
# Comparison of Costs and Return on Investments of IT Investments

SaaS and Traditional Applications

A business owner's guide to understanding the cost benefit of implementing Software as a Service based business applications and comparison with tradition applications.

## *Background*

Software as a Service (SaaS) is the revolutionary new way of delivery software applications through the internet. This business model has gained prominence in the last 3-4 years and there are quite a few companies like Salesforce, Intuit, Success Factors, Net Suite that have been able to show impressive results using this model. Due to its various advantages over off the shelf packaged application or custom built software (referred to as "traditional applications" in this document) the rate of adoption by businesses has been very impressive.

Like any business model SaaS also has many components – this paper takes a look at some of the components of a SaaS business and compares them with traditional applications – from an end user's perspective.

Since there are various business models around software applications we have classified some important one in the table below.

| Software Application | Examples | Attributes |
|---|---|---|
| **Internet / Web based (hosted) applications** | Email, Ecommerce, Online Filings | These are standard applications which are normally free and available for use through internet. |
| **Packaged Software** | Tally, Oracle 9i, Microsoft Office, SAP | Again standard applications which are not free but are licensed. Customization to suit business requirements may or may not be allowed. ERP falls in this category. |
| **Custom built Applications** | Billing, Inventory, Attendance, CRM | This is a very large and diverse set; applications can be very small and do only one specific task – for example export invoice and document printing - or can be very large and complex – for example an application which includes sales, purchase, inventory, accounting and production. |
| **SaaS Applications** | Salesforce, EazeWork, Intuit, SuccessFactors | New types of applications have been becoming very popular with the businesses globally. These are available on the internet and are not free but the fees are linked to usage. |

Traditionally companies have depended mostly upon packaged software or custom built applications but with the recent advances in software development technology, computing infrastructure available on the internet and connectivity the new breed of Web based - SaaS applications are emerging.

## *Return on Investment*

Return on Investment as a financial concept is used to measure the financial benefit from any project. A typical project has an initial capital outlay and then there are series of expenses (cash outflows) before gradually the cash inflows (savings, benefits, higher sales) start accruing and eventually the cash inflows exceed the cash outflows (hopefully!!).

Information needed to calculate the ROI of any project are

1. Life cycle of the project – Since the speed at which software technologies change is quite fast the maximum life cycle of a software project is 5 years. After 5 years there are major changes which need to be taken up as another project.
2. Cash outflows – All expenditures which are done for the project is to be captured, this includes the following
    a. Initial capital expenditure
    b. Ongoing expenditure
3. Cash inflows – Inflows are either in form of revenue or due to cost savings. Typically for software projects both types of inflows are relevant.

## *Benefits from a Software Implementation*

The benefit a business is able to get from software depends upon various factors. Most important is the ability of the business to change their ways of working and start using the software application as planned. Nature or business is also an important factor; some businesses like trading, transportation based, export and OEM based tend to benefit more from computerization.

To assess the benefits it is most important to understand the nature of benefits, there are three types of benefits which can result from any software usage.

1. **Reduction in cost due to increase in efficiency** – Efficiency has various aspects, reduction in human effort, reduction in time, increase in decision making ability. All these translate to reduced manpower and increase output.
2. **Reduction in working capital requirements –** Some applications helps us to manage our working capital better. Tighter inventory management, better control on Accounts Receivables, improved co-ordination between Sales, Purchase, Production and Dispatch all lead to reduction in working capital requirement.
3. **Increase in Revenue –** This is an area where most businesses want to focus and get results. Software applications are enabling tools and if properly implemented they help in increasing turnover of a business. Since the direct impact of any application on end sales result is difficult to measure its best if the business heads themselves arrive at a consensus.

All these benefits vary significantly based on factors like

1. Nature of business
2. Success of implementation as seen by usage of the application

For the purpose of this paper we assume that both Traditional applications and SaaS application give equivalent benefits over time. There are areas where either of them are stronger than other but on an overall basis this becomes equal.

## *ROI Comparisons*

To compare the ROI of Traditional Application and SaaS Applications we are using the following scenario and will be focusing on the costs aspect alone.

**Scenario Description –** Small Enterprise with 50 users, the users are spread across Finance, HR, Sales, Purchase, and Dispatch and the breakup is given in the table below. The setup is across multiple locations – one factory, one head office and four sales offices.

| Department | No. of users | Application(s) used # |
|---|---|---|
| **Finance** | 4 | Accounting |
| **HR** | 2 | Payroll |
| **All** | 50 | Employee Self Service |
| **Sales** | 8 | Sales Management |
| **Purchase** | 3 | Material Planning |
| **Production** | 3 | Invoicing |

# - Please download ***Business Applications for SMEs*** to gain a better understanding of applications needed by SMEs.

In this scenario we are assuming a 5 year usage cycle with minor upgrades every year and major upgrade every second year. We are also assuming that the number of users across departments remains constant over these 5 years. The costs are for a typical Indian company.

**Cost Heads**

1. Licence costs
2. Infrastructure costs (servers, operating system, switch, desktops)
3. Implementation costs

4. Monthly IT Infrastructure operating costs (including connectivity, vendors and in house IT staff)
5. Minor and major upgrade costs
6. Annual Maintenance Charges (hardware and software)

### *Licence Costs*

Software licences are typically of two types – perpetual or limited time. While packaged applications come with perpetual licence the SaaS applications have time or usage based licensing. The licence are further classified into fixed or a floating licence, fixed licence as the name suggests can be used only by a specific named user while floating licence can be used by anyone in the company.

For this scenario we are assuming Packaged applications which are licensed perpetually to the company and are comparing with the annual subscription costs for the same set of SaaS applications.

(Figures in INR) **Licence Costs**

| Application | Traditional Apps | SaaS (per annum) |
|---|---|---|
| **Accounting** | 52000 | 28800 |
| **Payroll** | 125000 | 105000 |
| **Employee Self Service** | 500000 | 150000 |
| **Sales Management** | 240000 | 33600 |
| **Material Planning** | 345000 | 18000 |
| **Invoicing** | 24000 | 6300 |
| **Total** | **1286000** | **341700** |

There exists a significant different in licence cost between traditional applications and SaaS based applications.

### *Infrastructure Costs*

We are assuming in the scenario that the traditional applications are hosted within the company's premises hence the company needs to buy or lease the infrastructure components needed to run the applications. There are three components within this infrastructure layer

1. Computers – Server, Desktop
2. Networking – Firewall, Routers
3. Software – Operating system, Database, Anti-virus

SaaS applications only need desktops and good internet connectivity. The desktops for running SaaS applications need not be very high end machines since they don't need to host heavy client side software.

(Figures in INR) **Infrastructure Costs**

| Infrastructure Components | Traditional Apps | SaaS Apps |
|---|---|---|
| **Server** | 450000 | 0 |
| **Desktops** | 1500000 | 75000 |
| **Networking Equipment** | 100000 | 60000 |
| **Software Licences** | 80000 | 5000 |
| **Total** | **2130000** | **615000** |

This investment in Infrastructure by a company can be reduced by going for a dedicated or shared hosting in a Data Centre but that adds to managerial costs and is not being considered in this scenario.

### *Implementation Costs*

Standard off the shelf applications need to be customized or configured for a specific company's requirement. SaaS applications also need to be configured but cannot be customized since one application is shared by multiple companies. Basic difference between configuration and customization is that - configuration is based on company specific data which is inputted while customization is done by changing the code structure of the program.

Traditional application's customizability is a huge advantage when the company is implementing very niche and specific applications; typically these applications are implemented by large companies and not by SMEs.

In the case of traditional applications the cost of implementation varies significantly depending upon the level of complexity and the quantum of changes but typically this is anywhere from 50% to 150% of the original licence cost of the application. Cost of configuration for SaaS applications is much lower in comparison – primary reason being that SaaS applications are built in a manner which enables quick configurability, it takes away some flexibility but brings in significant benefits.

(Figures in INR) **Implementation Costs**

| Implementation Costs | Traditional Apps | SaaS Apps |
|---|---|---|
| **Accounting** | 20800 | 8500 |
| **Payroll** | 37500 | 14000 |
| **Employee Self Service** | 75000 | 8000 |
| **Sales Management** | 72000 | 8500 |
| **Material Planning** | 172500 | 9000 |
| **Invoicing** | 4800 | 2000 |
| **Total** | **382600** | **50000** |

### *Monthly IT Infrastructure Operating Costs*

Keeping an IT infrastructure running in an Indian context can be quite a difficult and expensive affair. The basic infrastructure like power, internet connectivity, presence of competent IT staff and availability of reliable service vendors who stick to SLAs are all difficult to find. For these reasons only large companies are able to have a solid and reliable infrastructure. Assuming 90% infrastructure availability is quite optimistic.

Compare this with SaaS services where the problem is maintaining the infrastructure is of the service provider who in turn depends either on in-house expertise or lease servers on cloud infrastructure. SaaS providers promise and deliver 99%+ reliability.

(Figures in INR) **Monthly IT Infrastructure Operating Costs**

| Operating Costs | Traditional Apps | SaaS Apps |
|---|---|---|
| **Connectivity** | 15000 | 15000 |
| **In house IT Team** | 20000 | 8000 |
| **Outsourced IT Vendor** | 4000 | 4000 |
| **Power (Backup)** | 1500 | 0 |
| **Total** | **40500** | **27000** |

As is evident from the numbers it is not only the cost of maintaining and running the IT infrastructure but also the lack of reliability which is causing a large numbers of companies moving to public infrastructure.

### *Major and Minor Upgrade Costs*

As the business environment keeps on continually changing and even governmental rules and regulations can change the business applications need to be updated as and when these changes occur. Sometimes companies decide to change the process due to re-structuring or to bring in efficiency improvements.

Like stated earlier SaaS applications cannot be customized but can be integrated with external applications through APIs. In some cases companies can utilize this feature to develop small work flows outside the SaaS application and integrate it. If changes are external like regulations then it is the responsibility of the SaaS vendor to provide these changes as upgrades free of cost.

Most of the good SaaS vendors also have a mechanism to ask their users about feedback and enhancement requests. They use these inputs to keep their applications continually evolving to meet the user's requirements.

Traditional applications can be completely customized and this helps companies in having an application which is flexible and in line with the requirements. The cost and complexity of maintaining these customizations is captured indirectly in other areas.

(Figures in INR) **Major and Minor Upgrade Costs**

| Operating Costs | Traditional Apps | SaaS Apps |
|---|---|---|
| **Minor Upgrades** | 250000 | 0 |
| **Major Upgrades** | 550000 | 0 |

## *Annual Maintenance Charges*

Traditional software companies charge an AMC which is meant to take care of the upgrades and services like trouble shooting, reinstallation, bug fixes and operating queries. AMCs vary from 10% to 22% of the original cost of licence. Hardware vendors also have a pretty steep cost of maintenance and due to high rate of technological obsolescence it becomes expensive to maintain the hardware after 3 years. This poses issues to companies which are outside the purview of this article.

SaaS companies don't charge any AMC but have flexibility in increasing the charge of their services at any time. These new charges will apply to you when you go for renewal of subscription. Most SaaS companies allow for multi-year contracts to prevent against this future escalation of charges.

(Figures in INR) **Annual Maintenance Charges**

| Operating Costs | Traditional Apps | SaaS Apps |
|---|---|---|
| **Hardware AMC** | 205500 | 81000 |
| **Software AMC** | 257200 | 0 |
| **Total** | **462200** | **81000** |

## *Summary*

If we compare the overall cost of purchasing, implementing, using and maintaining the traditional applications with the cost of subscribing, implementing and using the SaaS applications we find significant differences in the two.

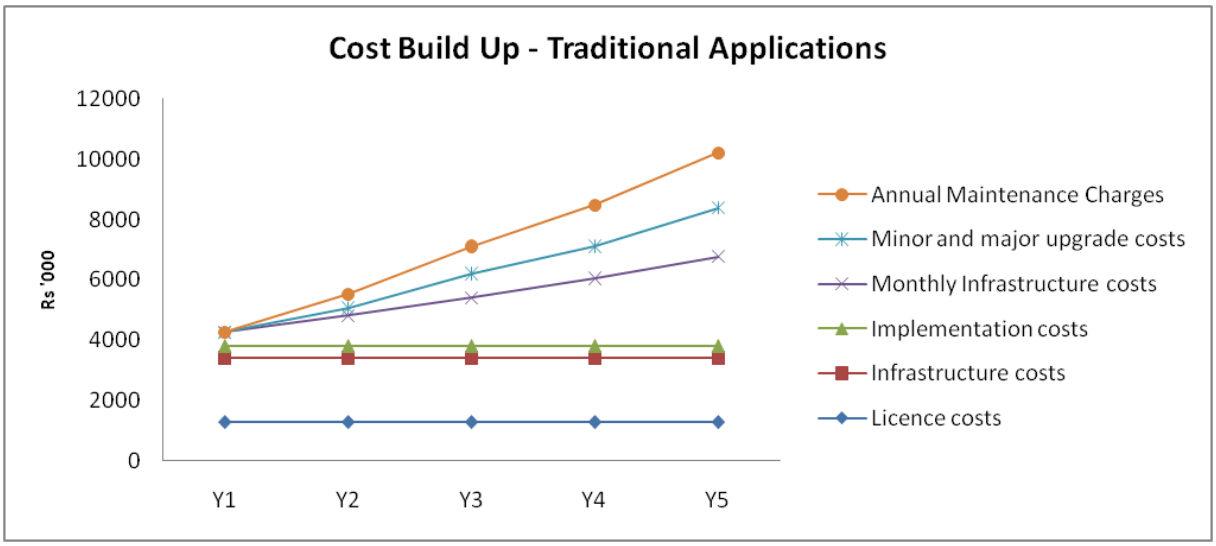
Table below gives the overall costs across the various factors between Traditional applications and SaaaS applications as a snapshot for years 1, 3 and 5.

(Rs '000s) **Total Costs**

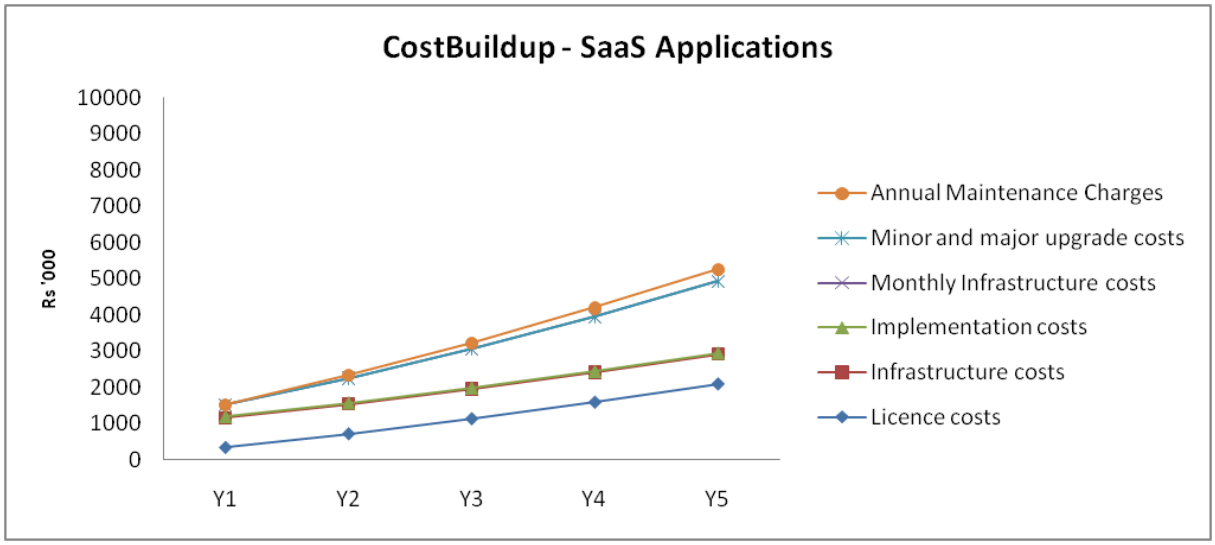
| Application | Traditional Apps | | | SaaS Apps | | |
|---|---|---|---|---|---|---|
| | **Y1** | **Y3** | **Y5** | **Y1** | **Y3** | **Y5** |
| **Licence costs** | 1286 | 0 | 0 | 342 | 413 | 500 |
| **Infrastructure costs** | 2130 | 0 | 0 | 815 | 0 | 0 |
| **Implementation costs** | 383 | 0 | 0 | 50 | 0 | 0 |
| **Monthly Infrastructure costs** | 486 | 588 | 712 | 324 | 392 | 474 |
| **Minor and major upgrade costs** | 0 | 550 | 550 | 0 | 0 | 0 |
| **Annual Maintenance Charges** | 0 | 462 | 462 | 0 | 81 | 81 |
| **Total** | 4285 | 1600 | 1724 | 1320 | 780 | 931 |

Graph below gives a snapshot of the different costs and how they stack up over five years.

**Total cost incurred over five years for Traditional Applications = Rs 10.21 mn**




**Total cost incurred over five years for Traditional Applications = Rs 5.25 mn**




Although there is no expenditure on licence cost after the first year in the case of Traditional Applications the cost of maintaining the infrastructure and the cost / AMC of hardware more than makes up for the difference. The result is that the overall cost of Traditional Applications is about two times the total cost of SaaS applications.

## *Conclusion*

**So what is the best option for your company?**

Comparing Traditional Applications and SaaS Applications should not be done only the factor of cost alone. There are other aspects like data security, level of customization needed, level of reliability needed, recent investments in Information Technology and the strategic direction the company wants to take regarding computerization. Besides all this the most important aspect is presence of good quality applications and SaaS vendors in the market.

Answer to these questions and more insights can be gained by undergoing a SaaS Assessment service from EazeWork. You can go to **http://www.eazework.com/services/** or **Contact Us**.

## About the Author

Chintan Tyagi is the CEO of EazeWork – a company providing business applications to SMEs on SaaS platform. Chintan has rich experience in working with different types of industries and has implemented and managed implementations of various business applications. He has founded EazeWork along with three other co-founders to build, deploy and deliver business applications as a service to their clients.

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