“To Upgrade or Not to Upgrade?”

A comparative study of Adobe CS5 and Adobe CS6 software

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Abstract

For a long time, human beings have believed that only the best of the best is what counts as quality. This has led to a consumer mentality where as soon as a new or an upgraded version of a product comes out, everybody rushes to get it without hesitating. This has resulted in producers rushing to produce new products in order to be able to compete with the rest, and to maintain their stronghold in the market. It has therefore become more and more difficult for us to keep up with the fast changing technology, which is steered by the need to make a quick buck (the suppliers) and the need to be in with the times (users). The questions we are trying to answer in this document are: Is it really necessary to upgrade or buy the new item? What value does it add to our lives when we upgrade? Is there a significant improvement to the product that warrants us getting the newer or latest version? Through our user study, we try to bring out a clear distinction between the different versions of the same product, that will give a clearer understanding of the idea behind the upgrade and our need to have it. Thus we want to help people to make the right decision in considering of buying a new software. The results that we got showed that the latest and the greatest is not always the best, and in some cases it might be better to just stick to the older version than getting the newer.
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1 Introduction

When we compare technology today with the technology that existed five years ago, or even further back in time, we see a huge difference and sometimes ask ourselves how we ever managed in the past. Great advances have been made in a very short time and these changes have had a big influence and meaning in the society. The effects have been both positive and negative. The positive part of it means that it makes our lives easier but at the same time it costs us both time and money.

In this paper we try to answer the question of whether it is necessary to upgrade or not. Do people really need to upgrade their systems or software, and if so, what are the major reasons that lead them to making the decision to upgrade. When one has made the decision to upgrade, does their work become easier to do? Is the machine or software made better as a result of the upgrade? Is it an easy thing to do and is it worthwhile, in terms of money and time, to upgrade to the newer technology? Can one choose to integrate different programs instead of upgrading, or if it is just better to continue using the current programs one has instead of integrating or upgrading? Do they still get the same results in the long run, or better?

Being in the media branch brings us into contact with many different editing and filming software. We are then automatically pushed into having a little know how on upgrades and upcoming events. One such software that we have used a lot is the Adobe Creative Suite. Adobe is a world renowned company that has established its reputation through their advanced products and attention to quality. There is no doubt that their software is among the best one can find in this particular field. Their excellent quality products come at a steep price which not everyone can always afford to buy or upgrade whenever they launch a new version.

When we therefore upgrade this Adobe software, there is almost always a few hitches in the system that need to be sorted out, and leaves us wondering if it was really necessary. It is therefore an important decision that is made when one; especially those who are using it for business or official purposes; decides to buy Adobe products because the time spent on it and the prices that come up as a result of the upgrade plays a very big role here, and one cannot just buy them for fun.

Adobe products are among the best in the market judging from user reviews and comparisons available on the internet. As a result of their quality and high status in the market, they are a bit pricey even for companies who invest in such products. Therefore it is imperative that if one has to use such software, they have very good and plausible reasons for choosing it. Having had some experience using the Adobe Creative Suite products before (at the university as students), we have gained a little knowledge about such software and what it entails to upgrade. What is not clear to us is the why and what is involved including the possible expenses that can be incurred.

We believe that this is a very important aspect in our education. Upgrading takes place automatically in school and nobody comes in and explains why they have decided to upgrade the systems and software. The companies that sell these products most often only try to convince people to buy, but never really have a concrete explanation on why. To them it is
mostly about the strength of the product, which might actually be unnecessary. This kind of education or knowledge is a very important tool that we need in our future especially for those who decide to start their own companies. For these reasons, we chose to conduct a our study specifically on Adobe Creative Suite version 5 compared with version 6 to educate people on the importance of know-how in upgrading.

Bala, R. & Carr, S. (2009) write in their article, Pricing Software Upgrades: The role of product improvement and user costs, about how clients can be misled into upgrading through enticing offers, because they have somehow decided to ignore the available upgrades that they have set out.

1.1 Differences between update and upgrade

Upgrading is simply making a system or software perform better by either installing a newer or improved version of it, or by simply buying a new one which has advanced features that do not exist in the current one. Updating on the other hand can be described as installing bug fixes that help the system or software perform as it was intended to. Upgrading is most often a conscious decision, while updating can be something that has been pre-installed and happens automatically as soon as an update is available.

In software systems, a feature represents a functionality that is defined by requirements and accessible to developers and users. Software maintenance and evolution involves adding new features to programs, improving existing functionalities, and removing a bug, which is analogous to removing unwanted functionalities. (Dit, B. et al, 2011:2).

We define an upgrade action as adding a new function or features to a software system. (Sahin & Zahedi, 2001:3)

The two articles quoted above give the same definition on what upgrading is. Dit et al goes on ahead to compare the difference between upgrading and updating, something which seems not to know, or are confused by a lot. In order to be able to get the right information, one must be sure what one is talking about. Updating is mostly done to fix a minor problem while upgrading is considered to be a major new software release. In our case, we are targeting only the upgrading bit of the equation.

1.2 Problem

In order to figure out how people think when they are deciding to upgrade or not to upgrade, we have to answer the question “why do people need to upgrade?” The problem comes in when people need to make an informed decision regarding what software to use and why. We want the users of these products to be able to choose the right software in order to save on resources, that can be used on other equally important issues. The companies that offer such services as upgrading can sometimes take advantage of the user’s lack of knowledge and laid back attitude when making important decisions on their upgrades.

We hope that at the end of this paper, we will have given more insight on what warning signs people should look into and how to go about such important decisions.
1.3 Purpose
The reason for our research in this particular field is to determine whether there is an actual need to upgrade our systems or software at all, or whether it should be done as often as the new versions come into the market. We investigate the reasoning from the users point of view using the Adobe Creative Suite software upgrade as our study object. What this study is specifically looking into is the economic angle which covers a wide span such as expenses incurred, time taken and resources that are put aside for such a project.

In order to collect the necessary information, we use different methods namely a user study, interviews and questionnaires, which explore deeply the differences between two versions of Adobe software, and their advantages and disadvantages. The study of Adobe Creative Suite should help us find out what makes the latest version of Adobe more useful than the older versions.

When users and anyone else who is interested in technology as a whole have the knowledge on whether to upgrade or not to upgrade, they will be able to avoid unnecessary glitches in their systems like system crashes, bugs and/or viruses. As a result of this, they end up saving a lot of resources by getting only software that is appropriate to their needs instead of just getting software because it is the “in thing”, or the latest in the market.

1.4 Structure
Our thesis is divided into different chapters to make it easier for the reader to find the relevant information and to be able to connect the different chapters in a flowing manner. Chapter one explains what the research is about, the problem that needs to be solved and the reason behind the studies. The second chapter will give a detailed explanation of the methods we will use in our research, our reasons for the choices we made, and the actual process that will take place.

The third chapter is dedicated to the results that have come out after the tests and the research has taken place, while the fourth chapter analyses the results by answering the questions on whether they can be relied on, are valid or if there is a need for this particular question to be answered. This is also where we will have our theory on how the four studies have come together to contribute towards solving the problem. In the fifth and sixth chapters, we will write what we think of the results and all the studies and research, together with any problems we encountered while doing this research. We conclude with a summary of the whole process and a list of documents where we found any information that we have mentioned in the document.

2 Approach and Methodology
The study object that we consider is appropriate to our research is the Adobe Creative Suite products mainly CS5 & 6 and our main objective is to extract data sets from other people’s previous experiences with the adobe software. This data will come from a varied scope of people with different viewpoints.

First we have students who have used both CS5 and CS6, and can easily identify the new additions, the difference in experience, and whether it is something that would make it
worthwhile to invest in the new software. This is in the form of a user study. Another group
of people are from companies that already use such software and have much more than
money invested into the choice of the kind of software they use for their productions. They
will give an insight on what they feel the product does for them that other products in the
market do not do, and what their main reasons choosing to upgrade or not to upgrade are. In
this case we use a questionnaire to pose the different questions.

A few sellers and suppliers of the products will also give their reasoning on why they think
it is actually worthwhile to upgrade to the newer version. Is it easier for them to manipulate
clients into buying a product that they might not actually need? From what viewpoint does
the decision they make come from? A profit margin viewpoint or an honest attempt to
promote a product they believe in. From their observation, what reasons do their clients give
for wanting to upgrade, and what are their reaction to the products. For example, do they get
many that are dissatisfied with the upgrade or does the upgrade cause more problems than
solutions?

The collected data sets will then be correlated and analyzed to gauge whether they had a
common denominator and if this denominator led them all to the same conclusion on why an
upgrade is necessary. We have used Holme & Solvang (1997) as a source of reference or tool
in guiding us in our method choices.

A method is a tool or way to come to new knowledge (Holme & Solvang, 1991:13).

The methods we have chosen play a big role in obtaining the information we need to figure
out the problem and come up with a solution towards it. Our chosen methods are interviews,
user testing and a questionnaire. Holme & Solvang (1997:85) state clearly that there are a lot
of advantages to be found in combining both quantitative and qualitative methods. A mix
of three methods will give us a more trustworthy result especially if the results all point towards
the same direction or if they are mostly the same. They also go ahead and refer to another

We have therefore chosen these methods specifically because of their functionality and
ability; as the authors have mentioned in their book; to give us the most accurate, valid and
right data for our proposed study. These three methods are a mix of both qualitative and
quantitative methods and ensure that a more detailed form of data or information collection
is done. Following is a description of the different methods we have chosen and why we
chose them. We will also go into more detail on some of the methods that were available to
us and why we have chosen other methods over them.

The three methods we have settled on are Interviews, user testing and a questionnaire. In
two of these methods, (interviews and user testing), we have decided to incorporate the
observation method to help us get more detailed information. The observation method can be
used in two different ways namely, hidden and open observation. Hidden observation can be
done in different ways, for example, one can observe from a distance, or one can observe by
joining the respondents and working with them without them knowing that you are there to
observe what they are doing (Holme & Solvang, 1997:112). The disadvantage is that it is
difficult for the observer to maintain anonymity, make obvious observations, or ask too many
questions. As a result, the observer can therefore easily miss out on important information because people will start wondering why someone is standing at their back and/or staring at what they are doing. That is the reason why we have chosen not to use hidden observation and decided to use open observation, which on the other hand is done with the observer in the same room as the respondents, and everyone is aware that the person is an observer.

We feel that open observation will best suit our needs because we will be there physically and can see what is happening or what our respondents are doing in real time. As Holme & Solvang (1997:113) explain, an open kind of observation method helps the observer to create camaraderie with the respondent that is not possible with hidden observation. The only disadvantage we see with this is that the respondents might not be as free and relaxed if they know that someone is watching them. Despite this, we have decided to go with open observation trusting that we will have created a good enough camaraderie with the respondent to get rid of their discomfort.

Interviews can either be structured or free (Lundahl & Skärvad, 1999:116). In structured interviews, the respondents are required to answer preset questions while the free interviews only require one to come up with their own questions. Lundahl and Skärvard give a list of characteristics one should look for in a structured and a free interview as follows:

<table>
<thead>
<tr>
<th>Structured Interview</th>
<th>Free Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>The interviewer has preset the interview's targets</td>
<td>The aim of the interview is not as defined and the orientation is wider and less focussed.</td>
</tr>
<tr>
<td>A the questions formulated in advance as followup questions have been formed to support a systematic examination of the area that the interviewer is interested in.</td>
<td>The aim of the interview is to get respondents’ assessment of the situation, opinions, attitudes and notions in an equally high degree as hard facts.</td>
</tr>
<tr>
<td>The interview is focussed and information-oriented</td>
<td>Instead of primarily information-seeking questions, dialogue building questions are also use. That is to say questions that stimulate the respondent to develop their questions and thoughts.</td>
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*Fig 1: Characteristics of a structured and a free interview (Lundahl & Skärvad, 1999:116)*

While our interview method is the structured method, we need to have a bit of the free interview’s characteristics in order to give our respondents an open leeway and a freer hand in how they answer the questions. Our reason for leaning more towards the structured method is because we feel that in this way we can control the questions that are asked and that by giving a free hand in answering, get the right information that pertains to our research.
We foresee a few problems with the methods we have chosen, but believe that we will still be able to get the answers we are looking for. One such problem can be that, in the case of a questionnaire, people can misinterpret or misunderstand the question, and as a result give an answer which does not cover the topic we are asking about. The Interview method on the other hand, if we are lucky to do it face to face, can allow the interviewer to explain more in case he/she feels that the respondent has misinterpreted the question.

2.1 Interviews
We shall select the interviewees using the criteria that Lundhal & Skäravad (1999:117) have listed out as important consideration when choosing prospective interviewees. The selected companies should be able to provide us with a key contact that is in charge of their IT department and is qualified to answer the questions we have about decisions to upgrade. The criteria that the authors have given are as follows:

- Identify interesting people,
- Contact them,
- Get them to participate.

The first step will be to identify which companies we want to interview. The more the better because it is not guaranteed that everyone we contact will be willing to participate. Then we will contact the prospective interviewees and try to give them good reasons on why they should participate. One such reason can be that our research can help in future to improve the services they get from companies like Adobe.

We will then give them an option of doing the interview face to face, on phone or email (by sending questions to those who cannot answer the questions on the phone), depending on what is most suitable for them. This is where we should get the contacts of the person who will be helping us with our interview. These interviews will target companies of different sizes that use software like Adobe Creative Suite and even other software. We are targeting to interview a total of ten companies from different towns in Sweden. The reason for this is to ensure that we get a wider range of answers, opinions and different perspectives on how the size of the company might also affect what software, how often and why they upgrade.

The criteria for choice of company is their size, how well known they are, and the services they provide which should be something to do with software, specifically film, photography, design and 3D. For example, a larger company might have completely different reasons; for choosing to use a certain software; as compared to a smaller company. The popularity of the company is most probably based on the quality they offer and this may also be a big deciding factor when they are purchasing or upgrading their software.

These are the most likely companies to use Adobe Software and can give more insight on use of the software or any other that they use for their productions. The reasons for choosing certain service providers is to increase the chances of ensuring that we interview companies that actually use the Adobe products or other products on the same level, that do the same thing, that Adobe software does. Some of these companies have previously won awards for their productions.
2.2 User Testing

We have chosen to conduct a physical user testing because from this we hope to get a real-time view on how user’s experience foreign software; new or other versions of a software that is not necessarily new; when they have been using another version altogether. It can simply be put as “going into uncharted territory”. We hope, at the end of this test, to be able to prove whether or not people’s lives are made easier or more difficult when they upgrade their systems or software.

The study will have participants from a specific demographic zone in order to be able to gauge their reactions when using the Adobe CS5 and CS6 programs. The demographic zone in this case is University students who have studied, or are still studying Media Production and have had the opportunity to use either of the two study objects. We have selected a total of ten testers and they are of different ages (both male and female). The males are six and the remaining four are female. This unbalanced ratio is not of our choosing, but is as a result of the number of people who have volunteered to help us in this project.

The main criterion for this selection is that they should have used or have some general knowledge of the Adobe products or software in the Creative Suite packages. It will be a two hour test that will be done using computers in a laboratory environment. The five testers that had previously used CS5 are required to test CS6 while the other five that had used CS6 are required to test CS5. The purpose of this switch is to be able to see how they react to the “new” program’s usability, speed and flexibility, and for us to gauge their reaction and experience of the package.

Each participant is required to perform two tasks. For the first test, they have been provided with a raw photo, which they are supposed to edit using Adobe Bridge and Adobe Photoshop. The final product will be a poster which is supposed to depict an advertisement (see the fig. 2 below).
In the second task, the participants have been provided with three video and three audio files to choose from as they so wish. They are expected to use these clips to create a short film using Adobe Premiere Pro and Adobe After Effects. They can choose to use any of the other software available to create effects (for example Adobe Photoshop) which they will later import into their film using Premiere Pro or After Effects, where applicable. Using the available tools in these programs, they are supposed to put in effects and animations, and create good transitions from one video clip to the next, including the appropriate sound where needed (see the figure below).
Task Two

Group One: CS5
Group Two: CS6

Using the Adobe Creative Suite version allocated to your group, and the provided raw footage and sound clips, select and combine the most effective shots in order to form a logical and smoothly running story. Use the software Premier Pro & After effects for this task.

While editing, use visual effects and sound necessary to complete your task and string together the raw footage into a continuous whole by editing the video clips. Insert music, dialogue, and sound effects, and correct any errors.

You have been provided with an answer sheet where you will note done all the tools you have used in the program, a step by step review of the whole process and your thoughts on the program.

Note: Try to use as many tools and shortcuts available on the program as possible.

The main aim of this task is to note down the differences in the two programs, whether good or bad. How do you experience using the new interface compared to the one you have used before?

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**Fig 3: Photo editing task to test CS5 & CS6**

While they are working on these two projects, they will be required to note on a simple questionnaire, their experiences, findings, differences or additions, and what they feel should or should not be in the program they are testing.

As they work on these projects, we will walk around the room and observe how they are relating to the new software and their different reactions. The reactions will be gauged through their body language and facial expressions. To have a record of this, we will record videos of the participants at work and take photos of both the screens and the participants. The purpose of these photos is to later be able to figure out what each particular respondent has worked with and the result that they have come to.

### 2.3 Questionnaire

This method is meant to work as a pre-survey that can help us to explore this area generally and find out what people think about upgrades based on their personal background, their areas of interest in technology and many others. We want the questionnaire to help us prove our observation that consumers do not always necessarily go for the new versions of software in the market with tunnel vision.

> According to our hypothesis, we shall have gotten a firm result, and the question is if we really have gotten it. (Hartman, 2004)
By answering the questionnaire online, which is also our internet survey, the respondents will have an unlimited gateway to give their honest opinion on the product. The fact that it is anonymous, will make the respondent more honest and willing to discuss, than if it was not anonymous.

We will send out a link to different forums and social media like Facebook and the Adobe forum. The purpose of this is to collect data on people’s usage of Adobe Creative Suite products and their experiences. The survey comprises of a set of ten questions that are aimed at finding out their usage of Adobe Creative Suite products and their reasons for using them, or for choosing to upgrade (see the figure below).

![Create your own FREE ONLINE SURVEY](image)

**Fig 4: Photo editing task to test CS5 & CS6**
Since the questionnaires will be distributed online, we will not be able to collect any empirical material on them; namely through audio and video recordings, nor through observation on them.

3. Related work

With the vast amount of literature available in the online community that covers the topic of Adobe Creative Suite and also of upgrading in general, we will get a more detailed research that delves deeper into user’s and expert opinions on their thoughts around upgrading and in particular the software they use. Some of the information will also come from forums where people discuss issues they have come across while upgrading their systems and/or while using the Adobe Creative Suite software. We hope to get a little bit more insight on what people think of both CS5 and CS6 software too.

Direct websites like the Adobe Company website will also be an oasis of information because here, we can get information on their different products and their policies, aims and goals. We can also get an inkling of how they think when they make decisions that a new upgrade is due together with their market analysis.

3.1 Comparison of literature

Our literature has come from a varied number of sources, namely forums, scientific journals, books and company websites. The reason for this was that with such a big variation, we are sure to get the answers we need, with a deeper insight into the problem that we are trying to solve. A comparison of all the documents gives a stronger, more detailed and valid summary that matches the results we have gotten from the user study and the questionnaire.

Boogaard (2011) has highlighted some of the key reasons and decision making steps to be considered during an upgrade of software. He gives some reasons such as if the seller discontinues to sell a product, lack of support of current software, licencing issues and red tape, and social media reducing the need for support from sellers. He mentions cloud computing as something that can/is used to address upgrade inconveniences.

We had earlier in the paper mentioned the difference between upgrading and updating. Boogaard (2011) delves a little bit deeper on what is the difference between these two terms. He defines updating as fixing a minor extension for a definite problem, while upgrading is a major new software release that is compatible with a previous version. What most people do not know is when thinking of their software is whether they need to upgrade or simply to update their system. The solutions he suggested when he wrote his paper can now be seen in innovations like Adobe’s idea of the Creative Cloud.

Investigate whether certain functions can be implemented in a simpler way or can be transferred to other existing systems, or just removed because nobody is using them (Boogaard, 2011:10).

Just now, as it is, Adobe cloud makes one use or retain all software included in the package, on their system despite the fact that they are only using a few selected programs.
This is because the idea behind Cloud is to do an automatic upgrade of software where a client has a yearly subscription. This can be both good and bad. The good part is that the client does not need to worry about keeping up with the new software or bug fixes that have come out. The bad part is that all these dormant programs take up a lot of space on the system that can be used for other things.

Bulow (1982) describe how sale of products can result in a second hand market that is not controlled by monopolist companies resulting in them renting their products instead of selling it. The Adobe Creative Suite service being offered by Adobe is a perfect example of such a product that has moved the Creative Suite series from selling to renting.

A renter provides services for his market one period at a time. A monopolist seller can achieve the same result by producing goods that only last one period at a time. (Bulow, 1982:324)

Price guarantees, service contracts and implicit contracts are a few of the advantages to be gained by firms that provide durable services (Bulow, 1982). These durable services, if monopolized allow the firms to be able to rent instead of selling and this is what enables them to have the kind of advantages mentioned above. In her paper on durable monopolist under rapid sequential innovation, Kornish (2001) supports Bulow (1982) and Dhebar (1994) with her theory on pricing in relation to selling or renting and monopoly of products in the market.

Ellison & Fudenberg (2000) in their article on excessive upgrades in the software industry explore in greater detail factors that motivate monopolies to provide upgraded versions of their software. They, in their article, therefore give support our theory that upgrades do not necessarily mean that they have discovered a new need in the market, but can be also because of pure profit making goals. They have done this by doing two different tests; one on identical consumers and the other on heterogeneous consumers; to figure out the kind of commitment these companies want, can get, and at what lengths they go to keep it.

In their paper “Key success factors for implementing software process improvement” Rainer & Hall (2001) also discuss Practitioners’ opinions on what factors they believe impact software process improvement. they want the respondents to answer four questions namely; a major impact, no impact, difference in impact from company size and difference in impact from success of the company in order to find out what it is that makes them decide to improve their software processes. In their findings, they discover that reviews, set standards and procedures, training and mentoring, all have a major impact on how successful software process implementation will be. This can clearly be applied when one wants to upgrade their systems or software.

Bartick & Bartick (2008) have also written a book which touches on how sellers do what they can to make a sale. One of our arguments is that sometimes, people buy things or upgrade software because of sellers convincing them on the benefits of owning that particular product. But sellers being sellers are trained to convince people to purchase, even if they do not believe in the product. Most of the time, the people selling you the upgrade have absolutely no idea on what its benefits are and why they even think you should upgrade. They also take advantage of clients’ need to be up to date with all technology.
One of the secrets to building rapport is getting to know your customers and letting them know you have their best interest at heart. This means taking the time to ask the questions that will give you a crystal-clear understanding of their situation. Think about it, they really don’t care how much you know until they know how much you care (Bartick & Bartick, 2008:19).

The above quotation suggests the kind of attitude or training most salesmen have or get in order to convince prospective clients to buy. They already know that the client does not care how much they know of what they are selling. What the client needs to hear is how the salesman is on his/her side, and this makes them open up their wallets and close their eyes to the actual situation. The greatest motivation to make these sales is not because people just want to cheat other people, but more out of a need to meet targets in order to maintain the job.

This brings us to ask ourselves why are firms making their sellers convince people to upgrade, while not telling them of the hidden costs? Carr & Bala, (2009:1) analyze the role that improvement of software products play and the cost to the people who use them. According to them, consumers are likely to project future or upcoming software releases, and with this insight, make longer term decisions regarding the purchase or upgrade. These decisions can be to buy and not upgrade, or to postpone buying something until the new version comes out. In order to combat this, firms give special cheaper prices for upgrading as opposed to buying. Could this mean that there actually is no need to upgrade – if it is true that clients are just buying products and choosing not to upgrade?

Clearly the level of product improvement in the upgrade is critical (Carr & Bala, 2009:2).

From the statement above, the authors stress the fact that the new things to be found in the latest software play a big role in clients’ decision on whether to upgrade or not. But the question is how this works when the clients are not informed by the sellers on exactly what the new product does?

Our paper is also related to the literature on Adobe Creative Cloud because it somehow affects the future of all previous versions of Adobe Creative Suite (namely versions one to six). From Adobe’s company website, we see that once they have fully launched Creative Cloud, there will be no new version after that. This is because CS6 is designed in a way that once one has joined or bought the software one needs, they only need to pay a monthly fee, and any new upgrades or features available will be automatically installed in their system.

Creative Cloud is also flexible because they have provided different payment plans and fees to suit the market. For example, they have special varied prices for students, teachers, groups, and the business community, and one can also choose which applications they want and pay for only those and not the whole Creative Suite package. This is a plus because depending on what one is using the program for, they do not necessarily need the rest. A good example is a photo editor. As a photo editor, one only needs Photoshop and maybe one...
more package like Adobe Bridge, so programs like Premiere Pro and After effects are more geared towards film editing, and would be a complete waste of resources to such a person (the photo editor).

Another problem which the authors talk about and that we also faced during the user testing is the user interface. Both Carr & Bala (2009), and the participants in our user testing find it a little bit difficult to get used to the new interface. Thus, the user upgrade cost may also include the cost of learning claim the authors.

There are other factors that play an important role when it comes to deciding to upgrade (Carr & Bala, 2009:12). One such factor highlights the problem we mentioned earlier on about the hidden costs that the clients are not aware of. The authors give us an example of upgrading from Windows XP to Windows Vista where the consumers who want to upgrade may need to upgrade the hardware to meet the non-negotiable demands of the new operative system and thus to be able to optimally use the Windows Vista (by using all the new features). That brings up new costs that are not included in the price of the upgrade.

Earlier statistic results shows that US software developers companies spend over 70 billion dollars or 50-80% of their budget for maintaining and enhancing their existing software (Ji et al., 2011:2). Software systems usually have a limited life because, after a certain time, it gets more expensive to maintain than the value the software generate to the developer company (Rajlich & Bennett, 2000). The authors mention that most of those companies are faced with the same problem of continually enhancing existing software systems, quickly and at low cost.

Depending on what kind of need the organization/consumer has, there are different steps that can be taken before deciding to upgrade (Stewart et al., 2012:1). The authors highlight four aspects that have to be considered before upgrading:

- the benefits of new functions to your business;
- the ease at which the organization can implement, use and integrate the new functionality;
- the ability to integrate into current business processes; and
- the capacity of new functionality to facilitate the removal of any customizations estimate the time it will take to put your system through the upgrade process; provide a test system with your data to show to users and gather views; identify areas that may require significant change management or training.

These aspects, if taken and used as they should, are supposed to make it easier and more profitable for organizations to upgrade. They should also help the decision makers in analyzing why they might or might not need to upgrade.

4 Results

4.1 User testing

This method was meant to help us find out how usable an existing product is and was supposed to give information about what users think about the system, if it covers their need
and if there are some issues that have to be fixed as well as things that can be done even better. By doing this user testing we will be able to see “if the user’s cognitive model matches the model of the product” (Laurel, 2003:74). Because our user testing comprised of a comparison of two different versions of Adobe Creative Suite products, we have broken the results down into two different sections to make the data analysis that will be done afterwards a little bit easier.

**Test 1 – Photoshop and Bridge**

**Group 1**

The first group of five people who had worked with older versions of Adobe like CS5 and earlier tested CS6. In order to tweak the photo and form a simple poster, what they did was to import a RAW-file into Adobe Bridge for editing using the function Camera Raw. There were no noticeable reactions or comments about the program because it seemed that they did not find many changes that would affect how they worked with it, So no new information came up regarding this particular program.

All the participants had the same reaction on starting up the Photoshop program. According to them, the interface was completely different from the older version in its outlook. This was because the new background was black compared to the older version which has a light grey background.

*I love the new background, it is so cool but it could be because my favorite color is black.*

Two of them felt that it was a nice feature which connected somehow to the interface in after effects. The rest of the testers felt that it was a bit confusing for them but quickly realized that it was possible to change the color of the interface, which made it easy for anyone who was dissatisfied with the old interface.

The participants discovered new tools in CS6 that were not there in CS5 and other earlier versions. Examples of these tools are the editable rounded rectangles and the ability to select multiple shapes and paths simultaneously. One participant who wanted to create a text in 3D found that there were better options for 3D painting and he felt that this made everything a bit easier and also gave him more opportunities to be creative.

*I am obsessed with 3D and love that I can play with the tools and create amazing new things!.*

There were other tools that everybody agreed were useful and good to have, like the smarter smart sharpener, improved algorithm for enlargements, function to "reset" the images that has become blurred due to the camera movements and also camera raw that has been supported by layer, which did not exist in earlier versions.

One common thing that all the participants were not sure of was whether it was good or just unnecessary that when cropping the image the frame would be fixed hence the image would be moved inside the frame. Some felt that it would take a bit of time to get used to,
though it worked quite well anyway, while others tested the function and felt that it made the work easier now than before. The rest felt that it did not matter so much since it made no difference to them.

*I don’t really see what difference this tool makes if any, for me it is just an unnecessary change.*

The only disadvantages all the testers felt that the new version had was that despite the fact that the differences between CS5 and CS6 was not that big, it would take quite a while to find out and get used to all the new functions then learn how to use them. When asked which one of the two versions they would prefer, two of them chose CS6 because they felt that the interface seemed cleaner and simpler which means that editing can go smoother and faster. The other three felt that CS5 served them well despite the fact that they also liked the new CS6 though they would only consider upgrading to it at a much later date.

**Group 2**
The other five participants that we chose had used only CS6 as their first Adobe product and were therefore required to compare it with CS5. They were supposed to do the exact same thing with the raw photo as Group one. The general consensus among them was that using CS5 felt like “going back in time”, since there were many features they did not have and they had quite a difficult time trying to find features on it that served the same purpose as those that they were used to while using CS6.

**Test 2 - Adobe Premier Pro and After Effects**

**Group 1**
For this part of the test, the respondents were required to do a short film with some sound effects. They did this by selecting two or all the three video and sound files to create a short film with simple effects like transition and whatever they saw fit. This group had used only CS5 before and as the previous test they were supposed to use CS6 for the first time.

All the participants decided to start with Adobe Premiere Pro first and then to finish in After Effects to adjust the effects and finally export the finished production. When they started the program everything seemed quite the same with the interface, nothing remarkable, but then after a while they started to notice a lot of things that were quite different from the old version. When trying to import a file, they discovered that it did not open by double clicking at the top left corner as is usually the case.

*It’s a little bit irritating at the beginning, but it became better the more I used it. I like challenges.*

In the new version CS6 one has to click on the bottom corner instead. While initially confusing, it did not make a big difference to them once they had gotten used to it. It took a bit of time to figure this out though.
Two of the participants were faster than the other three who had already gotten a little bit irritated because of looking for the solution to this. Everybody thought that this change was unnecessary because it made no sense changing the position since it didn’t make the work go faster. Another difference that they detected when they had all the files on the timeline and were about to start editing was that the editor had the source preview window on the left and the project preview on the right, unlike before when it was the opposite.

*It doesn’t make any sense to me why they have changed the source preview window.*

Everybody got very confused and wondered why it was like that, because they did not see any good reason for changing it. They all felt that it had served them well the way it had been before and was therefore a completely unnecessary change. It is more logical and practical to have the files nearer the source window than so far away that one has to hop over another window to get to the source window. A few tried to figure out whether it was possible to switch to the old interface and it turned out to possible. Despite the fact that it was possible, they all chose to continue using the new one in order to explore every other new thing that CS6 had to offer. The plan was to switch to the older version if CS6 did not meet their expectations or if it was not to their taste.

They found plenty of tools and effects that had come as added features in the old version or can also be found in other Adobe programs. A good example is the image stabilizer, which existed previously in after effects. Another tool which they appreciated very much was speed grade that is meant for toning and color temperature, and can give new luster to washy filming or can even bring a more dramatic effect to the film. Besides these there were many other effects that the test persons found in Premiere Pro CS6 that could be applied to adjustment layers. There was also an individual effect layer that could be added to the timeline and could be applied to multiple clips at once. One of the participants even found that the new version had improved the camera options and it now offered unlimited multi camera angles, which allowed one to have as many cameras as they wanted, as long as the computer being used could handle them.

*Wow! It is so good not having to open a thousand windows to work on one project! Everything went so smoothly.*

All in all, the participants all agreed that CS6 was a great program with a clean interface which enables one to use all of the tools and features in an optimal way even if they do not have a lot of technical experience. They also said that in the beginning the interface seemed a little bit messy because of the new look, and that it takes a while to get used to. This is why some of the participants who felt that it was a disadvantage chose, much later, to work in the old interface that they thought was better. The rest felt that their experience with the new interface had more advantages than disadvantages since it had not taken them too long to get used to the new look and that was why they were willing to continue using CS6.

*I will definitely continue using CS6 and learning new things!*
After about one hour working in Premiere Pro it was time to import the production in After Effects. The first thing the participants discovered was the difference in how the RAM Preview worked. A few of them decided to add an effect to their composition, and as usual, the green line disappeared since the cached composition now changed. However the next RAM Preview that they ran was considerably faster than the previous preview, despite the change. When one of them tried to undo some changes or to delete the effect, the green line reappeared and the preview ran in real-time again, without needing to reload the RAM Preview.

The same thing happened when another person toggled layer visibility as well as after an undo or redo command. Adobe re-engineered the system to recognize any frame of a composition or layer inside a project that was the same as a previously rendered and cached frame, so that did not need to be re-rendered. Reusable frames were recognized anywhere on the timeline, and this included when they were in duplicated layers, or duplicated compositions or not on adjacent frames that included using loop expressions, time remapping and copying then pasting key frames. Everybody liked it because it saved on time which is one thing they all agreed to be irritating especially when one had a long sequence with lots of effects and was waiting for the RAM preview to reload.

This is a refreshing change from waiting for an eternity for the project to render like before.

My last project took such a long time to render, that my computer crashed, this is much better!

Another great enhancement in After Effects CS6 that the respondents discovered was when they closed the project or exited the application. On reopening a previously cached project they found blue lines above the composition layers, indicating that the application had located all the previously cached frames on the disk, without the need to re-render them. This persistent disk cache function saved a lot of time, and became even more valuable, for example, when the battery on the computer ran out or if the system crashed - problems that all the participants had faced at one point or another. One tester figured out that the disk cache could be defined in Preferences Media & Disk Cache, so he could specify a faster, connected drive that was separate from his footage.

The most exciting feature of the new CS6 that everybody found was the new Ray-traced 3D rendering engine, allowing one to simply and quickly design fully ray-traced, geometric text and shape layers in 3D space. They said that even if After Effects had had access to 3D before this release, the new ray-traced renderer offered a newer, more physically accurate and powerful alternative to the existing scan line-based composition renderer, now called the Classic Renderer. Once one selected Composition Settings dialog, the Ray-traced 3D renderer allowed for some enhanced 3D capabilities. It also allowed bending of composition layers in order to add dimension and more advanced lighting effects. There were also new material
options that the group found, like reflection, transparency and index of refraction which could simulate light travelling through glass and other translucent materials.

The 3D and rendering features in this version are awesome!

There were plenty of other improvements and creative solutions but due to time constraints and lower concentration levels, the testing had to be wrapped up. Everybody was very excited about getting to learn the new CS6 even better and would gladly work with it. The only concern they had was the price if they should pay for it by themselves, but according to their opinion the program was worth its price if you could afford it.

Group 2
This group was given the task of trying CS5 since they had only worked with CS6 before. As was expected, we got almost the same reaction and results as in the previous test. They thought that the old version was quite good but they had already been “spoiled” by the new one. They felt that using CS5 was like “going back in time,” since there were many features they did not have and they had quite a difficult time trying to find features on it that served the same purpose as those that they were used to while using CS6. Thus they appreciated the possibility which gave them the opportunity to explore the old version and find out all the differences and improvements that has been made in the new one. They said that this helped them to appreciate and understand all the changes cs6 even more.

4.2 Interviews
Interview questions that were posed or sent to selected companies also yielded unexpected results. They were asked about how often they upgrade their systems (windows, adobe Photoshop etc.), their reasons and if it is worth it or not. These questions were set to cover software generally and gradually generated towards Adobe Creative Suite or its newest version namely Adobe Creative Cloud.

It turned out that some of the companies interviewed did not have a set policy regulating the frequency of updates. Generally, they operated on the belief that it is possible to keep oneself updated but still ignore or skip a step (most programs need/or have a major upgrade once a year). They felt that it serves them well to upgrade to every other (or even less frequently) new version. Others had set policies and did upgrades on a regular basis, or as soon as a new version came out. The rest had subscribed to the Adobe Creative Cloud, which upgrades automatically as soon as a new version comes out, so one does not need to keep looking out for the newest versions in the market.

All the respondents were unanimous on the fact that all new versions of most software and systems (Adobe included), would be better than the previous version in one way or another. They felt that new versions almost always found a way to turn some key elements in the older versions into easier to operate shortcuts working or editing in some programs. This, they felt, saves on time spent on a project through a significant improvement on performance. There are also systems or devices that might require a newer version of a program in order to work well, so it is easiest to upgrade.
While some felt that in the long run it was worth it to upgrade despite the fact that it is expensive, so long as one got quality for their money, others were of the opinion that upgrading often is sometimes not necessary but can be a must especially if one is using older versions that are slow and inefficient. Another reason they gave is that it is sometimes a good thing to have the latest version of software especially if one is working with other companies. In some industries a project can be divided among many companies. For example in the case of a film production, there can be companies doing different types of things, but using the same material, and they might be forced to share these materials. If the files have all been created using older versions of any software, they might have problems opening it using the newer versions because they are incompatible, and vice versa.

When it came to the questions that targeted mainly Adobe Creative Suite we got the same answers on quality and price. All the companies interviewed had purchased the whole Adobe package. Half of them upgraded indiscriminately, while the rest upgraded as soon as a new version was made available due to the fact that they had subscribed to Adobe Creative Cloud which means that it happened automatically. They were all comfortable and happy with their choices.

One of the companies considered the prices to be a little bit on the high side for them, and felt that they were forced to upgrade partly because of the stiff competition in the market, and because there are no proper updates and support available.

### 4.3 Questionnaires

Most of the respondents turned out to be students from Universities and Adobe fans, with a few working class people also taking their time to respond. The internet survey (questionnaire) contained mostly questions about Adobe Creative Suite. The aim of this questionnaire was to understand which version people preferred: the latest or the older, and why. The greater number of users was in the age bracket of 18 and 27 years, with a few between the ages of 38 and 47 years.

![Fig 5: Statistics on respondents by age](image-url)
Having sent the questionnaire on the internet, most of the responses came from Facebook which is a social media forum. The rest of the respondents were people who had either stumbled upon the link online, or from the other forums we used like Adobe forums and General Technological forums which comprise of people who are interested in technology.

Another reason for this kind of demographic could be because, as seen on the age bracket statistics, that the respondents are or can be avid Facebookers and therefore had more chance of coming across this questionnaire than any other users.

**Fig 6: Statistics on mode of response**

The respondents' gender also played a big role in determining which people choose to use such programs. It is understandable that the majority are male and not female because, it is still a male dominated area but as can be seen, females are also fast catching up and very soon it will be an equal playing field.
The reason to upgrade can be considered as one of the most important questions here. As shown in the figure below, the respondents’ reason for wanting to upgrade was mainly to keep up with the latest technology. For this group, money is not really a deciding factor. The rest were equally divided among wanting to find out what was new and upgrading for the sake of it. Others also had prenumerations like Adobe Cloud which upgraded automatically every year if one so wished, so they didn’t need to think about it.

It came out clearly that many of the respondents have tested the newest cs6 but that they were not so familiar with it. The few who had worked with CS6 (the latest version) a little bit more liked it, while the rest felt that they had not gotten to work with it long enough to really form an educated opinion on the version, so they leaned more on the side of CS5.

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**Fig 7: Statistics on respondents by gender**

**Fig 8: Statistics on respondents’ reasons for upgrading**
As we can clearly see in the figure below, the majority of the respondents had used both CS5 and CS6 before but, more had used CS5 than CS6. The reasons as to why they had used which version varied greatly. One reason was that because it was an automatic upgrade. This came mostly from students who use the programs at their schools, which already have discounted prices to ensure that they keep upgrading their software. It is also their duty to provide the best and latest software possible, hence the constant upgrades. Others were companies who use services like Adobe Creative Cloud. These services provide automatic upgrades. Another reason that was given was just for fun. This is mostly young people who want to find out what is new in the market, and also want to keep up with the times.

A third reason was the cost of upgrading. This is mostly from companies which buy the software. They have to really think about whether or not they want to upgrade because the software is a bit pricey. The free downloaded versions, or the ones people have shared on the internet always lack a few tools and a person who is running a business cannot afford to use such software in their company.

![Chart showing use of CS5 compared to CS6 & others](image)

**Fig 9: Statistics on use of CS5 compared to CS6 & others**

The general consensus though was that once one had gotten a grasp of the new shortcuts and added tools on CS6, they ended up saving time, but that they could still create the same thing in both versions.
80% of the respondents did not see such a big enough difference in the two versions to warrant an upgrade especially since it is very expensive. They therefore saw no reason as to why they should upgrade at all. Others did not want to consider an upgrade since they were used to the old system and they felt that learning the tricks in the new system would be time consuming.

4.4 Analysis of results

Our aim with these studies was to get answers which could be depended on to support our quest in answering the question of whether or not upgrading is something that is needed. Judging from some of the answers we got, it is quite obvious that most respondents interpret the questions posed in completely different ways. Despite this, the responses and data collected all tend to be geared toward the same result.

With the three different methods mentioned in the methods section, we are able to collate the findings. We see at the first glance that we have varied results from the different tests, but that the combined total are all on the same page as seen from their final stand. More than 80% of the total participants combined agree that they upgrading is a necessary evil and will do it, if not now, then at a later date (see the figure below). These percentage results were generated using Microsoft Excel, by keying in the collected results from the questionnaire, interviews, user esting and literature, into a formular sheet which was then converted into a pie chart which made it easier to calculate.
From the user study point of view, (which gives the perspective of students) the information we have collected show that despite the fact that they appreciate the introduction of the new software, they still do not see any big reason why it is needed. This shows that it does not have to do with just money, but more to do with what the software can offer them. The general consensus is that maybe the upgrades are needed but they are something that someone can do without for some time since they do not make a very big difference in how the system or program functions.

Our questionnaire also yielded basically the same or almost the same responses like the ones we got from the user testing. In the figure below are some of the responses we got from two of the questions asked. While some are of the opinion that the newer version is easier to navigate in, most feel that the software has extremely small improvements that do not warrant an upgrade. This questionnaire was supposed to give us the perspective from people from all walks of life, but especially those who trade in such products.
The respondents have varied views on whether they would recommend an upgrade and this proves that the decision to upgrade is something that should be weighed on heavily and not just done on a whim. This is because everybody has different needs and requirements, and might not necessarily need the same functions as the other person.
Interviewing respondents also proved to be a good source of information. Here we have managed to get answers from the point of view of people who are employed or self-employed. While they are of the same opinion that one does not really need to upgrade all the time, they are a bit special because they can afford to register and get automatic upgrades at a small fee.

The literature and websites have proven to be a big help in getting the information we need especially on the different software and systems that fall into the category of upgrading. Here we get a very big platform that gives information from a wide range of users and not just students, as the user testing did. Despite the endless information we have managed to collect from the internet, we notice that it is also basically the same information that we got from the other three studies (user testing and questionnaire). This is the point of view of an extremely varied audience and ends up being a mixture of all groups including the ones we have tested in the previous three methods.

These four different perspectives have somehow come together to give the same view on the fact that upgrading is something that does not necessarily have to be done.

5.1 Reliability, Validity & Need

Our research has brought us to the point where we have to ask ourselves if the data we have collected can be relied on. For it to be relied upon, it has to be valid to the point that it is needed in making the decision to upgrade or not to upgrade (Holme & Solvang, 1997:163).

Reliability is decided by how measurements are done and how rigid we are when working with the information. Validity depends on what we are measuring and if this is solved in the question (Holme & Solvang, 1997:163).

We believe that they have done this by the fact that they have all more or less brought us to the same conclusion. Upgrading is good, but only if it improves one’s system in a way that makes it faster, better and up to date. It should not be done if it only changes one small thing in the software that one can do without. For example where the interface has been changed from grey to black should not be a reason for somebody to upgrade their software.

Don’t upgrade just to get the latest and greatest. Take stock of your needs and scout out information first. (Goldsborough, R. 2007:1).

6 Own Reflections

From our research, specifically the user study, it has become a bit clearer that upgrading is something that will soon become automatic for most if not all software (for example Adobe Creative Cloud). We hope that our study and research will help in future planning that involve technological software or hardware. A good example can be people who are planning to start up a company or organization. They, being a bit green on everything, can take advantage on such information and avoid falling into the trap of expensive but not so helpful software and hardware.
Upgrades should not happen because people just want to be seen as having the latest technology, they should happen because a need has arisen that makes them mandatory to have. From our experience, every time an upgrade is done, there is almost always a problem that comes up in the system, with lots of bugs to be fixed. This is because most people just upgrade blindly without looking at important things like compatibility and most importantly, if the systems they have are powerful enough to take that kind of upgrade. Software is made in a way that the newer the version of software, the newer the version of the operating system it requires. So if a client buys an upgrade and tries to install it on a version of his/her operating system that does not take the upgrade, then it is not the fault of the seller. It is the fault of that person who was uniformed about such an important aspect of upgrading.

This is the exactly what Goldsborough (2007:1) talks about when he discusses in his paper in detail about when it is considered reasonable to upgrade and what kind of problems upgrading can cause. He suggests some things that one should consider before deciding to buy new software. The first thing is to find out what features have been added to the new system. Compatibility is also an important factor that plays a big role, and because sometimes software upgrades can cause; for example; overwriting files that are shared among different programs (Goldsborough, 2003:1). That means that the others programs also need to be upgraded so they can interact with each other, so it is important to be aware of any compatibility issues and the availability of other upgrades before upgrading. Another reason says Goldsborough (2003:1) is that if one works/collaborate with other companies or clients who have software in a newer version, then he/she also has to upgrade to the same version that makes it possible to exchange data with them.

Usually developer companies provide technical support for a limited time so one should always upgrade when the software vendor stops supporting your current version writes Goldsborough, (2007:1) in his article. Depending on system requirements it could be necessary to upgrade hardware as well. An upgrade to a newer version even means costs for upgrading, including the price of the software, time to install it and also for training that will help the users to get familiar with the all new features (Goldsborough, 2007:1).

Technology like Adobe Creative Cloud, when fully implemented, will make it much more difficult for people to illegally download and/or install such software. Since it is only Adobe that will be providing the software directly to the consumers, it also pushes the middlemen (suppliers/sellers) out of the equation. This might reduce the prices to the consumer. Adobe on the other hand risks losing clients. This will be as a result of the fact that, for those clients who prefer to walk into shops and purchase products, they will be convinced to use other products that are not Adobe by the sellers simply because Adobe has stopped using their services. On the other hand, Adobe can combat this by letting them sell or refer clients for a commission, which still does not make sense especially since clients can find the products themselves online.

Another thing is that if these companies want to retain their customers, they have to offer better reasons for encouraging people to upgrade. Just changing the color of the interface on a product, and moving the same things from one corner of the screen to another are not good enough reasons to charge people thousands of dollars for an upgrade. Soon, these same clients will notice that everytime they upgrade, there is very little change that one can do
without, then they will stop upgrading altogether. Instead, they might just prefer to try out other products on the same line, and see if they might be offering something much better than the product they already have.

6.1 Limitations

While doing the research for this paper, we encountered a few problems and obstacles that made it a bit difficult to collect the correct data that we needed. This has come as no surprise because at the beginning when we were choosing which methods to use and which ones not to use, we had given us a leeway on possible obstacles that we could come across during the research. To begin with, not many people were ready to take their time to conduct our studies and/or to answer the questionnaires or meet physically for the interviews. Many companies want to keep their operations secret, and there is a thin line between what can be considered as extremely sensitive information and information that can be given to just any individual who asks. They do not want to risk their management decisions on operations to come out into the open for the public, especially their competitors.

Finding information and past papers that have been written on this particular field (upgrading) was also a bit challenging. Very many have written about upgrading, but not particularly about Adobe Creative Suite, which was the object we studied. As a result, finding information relating to our research was extremely difficult and limited.

For privacy reasons, most of the participants did not want the recordings (both video and audio) to be used in any way, and requested to remain anonymous. We then decided to be fair and offered anonymity to all test persons. After all the tests had been done, the data was collected for analysis and comparison. We also took notes for further reference.

7 Conclusions

From the extensive research that we have done on upgrading and whether it is a good idea to do it, it is quite clear that the most important step or action that is needed here is education on the good versus the bad. The studies clearly show that there are many factors that contribute to the reasons why people choose to upgrade or not to upgrade. These are not necessarily feasible reasons, and the users can simply be put in the category of “uniformed”.

People need to be educated on the importance of upgrading, and more importantly, the effect it has on existing systems. It turns out that sometimes, the upgrade is unnecessary and is a waste of money and other resources. How is the money wasted? For example, if an upgrade causes a system to crash, it means that the company has to maybe replace a couple of things in the system, reinstall and so on. These can not only result in loss of documents or important information, but will also demand a lot of extra resources. Such resources can be hiring staff to sort out the problem, the time wasted in case there was an ongoing project, the cost of replacing any destroyed systems or software and many others.
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