each business with regard to its individual circumstances, predominantly 'yes' responses to this checksheet indicate the potential likelihood of success with open source software in your business.

[2] For example, what is the requirement for the distribution of derivative source code?