



# **Structured System Analysis and Design**

Project Name: E-Forms Tracking and Incident Management System

Deliverable 3: Systems Proposal

Group 3

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# Introduction

## Project Overview

### **Organizational description:**

"Catalent" is a global pharmaceutical company that provides delivery technologies, development, medicine production, biologics, gene therapies, and consumer health products. The company was founded in 2007. This international firm's headquarters are in Somerset, New Jersey. It employs over 17000 people, with approximately 2500 scientists and technicians. It's a profitable business, with revenue of more than \$3 billion in the preceding fiscal year. Its goal is to design, develop, and market products that help people live happier, healthier lives.

Its mission is to create, manufacture, and distribute items that assist people in living better, healthier lives. Furthermore, they aim to be the world's most trusted, dependable, and innovative drug development and delivery partner by upholding the highest industry standards and exceeding client expectations while driving the company's robust and sustained growth.

### **Problem Statement:**

Prior to Covid, Catalent pharma solutions were a paper-based company. Therefore, if they ever needed signatures and approvals on documents, they would just simply go to a coworker's desk/office and ask for it. Due to the Covid-19 pandemic, Catalent allowed their employees that were not in manufacturing, to start working remotely and did not need to be onsite unless needed. Once they made that transition, they noticed there was a bottleneck in document approvals and delays in signatures. This would directly impact project deadlines. Currently, Catalent uses DocuSign as their system for document approvals. They simply route it to the next person. However, not everyone in the company has access to DocuSign and it has some issues like time consumption, security, and so on. Our goal is to remove this impediment and streamline their process.

## Scope of Project:

Catalent's all departments



All employees at Catalent Pharmaceutical Solutions today suffer a backlog in document approvals, incident management, and quality management as a result of this project. Catalent used to be a paper-based corporation, but by becoming remote, they were able to incorporate DocuSign. DocuSign, on the other hand, has had challenges. Many staff do not have DocuSign access and requesting an account can be time-consuming. Additionally, incident management is done in an ineffective manner by utilizing the traditional method. Unnecessary occurrences are reported to many technical teams, wasting their precious time.

We can free up bottlenecks and make document approvals go much more smoothly by implementing the modules provided in the system suggested later, MasterControl. To save resources and time, incidents can be handled more efficiently

by referring them to the appropriate resolution group in the first place. So, using the same program, MasterControl, we can tackle many challenges. This frees up time, money, and resources for the business to spend on purchasing and maintaining new software.

This program will have an impact on all departments within the business that require form and document approvals. It will have an impact on all Catalent locations, including remote workers. Because everyone in this firm utilizes forms, the recommended solution will benefit everyone. It will be especially beneficial to project managers and executives, as many initiatives require paperwork clearance from subject matter experts from several departments.

MasterControl's incident management and corrective action module can track issues that might possibly develop into corrective measures. Routing, notification, delivery, escalation, and approval of remedial measures may all be automated, and all corresponding paperwork can be securely stored. Stakeholders will be able to obtain data on the number of document approvals, as well as information on concerns that have been raised and handled, as well as the overall efficiency of the process.

You may get to the MasterControl incident creation page from the current system incident. The end-user can choose the difficulty they're having from a drop-down menu. Depending on earlier instances with greater descriptions, the incident page's details may be available. Furthermore, they can supply further information about the concerns in the same format. The same data may then be utilized to forward the incident to the appropriate resolution team. For each new occurrence, a unique incident ID with all the data will be produced, making tracking very simple for the end-user. The end-user will receive a message with the same data when the issue is updated or resolved. They will be able to submit comments once more.

## Recommendation

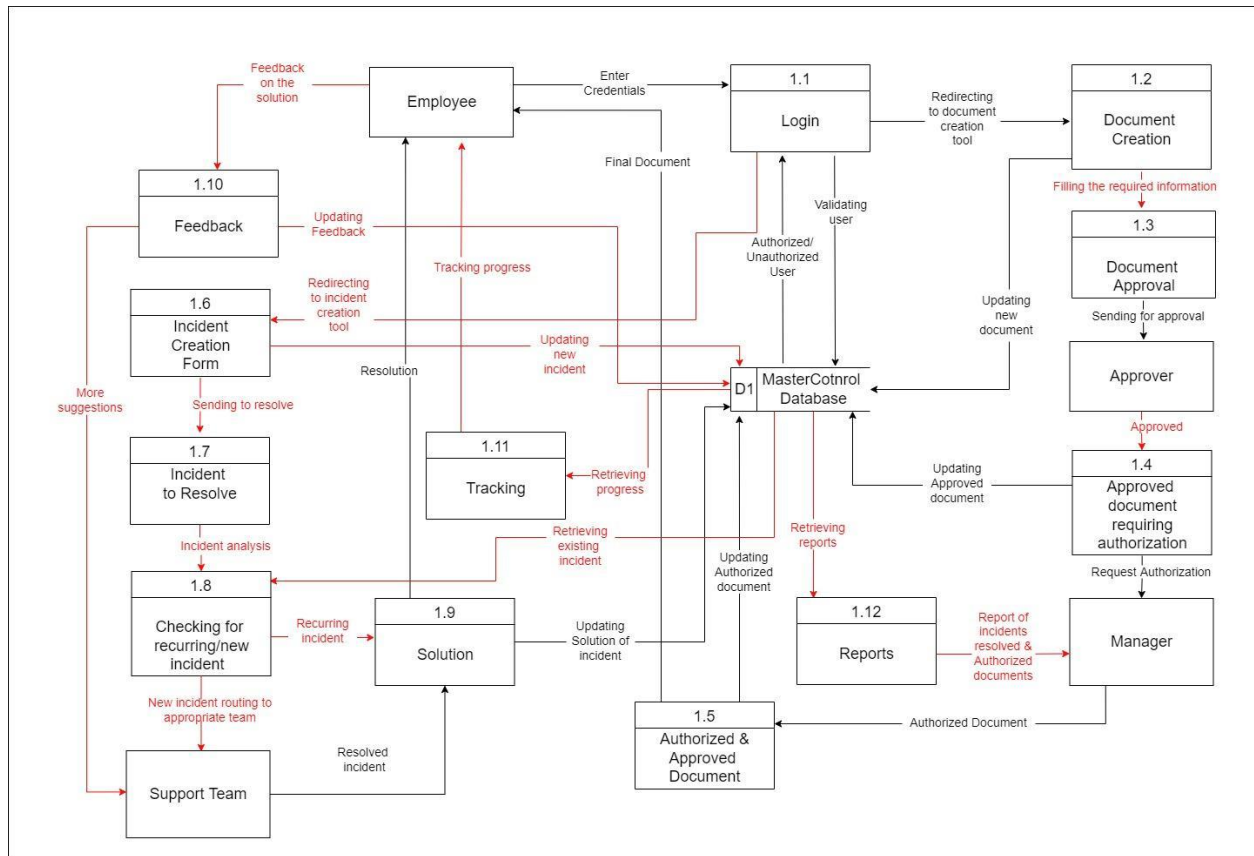
Master Control has been chosen over other alternatives after evaluating all possible solutions for the e-form tracking and incident management system. We get the conclusion that Master Control is perfectly aligned with the organization's goals, removes the bookshelves of binders throughout multiple sites, and has more advantages than other alternative solutions. Not only does it benefit from the economic perspective but also technically and operationally.

1. Although email economically is the best option, it only solves the problem of document management. Whereas between master control and service now, it is more feasible to implement Master control as its licensing costs less than that of service now.
2. As the Master control tool is already used in the organization for onboarding purposes, there is no need to make any technical changes in the existing system, whereas for the service alternative now, we have to change the system config for each system. Also, the operation to implement the new task in Master Control will be much easier than that of the service alternative now.
3. From the legal aspect, the company has already signed a contract with the master control. So, the company just has to extend the contract and add new modules.





## L1 MasterControl



Master control is one of the best alternatives for both incident and document management as it is already in use as an onboarding tool in Catalent and they just have to take the license of another module in order to implement the proposed system. Master Control is not only fit for the functionality, but it is also cost-effective and secure.

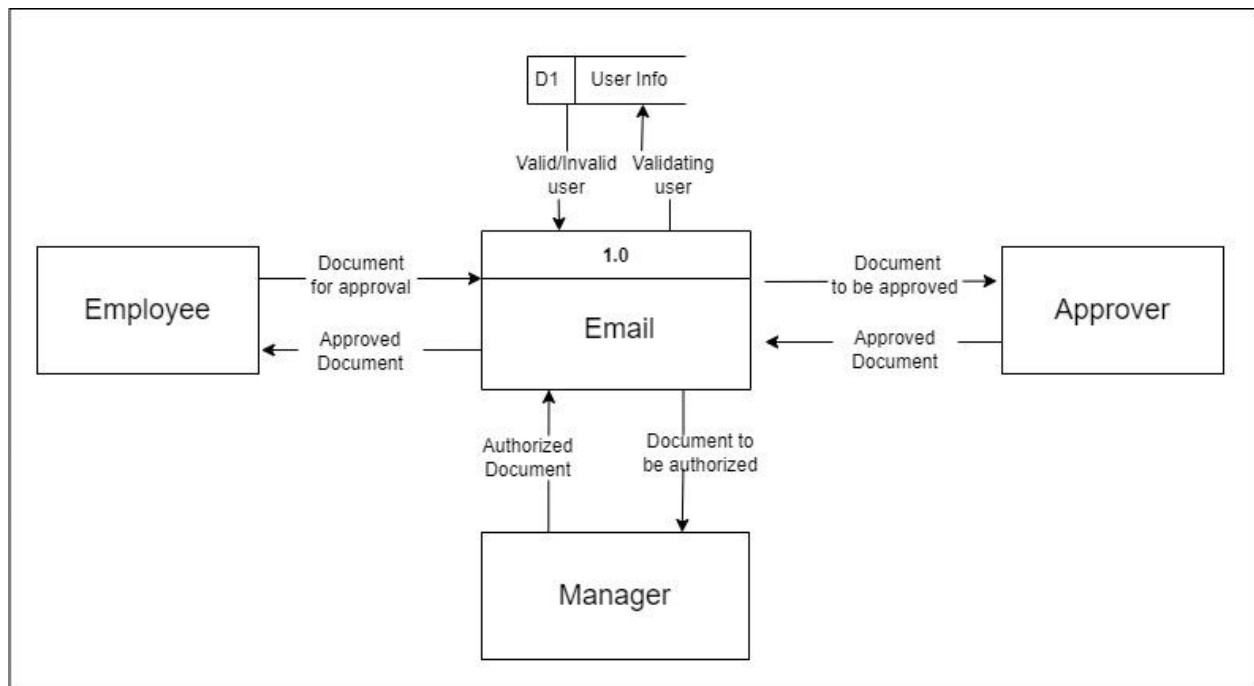
As it is already used in the organization as an onboarding tool everyone will have access to master control. For document management a person has to log in and then create or upload the document then it will go to the approver for approval and then the approved document goes to the manager for authorization and the authorized document is sent back to the user. The downstream of the document management can be tracked by a user who created the document in the dashboard and can send a reminder to the approver or manager if they are not approving or authorizing the document. The remainder can be sent via email or via the master control dashboard.

Similarly in Incident management, the user has to log in for creating an incident then it will be checked by the system if it is a recurring incident if yes then the system will provide the solution and feedback to the user and if not, then the system will route it to the concern support team to provide a solution to the user. Users can track the incident and can send reminders to the support team also if the user is not satisfied with the solution, he/she can reopen the incident.

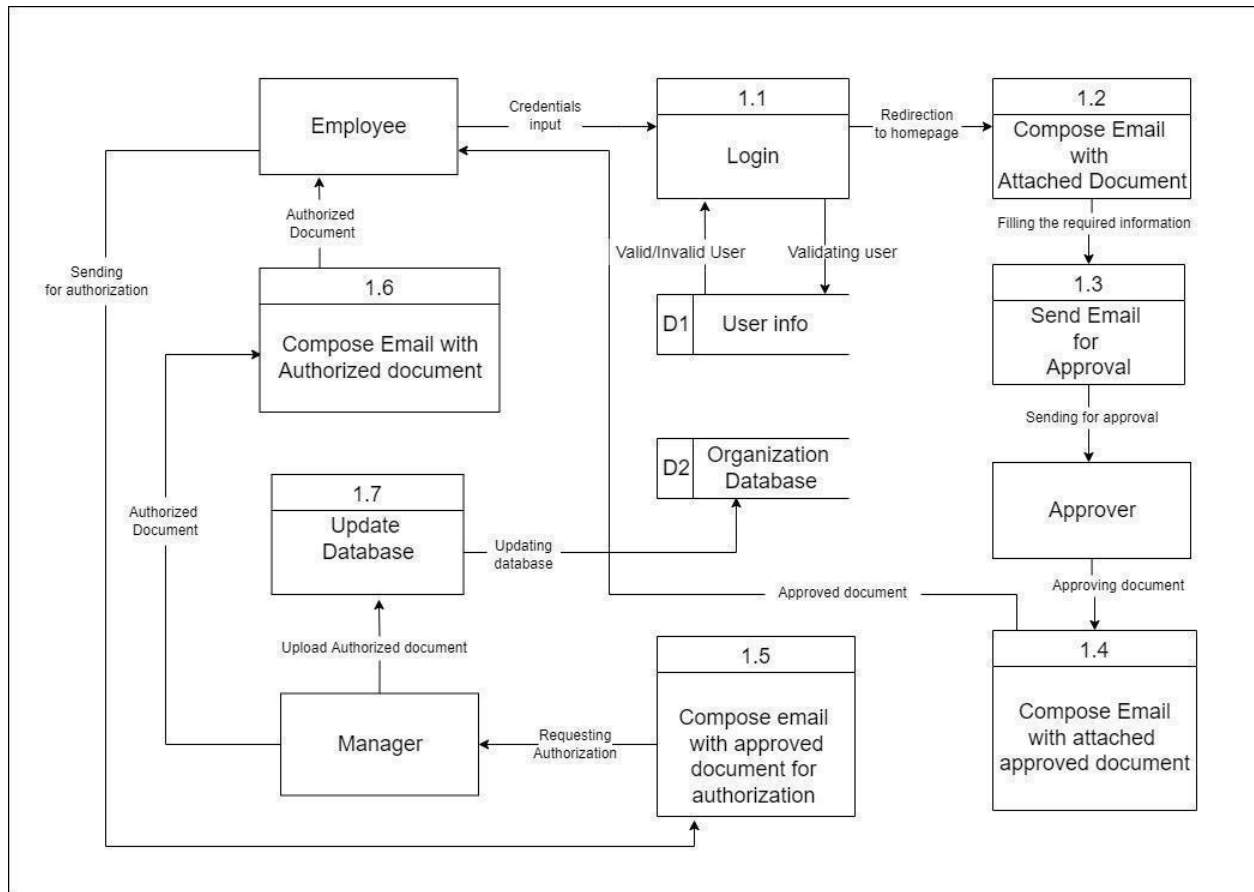
## Alternative 2

### Email

#### L0 Email



## L1 Email



E-mail is a type of communication and information technology. It employs technology to convey a digital message across the internet from a sender to a receiver. E-mail servers receive, send, deliver, and store messages; the user, as well as their computers or other systems, are not required to be online at the same time; they can just access the internet or mail servers for as long as the message is being sent or received.

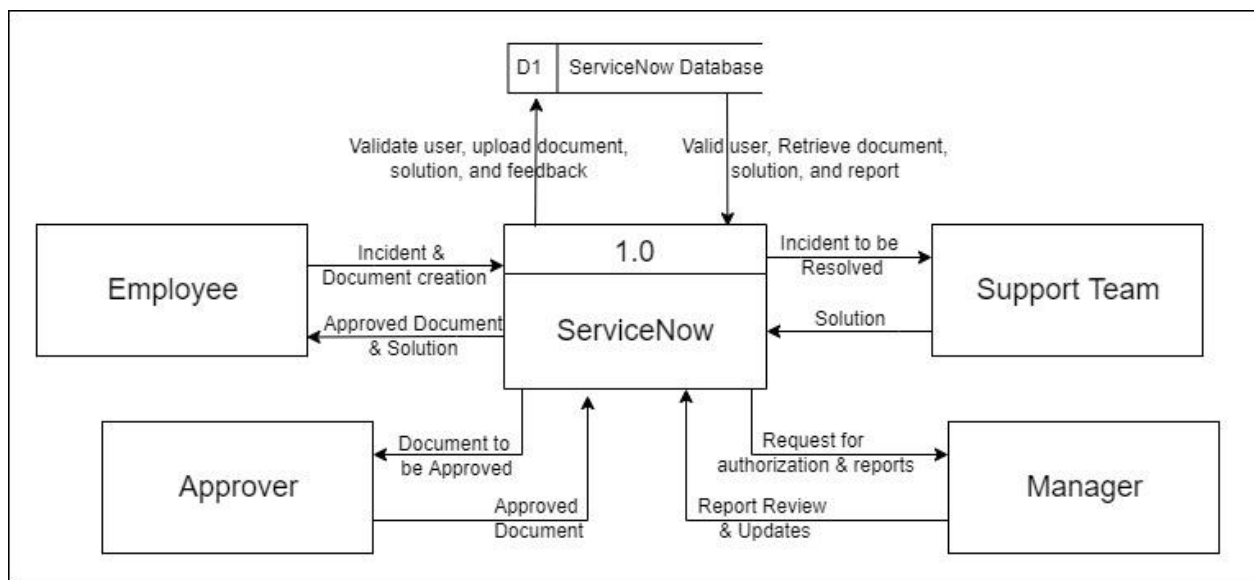
In this scenario, the employee opens a mail client and composes an email with the required document in order to obtain approval and authorization from the approver and management. Following the permission manager's update to the organization database (D2).

This is the old-fashioned way of sending and receiving documents for review and authorization. This technical solution takes time, and monitoring paperwork from approvers makes employees' jobs more difficult, and the entire process involves manpower.

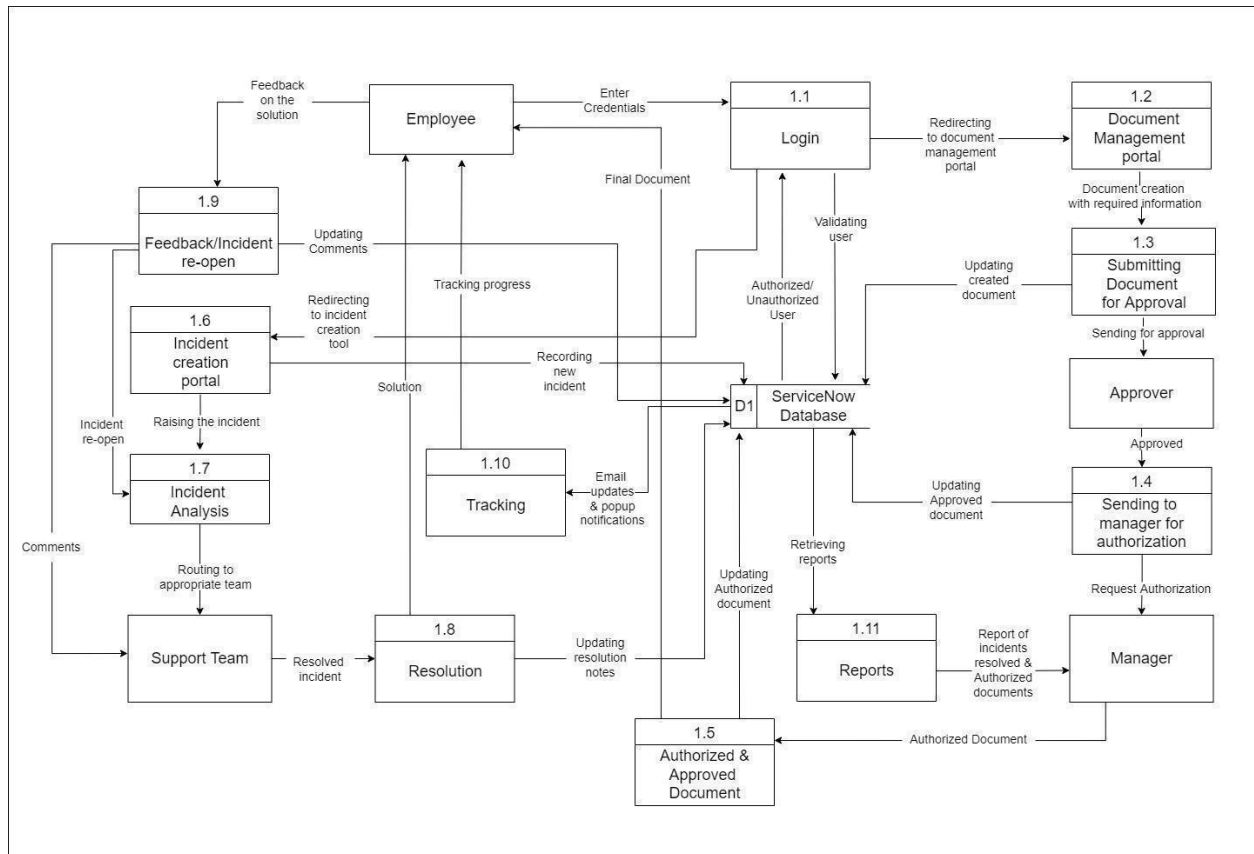
## Alternative 3

### ServiceNow - An ITSM tool to manage documents and Incidents.

#### L0 ServiceNow



## L1 ServiceNow



Because of its functionality and security, ServiceNow might be an excellent choice for document and incident management. ServiceNow can intelligently manage the incident and documentation. A user's credential can be used to log into the ServiceNow Portal (process 1.1). ServiceNow has its own database, which stores all the user's information. The user will be routed to the ServiceNow homepage once they have logged in with the correct credentials. Users may keep track of all their activity in this area. Users can then use the Self-Service Portal to access the document creation portal page (process 1.2), where they can easily generate or upload existing documents in a variety of formats. On submission, the same document will prompt the relevant person, who is already an approver for the process (process 1.3), to approve it. Email notification of approval will be sent to both the approver and the user. The user dashboard will show this as well. The document will be forwarded to the manager for authentication when the

approver has authorized it (process 1.4). The document will be updated in the ServiceNow database and can be accessed by multiple authorized persons once it has been authenticated (process 1.5).

The user will navigate to the incident creation page and fill out the form to create an incident (process 1.6). When a user submits a request, the system or help desk will generate an incident and examine it (process 1.7). For resolution, the same will be transmitted to the relevant resolver group (process 1.8). The user will be updated with a remedy, and the incident will be resolved after the user confirms it. If the issue is not addressed by the resolved group, users can react to the same incident and reopen it (process 1.9). On the ServiceNow dashboard, users and their supervisors may evaluate and monitor incidents (process 1.10). All data will be stored in the ServiceNow database, and only authorized people will be able to access it. Viewing incident reports and documentation is also possible with ServiceNow (process 1.11). Managers and stakeholders can access the report.

# Criteria and Comparison

## Criteria

Below are a few criteria based on which we will be making decisions about the best solution possible for the project -

1. Requirement - The company has stipulated that the process of document approvals and signatures should be automated rather than done manually in order to save time.

2. System Requirement - There should be no middleman in this process. It takes a lot of time and effort for the firm's employees to get any form of clearance or signature from other departments, which is why the company has implemented a new system. DocuSign and other approvals must be automatically sent back to the appropriate team for review and approval.

3. Risk - Database loss- Solution to the problem involves dealing with large data. There should be no data loss in between the process of this automation.

4. Risk - Need experienced employees, Catalent wants to implement a solution that does not involve hiring new technicians or a solution that can be done with little or no training.

5. Risk - Cost should not be high, there are no budget constraints, but the only specification from the organization is that the cost of the new system should not be high.

6. Constraints - Support team involvement should be there when there is data loss or server failure difficulties, such as in the event of an outage.

7. Effort and time utilization of employees - Currently the solution involves time and effort of all the ground staff, they want to reduce this as much as they can. The

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system should be such that little additional effort and impact is on the system broadly. They want to reduce the involvement of many people.

## Comparison of Alternatives

	Evaluation criteria	Relative Importance (Weight)	Alternative 1	Score (1-5)	Wtd Score	Alternative 2	Score (1-5)	Wtd Score	Alternative 3	Score (1-5)	Wtd Score
REQUIREMENT											
1	Requirement	25	Once the documents are uploaded it should directly move to concern manager	5	125	The documents are directed to top level management	1	25	The approvals will be approved on time	5	125
2	The document signs must get reflected automatically in the system	15	Gets reflected for all the concern team once updated on the system	4	60	No additional effort required to get approvals; it automatically gets updated to concern manager	2	30	Gets reflected for all the concern team once updated on the system	3	45
RISKS											



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3	No Database Loss	15	Catalent already has the database, just approval file needs to be uploaded	5	75	No need of entering data	5	75	High risks of data loss, as the entire database needs to get transferred.	2	30
4	Need of experience employees	10	This requires little training	4	40	No training required	5	50	Lot of training and new technical team required	2	20
5	Cost should not be high	10	No cost involved	5	50	No cost involved	5	50	High costs involved	2	20
CONSTRAINTS											
6	Technical support is required when needed	10	Involvement should have be there when required	5	50	Involvement should be there when required	5	50	Little involvement of existing technical team	4	40
OTHER FEASIBILITY ISSUES											
7	Effort and time utilization of employees	15	Little effort and time required by the managers	4	60	No efforts required	5	75	Time and effort consuming	2	30
	TOTALS	100	Alternative 1		460	Alternative 2		355	Alternative 3		310

Score denotes how well the alternative meets the criteria 1- poor 5- perfect fit

Three different solutions are shown in this diagram's left column, each with its own set of assessment criteria. According to the organization, each of these criteria has a different level of relevance. More emphasis is placed on the most critical criterion and less emphasis is placed on less critical criteria. Weighted scores are shown next to each

of those scores so that you can evaluate how each alternative performs on each of the criteria.

Once we have totaled up all the individual weighted scores, we'll know the ultimate outcome. The alternate method used by the company seems to be the winner based on the criteria.

## Feasibility Analysis

### Alternative 1

#### MasterControl

#### Economic Feasibility

The total costing for MasterControl would be approximately around \$25,000 per year. The training takes a major part of economic feasibility which includes for 1 to 2 sessions it costs around \$500, for 3 to 4 sessions it is around \$1500, for 5 to 7 sessions it's \$2500 and for 8 to 10 sessions it's \$5000.

Item	Details	Cost
MasterControl Complete Package Licenses Consultation Fees	Complete package with 5 licenses with all basic services. Which includes maintenance, business support	\$ 25000 per Year
Cost for features	For each feature	\$5000 per Year
User End Training	1-2 Sessions	\$500

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	3-4 Sessions	\$1500
	5-7 Sessions	\$2500
	8-10 Sessions	\$5000

When thinking about the big picture, it's easy to overlook costs, but one should be more specific when budgeting for fixed expenses. Feasibility serves as an unbiased assessment of the project and enhances the credibility by helping decision makers identify the proposed project's positive economic benefits to the organization. The table below estimates several types of costs involved in setting up, planning a project, and determining project and solution complexity.

The total cost can mainly be divided into two categories: -

*Tangible Cost* - These are the costs which can be measured in dollars with certainty and are associated with the information systems.

*Intangible Cost* - These are the costs which can't be measured in dollars with certainty and are associated with information systems.

The tangible costs that affect the project are MasterControl Complete Package Licenses and consultation fees. The tangible costs for this project will approximately be around \$34500 per year. The first two sessions would be around \$500 going up to \$5000 for 8-10 sessions.

The proposed solution is economically feasible because of the following factors:

1. Catalent's existing incident resolution method is traditional and time-consuming, taking almost as long as it takes to resolve incidents and obtain document approvals. This results in a waste of resources and time on their part.
2. The offered approach solves both problems. They will be able to add more modules in the future and save even more time. MasterControl is already used by Catalent. This is the most cost-effective way for them to save money.

3. Catalent is wasting more resources and money in the present technique than they will pay to activate the two additional modules. The long-term benefit is far greater than the standard way.

#### **Tangible Benefits to Organization:**

Sr. No.	Items	Benefits
1	Process improvement cost which leads to production improvement.	$\$30000 \times 3 = \$90000$ per year
2	Reduction in manual document management cost	\$10000 per year

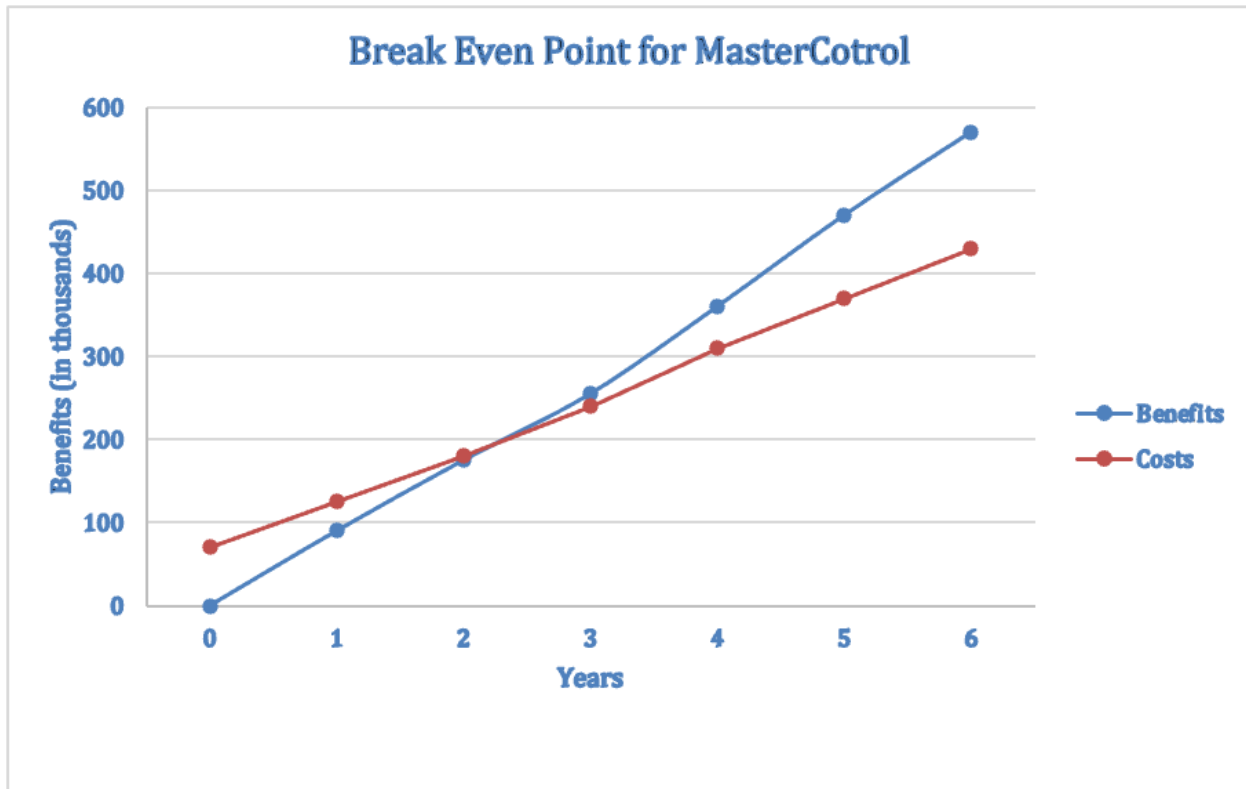
In the pharmaceutical, cosmetics, and nutrition supply industries, Catalent is a key player. For the various procedures, many rights and authorizations were required. It is tough to handle and maintain manually. This demands a robust cloud-based solution that simplifies and streamlines the process. MasterControl can provide all of the solutions with only one piece of software. This might save them almost \$100,000 in management fees each year. Only a few of the following benefits are mentioned: manpower savings, document management cost reductions, the process becoming faster, which leads to more production, and it may directly help in monetary gain to industry.

#### **Intangible Benefits to Organization:**

**Improved Process Efficiency:** With the help of MasterControl, document management can be efficiently controlled, and process efficiency may be boosted. This can help the individual right away, allowing them to work more efficiently and stress-free.

**Increased Organizational Flexibility:** MasterControl incident and document management may be highly automated, automating the resolution of many staff issues.

Incident automation can solve the problem with a few clicks while also increasing staff productivity on other tasks. Additionally, document management is simplified to the point where they simply need to upload and submit the paper. They may easily track their issues and document status on the MasterControl dashboard.



The graph illustrated above is a Break-even analysis for master control, which reveals the point at which the product's benefits (profits) equal its cost (investment). When the benefit equals the cost, the break-even period is approximately 2.1 years, and profits begin to flow from 2.2 years onwards.

### Technical feasibility

The technology we are going to use is already available, and the project team can handle the tool. The tool is user-friendly with a good user experience even non-technical users get to use the tool with a little training. MasterControl has security in

place so those with a need to know have access to their documents while blocking other departments from seeing the content of others. In addition, all actions are recorded in an audit trail for users and documents.

If the tool is down or has an issue, it has to be reported to the IT team, and this team has to contact the MasterControl support team. This process may interrupt the company's day-to-day operations due to the time taken for the support team to resolve the issue.

Size of the department which affects by using this tool: This tool affects the whole company since all employees will have access as Catalent transitions from paper-based documents to electronic documents.

### **Compatibility Issues:**

The MasterControl is already in use at Catalent for training reasons. All they have to do now is activate another module inside the MasterControl tool. Document management and incident management are two separate modules that are both simple to set up and use. Some of Catalent's current systems may need to interface with MasterControl in order for the process to function properly. The current database must be updated in the MasterControl database. That might be another time-consuming task for Catalent.

### **Operational feasibility**

MasterControl removes the need for bookshelves of binders throughout multiple sites. Keeping all the binders up to date is a manual process and takes time, space, and lots of duplication of paper. There is an electronic copy available to those who need it from any device in the house. This tool is well-aligned with organization goals as this is not only used for document management but training the employees, onboarding of the new employees. Master Control can also be used for Audit and Preventative Actions.

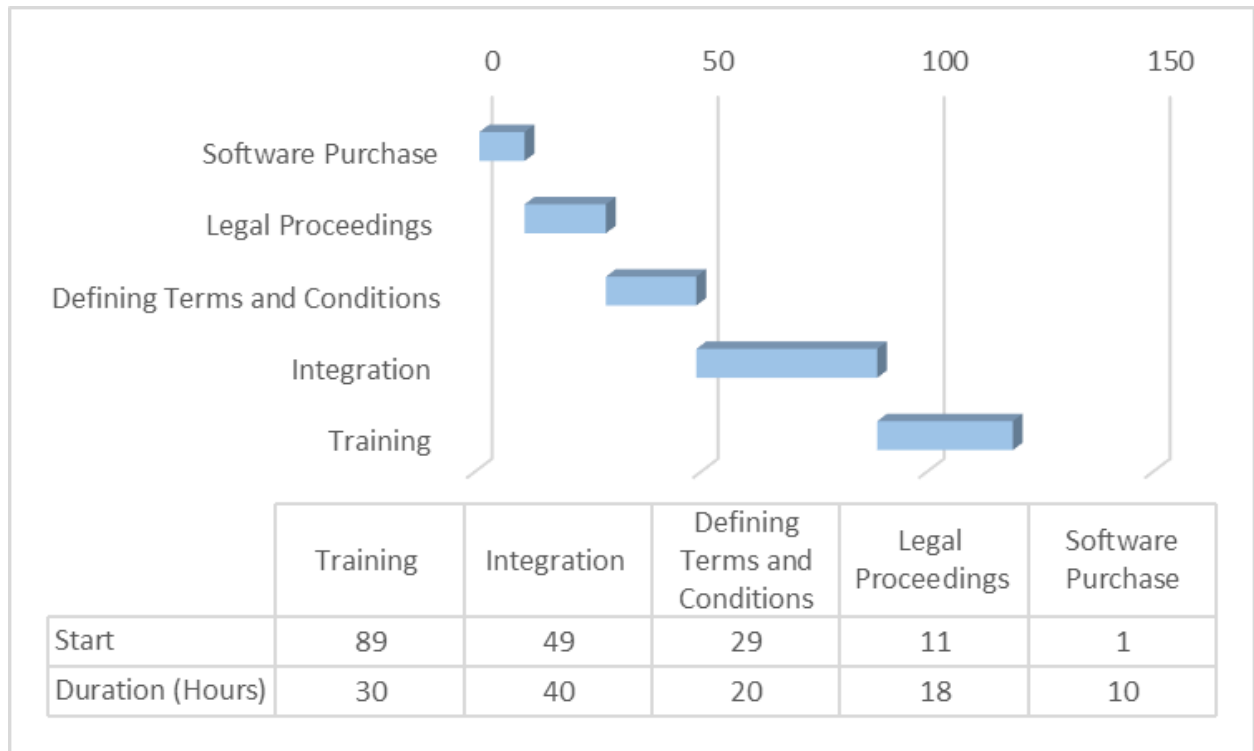
In-house, the admin team is the champion of this tool as they were the first ones to get trained in this module and now training and certification are conducted by them within the organization. Also, if a document is uploaded by mistake, it is only the in-house admin team who can remove it from the MasterControl dashboard.

### **Schedule Feasibility**

First, the organization and MasterControl should negotiate a deal for the purchase of the software, which includes the price of the software as well as the features that come with the purchase of this software. Second, the organization and MasterControl must agree on the legality of software usage, such as copyrights and other issues. The organization and MasterControl should specify the deal's terms and conditions and sign it so that the software purchase is legally binding and may proceed to the next level. The new software's integration is now in progress, and it will be completed after it has been fully integrated into the organization's workflow. Following the integration phase, staff will be given training sessions to familiarize them with new software and capabilities, as well as how to use them in their day-to-day job. The purchase of software takes approximately 10 hours, legal proceedings take approximately 18 hours, defining terms and conditions, making a legalized contract takes approximately 20 hours, the integration phase takes approximately 40 hours, and employee training sessions take approximately 30 hours.

Tasks	Number of Hours		
	<b>Optimistic</b>	<b>Most likely</b>	<b>Pessimistic</b>
Initiating	10	18	30
Planning	38	58	80
Execution	70	95	115
<b>Total</b>	118	171	225

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### Legal, Contractual, and Political Feasibility

To protect Catalent's intellectual property and trade secrets, all parties involved in the transaction must sign a confidentiality agreement before it can be completed and put into action. The terms and conditions of a company's contractual agreements must reflect the need to ensure that all employees (or new employees) utilize technology safely and responsibly. The supplier company must also provide layers of security for the product/service to prevent any virus transfer or attack on the computer systems of the organization. Since this is an internal initiative, the firm will own the tools it purchases.



## Alternative 2

### Email

#### Economic Feasibility

The economic feasibility in the case of this alternative will not be a major concern as the company already has a domain of its own from outlook. The effective tangible cost of this email introduction will be 'Zero' as we are not introducing any new module or any team to implement this alternative although if we implement this as a solution, we have to implement one more system for incident management which may have tangible cost.

#### Tangible Cost

The following are the tangible advantages calculated for the email solution:

Item	Details	Cost
Email Domain Charges	Company website domain charges	\$ 2000 per Year
Email Client Charges	To use Gmail as organization tool for email services	\$ 5000 per Year
Training cost	Training cost to new employee for general process understanding of the document flow	\$ 2000 per year

An email solution would have a very minimal tangible cost for the company. The cost of maintaining the website's email domain would be around \$2000 per year. Whereas using Gmail or any other email provider as an organization email tool would cost Catalent \$5000 per year in email client fees. Which one might be a little more flexible? When it comes to training costs, they might range from \$2000 to \$5000 depending on the number of new workers. However, they must be aware of the overall document management procedure, which is critical for Catalent. For extremely private materials, there were several security problems. Other challenges.

### **Intangible Cost:**

An intangible cost is a cost that can be identified but cannot be quantified or easily estimated. An intangible cost consists of a subjective value placed on a circumstance or event in an attempt to quantify its impact. Although intangible costs are more difficult to quantify, they have a real, identifiable source.

In this proposed alternative intangible cost might include fall in employee morale, customer dissatisfaction which may result as damage to company's reputation.

While intangible costs do not have a concrete value, it is often attempted to estimate the impact of the intangibles since they can have a real effect on productivity, costs, and a company's bottom line.

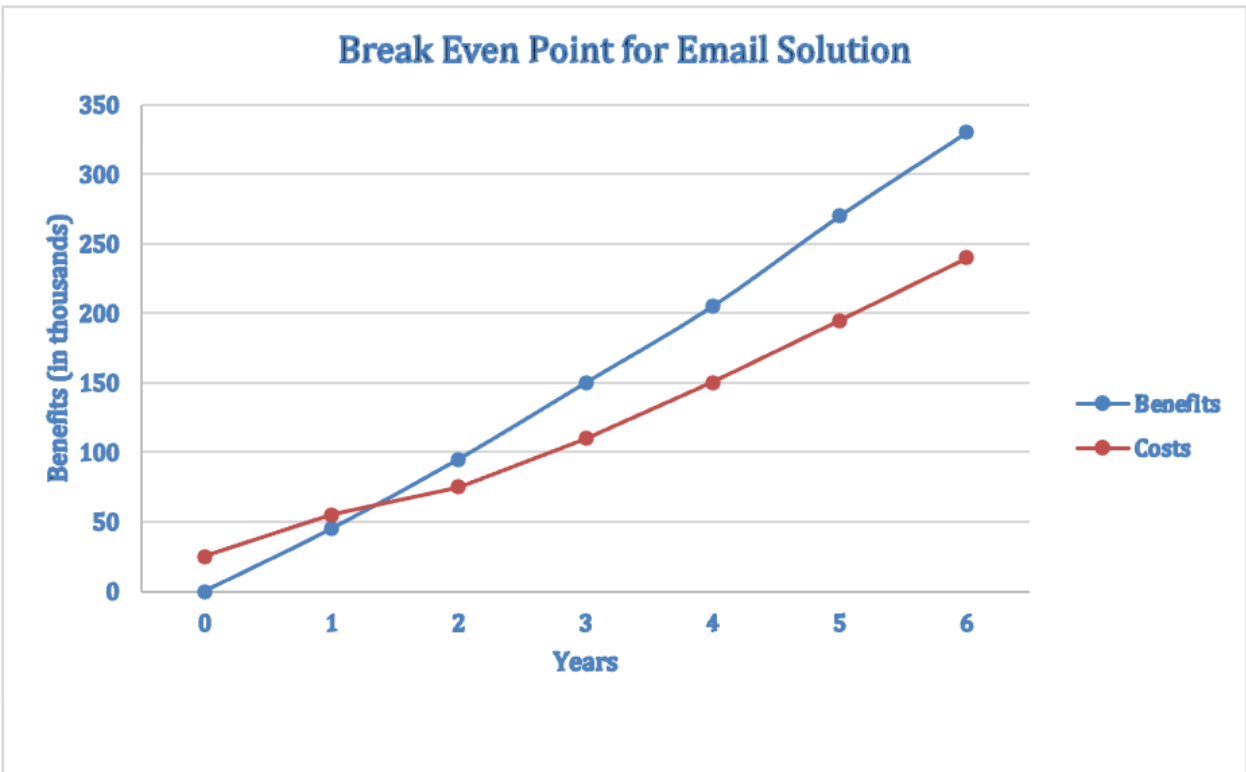
### **Tangible Benefits**

As this proposed solution doesn't involve implementation of any new module or new team, the tangible benefits won't be much. But with implementation of this solution one added solution is needed which might have some tangible benefits.

The tangible benefits of the additional module may be revenue cost saving, productivity gain, process improvement.

### **Intangible Benefits**

The intangible benefit of this system is that it is easy to use. Moreover, we save training time which we will need if we implement any new process. Apart from this we have also saved the time of implementation of the new system. Also, this solution will enhance user experience as it will help system users to easily use the provided functionality.



Above picture depicts the relationship between benefits and cost and profits at various levels of activity, with an emphasis placed on various break-even points. The breakeven analysis enables measurement of profit and losses at different levels of production and sales. It can also help predict the effect of cost and efficiency changes on probability.

From the above graph we can see that the benefits for email solutions are uniformly growing whereas costs fluctuate and are not uniform in nature. The benefits and costs are increasing every year. The breakeven point is the point at which total cost and total revenue are equal, meaning there is no loss or gain.

### Technical Feasibility

The technology used in this alternative is already in use in the organization. We just have to streamline the process by setting some rules for document approval.

As everyone in the organization is already familiar with email therefore no technical difficulties will be faced in order to implement this solution. As everyone will be using a company domain name therefore the organization can track all the documents sent outside the organization.

Size of the department which affects by using this alternative: This tool affects the whole company since all employees will have access as Catalent transitions from paper-based documents to electronic documents.

### **Compatibility Issues:**

When it comes to email solutions, there will not be many compatibility concerns because emails are a part of everyday life and practically every employee is familiar with them. They must, however, understand the procedure, including how to have the document certified and what security measures are in place for guarded papers.

### **Operational Feasibility**

Implementation of the document management will not be a problem as everyone in the organization will already know how to use the email. But email only solves the problem of the document management in the organization and is not completely aligned with the company goals as it does not solve the problem of incident management thus, we have to implement other solutions for incident management.

To Make this alternative operational for document management we have to set rules for the subject line of the email and the type of document to be uploaded in the email for approval and authorization. We need to make a trainer or champion who will make sure everyone follows the same rules for the approval of documents.

### **Schedule Feasibility**

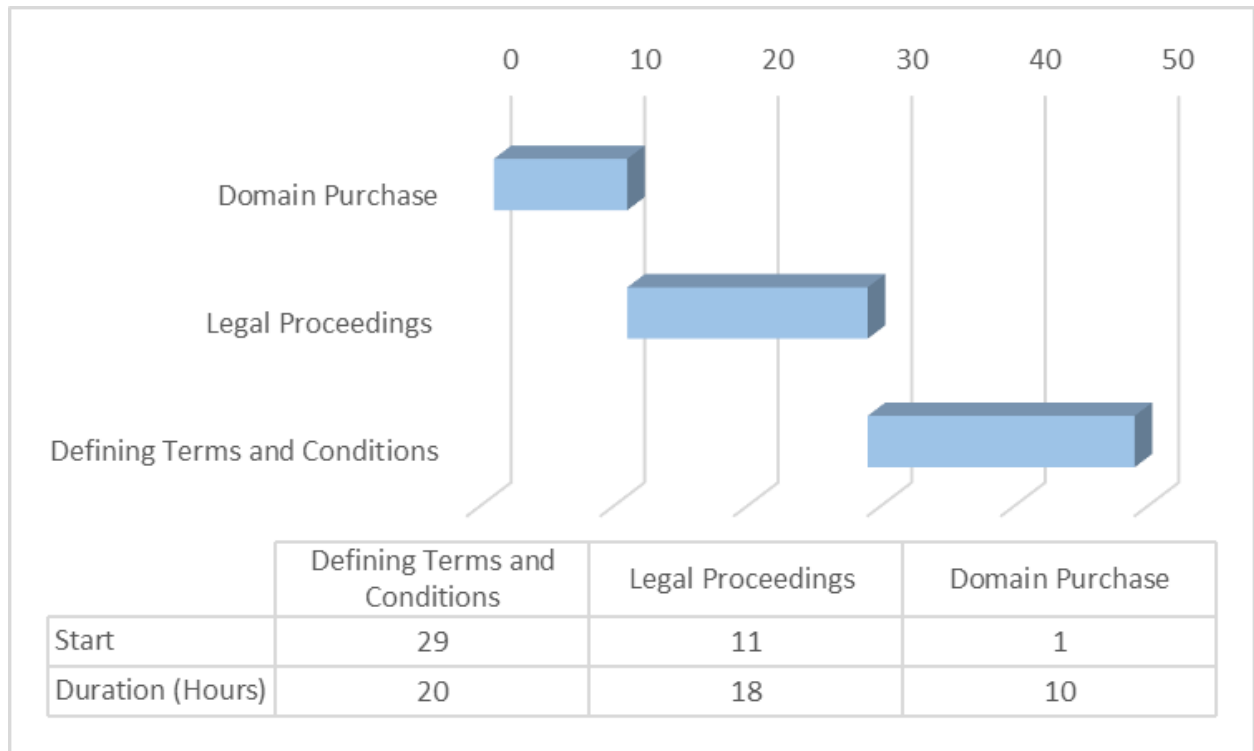
The organization will negotiate a domain purchase with Google for the organization's own domain of mail IDs and capabilities that are available to them in this proposed system. The organization and Google must agree on how to utilize services

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like copyright, proper usage, and use for illegal work, among other things. Following that, both the organization and Google will legalize and sign the contract. Google delivers the domains and provides features and support to the company. The domain acquisition will take around 10 hours, legal proceedings will take approximately 18 hours, setting terms and conditions and legalizing the agreement will take approximately 20 hours, and employee training is not required.

Tasks	Number of Hours		
	Optimistic	Most likely	Pessimistic
Initiating	10	20	35
Planning	38	60	75
Execution	0	0	0
<b>Total</b>	48	80	110

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### Legal, Contractual, and Political Feasibility

To protect Catalent's intellectual property and trade secrets, all parties involved in the transaction must sign a confidentiality agreement before it can be completed and put into action. The terms and conditions of a company's contractual agreements must reflect the need to ensure that all employees (or new employees) utilize technology safely and responsibly. Project managers, senior management, and those entrusted with documenting and approving the project's finances in advance all participate in this process. To avoid any virus transfer or assault on the organization's computer systems, the supply company must also provide levels of security for the product/service.

## Alternative 3

### ServiceNow Feasibility Study

When we consider all of the components that go into developing and continuing to operate the process or product, we can really understand the practicality of a concept. A feasibility study enables us to comprehend all of the expenses, dangers, and obstacles that the proposal entails, as well as factors that will have a significant impact on the firm.

Complete Feasibility Analysis for ServiceNow solution has been done in the following points:

#### Economic Feasibility

The first thing that comes to mind when discussing any new project or an update to an existing process one is the budget. How much money do you have set aside for the project? The majority of the options are chosen based on the budget. Almost every stage of the software development life cycle necessitates the expenditure of funds. These expenses are split into two categories: **tangible and intangible**. Both are critical to SDLC's success. A material item utilized in manufacturing or to execute commercial operations can be directly linked to **tangible expenses**. An **intangible cost** is a subjective value assigned to a situation or occurrence in order to measure its impact. In this part, we will talk about the costs of using ServiceNow in the Catalent Pharma Solution. Tangible costs are described in below table:

Tangible Item	Details	Type	Estimated Cost
Software Cost	ServiceNow professional service cost	Recurring per year	\$55000.00

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Operational Cost	Various licenses cost to maintain the ServiceNow.	Recurring per year	\$10000.00
Learning Cost	Training cost for employees	Recurring per year	\$5000.00
Development cost	Every upgrade development cost	Recurring per upgrade of ServiceNow	\$15000.00
<b>Total</b>			<b>\$85000.00</b>

How is the above cost estimated?

All the tangible cost components for which ServiceNow charges its clients are listed in the table above. The cost of software is the fee that ServiceNow charges their customers for professional services. Catalent Pharma Solution is a large company with over 17000 clients. For a company with more than 15000 workers, ServiceNow costs \$55,000 per year. All license costs for Admin, ITIL, Approval, and so on are included in the operational cost. This fee is determined by the number of licensees that Catalent and ServiceNow have agreed upon. The number of licenses for each category will be determined by the company and how they intend to maintain or offer service to their personnel.

The training delivered by ServiceNow to Catalent staff is included in the learning costs. Depending on the function that Catalent has assigned to them. While development expenses may vary depending on ServiceNow improvements. As a result, the



maintenance costs may rise as a result of ServiceNow's annual improvements. In the future, the entire cost may rise. The current estimated cost for a year is around \$85000.

The intangible cost associated with ServiceNow is described as follows:

**Productivity Losses** - When developers/managers are required to learn more sophisticated software that does not comply with their roles and duties, this has a negative impact on productivity since they are spending more time learning additional software.

**Loss in Employee Satisfaction:** Employees might be resistant to change and have a hard time accepting new software. They lose interest in anything new, resulting in dissatisfaction.

**Tangible Benefits to Organization:**

Sr. No.	Items	Benefits
1	Process improvement cost which leads to product improvement.	$\$50000 \times 3 = \$150000$ per year
2	Reduction in manual document management cost	\$10000 per year

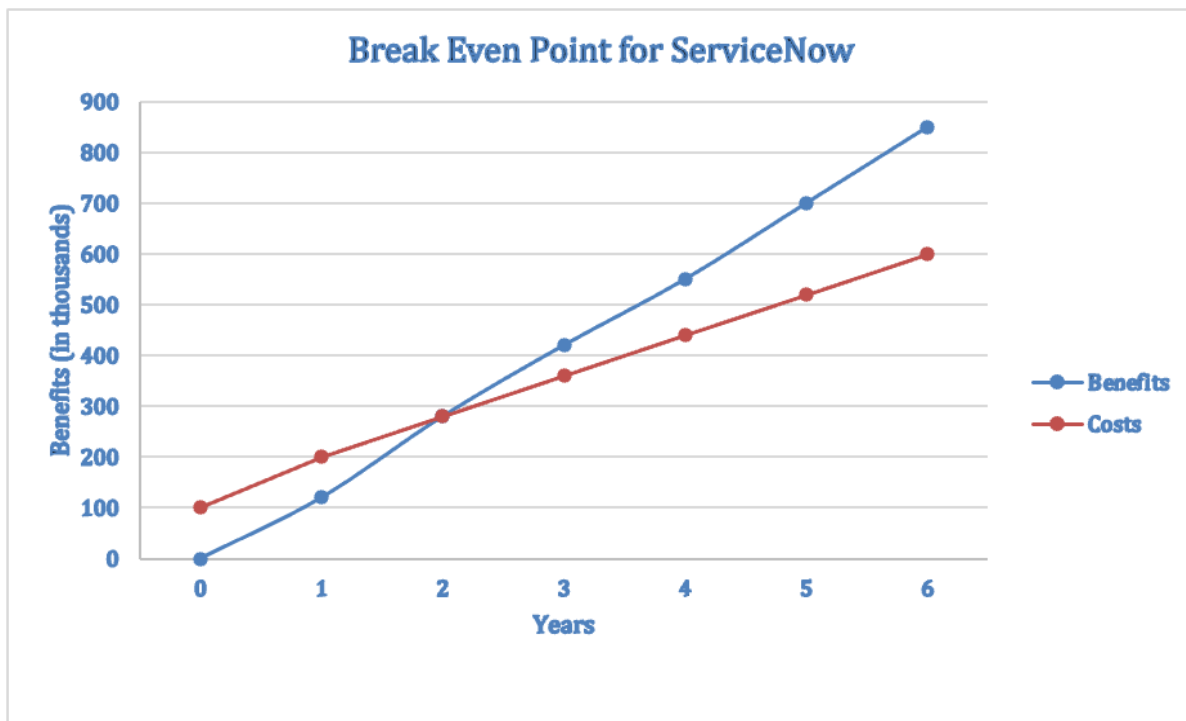
Catalent is a major leader in the pharmaceutical, cosmetics, and nutrition supply industries. Multiple permissions and authorizations were necessary for the numerous processes. Manually, which is difficult to handle and maintain. This necessitates a strong cloud-based solution that makes the process simple and seamless. With a single piece of software, ServiceNow can deliver all of the solutions. Which might save them roughly

\$160000 per year in management costs. Manpower savings, document management cost savings, the process becoming speedier, which leads to greater output, and may directly aid to monetary gain to the industry are only a few of the above benefits.

### Intangible Benefits to Organization:

**Improved Process Efficiency:** Document management can be managed efficiently, and process efficiency may be increased with the aid of ServiceNow. This can immediately benefit the individual, allowing them to work more efficiently and with less stress.

**Increased Organizational Feasibility:** ServiceNow incident and document management may be automated to a high degree, resolving many staff difficulties automatically. With a few clicks, incident automation can address the situation and increase staff productivity on other duties. Furthermore, document management becomes so simple that they only need to upload and submit the document. On the ServiceNow dashboard, they can simply follow their incidents and document status.



When compared to the other two options, the ServiceNow tool has a fairly high upfront capital cost. ServiceNow is now one of the most popular ITSM platforms, offering highly complex and automated solutions. Though Catalent may accomplish the Break Even point within two years with the given solution because it eliminates many superfluous operations and personnel while also increasing their productivity to a great degree. The tool has a high return on investment (ROI). The graph presented above is a Break-even analysis for ServiceNow, which reveals the point at which the product's benefits (profits) equal its cost (investment). When the benefit equals the cost, the break-even period is typically 2 years, and profits begin to flow from 2.1 years onwards.

### **Technical Feasibility**

The ServiceNow technology may be readily purchased by Catalent Pharma from the ServiceNow Company. Catalent will require a support crew to keep the ServiceNow development and services running smoothly. The program is simple to use, and the majority of the development may be done with only a few settings in the application. Security has already been implemented for the ServiceNow tool. Without appropriate authentication, no one can use ServiceNow. The matrix records all of the actions of all users. In ServiceNow, only users with the appropriate roles may see and manage the process. With a few easy queries, any user may be assigned or withdrawn from a role. With a little instruction, even non-technical persons can utilize and alter configurations. Reporting is simple to get on a daily, weekly, or monthly basis.

Users with appropriate roles can simply track documents posted to ServiceNow and make modifications if required. By building a separate dashboard for themselves, users may examine the daily reports on their dashboard. Any user with ServiceNow access can create an incident. On their dashboard, users may keep track of the event and offer further remarks for the resolver group. The resolver group can see and respond to these messages. Within an incident, all of the user and resolver group's activities are tracked. Users can also receive email notifications if the tool is configured properly. Automation may be accomplished using ServiceNow's tool or by using appropriate third-party technologies.

ServiceNow gives help to its clients if the tool has any problems or is unavailable. Users and administrators may utilize their HI portal to contact ServiceNow and have concerns prioritized. The team will deal with the situation.

All staff in the firm may use the app to keep track of their paperwork and incidents. The program also offers a number of other features that users may use to make their work easier.

### **Compatibility Issues:**

It would be an entirely new system to implement ServiceNow in Catalent. Catalent presently uses DocuSign to manage documents and the conventional approach to track incidents. Catalent would not have a difficult time installing ServiceNow but integrating it with current systems can be time-consuming. Integration of the present system with the new system may be difficult, and the support team may confront a variety of obstacles. However, the ServiceNow platform includes a number of ready-to-use plugins with easy setups. This can make the job easier.

### **Operational Feasibility**

Service now provides both incident management and document management in one single place and is well aligned with the organization's goals but at the same time, we don't have any champion for this tool at Catalent as this will be totally new to all the employees. The problem will be facing to make service now operational in the organization are:

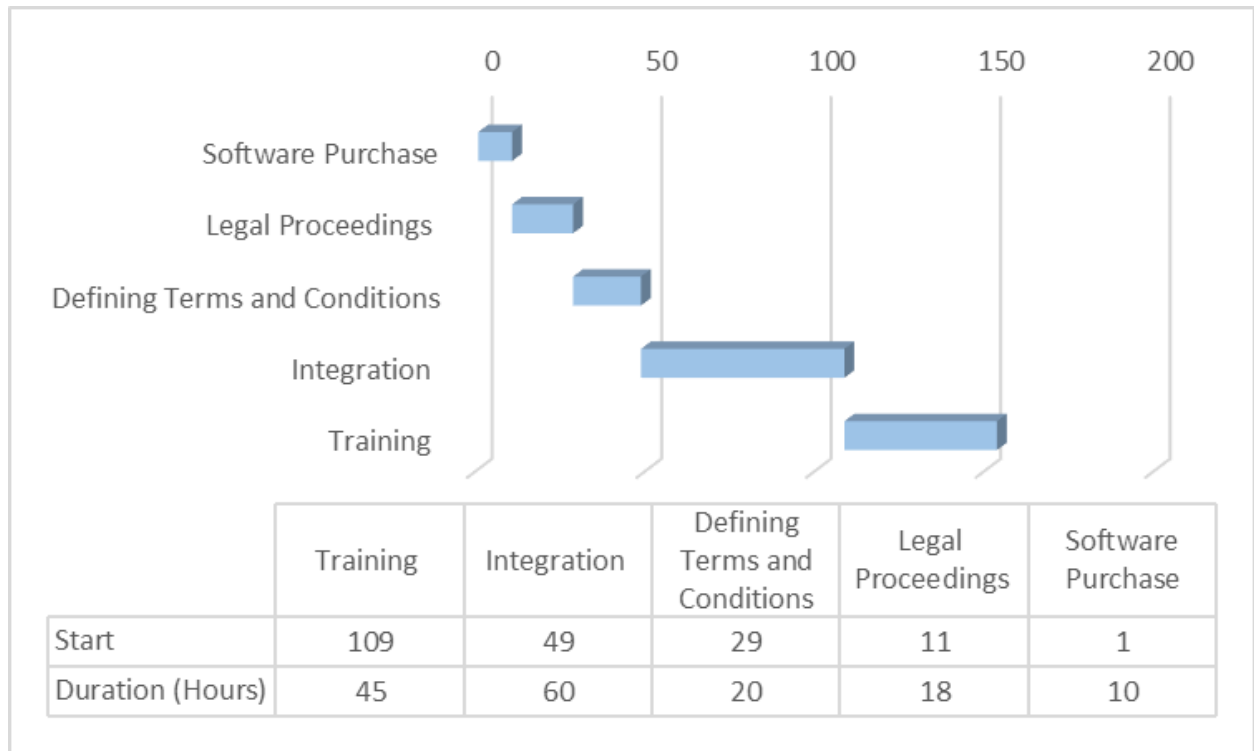
1. We need to find and train the champions of the tools within the organization and thus we have to hire experts for service now to onboard the new tool.
2. As the tool is a bit technical, non-tech people might find it difficult to understand the new tool.

### Schedule Feasibility

The organization must first negotiate a deal with ServiceNow, the software's provider, for the software's purchase, which covers the software's pricing, features, and services supplied. The organization and ServiceNow should agree on the legality of the software's use in the second step, including copyright, use for unlawful works, and so on. The organization and ServiceNow should agree on the terms and conditions for usage and services offered in the third stage, then formalize and sign the contract. The fourth step involves starting and finishing the software's integration with the organization's system environment. The fifth step involves holding training sessions for staff to familiarize them with the software's features and functions, as well as how to apply them in their everyday tasks. The acquisition takes 10 hours, the legal proceedings take 18 hours, establishing terms and conditions, creating a legalized contract, and signing the contract takes 20 hours, software integration with the organization's system environment takes 60 hours, and employee training sessions take 45 hours.

Tasks	Number of Hours		
	Optimistic	Most likely	Pessimistic
Initiating	10	25	45
Planning	38	60	90
Execution	105	135	160
<b>Total</b>	153	220	295

### Deliverable 3



### Legal, Contractual, and Political Feasibility

To protect Catalent's intellectual property and trade secrets, all parties involved in the transaction must sign a confidentiality agreement before it can be completed and put into action. The terms and conditions of a company's contractual agreements must reflect the need to ensure that all employees (or new employees) utilize technology safely and responsibly. Project managers, senior management, and those entrusted with documenting and approving the project's finances in advance all participate in this process. Since this is an internal initiative, the firm will own the tools it purchases.

## Appendix

### **Was the system proposal presented to you verbally or in written form?**

By submitting the deliverables 0, 1, 2, and 3 documents, we have supplied the proposal in written format.

### **Does this system's proposal clearly lay out the possible alternatives for addressing the problem your organization is facing?**

We submitted deliverable 3 with the finest solutions for solving the Catalent organization's current challenge, which was mailed to our contact.

### **Does the system's proposal explain clearly the criteria used by the project team to choose one of the alternatives as the recommended solution?**

We've made recommendations based on the feasibility analysis of each option and whether or not it answers the organization's problem.

### **Does this system's proposal provide all the information you need to make a decision about how to proceed on this project? If not, what other information would have been useful to you?**

We have provided all relevant information regarding the problem, including its scope and alternatives, as well as recommendations to assist the company in selecting a solution from the available options.

## Deliverable 3

4/11/22, 10:49 PM

UMBC Mail - Urgent - Help required on Project deliverables.

- Does the system's proposal explain clearly the criteria used by the project team to choose one of the alternatives as the recommended solution?
- Does this system's proposal provide all the information you need to make a decision about how to proceed on this project? If not, what other information would have been useful to you?

Appreciate it if you send it soon.

Thank you  
Sravan Kumar Krovvidi

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 **Deliverable 3.pdf**  
795K

**Chaudhry, Hamza** <Hamza.Chaudhry@catalent.com> Mon, Apr 11, 2022 at 5:56 PM  
To: Sravan Kumar Krovvidi <s226@umbc.edu>, Pravin Wamanrao Mohature <pravinm1@umbc.edu>  
Cc: Usama Rehan <urehan1@umbc.edu>, Sai Vineet Paladugu <ya53891@umbc.edu>, Navneeth Rao Pottheganti <za45259@umbc.edu>, Sudhanshu Jha <sjha1@umbc.edu>, Atefeh Jebeli <in18657@umbc.edu>, Shikha Jaitwar <shikhaj1@umbc.edu>, Sushmitha Kanapuram <sushmik1@umbc.edu>

See response in Red.

**Best Regards,**

Hamza Chaudhry

IT Business Analyst

 **Recycle Always** |  **Save Paper - Save Trees**

**From:** Sravan Kumar Krovvidi <s226@umbc.edu>  
**Sent:** Monday, April 11, 2022 5:36 PM  
**To:** Pravin Wamanrao Mohature <pravinm1@umbc.edu>  
**Cc:** Chaudhry, Hamza <Hamza.Chaudhry@catalent.com>; Usama Rehan <urehan1@umbc.edu>; Sai Vineet Paladugu <ya53891@umbc.edu>; Navneeth Rao Pottheganti <za45259@umbc.edu>; Sudhanshu Jha <sjha1@umbc.edu>; Atefeh Jebeli <in18657@umbc.edu>; Shikha Jaitwar <shikhaj1@umbc.edu>; Sushmitha Kanapuram <sushmik1@umbc.edu>  
**Subject:** Re: Urgent - Help required on Project deliverables.

**CAUTION: This email originated from outside the organization.  
Do not click or open attachments unless you recognize the sender.**

Hi Hamza,

<https://mail.google.com/mail/u/0/?ik=9a5a13d350&view=pt&search=all&permthid=thread-f%3A172742569669688907&siml=msg-f%3A1727425696...> 4/5



## Deliverable 3

4/11/22, 10:49 PM

UMBC Mail - Urgent - Help required on Project deliverables.

Sorry for bothering you, please find the attached document which is deliverable3 due today for submission, can you please take the time to address the following questions.

- Was the system proposal presented to you verbally or in written form? **Yes**
- Does this system's proposal clearly lay out the possible alternatives for addressing the problem your organization is facing? **Yes**
- Does the system's proposal explain clearly the criteria used by the project team to choose one of the alternatives as the recommended solution? **Yes**
- Does this system's proposal provide all the information you need to make a decision about how to proceed on this project? If not, what other information would have been useful to you? **Yes**

[Quoted text hidden]

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Pravin Wamanrao Mohature <pravinm1@umbc.edu>

Mon, Apr 11, 2022 at 9:19 PM

To: "Chaudhry, Hamza" <hamza.chaudhry@catalent.com>

Cc: Sravankumar Krovvidi <s226@umbc.edu>, Usama Rehan <urehan1@umbc.edu>, Sai Vineet Paladugu <ya53891@umbc.edu>, Navneeth Rao Potheganti <za45259@umbc.edu>, Sudhanshu Jha <sjha1@umbc.edu>, Atefeh Jebeli <in18657@umbc.edu>, Shikha Jaitwar <shikhaj1@umbc.edu>, Sushmitha Kanapuram <sushmik1@umbc.edu>

Thank you for your assistance, Hamza!  
I appreciate your help!

We may want your assistance in the near future. I hope you will find some time in your hectic schedule to read this.

Regards,  
Pravin Mohature

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