

CLIMATE CHANGE

User Perspectives on the Impact of Economic Conditions on Open Source Software Adoption

Customers continue to cite cost savings as a key driver for adopting open source software, particularly given the current economy – but what else is driving open source?

CAOS | COMMERCIAL ADOPTION OF OPEN SOURCE

4 FINDINGS

- Economic conditions and the need to save money are driving increased interest in open source software, at least among those that have already adopted open source to some extent. **PAGE 1**
- Lower cost is still the top reason organizations choose open source software, but flexibility is now cited as the biggest post-adoption benefit. **PAGE 4**
- Open source software is delivering real cost savings to most organizations. Among users surveyed, open source is meeting savings expectations over 50% of the time and exceeding them over 25% of the time. **PAGE 6**
- Software licenses and maintenance are still the top sources of savings from open source. Beyond that are other licensing advantages, such as the ability to use software via clouds or other services. **PAGE 6**

5 IMPLICATIONS

- The current economy is driving widespread reassessment of IT budgets, and cost considerations give open source an advantage. **PAGE 1**
- Open source has transformed from being a somewhat uncertain novelty for enterprises and SMBs to being widely and positively associated with cost savings. **PAGE 6**
- Flexibility is increasingly important to open source customers, and as open source and its business models mature, we may see flexibility catch cost as the primary adoption driver. **PAGE 5**
- Open source use is being watched closely by enterprise and other organizations interested in tracking its effectiveness and advantages. **PAGE 7**
- While cost, flexibility and reliability are rising in prominence among users, other benefits of open source, while still important, have faded in significance. **PAGE 12**

1 BOTTOM LINE

- Open source software is expected to bring financial benefits to users in the enterprise and other IT markets, and it's delivering on that expectation by meeting or exceeding anticipated cost savings nearly 90% of the time – while also providing increased business flexibility. These benefits will persist even after economic conditions improve, and they are likely to drive substantial growth in the adoption of open source software and related products and services.

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SECTION 1

Executive Summary

1.1 INTRODUCTION

We hear a lot about difficult economic conditions actually helping open source software and its vendors, largely based on the promise of cost savings. While lowering costs is often the initial reason for open source adoption, ongoing benefits lie more in flexibility and transformation of business processes.

This report includes a survey of more than 1,700 open source software users and customers, assessing their current attitudes on the key benefits of open source software, including cost and flexibility. It also includes a comparison with a similar survey conducted by The 451 Group in 2006.

Reasons for open source adoption vary, but achieving cost savings continues to rank as the top motivator, even when there are not always tools or processes to track these potential savings. Other business factors often come into play when assessing the benefits of open source software, however. Like any technology decision – and especially given the current economic conditions and continued pressure on IT budgets – the adoption of open source requires a business justification, and cost is one of a number of critical factors in this decision.

This report also serves as a practical guide for understanding the financial benefits of open source, and includes an updated version of The 451 Group's previously published guide for calculating the financial benefits of open source in enterprise IT projects. It provides IT managers, architects, vendors, investors and others with a basic financial analysis approach and calculator to identify and capture the costs and potential benefits of open source software.

1.2 KEY FINDINGS

- Current economic conditions and the need to save money are driving increased interest in open source software, at least among those that have already adopted open source to some extent: 46.5% of the 1,711 open source users we surveyed said they were more likely to adopt open source software in light of current economic conditions. Slightly more respondents (47.7%) said the economic climate had not changed their attitude toward open source. However, given that they were already open source users, this should not be seen as a negative response. Only a handful of respondents were putting off adoption of new software – open source or proprietary – in light of economic conditions.

- Lower cost is still the top reason an organization decides to use open source software, but flexibility has become a more significant factor in recent years, and is now cited as the biggest post-adoption benefit of open source. Meanwhile, vendor lock-in appears to have become less of a concern. With nearly half of our survey respondents citing cost, we believe it will continue to be the leading factor driving consideration of open source. While flexibility, mitigation of vendor lock-in and even reliability will continue to be significant factors, the cost element is reinforced by the time-to-market and time-to-value advantages of open source software.
- Open source software is undoubtedly delivering cost savings to most organizations that choose to adopt it. Survey respondents indicated that open source is meeting cost-savings expectations more than 50% of the time and is exceeding those expectations more than 25% of the time. Furthermore, the percentage of customers who said that open source came in below expectations on cost was less than 5% among survey respondents.
- Software licenses and license maintenance costs continue to lead as the top sources of savings from open source. Beyond the traditional cost savings of open source licensing that allows unlimited use or users, we are seeing additional licensing advantages, such as the ability to offer and use software on-premises or via clouds or other services without concern over cost or licensing obligations.

1.3 METHODOLOGY

To complete this report, The 451 Group used a variety of information sources, including our survey of more than 1,700 open source end users and customers, as well as a series of interviews with vendors, end users, investors and other industry figures. This research was supplemented by our ongoing coverage and a previous report and findings from its author, an IT practitioner himself. Additional components of the research include attendance at a number of industry trade shows and events. Research was conducted in both the US and Europe, with input from a variety of vendors, customers and others across various verticals and geographies.

Reports such as this one represent a holistic perspective on key emerging markets in the enterprise IT space. These markets evolve quickly, though, so The 451 Group offers additional services that provide critical marketplace updates. These updated reports and perspectives are presented on a daily basis via the company's core intelligence service – the 451 Market Insight Service. Perspectives on strategic acquisitions and the liquidity environment for technology companies are updated on a weekly basis via the company's forward-looking M&A analysis service – 451 TechDealmaker – which is backed by the industry-leading 451 M&A KnowledgeBase.

Emerging technologies and markets are also covered in additional 451 practices, including our Enterprise Security, Eco-Efficient IT and Infrastructure Computing in the Enterprise (ICE) services, as well as CloudScape, an interdisciplinary program from The 451 Group and subsidiary Tier1 Research.

This report was written by Jay Lyman, Enterprise Software Analyst, together with Matt Aslett, Senior Enterprise Software Analyst. In addition to our November 2009 survey and analysis on the perceived and real benefits of open source software among its users, the report also revisits and updates our original coverage of the topic in the 451 CAOS report 'Cost Conscious' (published in November 2006), which was written by former 451 CAOS Research Director Raven Zachary, in part based on his prior experience as an IT practitioner.

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SECTION 2

The Customer View

2.1 INTRODUCTION

As evidenced by both our original survey on this topic in 2006 and our most recent survey in 2009 – as well as by our discussions with dozens of vendors, investors and end users – the issue of cost remains the number-one reason that organizations decide to use open source software. Cost has actually risen in significance among end users surveyed, with more than 80% indicating it is important, compared with 76% three years ago.

While the opportunity for financial benefits may be the predominant factor driving adoption, it is not the only factor. Flexibility – cited as the primary benefit after open source software is actually adopted – was also a major motivator for open source among nearly 30% of respondents. Our survey also indicated that the potential for improved reliability, performance and security are also significant factors for some users, and all continue to help drive open source in various segments.

Another overarching trend evident from our survey, discussions and research is that open source software is living up to its reputation for cost savings. It is meeting or exceeding cost-savings expectations, which are inherent in open source adoption for most customers, more than 87% of the time. It seems that even though most organizations may not have policies in place for financial evaluation or adoption of open source, most do track open source software, highlighting the expectations of cost savings and indicating a desire to measure them. Our survey also indicates that difficult economic conditions are indeed promoting the use of open source software, which, again, appears to be delivering on its cost-savings promises in most cases.

2.2 COST AND FLEXIBILITY

THE BAD ECONOMY IS GOOD FOR BUSINESS

Given current economic conditions, there is considerable interest in open source, with many people wondering whether open source software and licensing can really help lower the cost of enterprise computing compared with traditional proprietary software and licensing. In our survey, we received reinforcement of what we learned in our discussions with vendors, end users, investors and others – that difficult economic conditions have driven greater interest and adoption for open source software.

When asked whether the current economic climate had impacted their attitude toward open source software, 46.5% of respondents said they were more likely to adopt open source software. While 47.7% reported no change in attitude, only

2.5% of respondents said they were less likely to adopt open source. Another 3.4% said they were less likely to adopt any new software, proprietary or open source, as a result of current economic conditions.

COST IS KING

Our most recent survey also reinforces the fact that lower cost is the primary consideration for deciding to use open source software. A total of 731 respondents, or 43.9%, cited cost as the primary reason for open source use. Increased flexibility was the next-most-cited reason, with 26.7% of respondents. Next came reducing vendor lock-in (12.8%), reliability (5.4%) and performance (4.1%). Meanwhile, security was ranked the top reason for open source among only 1.8% of respondents.

The idea that cost is the primary driver for open source software in enterprise and other IT markets is consistent with our conversations with both vendors and end users. Cost, and thus open source, also become more significant at a time when economic conditions are driving reassessment of IT planning and spending. Even in good economic conditions, there are still tremendous time, business and other pressures on organizations and their IT, and we believe open source software will continue to benefit from its reputation as a way to cut costs and do more with less.

More than 46% of survey respondents called cost savings 'very important' when considering open source, and 35% said it was 'important.' Another 15.5% called cost 'somewhat important' in decision-making on open source software, while just 2.7% deemed it 'not important.' We also see some of the other advantages cited – flexibility, reliability and time to market, in particular – tied to cost as organizations are typically seeking to improve efficiency, cut down on software licensing and support costs, and speed development and distribution using open source software.

FLEXIBILITY IS KEY AFTER ADOPTION

While cost was the clear choice among customers deciding whether or not to use open source software, the biggest benefit of open source software appears to change after adoption, and increased flexibility is ranked the primary benefit by 38.9% of those surveyed. Lower cost is still cited by 30.6% after adoption, but we also see increasing importance of other benefits, specifically performance (the primary benefit after adoption among 8.1% of respondents) and reliability (7.9%). Reducing vendor lock-in diminishes in importance, cited by 9.2% as the primary benefit of open source after adoption. Security was cited as the primary benefit after adoption by only 1.5%. We also saw a number of other motivators for open source software, including combinations of these benefits, time to market and client or customer demand.

Although avoiding or mitigating vendor lock-in has long been a part of the pitch for open source software from its supporters and vendors, our survey results back up what we've heard from customers, who are more concerned with cost and support than with vendor lock-in. The fact that lock-in was more of a driver for deciding on open source (the primary reason for 12.8% of respondents deciding to use open source) than it was an actual benefit (the primary benefit for 9.2% of respondents after adoption) is consistent with our contention that lock-in is fading as a differentiator for open source software and its vendors. Even though open source may have ushered in the greatest challenge to vendor lock-in and enabled customers to have more leverage with vendors, lock-in continues to move down the list of top benefits.

OPEN SOURCE DELIVERS

Bolstering our claim that open source software is largely living up to its cost-savings expectations among customers, 58.3% of survey respondents said open source had met expectations, and another 28.9% said it had exceeded expectations in terms of the savings achieved. While 5.6% said it was too early to tell and another 3% said they don't know, only 4.2% of survey respondents said open source had fallen below expectations on achieving cost savings. This is contributing to open source's traction in troubled economic conditions, since there is concrete proof that it can cut costs for many organizations – from enterprises to government agencies to SMBs – that are hungry for more savings.

2.3 SHOW US THE SAVINGS

WHERE ARE THE SAVINGS?

Highlighting the potential savings through open source software licensing, which typically allows greater scale and flexibility in deployment, a whopping 83.7% of our survey respondents cited licenses as where they derive cost savings from open source. The other area that scored more than half of respondents was license management, which earned 54.1% of responses.

Other major sources of savings, according to the survey, are: maintenance contracts (43.7%), hardware (34%), support, productivity and development (all at 31%). Additionally, respondents cited operations (22.3%), professional services (19.8%), training (10.5%), testing (10.3%) and staffing (8.8%) as the origin of cost savings from open source. Based on 'other' survey responses to our question on the origin of cost savings, we would add that several customers indicated that open source software and vendors provide more streamlined, unencumbered access and support compared to traditional software vendors.

RARELY A FORMAL PROCESS

We also asked users whether they had processes for open source adoption and financial analysis in place, and we found that fewer than half of the organizations we polled do have formal policies. More than 58% said they did not have formal processes in place for IT project financial analysis, while 32% said they did. Another 9.8% said they don't know. For those that did have financial analysis process in place, ROI and TCO were the top two metrics used, with each getting about 31% of responses.

Meanwhile, fewer than half of organizations surveyed had policies or guidelines for the adoption of open source, with 54.4% indicating that they do not. However, more than 63% of the same organizations said they do track the deployment of open source software in their organizations, and 57.6% track open source in development, indicating an awareness of open source advantages and a desire to measure its benefits.

GIVING BACK

Unfortunately for some open source software vendors and projects, the expectations and benefits associated with the software are not accompanied by a strong drive to give back to the projects, as our survey shows that 62% of respondents do not have policies or guidelines for contributing to open source software. Still, the fact that 31.8% of surveyed organizations do have policies or guidelines for contributing to open source projects may be indicative of greater awareness and continued strength for software communities and overall participation.

FIGURE 1: HAS THE CURRENT ECONOMIC CLIMATE IMPACTED YOUR COMPANY'S ATTITUDE TOWARDS OPEN SOURCE SOFTWARE?

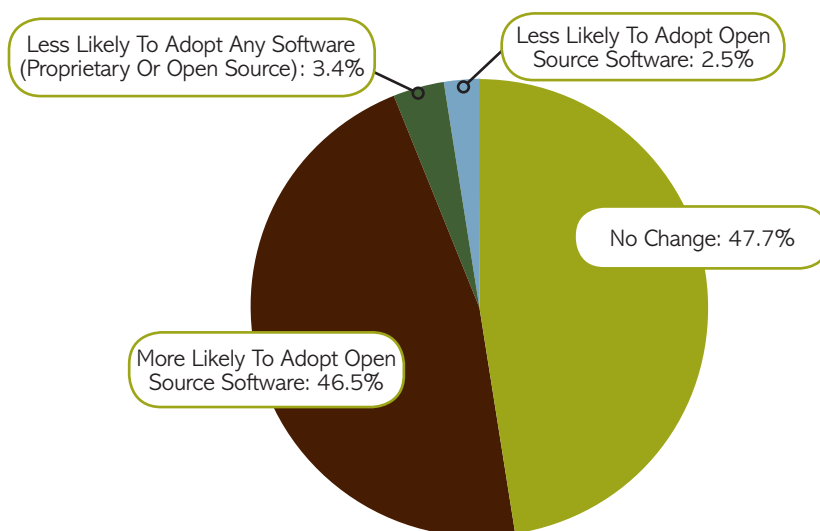


FIGURE 2A: WHAT WAS THE PRIMARY REASON THAT YOUR ORGANIZATION DECIDED TO USE OPEN SOURCE SOFTWARE?

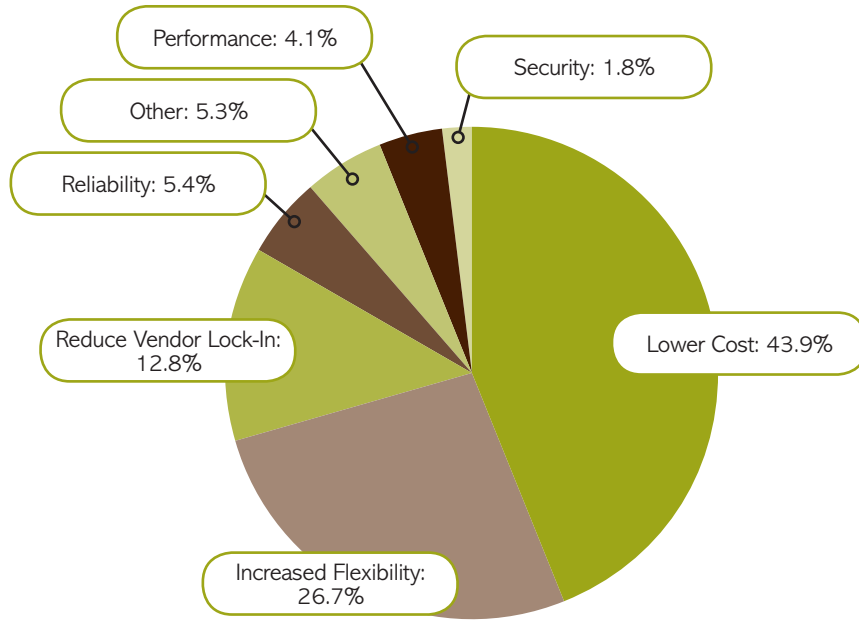


FIGURE 2B: AFTER YOUR ORGANIZATION ADOPTED OPEN SOURCE SOFTWARE, WHAT WAS THE PRIMARY BENEFIT OF ITS USE?

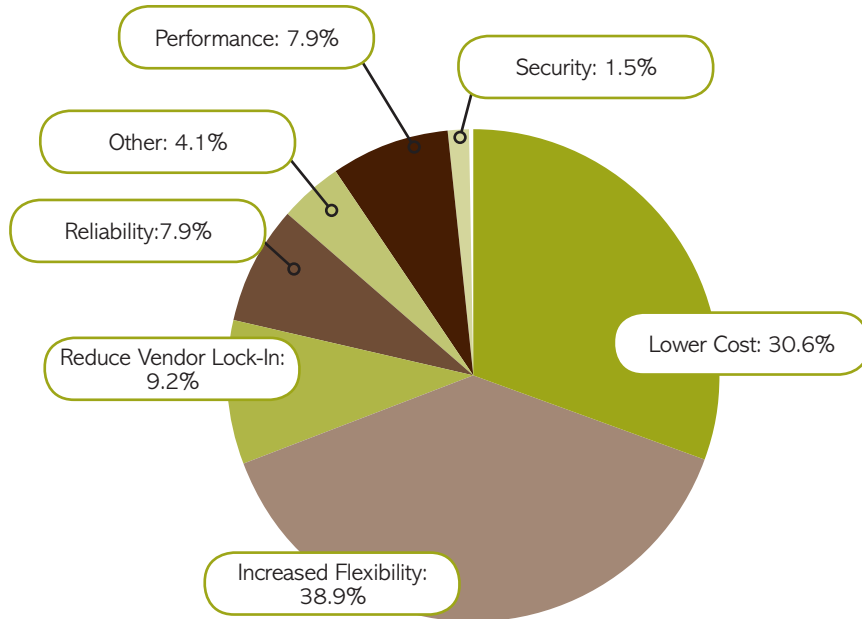


FIGURE 3: TO WHAT EXTENT WERE COST SAVINGS ACHIEVED THROUGH THE USE OF OPEN SOURCE SOFTWARE?

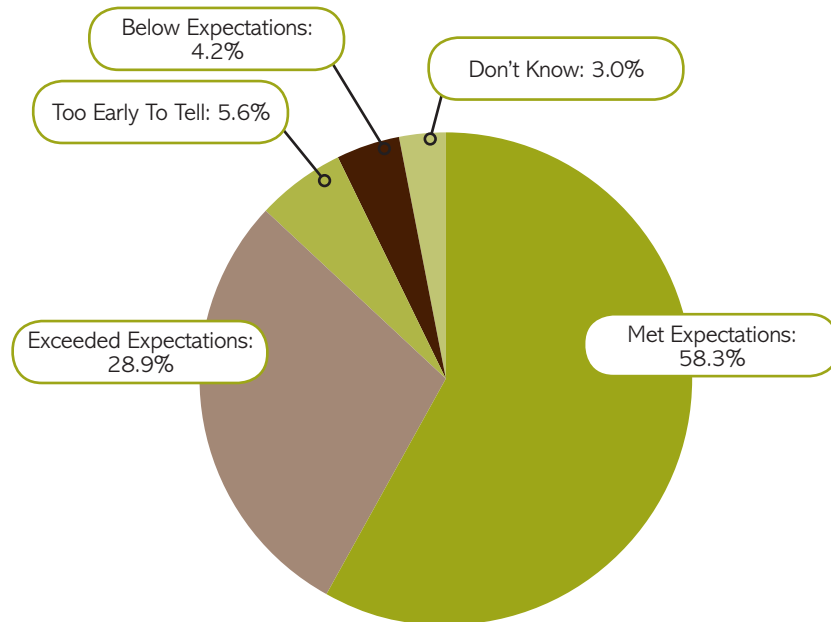


FIGURE 4: WHERE DO YOU BELIEVE THE COST SAVINGS WILL COME FROM/DID COME FROM?

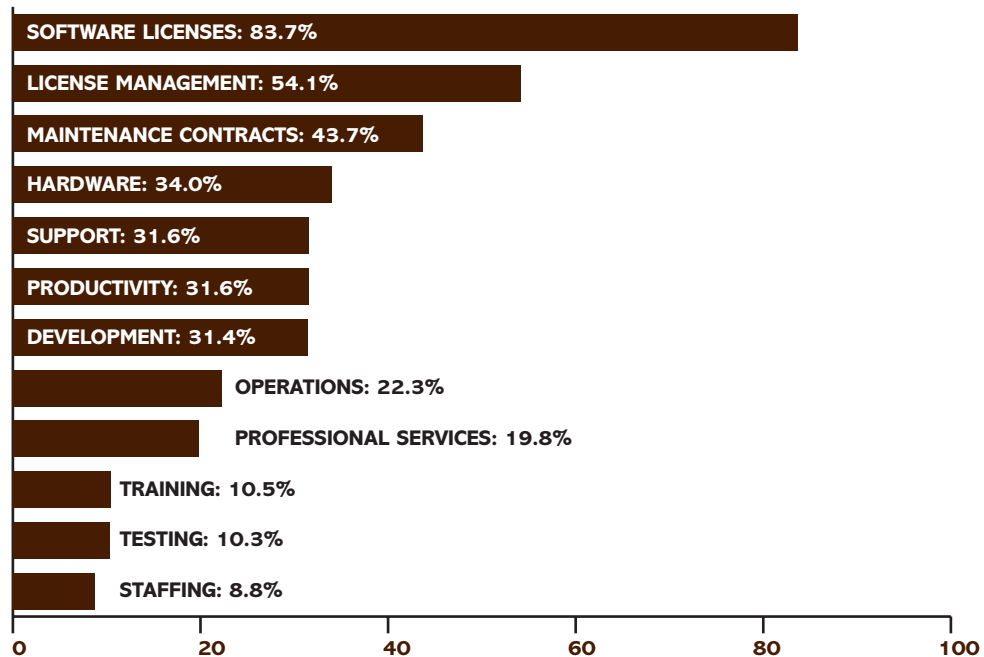


FIGURE 5A: DOES YOUR COMPANY TRACK THE USAGE OF OPEN SOURCE SOFTWARE IN DEVELOPMENT PROJECTS?

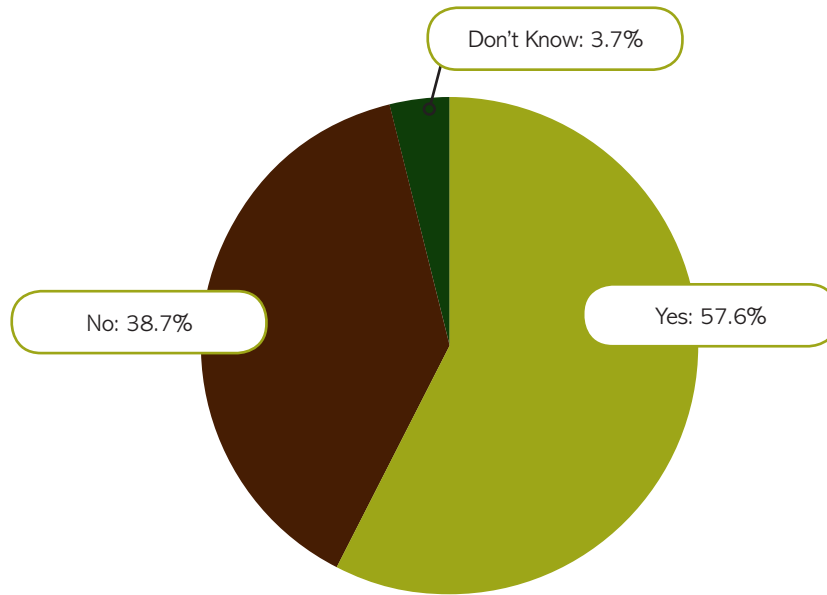
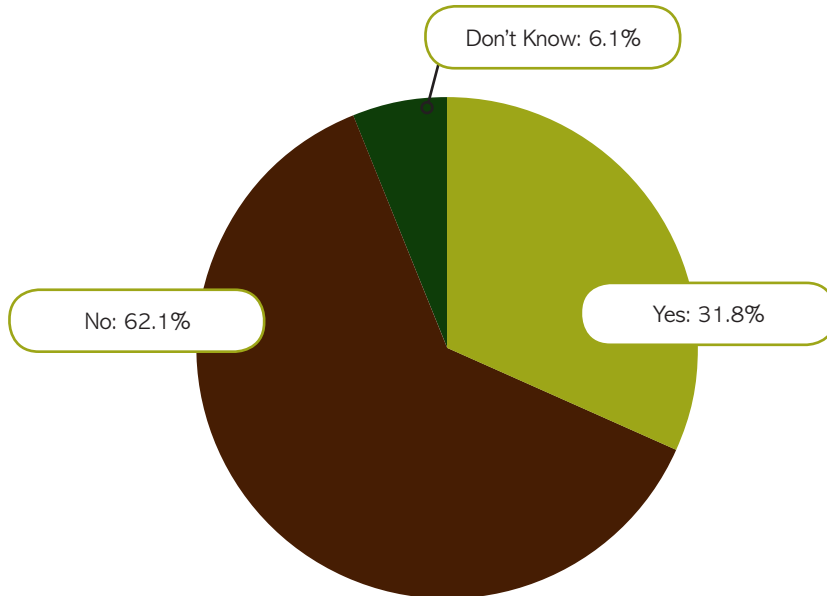


FIGURE 5B: DOES YOUR COMPANY HAVE POLICIES AND/OR GUIDELINES FOR CONTRIBUTING TO OPEN SOURCE SOFTWARE?



2.4 A COMPARISON WITH OUR 2006 SURVEY

There were not many dramatic differences in our 2009 survey results compared with our 2006 survey, indicating that the major benefits of open source software have not changed much in the intervening period. Still, we do see some changes in terms of customer perception of open source, the realization of open source benefits and the outlook on what is most important to the majority of customers.

- **Financial Expectations** – Open source software is meeting or exceeding financial-benefit expectations even more today than it was three years ago. In our 2006 survey, 62% said open source had met cost-savings expectations, and 22% said it exceeded expectations. In 2009, those numbers were 58.3% and an impressive 28.9%, respectively. The percentage of respondents who said open source had come in below expectations in terms of cost savings also went down from 2006 (8%) to 2009 (4.2%). This underlies our belief that rather than presenting uncertainty or risk for organizations, open source software is positively associated with cost savings in enterprise and other IT markets. To the degree that open source still does represent risk, it seems to be a risk that more organizations are willing to take given the usual pressures of IT on top of current economic conditions.
- **Cost** – While there were gains in the 2009 survey for non-cost-related advantages of open source, such as flexibility and reliability, the importance of cost was steady. The 44% of respondents that cited cost as the primary reason for deciding to use open source in 2009 was on par with the 43% figure in the 2006 survey. Additional responses to our survey also indicated that many organizations view and use open source software as a zero-cost option, at least in terms of software acquisition, highlighting the fact that the software is often available in community versions or project form for no cost. Of course there may be additional support and maintenance considerations, but survey respondents reminded us that open source can sometimes go beyond low cost all the way to no cost.
- **Flexibility** – While flexibility was the number two reason for deciding on open source (18%) and was tied with lower cost as the primary benefit after adoption (31%) in our 2006 survey, it was even more important in our 2009 survey. When deciding on open source, increased flexibility was cited as the primary reason by 26.7% of respondents in 2009. After adoption, flexibility actually superseded reduced cost as the primary benefit of open source in 2009, according to 38.9% of respondents (30.6% cited cost). Vendor lock-in was less of a concern in 2009, when 9% of respondents called it the primary benefit of open source after adoption, compared to 15% in 2006. Reliability stayed much the same in the eyes of end users, with about 7% indicating that it was the top benefit of open source adoption in both surveys. Performance was down as a top after-adoption benefit of open source, dropping from 10% of respondents in 2006 to 8% in 2009. Security was similarly down, from 4% in 2006 to 1.5% in 2009.

- **Vendor lock-in** – While respondents of the 2006 survey ranked reduced dependence on vendors as the number two driver for adoption after lower cost at 21%, the share for ‘reduce vendor lock-in’ from our 2009 survey was down to 12.8%. This is consistent with the message we hear from end users and many vendors: vendor lock-in remains a significant differentiator, but it is not as important as price, performance and other aspects of open source, including access to source code and flexibility. We continue to think of a statement made to us by a cloud computing customer who was asked whether his organization was locked in: “I suppose we are, but it’s lock-in I can afford.” This is further reinforcement of the idea that lock-in may be waning as a differentiator for open source. Given the rise in importance of flexibility, it may also be making room for other issues to gain prominence.
- **Licensing and maintenance** – Software licenses and license maintenance are consistently identified in both our 2006 and 2009 surveys as the primary source of cost savings from open source. In 2006, 73% said software licenses and 46% said license management were the primary source of savings. In 2009, those figures were 83.7% and 54.1%, respectively. The category of maintenance contracts was cited by 54% of respondents in 2006, but dropped to 43.7% in 2009. While support, development and productivity came in as the next-most-cited sources of cost savings from open source in 2006 (at 27% each), hardware jumped ahead of them in 2009, with 34% of respondents. Support, development and productivity weighed in similarly, at about 31% each. Other potential areas for savings – operations, professional services, training, testing and staffing – remained relatively similar in ranking among survey respondents from 2006 to 2009.
- **Formal processes** – Somewhat surprisingly, even fewer organizations now have formal financial evaluation processes in place for IT projects – 32% in 2009 vs. 58% in 2006 – and less than half (42% in 2009) have policies or guidelines for adopting open source technology. Nevertheless, more than 63% track the deployment of open source software, according to the 2009 survey. This may indicate an inherent expectation of cost savings from open source software and a desire to be able to prove it, even if there are not formal policies on either financial analysis or open source adoption in place.

2.5 IMPLICATIONS AND OUTLOOK

Open source software is expected to bring cost savings, and it is delivering in most cases. It is also contributing other advantages, such as flexibility and reliability, and this is helping to perpetuate confidence and credibility for open source software across the enterprise and SMB markets. Open source is no silver bullet and can still bring with it unique or added expenses, but it is providing significant and consistent cost savings based on our discussions with vendors, end users and investors, as well as our surveys and other research for this report.

While cost is still king, and this report and survey further reinforce the idea that bad economic conditions can be good for open source software, we are also seeing a rise in significance of various additional benefits of open source adoption beyond cost – and these may be the areas of greatest opportunity to open source software vendors and investors seeking to deliver the most compelling value to customers.

SECTION 3

Financial analysis for open source

Our 2006 survey on cost considerations for open source software adopters and users accompanied our second 451 CAOS report, Cost Conscious.

The second half of this report provides an overview of some of the key themes discussed in Cost Conscious, and is designed to provide a starting point for IT practitioners considering how to measure and calculate the cost benefits of open source software.

It includes:

- Ten considerations for financial analysis
- Main factors to consider in any cost analysis
- An introduction to The 451 Group's CAOS Cost Calculator
- Best practices for financial analysis.

The CAOS Cost Calculator is a multiyear financial-analysis spreadsheet for calculating the costs and savings of technology projects. The Calculator can be obtained from The 451 Group's website or through a 451 account representative, and is available in either Microsoft Excel or OpenOffice format.

The 2006 report provides a practical guide for understanding and calculating the financial benefits of open source for enterprise IT projects and is still available here: http://www.the451group.com/caos/caos_detail.php?icid=267 or through a 451 account representative.

In addition to the content below, Cost Conscious also provides information on:

- The value of financial analysis
- Building a business case
- A discussion of cost calculation methods
- Comprehensive instructions on using The Calculator for financial analysis.

3.1 INTRODUCTION

Given the continued citation of cost as the top driving force behind open source software adoption in the enterprise and SMB markets, it is important to be able to assess and understand the actual cost savings expected and delivered. This report and its calculator are intended to be actionable so that the IT manager or architect, development team, CIO or other member of an organization – with or without training or background in assessing open source software from a financial perspective – can build a financial analysis for a proposed initiative or strategy.

3.2 TEN CONSIDERATIONS FOR FINANCIAL ANALYSIS

Here are 10 important considerations to keep in mind with regard to financial analysis:

NOT EVERY PROJECT RESULTS IN A FINANCIAL BENEFIT

Not every IT project is pursued based on financial reasons alone. There are other factors here, including strategic value or the elimination of legacy systems, for example. In addition, not every project that anticipates a financial benefit actually generates one. Things change, estimates are proved incorrect, and what looked like an airtight financial analysis may have failed to account for an important detail in the end. Even though nearly 90% of our surveyed customers found that open source met or exceeded their cost-savings expectations, open source may not be the lowest-cost option in every instance.

EACH PROJECT IS UNIQUE

As we mentioned above, not every project is approved based solely on its financial benefits. Other important factors are at play, including the generation of revenue, the support of other projects, strategic value and the overall level of confidence. It would be very convenient to have a 'one size fits all' approach to financial analysis, but this isn't possible. Each project is unique, and this uniqueness must be captured and quantified. Not all projects have the same financial elements, with software licenses, hardware and training being several examples of elements that vary by project.

EACH ORGANIZATION IS UNIQUE

Organizations have their own processes, and sometimes these include standards, or even government regulations specific to an industry. As such, industry-specific or organizational-specific aspects must be considered. Additional aspects, particularly the support and personnel aspects of enterprise software use, are consistently unique to an individual organization and its context.

FORMAL PROCESSES ARE NOT ALWAYS IN PLACE

Not every organization has formal processes in place for financial analysis. In fact, our survey showed that more than 58% of organizations have no formal process in place for IT project financial analysis. Furthermore, more than 54% have no policies or guidelines for the adoption of open source. Without a formal process, it is difficult to effectively compare projects and track their true financial impact over time. This report's calculator does provide a process, and if an organization already has a process in place, the report and calculator may be used to augment it.

FINANCIAL ANALYSIS IS OFTEN IN COMPARISON

When preparing a financial analysis, it will likely compare two or more alternatives. This could be an existing setup compared with a proposed project, or even multiple proposed projects. It may be a comparison between a proprietary offering and an open source alternative, or even the possibility of 'build vs. buy.' The decision may also relate to an end-of-life software installation, with the desire to compare the proposed replacement with what existed before. It's important to remember that financial analysis is most valuable when there are multiple options, and the pros and cons can be viewed across multiple scenarios equally.

CONSISTENCY IS KEY

When comparing multiple options, accuracy and consistency with the calculations are key. The most important point to remember is that the same standards should be applied in any comparison. Treat each option equally. This is the only fair way to compare projects.

COST SAVINGS ARE RARELY 'SAVED'

In the cases where there are cost savings, what becomes of the savings? Of the organizations we interviewed, the vast majority said the savings were reallocated to other IT projects. Realizing savings rarely means that the money is returned to the organizational coffers or shareholders. By saving money in one project, the money can be freed up to be spent in another area. In addition, today's constricted IT budgets are not usually growing as fast as business or investment needs, so savings become even more necessary. Also, savings may never actually equate to a reduction of expenses at the departmental level the next year. In the case of an ISV or systems integrator, cost savings can be the impetus for cheaper offerings for the end customer, or increased margins.

FINANCIAL BENEFITS STUDIES OFTEN SUPPORT A POSITION

Many software vendors – proprietary and open source alike – provide marketing materials that praise the financial benefits of using their software. There is a plethora of studies attempting to show the cost benefits of one product over another. In almost all cases, studies that are sponsored by vendors show a positive return, as might be expected. Some independent studies do exist (such as this report), although it is not often clear how independent they really are. The only positions this report takes are that financial benefits are the top reason for adoption of open source, and that open source appears to be delivering on its cost-savings promise for more than 87% of customers. This does not mean that open source delivers cost savings in all instances, but

we would reiterate the independence of this report and our survey, which we believe offer a true reflection of how cost-effective open source software is and how customers view it.

IT BUDGETS AREN'T JUST ABOUT IT

Although CIOs are generally the final decision-makers for IT budgets (in organizations large enough to have a CIO), some organizations have other structures in place for financial decision-making. Many organizations place business leaders and the CFO in the critical path for project approval, and it's important to 'speak their language' to effectively gain approval to pursue the proposed project. This fact is enough to warrant a serious financial analysis, since this information may be requested beyond the IT organization.

FINANCIAL ANALYSIS IS NOT THE SAME THING AS A BUDGET

Although financial analyses and budgets both involve the calculation of costs, they serve different purposes. A financial analysis for an open source initiative is focused on the justification itself and is not an operational approach. A budget, on the other hand, is used for the management of the project rollout. It's important to understand this, since the focus of this report is on offering aid not in creating a budget, but in understanding the financial benefits of an open source initiative. Much of what is created in this process can be applied to a budget, if the project is approved.

3.3 COST FACTORS AND OPEN SOURCE

To calculate the potential financial impact of an open source initiative, there is a need to understand the various costs and possible benefits at play. The financial elements listed in this section are types of costs that are commonly encountered in any IT project, as well as some related benefits, with particular focus on how open source can impact them. This is by no means a complete list, and it is important to account for financial elements not covered in this report by also understanding organization-specific requirements. The main purpose in reviewing the various financial elements is to have an awareness of a broad range of costs to be considered.

Another issue to keep in mind is that of 'hidden costs,' or costs that are not always clear up front when doing the analysis. While our survey indicates that open source software is delivering on its promise of cost savings for most users, other surveys have indicated that nearly half of IT end users typically encounter significant hidden costs in open source initiatives.

Not every calculation is easy, especially when it comes to soft costs, where a fair amount of estimation will need to occur. We will cover this in more detail in the section on soft costs. This section should be reviewed again when working with the calculator.

The hard-cost financial elements listed below are the ones that are both quantifiable and most likely to come up in a proposed IT project. Here we cover the 10 most common hard costs, which are included in the calculator, and list additional hard costs for consideration as well.

SOFTWARE LICENSES

Software licenses and license maintenance continue to be the greatest areas of cost savings from open source software, according to our survey and research. This is consistent with previous surveys and our discussions and research in the industry. Particularly as organizations scale up their IT infrastructure, avoiding up-front and recurring licensing expenses are a key source of savings. The licensing advantages of open source software are also being realized in emerging virtualized and cloud computing environments, where customers can run software on-premises, via a SaaS offering or on a public cloud service without worrying whether it is permitted by the license and vendor. However, with the continued use of open-core models that include commercially licensed offerings and options, we may see some lessening of the savings from open source licenses.

The costs associated with software licenses are best captured through historical invoices, and by talking with software vendors directly. The use of list pricing is not always accurate, since what an organization paid or will pay for software does not always match the sticker price. The other issue to be aware of here is that some software licenses, such as operating system licenses, are attached to a hardware invoice.

HARDWARE

A new project may require new hardware. When considering the replacement of an existing system with an open source one, can the same hardware be used? There are potential risks (e.g., rollbacks and downtime) in using the same hardware, and there are also potential financial benefits in using the same hardware. There may be a preference to purchase additional hardware for a project. If thorough testing of a new system needs to be done prior to rollout, while continuing to support an existing system in the interim, new hardware may be necessary. Can the current production system be taken down for the migration? Hardware reuse is an important issue to consider.

Open source software sometimes has reduced hardware requirements compared with a proprietary alternative, or it can make better use of the hardware than proprietary software does. We believe this may be where flexibility is rated highly among our survey respondents in both deciding to use open source and after adoption, since open source software is often more flexible in terms of hardware support.

We would add here that outsourced hardware in the form of cloud computing and other infrastructure-as-a-service offerings can also change cost equations. Finally, hardware lifespan must also be determined and factored into the calculation as well.

SUPPORT

When considering the support of open source software, there are often more options than with proprietary software, although they are not always as mature as proprietary software support options. Support for proprietary software is generally provided by a single vendor and, as the sole provider, the vendor sets the pricing. With open source, the opportunities for support depend, to a large extent, on the relative popularity of specific open source software components. The more popular components typically have a greater range of support options available from a number of sources.

The three most common models of support for open source software are: professional support by open source software vendors, third-party vendor or consultant support, and self-support. Professional support is typically offered by the primary caretakers of the open source software in question, but we are seeing more vendors, SIs, VARs, service providers and others offering third-party support for open source software. While each of these three support options has its own costs, benefits and risks, they have all continued to evolve and contribute to a greater overall confidence and credibility for open source software.

DEVELOPMENT

Support issues are a critical underpinning for any open source initiative, but also important is the issue of software development costs. It is worth mentioning here that when we ask vendors and investors, development speed, effectiveness and growth are often cited as the main reasons for turning to open source. It can be argued that access to the source code makes development easier and less costly, but any new IT project has the potential for new development costs. Migrating to a new open source system, for example, may require re-coding for software to work properly with the new system. While open source is increasingly achieving feature parity with proprietary software, this is not always the case, and this can be another factor in both development and cost analysis.

One issue to be aware of here is that adding custom code into the open source component may make it difficult to support in the future. If there is functionality required from an open source component that is not part of its core functionality,

consider working with the open source project team on meeting this functional need, possibly even contributing the resulting code back to the project.

Regarding the issue of internal labor as it relates to development costs, some organizations do not account for this, since it is already accounted for as overhead costs for the organization, regardless of the specific IT project that is being pursued by internal developers.

PROFESSIONAL SERVICES

Professional services are often categorized as related to development, installation and configuration. It's important to treat professional services as a separate financial element for the calculator because there needs to be a clear distinction between the core development requirements of an IT project and any supporting professional services, such as those provided by a software vendor.

If the development of the open source initiative is being outsourced, then these costs should be treated as development costs, not as professional services. Consider this category to be for additional external help – either from an open source vendor or a third-party vendor, or an individual. Do not include training in this category.

TRAINING

When dealing with a new system or technology, training is an important aspect of educating the project team. A better-informed team can better address any issues that arise during the project. Training comes in many forms, and it may be provided directly by a software vendor or through a third party such as a professional learning center or an educational institution. It may occur on-site, off-site or even online. It may even be appropriate for the training to be done internally by and for the team. If any training costs are associated with a proposed project, these need to be captured.

IT architects and developers are not necessarily the only beneficiaries of open source training. Operations staff, such as systems administrators, quality-assurance staff and even end users may benefit from this training. Although retraining for different technology can entail added expenses, our research and conversations with vendors and customers tell us that open source software can actually improve individual and team self-sufficiency and proficiency. This is certainly possible with proprietary software as well, but we find it is a consistent ancillary benefit of open source software and is worthy of mention here.

TESTING

Systems need to be tested before they're deployed, and it's important to capture the costs associated with testing. Whether involving unit testing, performance testing, functional testing, creating test scripts, the documentation of use-case scenarios or other forms of testing, quality-assurance costs must be factored into the financial analysis. The testing needs for a migration are different from those for a new initiative, and they should be treated differently. Work with the testing team to determine these costs.

OPERATIONS

What will it take to operate the open source deployment once it has been deployed? This issue is often referred to as 'manageability.' Operations costs may be a mix of labor (systems administrators), management and monitoring tools configuration, and even the creation of manual procedures to support operations. Open source options, while typically lower in cost, can also have fewer or less-mature management capabilities. Custom development to support operations should be treated as a development cost, and any software licenses for monitoring tools should be captured as software license costs.

With open source software, the potential for initial operational challenges and the potential for improved reliability may balance each other out. Work with the operations team to determine these costs.

STAFFING

Will the proposed open source initiative require any additional staff to develop, support, test or operate it? It is valuable to capture these staffing costs independently from the other financial elements, since hiring is treated uniquely in many organizations. If an organization is hiring for a specific open source skill set that it currently doesn't have in-house, it should carefully review the going rate for these skills and consider this information when estimating the cost of staffing.

MAINTENANCE CONTRACTS

Maintenance contract costs for software and hardware need to be captured in the financial analysis. Maintenance fees from proprietary software and hardware vendors are typically based on 15-25% of the cost of the software licenses or the equipment per year. These maintenance costs are different from the internal costs to maintain software. Maintenance contracts are often confused with software subscriptions, which are a form of software licensing fees. Maintenance costs are typically calculated using the list price, and not what was actually paid.

Hardware maintenance is also an issue, and it needs to be addressed. Vendors of most hardware devices, from servers to firewalls to routers, offer maintenance

contracts of various levels. A move from a proprietary hardware platform to a commodity platform can result in substantial savings in this area. Make sure to capture these costs for the calculator.

This category may need to be treated as two categories in the calculation process – software maintenance and hardware maintenance – based on the complexity of the environment.

OTHER HARD COSTS

The 10 most common hard costs we've just discussed cover the majority of cost elements for most IT projects. But these are by no means the extent of the hard costs for a project. We have listed some additional hard costs below for consideration. Organizations may have their own specific hard costs to calculate as well.

- **Migration:** When migrating from an existing system, data may need to be moved to the new system, and it may need to be integrated with other internal or external systems. If the proposed project has a data migration component to it, these costs must be calculated. Data migration includes development and testing elements.
- **Environmental:** These costs include many of the costs associated with data-centers or hosting, such as datacenter floor space, power, bandwidth, shared infrastructure services or hardware leasing.
- **Documentation:** These costs are often captured as part of the training category. Does documentation need to be created for the initiative?
- **Deployment:** These are costs associated specifically with the deployment itself. This is especially important if some of the operations have been outsourced.
- **Configuration:** These are costs associated specifically with configuration. This is often captured as part of the development and operations categories, unless the configuration needs are highly complex.

SOFT COSTS

Not every element in a financial analysis can be easily determined. Soft costs – also called intangible costs – can be difficult to calculate and are not always accepted as part of a financial analysis. Examples of soft costs – and benefits – include employee productivity and system downtime avoidance.

Some examples of soft costs and benefits include:

- Downtime – the financial impact of system outage
- IP risk – legal costs related to litigation
- License auditing risk – resources required to perform a vendor-required license audit
- License management – resources required to manage the deployment of licenses and the purchase of additional licenses as the deployment grows
- License negotiation overhead – legal costs and resources required in negotiating the software licensing contract
- Planning – resources for project planning and overhead
- Process inefficiencies – lost time and costs related to any process activities
- Procurement overhead – purchase costs and resources required to procure the software
- Productivity – efficiencies from the use of software
- Reliability – the financial impact of improved system reliability and uptime
- Support quality – resources required during the software support process

The descriptions above may also apply in the inverse. What was a cost in the initial or proprietary option may now be a cost-savings opportunity with the open source alternative.

INTERNAL COSTS

Calculating internal costs, or those elements that are specific to an individual organization, is an attempt to capture the costs that are generally above the project level, in order to provide a realistic look at the total cost incurred by a project. Many organizations have their own standards for calculating these specific financial elements. What are the organizational rules for accounting for internal labor? What about charge-backs to other departments? An organization's expectation of internal costs and how they should be calculated must be considered.

Some examples of internal costs include:

- Amortization
- Capital vs. expense budget allocations
- Charge-backs

- Contingency
- Depreciation
- Inflation
- Interest
- Loaded costs
- Management overhead
- Project overhead
- Taxes
- Time and internal labor

Individual internal costs are not included in our cost calculator by default, although internal costs are listed as a row in the calculator. An organization should add any of its required internal costs.

REVENUE

While cost savings may be the primary means of bringing financial value to an organization for an IT project, there may, in fact, be a revenue benefit in the mix. The move to a new technology may result in improved system performance, which may result in new revenue opportunities, regardless of whether the technology is open source or proprietary in nature. If this potential revenue is known or can be estimated, it should be captured, but consider adding a margin of error for any calculated revenue gains to reflect their intangible nature.

EVALUATION COSTS

Some organizations include the costs associated with the evaluation of technology as part of the overall cost of the project. We have chosen not to cover this as part of the calculator. We consider this as a phase prior to financial analysis and independent of the costs directly associated with the development, testing, deployment and operations of an IT project. This report is not intended to be used for the evaluation and selection of open source software.

SECTION 4

The Calculator

The 451 CAOS Cost Calculator is a spreadsheet that factors the costs and savings of technology projects over time. It facilitates a multiyear financial analysis with side-by-side financial comparison of two options – one open source and one alternative, which may be an existing deployment or another proposed deployment, whether proprietary or open source. The spreadsheet includes four pages (tabs) – the calculator, a worksheet for internal calculations (if required) and two examples.

Because every organization is unique and may have existing processes to use in financial analysis, it will be an individual organization's responsibility to determine whether this calculator can be used as is, needs to be modified, or should only be used as a model for calculating financial analysis with an existing tool. The calculator was created with the assumption that no internal financial processes are in place.

The spreadsheet can be obtained from The 451 Group's website or through a 451 account representative. It is available in OpenOffice.org or Microsoft Excel format. The cells in the spreadsheet are general numbers to support international usage, whatever a given currency may be.

The calculator includes time-based columns, with financial elements and results presented in rows. The columns include the initial investment period, three annual periods and the totals. The rows include the 10 most common hard costs, subtotaed in a hard-costs row, as well as individual rows for soft costs, internal costs and revenue. The remaining rows include information pertaining to the financial return – cash flows (both for the required period and cumulative), the rate of return by time period, when the payback occurs (payback period), the net present value, the internal rate of return and the cost of capital. There is also space for notes.

FIGURE 6A: COST CALCULATOR EXAMPLE 1

| Open Source Solution | | | | | |
|------------------------------|--------------------|----------|----------|---------|---------|
| | INITIAL INVESTMENT | YEAR 1 | YEAR 2 | YEAR 3 | TOTALS |
| HARD COSTS | 76,250 | 41,200 | 111,150 | 49,100 | 277,700 |
| SOFTWARE LICENSES | - | - | - | - | - |
| HARDWARE | 25,000 | 3,000 | 3,000 | 3,000 | 34,000 |
| SUPPORT | - | 25,000 | 30,000 | 35,000 | 90,000 |
| DEVELOPMENT | 22,000 | 2,500 | 5,000 | 2,500 | 32,000 |
| PROFESSIONAL SERVICES | 12,500 | 3,000 | - | - | 15,500 |
| TRAINING | 7,500 | - | - | - | 7,500 |
| TESTING | 3,000 | 3,000 | 3,000 | 3,000 | 12,000 |
| OPERATIONS | 2,500 | 500 | 500 | 500 | 4,000 |
| STAFFING | - | - | 65,000 | - | 65,000 |
| MAINTENANCE CONTRACTS | 3,750 | 4,200 | 4,650 | 5,100 | 17,700 |
| | | | | | |
| SOFT COSTS | | | | | - |
| INTERNAL COSTS | 2,500 | 1,500 | 3,000 | 1,500 | 8,500 |
| | | | | | |
| REVENUE | | 50,000 | 100,000 | 200,000 | 350,000 |
| | | | | | |
| CASH FLOW | | | | | |
| PERIOD | (78,750) | 7,300 | (14,150) | 149,400 | |
| CUMULATIVE (PAYBACK) | (78,750) | (71,450) | (85,600) | 63,800 | |
| | | | | | |
| RATE OF RETURN | | 117% | 88% | 395% | |
| PAYBACK PERIOD | Year 3 | | | | |
| NPV | 22,828 | | | | |
| IRR | 22% | | | | |
| COST OF CAPITAL % | 12% | | | | |

FIGURE 6B: COST CALCULATOR EXAMPLE 2

| Alternative/Existing Solution | | | | | |
|-------------------------------|--------------------|-----------|-----------|----------|---------|
| | INITIAL INVESTMENT | YEAR 1 | YEAR 2 | YEAR 3 | TOTALS |
| HARD COSTS | 116,250 | 74,200 | 156,150 | 89,100 | 435,700 |
| SOFTWARE LICENSES | 20,000 | 5,000 | 5,000 | 5,000 | 35,000 |
| HARDWARE | 25,000 | 3,000 | 3,000 | 3,000 | 34,000 |
| SUPPORT | - | 50,000 | 60,000 | 70,000 | 180,000 |
| DEVELOPMENT | 22,000 | 2,500 | 5,000 | 2,500 | 32,000 |
| PROFESSIONAL SERVICES | 25,000 | 6,000 | - | - | 31,000 |
| TRAINING | 15,000 | - | - | - | 15,000 |
| TESTING | 3,000 | 3,000 | 3,000 | 3,000 | 12,000 |
| OPERATIONS | 2,500 | 500 | 500 | 500 | 4,000 |
| STAFFING | - | - | 75,000 | - | 75,000 |
| MAINTENANCE CONTRACTS | 3,750 | 4,200 | 4,650 | 5,100 | 17,700 |
| | | | | | |
| SOFT COSTS | | | | | - |
| INTERNAL COSTS | 2,500 | 1,500 | 3,000 | 1,500 | 8,500 |
| | | | | | |
| REVENUE | | 50,000 | 100,000 | 200,000 | 350,000 |
| | | | | | |
| CASH FLOW | | | | | |
| PERIOD | (118,750) | (25,700) | (59,150) | 109,400 | |
| CUMULATIVE (PAYBACK) | (118,750) | (144,450) | (203,600) | (94,200) | |
| | | | | | |
| RATE OF RETURN | | 66% | 63% | 221% | |
| PAYBACK PERIOD | Unknown | | | | |
| NPV | (110,982) | | | | |
| IRR | N/A | | | | |
| COST OF CAPITAL % | 12% | | | | |

SECTION 5

Best Practices

There are numerous best practices relating to the financial analysis process that will help make a more accurate, compelling case for a proposed project.

Be consistent

Comparing multiple options can be difficult. These options are often dissimilar in nature. What keeps them comparable is consistency – consistency in approach, consistency in estimation and consistency in which financial elements are selected. When considering soft costs and benefits for an open source initiative, include them for the alternatives as well. The financial analysis is of no use to anyone if it's not balanced. The other aspect of consistency comes into play when comparing specific financial elements across multiple options. If the existing system has support services of one level, and the costs of a completely new support level for a proposed project are being calculated, this may not be a fair comparison.

Double-check the math

While this may seem like an obvious best practice, when dealing with a lot of numbers and the process of building formulas (using a calculator created by someone else), it doesn't take much to introduce an error in the calculation process. Make sure to review all numbers at least twice before presenting the findings.

Show the math

Plan on using the calculator worksheet with all of the calculations for the relevant financial elements. Show all of the math, since these details may be needed or requested in the future. After a review by a CIO or CFO, there may need to be adjustments based on an organization's own practices. Generating a total amount for software licenses, for instance, does not help in understanding the different licenses that are required (or being eliminated). The other problem that will come up when not keeping detailed records is that when revising the calculations later, the manner in which the number was calculated may be difficult to determine.

The possible exception to this best practice is labor costs. When calculating labor costs based on salaries, which may be confidential, obscure the worksheet math to avoid people reverse-engineering individual salaries from the full calculation.

Keep the numbers up-to-date and share them

Building a financial analysis should not be considered a one-time event. Things change, and estimates may be incorrect; they should be updated with real-world numbers once these become clear. The scope of a project may change – and the costs and benefits will need to be updated accordingly. Revisit a financial analysis at least twice a year, if not

more frequently. If there is a known cost change, ideally it should be updated immediately within a financial analysis.

Don't forget to share the updated financial analysis. Not being asked for an update is not a good reason to withhold this information. Many people forget to follow up on past projections of financial benefits. It is better to be open and honest, even if the financial benefits aren't as compelling in the end.

Gather the correct information

Don't assume that the six-month-old quote from a supplier is still valid. When doing the calculations, ask for updated numbers wherever possible.

Use a margin of error

When numbers are estimated, account for the fact that they may indeed be wrong. Mistakes will be made. Contingency was listed earlier as an internal cost, and regardless of whether your organization requires a contingency for a proposed IT project, factoring in a margin of error for individual costs is a good idea, even if you have included a contingency for the overall project.

The margin of error should be proportional to the level of uncertainty in the estimate. If there is only 50% confidence in an estimate, then double the estimated cost or halve the financial benefit, whichever it may be. This is especially important when dealing with soft costs and revenue projections.

Understand short-term vs. long-term issues

Being too focused on either the short-term or long-term costs and benefits may limit the ability to realistically gauge the success of a project. When too focused on the short term, a project may not yet have reaped the expected financial benefits. When too focused on the long term, it may be difficult to identify a failing project. The reality is that there are both short-term and long-term benefits, and that milestones along the way should be considered to track the relative success of a project.

This is why a multiyear calculation is recommended – with three years being ideal. Sometimes it will take a project a few years to bring the big payback. When too focused on the first-year results, it may be difficult to justify a project. When using a longer period – say, six years – it may exceed the useful life of the project, and the factors of inflation and depreciation become more important.

Time does have an effect on costs. An organization and its technology may change a great deal in six years. Too short or too long a time span used in the calculator can be problematic. When focused on the short-term gain, consider using a three-year projection to educate decision-makers on the longer-term benefits as well.

Recognize timing issues

Timing is key. Any number of costs for an existing implementation and the proposed alternatives are time-based – for example, support and maintenance contracts. The proper timing of contracts can save money, and the poor timing of contracts can present risks and, ultimately, more cost. If an organization is already planning to spend money for a technology refresh, such as new hardware, it may be able to time a proposed project around this purchase to avoid additional hardware costs.

Other important time standards are the organizational budget cycle and fiscal year. The proposed project may not be in a position to be considered for execution until some point in the future. The business case will need to be built, with the associated financial analysis, in preparation for the next budget cycle. It can be difficult to obtain new funds for a proposed project during the middle of an organization's fiscal year. Then again, there may already be IT budget allocation for the project, or there may be a more flexible funding situation in the organization.

When considering the timing of terminating old contracts and signing new ones, plan for some padding. Don't terminate old contracts in sync with a proposed launch date, since launch dates may change. Also, don't wait to sign new support contracts until the proposed launch date, since the support benefits during the development and testing phases of a project will be missed. This is often a period that sees great use of a support contract.

Launch dates present a critical timing issue. Does an organization have a predictable business cycle? If so, plan a launch, if possible, corresponding to a low point in activity. For instance, in the retail sector, the activity curve is at its peak around the end-of-year holiday season, while in the travel sector, the activity peak is in the summer during vacations. Avoid the rollout during activity peaks, whenever possible.

This rollout timing may involve an end-of-life support issue, a forced migration or a requested vendor upgrade that is not cost-effective for an organization. A proposed open source project may be supported due to this pressure. If this is the case, make every effort to launch well before the product support of an existing system has ended. This will reduce risks.

Embrace standards

One of the values of open source is that open source components, as a general rule, are standards-based and can be swapped out. Embracing standards will reduce any future switching costs and dependencies on vendors. Moving standards-based code from one component to another requires far less work than changing technologies, and a team trained on a common set of standards will have little or no training needs. This will also likely reduce future recruiting costs and will result in a larger pool of candidates to choose from.

Standardization leads to commodification. When using a commodity platform (especially in terms of hardware), cost savings and potential for reuse go way up. Don't underestimate the value of standards-based technology. It will be a source of financial benefit in the future, even if this is difficult to quantify in the short term.

Review the contracts

Anytime a technology change is proposed, it is a good opportunity to go back and review the legal contracts, ideally with the aid of an organization's legal counsel. Are there any termination penalties for changing technology or suppliers? Is there a required notification period? Multiyear contracts will present the greatest challenges. Any penalties or future payments that are directly related to a proposed project need to be captured as costs.

Identify suppliers

With open source, it's not often clear who the best providers are for the services required, such as support, professional services or training. With open source, there will be more choices than with proprietary software. Don't assume that the first supplier contacted is the best supplier available.

The number of choices may require a request for information or a request for proposal. While this topic is not covered in this report, there are plenty of good sources for this information online, and an organization may already have an established process for RFIs and RFPs. The other benefit to an RFI/RFP is that it clarifies the requirements and goals.

When exploring self-support as an option, the internal team should respond to the RFI/RFP as though it were an independent provider. This is the best way to compare self-support with other options.

Build a business case

As mentioned before, the financial analysis for an open source initiative should not be considered the entirety of a business case for open source adoption. The calculator should not be the only exposure that IT leadership has to the open source proposal. The results from the calculator should be coupled with a wider business case for open source. The primary benefits of using open source in an organization may not be financial in nature.

Approach benefits beyond finances

Although the focus of this report is on the financial benefits of open source, don't lose sight of the fact that there are other tangible benefits to an organization that may come from adopting open source. While the financial benefits may actually be meager or nonexistent in some cases, put this information in context with the other benefits for the proposed project.

Know the organizational requirements

Understand the project and funding approval process within an organization and what format the financial analysis information should be presented in. Are there any corporate standards or forms that must be used? The material generated from the calculator may need to be placed in a different format.

Know the decision-makers

Know who in the organization will be reviewing the financial analysis. If possible, speak with all of these people regarding their expectations. The CIO and the CFO may be expecting different information. The CFO will likely be more process-focused than the CIO, who is more sympathetic to the strategic value and intangible benefits of technology initiatives to the organization.

Consider a pilot project

There is value in an organization proceeding with a pilot project when there is little or no in-house experience with open source. The use of a pilot project coupled with financial analysis reduces risks, helps in understanding the true costs of an open source deployment and determines what other benefits may come from open source in an organization. The incremental adoption of open source, while more time-intensive, is the most prudent course of action.

As the experience in implementing open source within an organization grows, the overall time to implement and cost to implement will both decrease, and the ability to estimate costs will improve. A first open source initiative may be the most expensive one in terms of overhead as an organization gains familiarity with the intricacies of open source.

As for determining the best option for a pilot project, try to avoid selecting a critical production project. Maria Winslow, in her book 'The Practical Manager's Guide to Open Source,' says that "any noncritical system that is transparent to end users is a good choice." Start small, and monitor the project (and costs) closely. The trade-off with a pilot project is that the financial benefits may be less dramatic.

Understand the nuances of various project types

Not all projects are created equal. When comparing an open source deployment to an existing one, the financial elements are not always similar. The same can be said about comparing any two prospective projects – even two open source initiatives. Projects don't have to be treated identically, as long as they are treated consistently. Each project will have unique financial elements at play.

When looking at the replacement of an existing system, understand that migrations can be disruptive, and are often costly. The status quo is often at a financial advantage. If this is a forced or required migration, a comparison of the open source option to

another option is ideal. The other important point to consider here is that if the migration is not mandatory, any money or time spent planning the migration really should be treated as costs.

When looking at a new project not involving the replacement of an existing system and comparing an open source option with a proprietary one, there will likely be significant financial benefits with the open source option due to the savings from software licensing fees, assuming that all other elements are equal.

SECTION 6

Survey Details

6.1 SURVEY METHODOLOGY AND RESPONDENT DETAILS

In association with this report, we conducted a survey on the topic of open source cost savings. The purpose of this survey was to collect information on the role of cost savings in open source software adoption and to better understand how customers see it.

With the help of more than two dozen open source software vendors, we surveyed a total of 1,711 respondents representing organizations of various sizes in various industries and geographies around the globe (See Figure 6 for details).

6.2 VENDOR-ASSISTED, BUT INDEPENDENT

In order to reach as wide a sample of open source users as possible, for this year's survey we asked a number of vendors to send the survey to their customers on our behalf. Nearly 30 vendors (both clients and non-clients of The 451 Group) agreed to do so.

In keeping with one of the core principles of The 451 Group that our research is never sponsored, nor is it produced to promote a particular vendor's agenda, no vendors were involved in drafting the questions for the survey; no vendors were involved in the analysis performed on the results; and no vendors saw the results before they were published. We are nonetheless extremely grateful to the vendors that participated for enabling us to reach such a substantial survey sample, and they, like the users completing the survey, will be receiving a copy of the research results.

The vendors involved in distributing the survey to their customers were: Actuate, Adaptive Planning, Digium, DotNetNuke, EnterpriseDB, eZ Systems, Infobright, Jitterbit, KnowledgeTree, Likewise, MindTouch, MuleSoft, Nuxeo, Open-Xchange, Openbravo, OpenLogic, OpenNMS Group, OrangeHRM, Red Hat, Sourcesense, SourceForge, Squiz, Talend, Terracotta, xTuple and Zenoss.

6.3 LIMITATIONS

There is of course a difference between open source users and customers of open-source-related vendors. Above all we were interested in the attitudes of paying customers, and we asked the vendors involved to send the survey to their customers, rather than prospects. Nevertheless, a respondent could be both a customer of one vendor and a non-paying user of another vendor's software. According to our analysis of the results, 16% of the respondents claimed not to be customers of any specific open-source-related vendor.

Since the respondents to the survey were already open source software users, the results are not to be taken as reflective of overall attitudes toward open source software. This was deliberate, since the aim was to assess the benefits of open source software from the point of view of those that have been through the process of selecting and adopting it. We believe the size of the sample provides a valuable view of attitudes toward open source software among a diverse group of users from a wide array of countries, company sizes and industries, and with various philosophical attitudes toward software licensing.

As with any survey, there is a danger that the questions being asked led the respondent toward a certain answer. Certainly the survey had a focus on attitudes about the cost of open source software adoption, which might have influenced responses toward the issue of cost. However, every attempt was made to keep the questions neutral and the choice of responses randomized.

FIGURE 7: COMPANY HEADQUARTERS

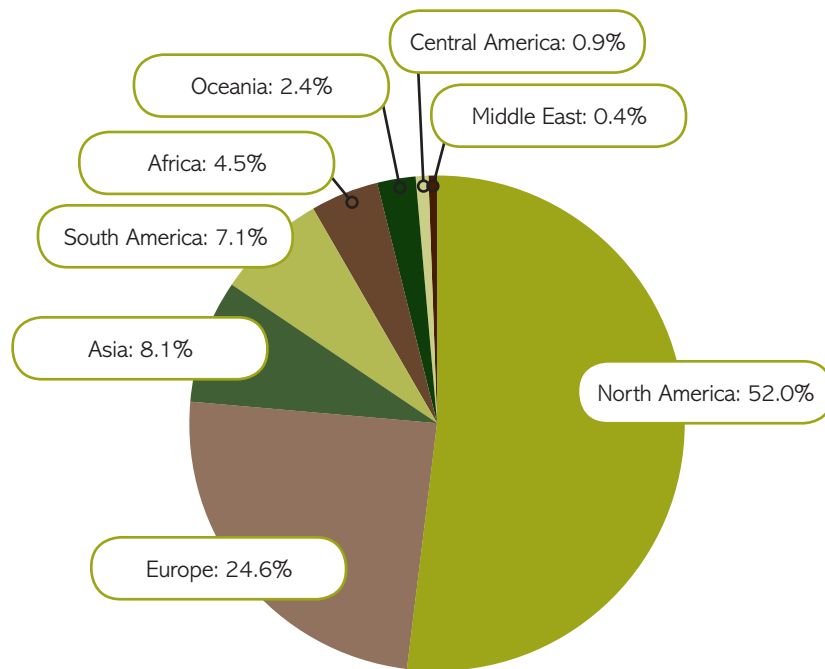


FIGURE 8: VERTICAL MARKET

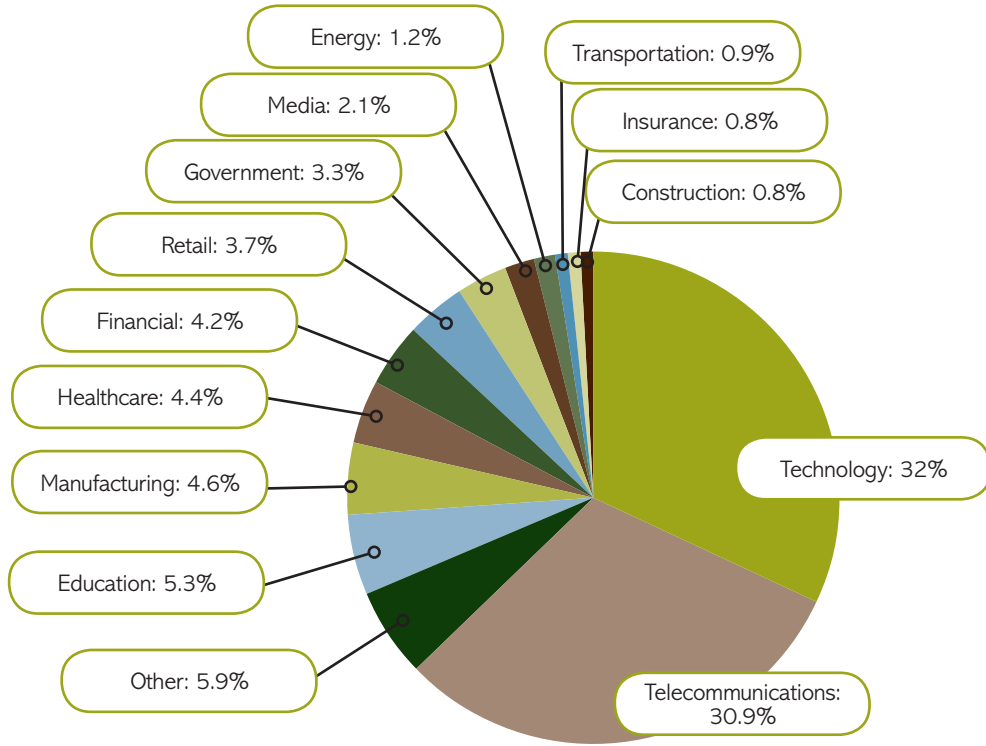


FIGURE 9: NUMBER OF EMPLOYEES

