

The Cloud

When & Why?

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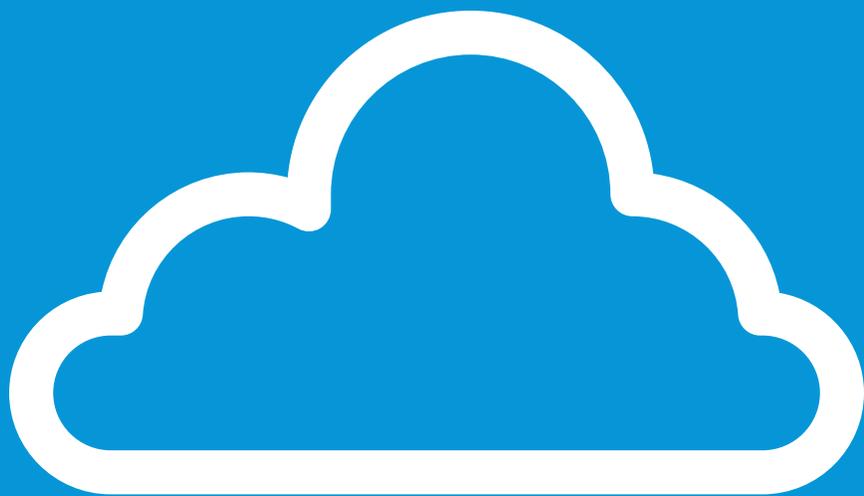
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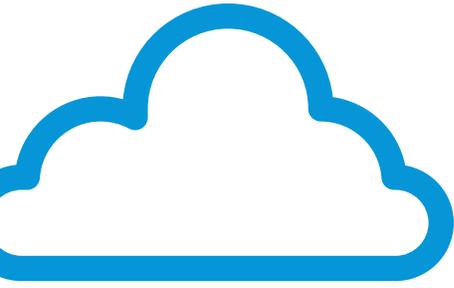
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Achieving CIO Goals in the Cloud

Introduction

CIO's jobs are changing. These days it's not only about running IT efficiently, but also about supporting core business strategies and helping create strategic advantage by reducing cost and driving innovation.

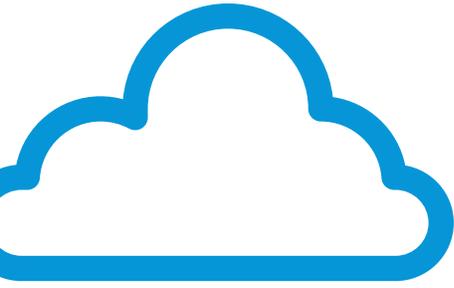
This means CIOs are under pressure to build infrastructure that can move and adapt at the same rapid pace as the rest of the business. They need to support geographical expansion, mergers, and product or service innovation while at the same time reducing costs.

In other words, CIOs are being asked to do more for the business with fewer resources. Every year, the same cycle repeats: reduce total cost, move the cost structure from fixed to variable cost, and free up resources for innovation by reducing operating expenditures.

Initially, companies adopted outsourcing and Cloud solutions primarily to reduce costs and preserve resources for strategic initiatives. More recently, however, Cloud applications have been used to support the strategic agility today's businesses need. In addition, having one single code-base across all their customers allows modern Cloud application vendors to very quickly leverage innovations and distribute product improvements across their entire customer base.

This whitepaper discusses the main reasons companies choose to adopt Cloud solutions, and also guides companies in evaluating Cloud-based business application investments. It summarizes our research on the economics of Cloud vs. on-premise solutions, and highlights the main differences in drivers of cost and benefits.

To illustrate our points, we will use a SuccessFactors HR System of Record product: Employee Central. This is a Cloud-based product often competing with the on-premise offerings of SAP, Oracle, and PeopleSoft.



Overview Of Cloud Offerings

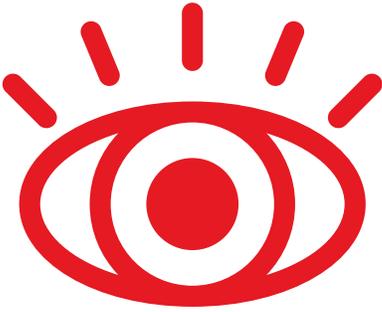
With the rapid growth and success of Cloud offerings— revenue for cloud offerings is growing 5x faster than conventional packaged software¹ —almost all organizations find themselves in a situation where they have to evaluate the merits of cloud solutions. This can be a challenge since the operational and business models of Cloud offerings differ significantly from those of on-premise IT solutions.

Business applications running in the Cloud differ from traditional “on-premise” applications because they are located and operated remotely, off-premise from the companies that use them. As noted, modern cloud systems are built on a single code base where customers have their own instance configured to meet their specific business needs, but the provisioning and maintenance of hardware and software, as well as operations and bandwidth, are the responsibility of the software vendor, not the customer. Typically, the software is accessed through standard web browsers.

Reasons frequently cited by companies that have chosen Cloud solutions include:

- supporting strategic agility
- access to features not available on-premise
- lower cost of ownership
- absence of cumbersome re-implementations and updates
- faster time to value
- better user interfaces
- higher security
- lower risk associated with subscribing to rather than buying software.

¹ IDC “Worldwide Software as a Service 2010–2014 Forecast: Software Will Never Be the Same”, July 2010



Key Findings

In addition to the superior cost structure and level compared to on-premise solutions that we discuss in depth in this paper, there are some other benefits for companies that choose Cloud solutions in comparison to traditional software. Looking at these in detail will help readers reach the same conclusion we did – **software will never be the same again.**

Strategic Agility

Cloud deployments largely eliminate the need for CIOs to deal with capacity and location planning. Vendors are responsible for providing sufficient capacity and geographical coverage. This means that organizations using cloud deployments can be much more responsive to unforeseen events and business demands than companies using on-premise systems. In the latter case, organizations need to hire, procure hardware and increase operations complexity to respond to unforeseen business realities.

The Latest Versions

Product renewals and re-implementations are not a problem. Cloud solutions are often renewed several times per year at no additional cost to the customer. In many cases, customers are even offered the latest updates as a matter of policy.

Built for User Adoption

The intense upgrade cycle means that user interfaces tend to be more modern. Users access Cloud solutions through web style user interfaces that maximize adoption and minimize training needs by using the same design principles as popular consumer web applications like Yahoo and eBay.

Improved Security

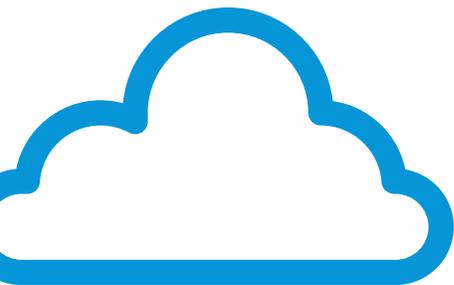
Increasingly, security is seen as a key reason to use Cloud solutions. Strict ISO standards and regular security audits have proven that Cloud solutions can be implemented to the highest security standards. This means companies can only gain by eliminating the risk of lost laptops containing sensitive information, not to mention other even more malicious threats from hacking organizations.

Time to Value

The deployment times and resource needs associated with rolling out Cloud solutions are significantly lower than with on-premise solutions. Often, Cloud solutions can “go live” in 2-3 quarters while on-premise solutions require 2-3 years. In addition, the resource commitment from busy IT departments is much lighter for Cloud solutions. In fact, SuccessFactors core modules for business execution have an average time from project kick-off to customer production sign-off of 110 days.

Opex instead of Capex, with Risk Transferred to the Vendor

Finally, a key business model difference is that companies buy on-premise solutions, but subscribe to Cloud solutions. Subscriptions are pay-as-you-go, and thus offer lower initial investment with an easier exit option if things should not go as envisioned. This means the vendor has to earn the business on an ongoing basis, and owns more of the business risk.



Evaluating Software Investment Decisions

Evaluating a major software commitment for an on-premise solution vs. the cloud requires attention to four key areas: support for business strategy, operations, security, and cost. All of these areas require both qualitative and quantitative consideration.

Support for business strategies not only includes the ability to execute on the current strategy, but also to react to unforeseen changes in the business environment that always occur. In some cases – when legacy applications are involved, for example – moving to the cloud is not an option. But in others, particularly those which require the flexibility to increase or decrease computing capacity based on workload, cloud computing is ideal.

Considerations related to **operations** include implementing, deploying, managing and maintaining the chosen solution. What resources will be required for implementation? How long will it take, i.e. what is the “time to value?” What are the risks? (These include the question of whether or not the system will perform as advertised, and the risks related to user adoption.) Is there a way to deploy the required resources that is of more value to the core areas at the heart of the business?

Security factors include general intrusion protection, prevention of data theft, and regulatory compliance. Cloud vendors follow transparent security and auditing standards.

Cost analysis needs to not only capture total cost, but also the balance between fixed and variable costs and the sensitivity to changes in assumptions.

There are many different ways to evaluate the cost of a given solution. This paper will take the commonly used total cost of ownership (TCO) approach. The reason is that there are many factors that impact the cost of a software solution to a business beyond the cost to license it. In fact, even when the licensing cost of on-premise software is “free” (because some software solution was purchased as part of a bundle), the total cost may still exceed that of a cloud solution.

To illustrate this discussion, we will compare the costs of an on-premise and a Cloud implementation of a Human Resources (HRIS) solution for a typical 10,000 employee company. (We have studied companies with headcounts ranging from 500 to 50,000 and the results do not differ significantly.) For the on-premise case, this study is based on data from approximately 50 cases we have studied. Obviously, all organizations need to rely on their own numbers, but these are representative and valid for broad comparisons.



Siemens Brings Global HR Processes into The Cloud

In 2008, Siemens' HR and IT departments both faced interesting challenges.

HR was tasked with meeting objectives like building an outstanding employer brand, building a high-performance culture, a global diverse talent pipeline, and providing life-long development and learning.

At the same time, IT's strategic challenges were to improve IT productivity measures, support globalization of businesses, supporting "digital generation paradigms" like social media, and supporting departmental initiatives.

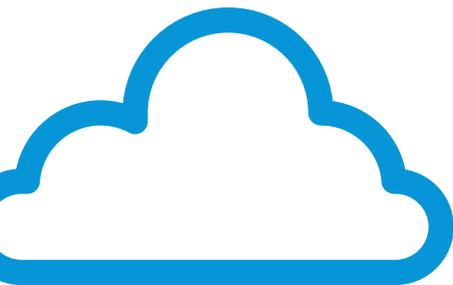
HR and IT jointly decided to deliver on all of these challenges by establishing a professional people management system.

Further analysis showed that a cloud implementation would be most beneficial to Siemens.

The key reasons Siemens highlighted for selecting a cloud solution were that it:

- Accelerates deployment: shorter time TO and FOR implementation
- Minimizes cost barriers with pay-as-you-use
- Offers web scalability without up front provisioning
- Offers direct benefit from application improvement ideas – out of the users community
- Allows business to get things done with minimal IT support
- Lowers Total Cost of Ownership (TCO) compared to on-premise installations

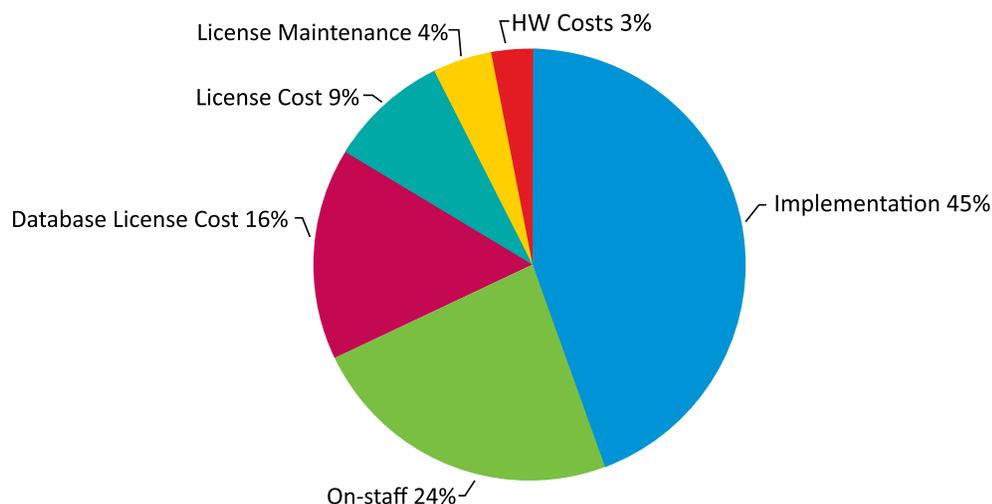
SuccessFactors was chosen as the vendor to deliver this solution, and within 6 months key modules were live. After an additional year, 400,000 employees use the solution with 40-50,000 logins per day. 18 million individual performance objectives have been registered, and 6,000 job requisitions are live.



Cost Factors for On-Premise Solutions

As Graph 1 illustrates, on-premise solutions require initial investments in software licenses, database licenses, hardware and external implementation consultants. Implementation also imposes a significant burden on the IT and HR organizations, which can be quantified by calculating the hours involved. Most of these costs are incurred before going live.

Graph 1: Cost Structure of an On-Premise HRIS Solution.



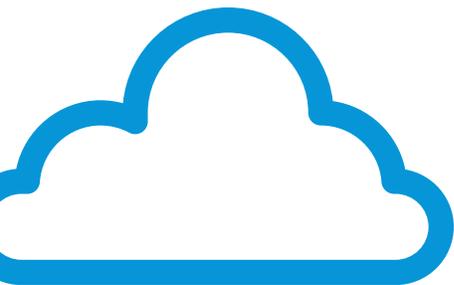
In addition to up-front costs, there are ongoing costs, including license renewals, software and hardware maintenance, and the salaries of on-staff database administrators (DBAs).

After four to five years, most application software has become outdated and requires an upgrade. This upgrade typically involves a significant change to existing systems, and therefore requires re-implementation and re-configuration of systems and processes. It should be noted that in some cases these upgrades are for all practical purposes mandatory, as suppliers simply stop providing support for older versions of their application. In others cases, companies make such heavy customization to the code base they receive from the vendor that upgrading to a newer version can become almost cost prohibitive.

As Graph 1 illustrates, the largest cost item for an on-premise solution is implementation. Two factors drive this:

- The large degree of customization required when implementing on-premise systems, which often includes expensive code modifications.
- The need to re-implement upgrades after 4-5 years.

The second and third largest items in the on-premise cost structure relate to owning and operating the databases these systems require. Database licensing fees are substantial, and an additional 2-3 DBAs are needed on a full-time basis to maintain a 10,000 employee implementation.



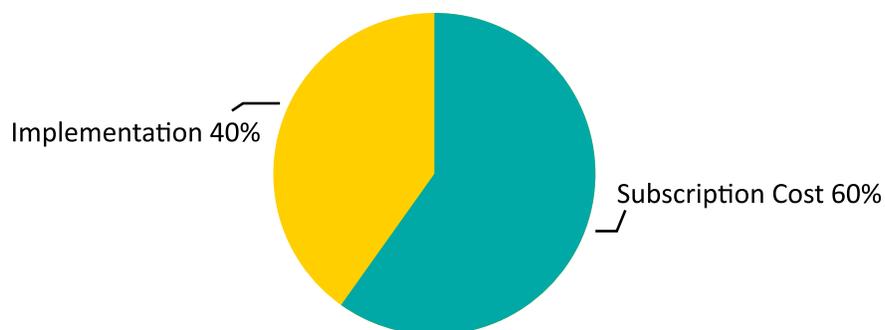
Somewhat surprisingly, the costs for buying, upgrading and maintaining licenses only comprise 13% of total cost. Organizations that buy a bundle of licenses need to realize that, even if the license cost is already paid for, the other 87% of costs are still present.

Appendix A contains the details behind these examples.

Cost Factors for Cloud-Based Business Applications

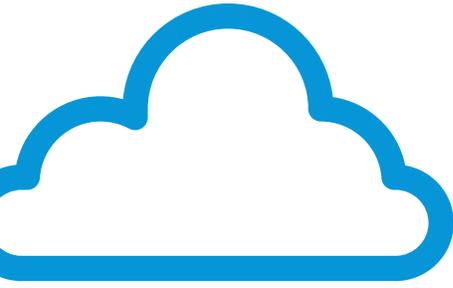
In comparison to on-premise solutions, the cost drivers of Cloud solutions are simpler, more transparent and easier to analyze. The business agreement is typically structured as a subscription, with the responsibility for maintaining and operating the infrastructure falling to the vendor, not with the customer.

Graph 2: Cost Structure of a Cloud-Based HRIS Solution.



The up-front costs for Cloud solutions consist exclusively of external configuration consultant fees and support from internal IT and HR personnel. These costs are typically much smaller than in the on-premise case. The reason is that software in the Cloud is typically configured to meet special customer needs, a process which involves activities like checking a series of boxes that control system options. In contrast, on-premise systems are implemented, which is a much more complex process that may involve writing code. With the configuration option, customization is sometimes limited, but the need to re-invent the wheel for every customer is also removed.

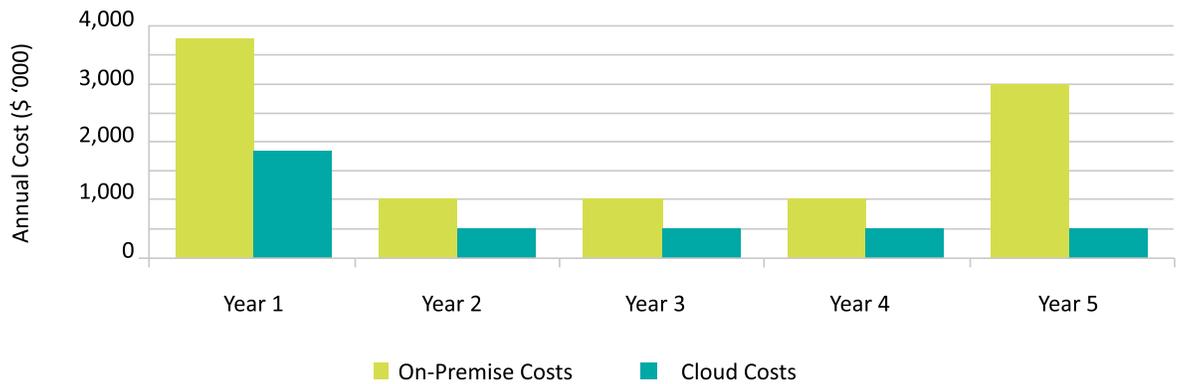
On-going costs for Cloud solutions consist of subscription fees and nothing else. All other costs are the responsibility of the vendor. Additionally, since Cloud-based solutions are updated several times per year as part of the agreement, the need to purchase software upgrades and re-implement every 4-5 years is removed.



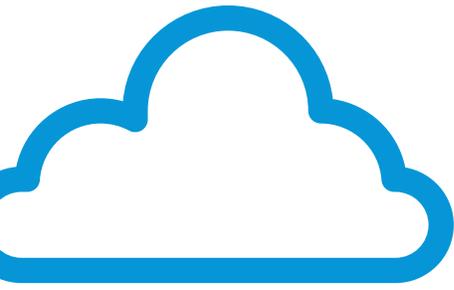
On-Premise vs. Cloud: The TCO Comparison

The cost structure for a Cloud solution is not only much simpler than that for an on-premise solution. More importantly, the total cost of ownership is significantly lower, as the graph below for a typical 10,000 employee company illustrates.

Graph 3: Typical Costs for a 10,000 Employee Company.

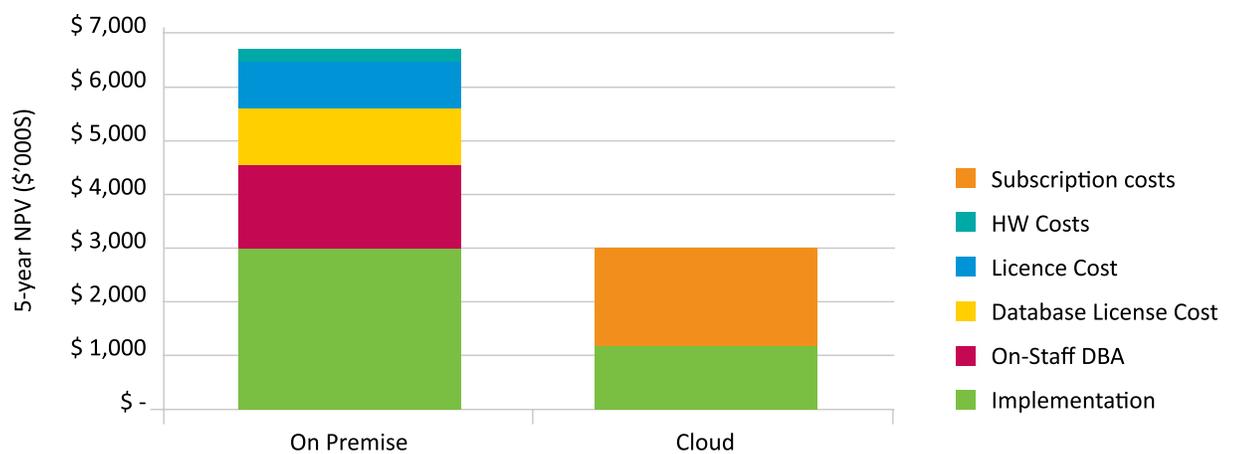


Graph 3 shows typical costs of an on-premise HRIS solution for a 10,000 employee company vs. the costs for an equivalent Cloud-based solution. The cost increase in year 5 is absent because, as noted, Cloud deployments feature continuous updates that do not require upgrades or re-implementation.



Understanding the Cost Differences

Graph 4: 5-year Total Cost of Ownership Comparison by Category at 13% Discount Rate



To compare the cost structure of Cloud solutions vs. on-premise solutions in an apples-to-apples fashion, it is useful to split the comparison into items that provide the same customer benefit:

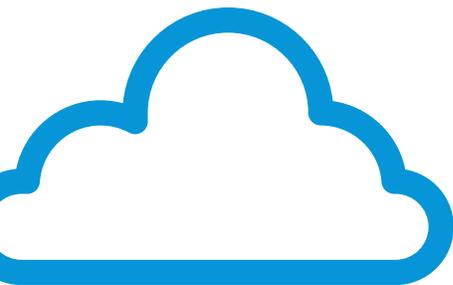
- In the case of implementation costs, those for an on-premise solution and those for a Cloud solution are directly comparable.
- In the case of ongoing operations, the Cloud subscription costs are equivalent to the sum of hardware costs, licensing costs, database licensing costs and DBA salaries in an on-premise solution.

The Cloud-based system implementation costs are 20-30% of the on-premise cost for two main reasons:

- There is no need to re-implement the solution after 4-5 years
- Simpler implementation because Cloud models remove the need for customization.

Having explained the difference in implementation costs, we will now compare Cloud subscription costs to the remaining cost items for on-premise solutions: hardware, license, and database costs.

The largest of these is database license and operations. Cloud vendors have built their applications to achieve great economies of scale, and can operate their data centers at a fraction of the cost compared to on-premise solutions operated by on-staff personnel. Graph 4 shows clearly that this cost efficiency is passed directly on to Cloud customers.



Conclusion

Faster Time to Value, Lower Cost

In summary, we found Cloud solutions typically provide the same or better functionality at a significantly lower cost, and with additional strategic advantages such as agility and short deployment times.

Even so, many companies still struggle with these decisions. The most common reason is they neglect to include all relevant cost factors in their analysis. For example, they may compare the on-premise license cost to the Cloud solution subscription fee, assuming they are making an apples-to-apples comparison. In this paper we have shown that this is not the case, and will lead to an erroneous business decision since Cloud vendor license costs cover a large range of costs borne by the customer in the on-premise case. Examples include database staff and database licenses.

Any evaluation of investments needs to fully account for costs and benefits of all alternatives. When comparing Cloud to on-premise solutions, all the data shown in Table 1 should be collected for on-premise solutions.

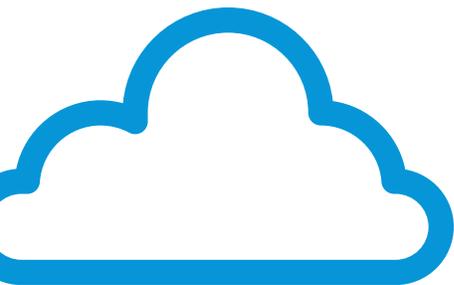
Table 1: Cost Factors for On-premise Solutions

| On-premise Software Costs | |
|--|-------|
| Initial License Cost | (\$K) |
| Annual Maintenance | (%) |
| Upgrade Fee | (%) |
| Database License Cost | (\$K) |
| On-premise People and Implementation Costs | |
| External Implementation | (\$K) |
| Internal Implementation | (\$K) |
| Upgrade Implementation | (%) |
| On-staff DBA | (FTE) |
| Fully Burdened Cost/DBA | (\$K) |

The equivalent costs for Cloud-based solutions are shown in Table 2.

Table 2: Cost Factors for Cloud Solutions

| Cloud Business Application Costs | |
|----------------------------------|-------|
| Subscription Fee | (\$K) |
| External Implementation | (\$K) |
| Internal Implementation | (\$K) |



Appendix

Cost Details

This appendix contains the detailed cost drivers and the cost structure for the 10,000 employee on-premise implementation used in this whitepaper.

Table A: Cost Assumptions, 10,000 Employee On-Premise Implementation

| | Unit | |
|----------------------------------|-------------------|---------------|
| Number of Employees | | 10,000 |
| Finance | | |
| Discount Factor (WACC) | (%) | 13% |
| Software Costs | | |
| Initial License Cost | (\$K) | 500 |
| Annual Maintenance | (%) | 22% |
| Upgrade Fee | (%) | 50% |
| Database License Cost | (\$K/core) | 25 |
| HW Costs | | |
| # Servers | (#) | 3 |
| Cores/server | (#) | 4 |
| Cost/server | (\$K) | 3 |
| Server Maintenance | (%) | 25% |
| People and Implementation | | |
| External Implementation | (\$K) | 1500 |
| Internal Implementation | (\$K) | 900 |
| Upgrade Implementation | (%) | 67% |
| On-staff DBA | (FTE) | 3 |
| Fully Burdened Cost/DBA | (\$K) | 150 |

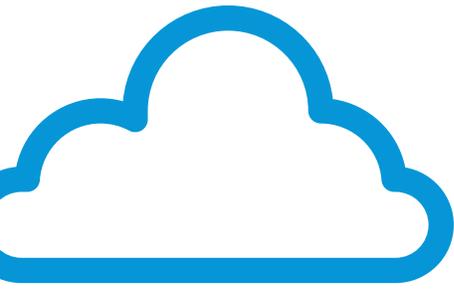


Table B: 5-year Cost to Own On-Premise Systems, 10,000 Employee On-Premise Implementation

| | Unit | NVP | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|------------------------------------|--------------|--------------|--------------|------------|------------|------------|--------------|
| Total Cost On-Premise | (\$K) | 6,709 | 3,780 | 870 | 870 | 870 | 2,848 |
| Software Costs | (\$K) | - | 800 | 410 | 410 | 410 | 660 |
| License Cost | (\$K) | - | 500 | - | - | - | - |
| License Maintenance | (\$K) | - | - | 110 | 110 | 110 | 110 |
| Upgrade Fee | (\$K) | - | - | - | - | - | 250 |
| Database License Cost | (\$K) | - | 300 | 300 | 300 | 300 | 300 |
| HW Costs | (\$K) | - | 130 | 10 | 10 | 10 | 130 |
| Servers | (\$K) | - | 120 | - | - | - | 120 |
| Server Maintenance | (\$K) | - | 10 | 10 | 10 | 10 | 10 |
| People & Implementation | (\$K) | - | 2,850 | 450 | 450 | 450 | 2,058 |
| Implementation Consulting | (\$K) | - | 1,500 | - | - | - | 1,005 |
| Implementation Internal | (\$K) | - | 900 | - | - | - | 603 |
| On-staff DBA | (\$K) | - | 450 | 450 | 450 | 450 | 450 |

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