



SAARLAND UNIVERSITY
COLLABORATIVE BUSINESS PROCESS MANAGEMENT

Appraisal Outsourcing

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1 Introduction

This first chapter contains information regarding the scenario under which IAP AG operates and plans the extension of its business activities. Details concerning the communicational organization of the team members and with LifeSavers Inc.'s representatives during the project are given in section 1.2. This section also contains a GANTT-chart regarding the time plan of the singular work steps that are part of the overall project. A brief overview of the basic processes of IAP AG's new venture is subject of chapter 1.3. The team appointed to handle the management of the business extension by IAP AG consists of Koushik Chowdhury, Lara Chehayeb, Amin Ranem and Tim Zimmer.

1.1 Scenario Description

1.1.1 Scenario Overview

IAP AG (International Appraisals) is performing appraisal processes for various insurance companies. Their task is to evaluate the claim evidence and to make suggestions whether to settle claims per payment or via court. This approval process involves the analysis of the customer's insurance policy and the appraisal of the involved costs. If a claim is approved, the insurance company will contact the customer, determine the amount of compensation, send the customer a check, and update the customer record. Otherwise, the case will be taken to court. The LifeSavers Inc. insurance company handles homeowners, health and vehicle insurance for a large number of customers. It receives many calls each day for claims on the different insurance types. It has outsourced the appraisal sub-process to an appraising company and is now considering switching its outsourcing partner and negotiating with IAP AG. In this scenario, students of Widener University will play the role of LifeSavers Inc. and students of Saarland University will play the role of IAP AG.

1.1.2 Process Details

Lifesavers Inc. is an insurance company that handles health, homeowners, and vehicle insurance for thousands of customers on a global scale. Several of their client's own property or vehicles in the USA yet living abroad. The company receives dozens of calls regarding claims each day. Once a claim is received, the appraisal for the claim is outsourced to an independent appraising company. The appraisal company suggests either settling or litigation, at which time Lifesavers Inc. completes the processing of the claim, notifies the claimant, and makes any applicable payments. LifeSavers Inc. is currently negotiating with IAP AG, an appraisal company located in Germany, to provide their entire appraisal needs. It is the goal of LifeSavers Inc. to provide a competitive and

efficient claim service to their clients. To this end, LifeSavers Inc. provides their clients various methods to make a claim. A client may make a claim by calling a central call-center, fax, mail, or by accessing the on-line web site. There are several business rules that the claim process has to take into account in order to maintain a competitive rate. It must be checked whether the claimant has adequate coverage based on the claim. The Appraisal Company needs to evaluate the claim evidence and suggest either settling the claim or litigating the claim – within a negotiated time frame and considering a potential double insurance. After a claim is processed, the claimant’s contract is re-analyzed. A claimant is allowed to submit additional information if a claim is denied. Based on the additional information, the appraisal may need to be redone. LifeSavers Inc. pays a fee to the appraisal company (as negotiated) for each appraisal completed. The relationship between LifeSavers Inc. and the appraisal company is based on a negotiated contract. This contract includes requirements expected by each participant.

1.2 Organizational Details

Communication Medium:

- WhatsApp was chosen as the preferred way to communicate within the German team
- Ease of use and general availability were considered the main reason for this decision
- Documents will be exchanged via e-mail

Project Plan:

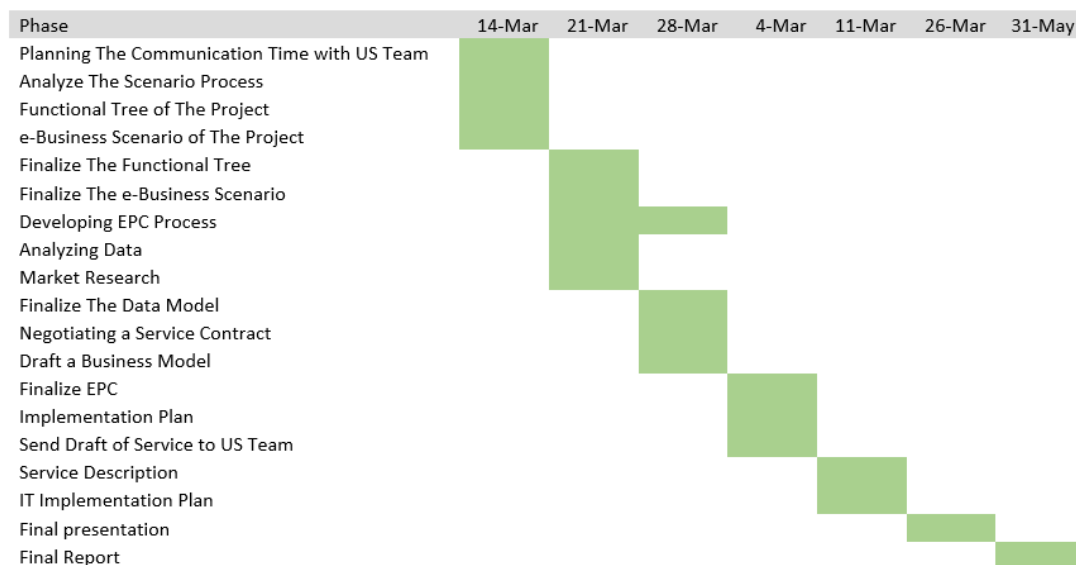


Figure 1. Project plan

Communication Planning with US Team:

- Interaction with American teams will be based on Zoom meetings
- Denise Woolsey and Tim Zimmer were appointed as the communication leaders during the project

1.3 Process Overview

- **Process 1: Appraisal claims in the homeowners policy [1]**
 - Customer and insurance company can't agree on cash value, cost of repair or replacement of a damaged property.
 - Customer writes a demand for appraisal.
 - Each party (customer/insurance agency) chooses an appraiser to represent its claim.
At this point in the process, our company would get the mandate from the American company!
 - Our company receives the written demand of the insurance customer as well as data relating to his/her personal information and insurance policies.
 - Within 20 days, the contact between our company and the insurance customers appraisal representative needs to be established.
 - The two appraisers need to choose an umpire (this is usually a lawyer/ industry expert working for a specialised law firm).
 - Once the umpire is found, both appraisers will estimate their valuation of the property values and the losses and negotiate a value that would be acceptable for both parties.
 - If this negotiation fails, the umpire will decide on the loss of value attributed to the asset.
 - This assessment is considered binding in most American states.
IAP AG would now send a report including this decision (and the invoice) to Lifesavers Inc.
- **Process 2: Vehicle insurance [2]**
 - Customer is involved in a car accident and files an insurance claim
 - Lifesavers Inc. forwards insurance claim to our company
Personal data and insurance policy as well as insurance claim gets forwarded to German IAP AG.

- IAP AG reviews the coverage of the customer. Does the insurance contract even cover the claim?
- IAP AG contacts all parties involved in the accident, takes statements from each participant and gathers the information.
- Additional information is gathered by IAP AG (police report, applying local traffic laws, ...)
- Evaluation of the gathered information and creation of report including recommendation for action (approval of claim or litigation)

Final report and invoice are sent to Lifesavers Inc.

- **Process 3: Health insurance [3]**

- Customer seeks medical service from healthcare provider.
- Customer provides his insurance information to healthcare provider.
- Healthcare provider forwards bill to insurance company

Lifesavers Inc. sends medical bill to IAP AG.

- IAP AG verifies the patient information (necessary in this scenario since some products may include governmental subsidies)

If there are faults in the patients' health bill (wrong personal data, missing information, ...) the receipt gets returned to Lifesavers Inc. for correction.

- IAP AG analyzes the coverage of the customers insurance policy.

IAP AG now either approves or rejects claim. Reasons for rejection May include entering of incorrect information for the healthcare provider, patient or insurance provider, mismatch between treatment and diagnostic code, duplicate billings, etc. . .

IAP AG sends final report (including invoice) to Lifesavers Inc.

2 Market Research

To determine the success probability of the new business field, a market analysis was conducted. This report divides the insurance market into the relevant segments for the American target market. Furthermore, it contains predictions relating to the estimated growth of the insurance market in general as an external success factor. This chapter closes with a SWOT analysis, looking for specific elements about IAP AG. This SWOT analysis also builds the basis for the development of the business model, which is the topic of chapters 3.1 and 3.2.

2.1 Market Research

Insurance sector in the US can be categorized into two segments: Life Insurance and Property and Casualty (P&C) insurance. Life insurance is usually settled upon the death of an insured person or after a previously determined period. P&C coverage is often settled upon the loss of finance. It includes a variety of insurance sub-segments. The most common are vehicle insurance, health insurance, and home insurance. The general global prediction for the insurance sector revealed that almost all insurance lines are increasing in value until 2025. There is some uncertainty in the projections of the insurance market changing rate as it is highly influenced by external factors such as reformed or new laws, technology, and other trending acts. The predicted increase in value, however, is mainly due to the steady slight increase (3 to 5%) in the P&C insurance over the past few years. Moreover, massive growth in health insurance has been witnessed the recent years due to the Affordable Care Act. The graph below shows the expected growth of the total premiums in North and South America.

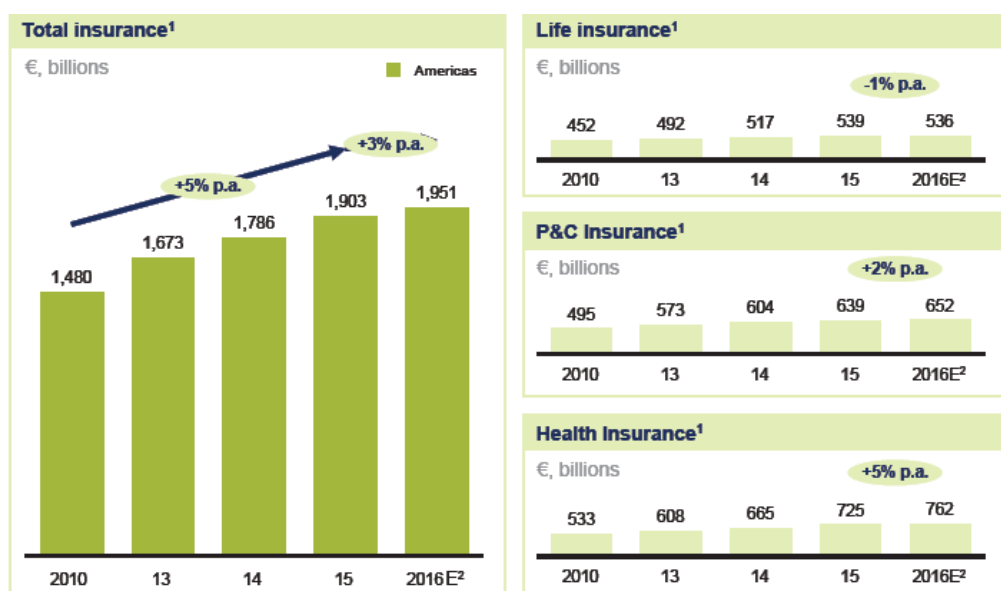


Figure 2. Market research

2.2 SWOT-Analysis

<u>Strengths</u> <ul style="list-style-type: none">• Specialization on certain appraisal processes (learning-curve effects)• International business activity• Agile business model	<u>Weaknesses</u> <ul style="list-style-type: none">• Dependencies on customer/insurance market
<u>Opportunities</u> <ul style="list-style-type: none">• Big Data/Data Analytics• Climate Change• Insurance premiums on the rise	<u>Threats</u> <ul style="list-style-type: none">• Technological disruption• Cybercrime/Data theft• Economic risks

Figure 3. SWOT-Analysis

- Strengths
 - Specialization: Learning curve effects lead to high organizational knowledge of the individual appraisal processes, which speeds up processes and raises the quality of work.
 - International business activity: Conducting business in an international environment can be considered instrumental in attaining business benefits in today’s globalized world. The business relationship with LifeSavers Inc. could sharpen the international profile of IAP AG and attract more customers.
 - Agile business model: As an information service, the business model of IAP AG is standardized and doesn’t need large lead times when adding new customers or business operations.
- Weakness
 - Dependency on customer/insurance market: Since IAP AG can’t directly influence the number of claims made by its customers, its business success depends on the business development of its customer companies. This can negatively affect business success and revenue in times of crisis and economic recessions.
- Opportunities
 - Big Data/Data Analytics: Technological advancements can improve efficiency as well as quality of research. It will be important for IAP AG to invest in modern data management technology in order to remain competitive in its market field.
 - Climate Change: The steadily increasing number of natural disasters will open new business opportunities for the insurance market and an increase in the total number of claims made by customers.

- Insurance premiums on the rise: For the first time in 5 years, premiums began to rise in 2018. This could improve revenue and income of insurance companies, thus potentially improving the negotiation position of their contractors.
- Threads
 - New technologies: While providing tremendous business opportunities in the upcoming years, new technologies also inherit risks for companies that fail to adapt to changed market circumstances and technology concepts in a timely manner.
 - Cybercrime/Data Theft: Since sensitive data is transferred and stored by IAP AG, the company will have to take necessary measures to protect the data and prevent theft. Failing to do so could lead to expensive damages and the loss of customers following a loss of trust in IAP AG's ability to protect itself from cyberattacks.
 - Economic risks: Economic downturns or rising inflation rates have a direct impact on the insurance market. Because of above mentioned dependencies, IAP AG's business would automatically be negatively affected by these events as well.

2.3 Conclusion

- While the overall business outlook remains positive, there is disruptive potential of new technologies in the insurance industry, demanding IAP AG to conduct efficient and timely technology management.
- Increased diversification into new insurance markets based on the international experience gained by cooperating with LifeSavers Inc. could decrease economic risks and should therefore be pursued in the future.

3 Business Model

Chapter 3 depicts the business model of IAP AG regarding the new business venture. A verbal description of the mission statement as well as the key activities, essential resources, and value propositions. It closes with the financial planning of the new business segment. Section 3.2 presents the business model CANVAS that was chosen to give a comprehensive overview of the key components and factors of the desired business activities. Chapter 3.3 is concerned with possible innovations that could extend or modify the business model of IAP AG in the future to further increase process efficiency and operation profitability.

3.1 Business Model Description

IAP AG (International appraisal)

Mission: IAP AG is dedicated to assisting the insurance sector to operate more profitably by ensuring increased quality and efficiency in appraisals of claims.

IAP AG (International Appraisals) is an international agency offering appraisal services for various global and local insurance companies. The leading service is to make suggestions on claims received and advise the insurance company to settle claims per payment or via court. IAP AG handles claims of homeowners, health and vehicle insurances. Besides, the company is continuously performing data analysis and market research with the data being processed. This has also increased the company's experience in the field, and an extended service has been launched offering consulting services on P&C insurance claims to guide better and develop the claim appraisal market.

Key Activities, Resources, and Value propositions

The company's activities vary with the change of service and within the different phrases of each activity. The claim appraisal process requires various activities as no two insurance policies are the same, and also each claim is unique. As such, in claim analysis, a thorough review of the insurance policy is one of the main activities done as soon as the claim is received. Additionally, the company verifies the data received and assessed the claim to complete the process. As mentioned previously, the agency is in continuous research for more effective outreach to new customers and stronger networking with third parties for detailed information. The third parties are external agencies that have access to information that supports claims received — for instance, records at the state police department or the fire department. As the number of claims increases in one area – with the rise of customers – our agency strengthens the network with such external agencies to ensure better communication and higher efficiency in process claims. Furthermore, IAP AG outreaches and hires highly experienced analysts who provide sustainable development of the company. This is achieved as the employees can process the claim to benefit the insurance company and its applicants mutually.

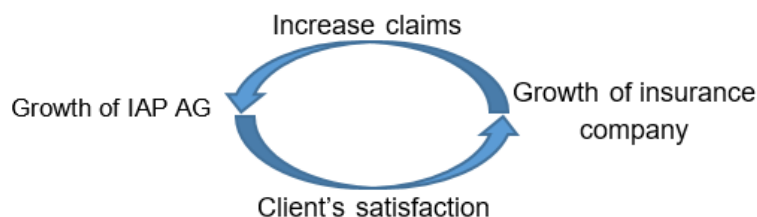


Figure 4. Purpose

Not only is the company considering the importance of its partner's business, but also it is ensuring a highly secure data management to protect its clients. As IAP AG has been performing internationally for the past years, the company follows research data services, expertise and technology solutions to ensure safe handling of data.

Financial Plan

IAP AG aims at increasing the number of claims processed and hence increasing the profit. Additionally, as part of our mission states, IAP AG ensures that the prices set within the budget are following that of our clients to ensure a mutual increase in profits.

Revenue Forecast

IAP AG main functions are claim processing, data analysis, and consultancy. This determines the main revenue streams. Currently, the primary revenue relies on claim processing and consultancy as the activity is performed every month.

A claim can be assessed based on frequency and severity. The rate is the number of claims received by an insurance company, and the severity is the individual cost of the claim appraisal. Moreover, the cost per claim is categorized based on the type and scope of the claim as each would differ. The appraisal fee on average and based on different insurance companies is \$500 on the low end and could reach up to \$3,000 on the high end. It is worth noting that the market has witnessed a decrease in the frequency of claims, but a significant increase in the severity. Furthermore, the average time to settle a claim is 11 days. Based on a recent study by J.D. Power and Associates Property Claims Satisfaction Study, a leading indicator of customer satisfaction is based on the cycle time to settle a claim. As such, IAP AG will challenge its competitors by accelerating the time of claim processing to prove better efficiency further.

In the following estimate, unlike the expenses, the minimum revenue is estimated. An average of the cost of a claim is considered to be 1500 Euro along with a minimum number of claims to be processed during a month (40 claims from 5 companies). Additionally, consultancy is only performed for two companies in a yearly contract for 36000 Euro each.

As such, the estimated revenue is 181,500 Euro.

Revenues	€ 303,000
Claim processing	300,000
Consultancy	3,000
Research	0

Figure 5. Revenues

Expenses Forecast

As an international company, the primary investment is made in human resources. Certified, experienced analysts are hired, paid a good salary while providing a flexible and friendly work atmosphere. The business structure below shows the list of central positions at IAP AG. Additionally, the company invests in data management systems and improved technologies. By maintaining both, the company has better chances of expanding in the global market. Considering the number of employees and the average salaries along with the data management, the total is estimated to be 142,000 Euro per month. Other expenses include office rental, research and development costs, general office costs, networking, and marketing costs. Considering the additional costs as operating costs, the estimated cost per month is 20,000 Euro. Finally, as IAP AG is located in Germany, it is entitled to pay taxes on the country based on the profits worldwide. The taxes entitled to be paid: business tax, revenue tax, and value-added tax. Combination of taxes, the corporate tax adds up to 30 – 33% of the total revenue.

The business structure of IAP AG:

- Chief Executive Officer
- Admin and HR Manager
- Certified Analysts
- Accountants
- Database and IT manager
- Finance Manager

The below table reflects estimated costs to be 154,000 Euro

**33% of the total revenue*

Expenses	€ 154,000
Human Resources	132,000
Database Management	10,000
Operating Expenses	20,000
Taxes and Tariffs *	99,990

Figure 6. Expenses

The previous estimate shows a net profit of around 41,000 Euro on monthly basis. Maintaining the current customers would result in a sustainable operation of the agency. Within a year, the company would be able to invest in its growth and acquiring more customers.

Payment Option

Claim processing usually results in a huge amount of money being transferred upon the completion of multiple claims. Payment methods could vary based on the clients preference. Below are the payment options that IAP AG accepts:

Payment by via check, (online) bank transfer

3.2 Business Model CANVAS

The following diagram depicts the key partners and reference persons for the optimal functionality of the proposed business model. Central activities and resources are discussed as well as the cost structure and the expected revenue sources. The value delivered to costumers is presented along with the desired relationships and contact possibilities with the relevant costumer segments.

Key Partners	Key Activities	Value Propositions	Customer Relationship	Costumer Segments
Engineers Local/Public Agencies	Pricing Marketing and Networking Claim Processing Policy analysis Data Verification Consulting Services	Efficiency Data Security International Operation Advanced Technology	Trust Experienced	International and local insurance companies
	Key Resources		Channels	
	Partnerships and alliances Highly experienced employees		Website Direct marketing	
Cost Structure			Revenue Streams	
Human Resources Networking and Marketing Taxes Technical maintenances Research and development costs Office rental and costs			Claim suggestion Data Analysis for market research Consultancy	

Figure 7. Business Model CANVAS

3.3 Innovation Potentials

- ***Use of communication bots:*** Standard communication patterns between IAP AG and LifeSavers, Inc. could be automated using communication bots that automatically initiate specific communication protocols between companies, once activated by an employee on either side.
- ***Data-integration through LifeSavers, Inc. services:*** The use of apps for uploading of appraisal claims is a trend within the insurance company market. Claims made via such an app could also be directly forwarded to IAP AG and thus reduce the communication and exchange processes between IAP AG and LifeSavers, Inc.
- ***Using Big Data Analytics to create new services:*** The use of Big Data Analytics could lead to the creation of new services by IAP AG. The recognition of patterns (for example damage-prone components of cars or houses; area- or job-related disease patterns) could be marketed as a service to help insurance companies with optimization of insurance premiums or customer selection as well as identification of fraud attempts. This would reduce IAP AG's dependency on the claim process number and could help attract new customers.
- ***Blockchain is a disruptive technology for claim management:*** The advent of Blockchain technology could transform the processes within the insurance industry. Smart contracts process the potential to speed up the appraisal claim process tremendously and reduce the risk of data errors during the entire process. Negotiations with LifeSavers, Inc. should be undertaken to try to implement such technology as early as possible, since costs for claim appraisal processes could face a steep decrease, endangering the business outlook for IAP AG.
- ***Use of automated police record retrieval:*** Since police databases are digital nowadays, extracting information from police reports can be done much more efficiently compared to the traditional document request process. Specific software solutions have reached the market and should be implemented into IAP AG's workflows, as it simplifies and allows the retrieval of relevant information in (near) real-time.

4 Function Tree

This chapter deals with the development of the Function Tree for IAP AG during this project. The model was transformed two times after the initial draft resulting in the final model shown in figure 8.

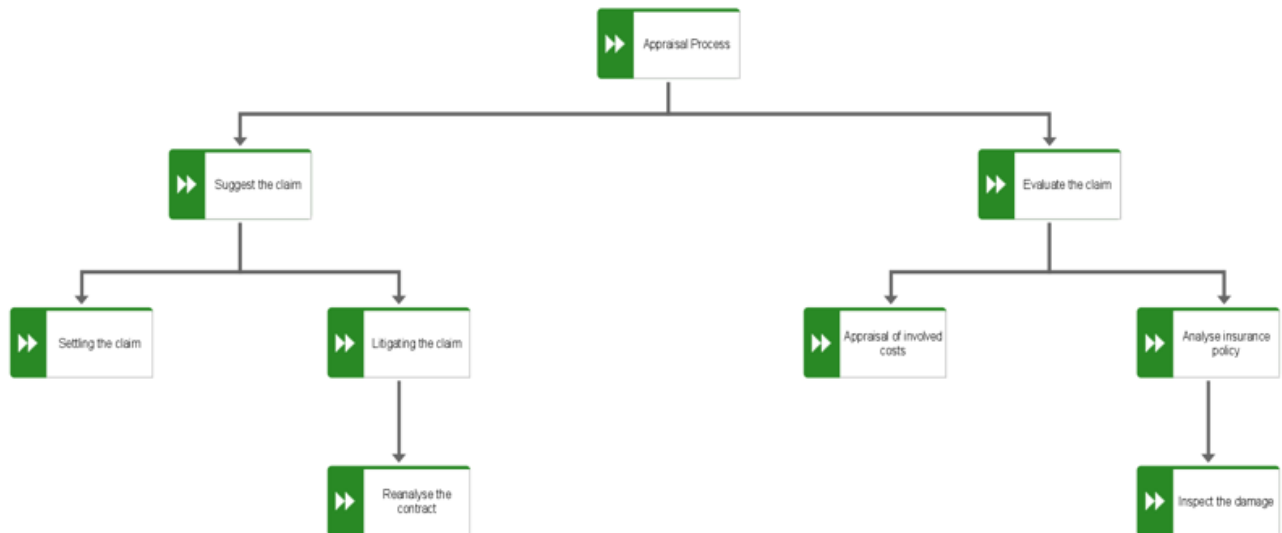


Figure 8. The figure shows the first draft of the Function Tree made for Milestone 3.

The idea behind this small function tree was to develop a short draft for the functions of IAP AG. It consists of four Levels. The top-level is called the **Appraisal Process**, which is the complex function. It can be broken down into two normal functions. In our case, these would be **Evaluate the claim** and **Suggest the claim**. **Evaluate the claim** relates to the evaluation process of the claim made by the client. **Evaluate the claim** has two sub-functions: **Analyze the insurance policy** and **Appraisal of involved cost**. In the **Analyze** section, the client's insurance policy will be checked. Also, damages will be investigated and further evaluated. After that, a claim will be suggested to the LifeSavers Inc. insurance company. The claim will either be **Settled** or **Litigated**. In case of a litigation, the client will send additional information to IAP AG, and based on that information; it will be decided whether the **Appraisal Process** must be redone or not. During the discussion panel of this Milestone Presentation, it has been recommended to create a more detailed function tree. Based on this statement, we recreated the Function Tree by adding more specific functions. Figure 9 shows the new Function Tree, which was presented on behalf of Milestone 4.

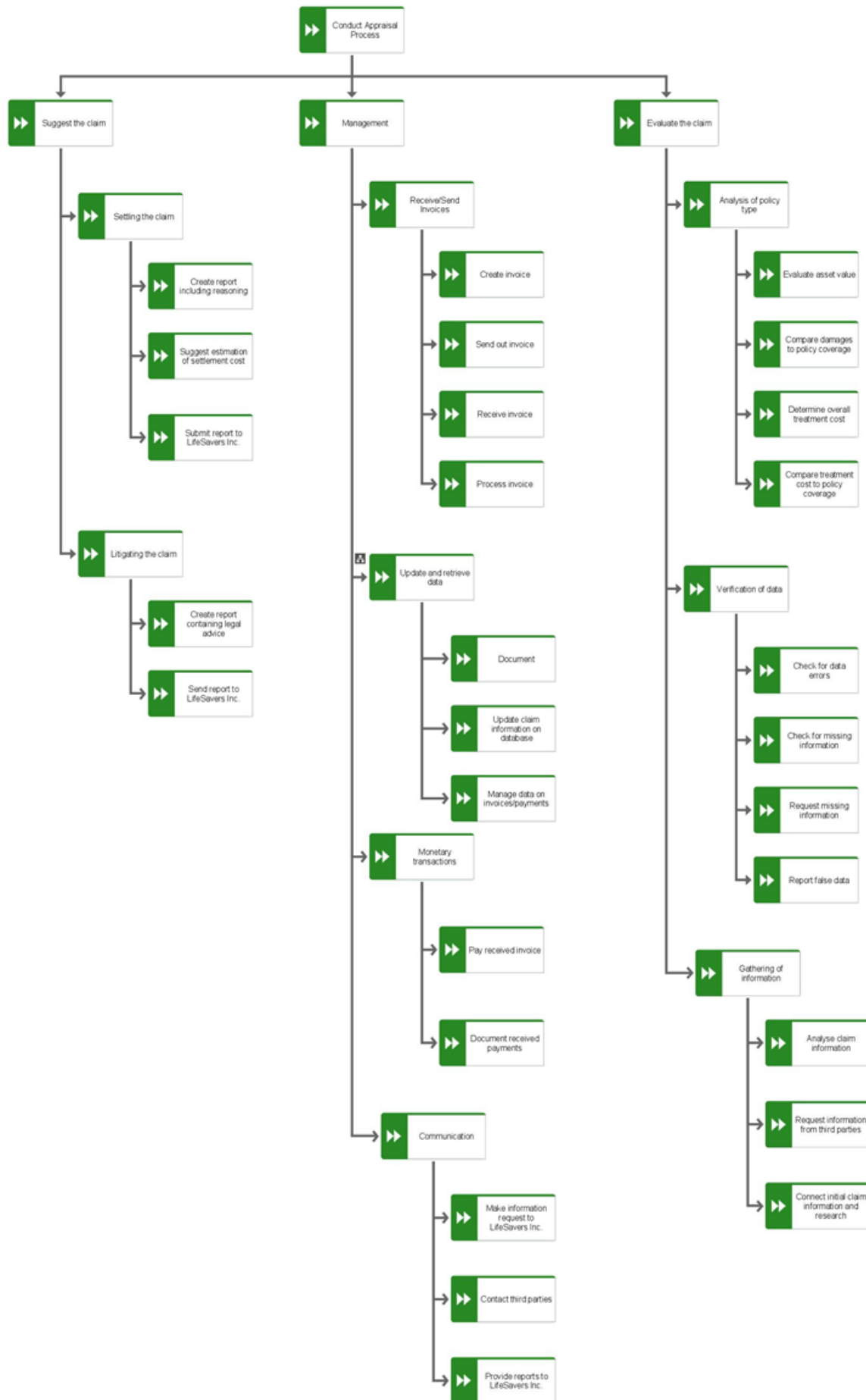


Figure 9. Function Tree M4

The recreated Function Tree still consists out of four Levels. The top-level is the **Conduct Appraisal Process**, which represents the complex function. It can be broken down into three normal functions. In our case, these would be **Evaluate the claim**, **Suggest the claim** and **Management**. **Evaluate the claim** relates to the evaluation process of the claim made by the client. It includes a thorough review and comparison of the information presented and the insurance policy. In the **Suggest the claim** function, a suggestion will be made to the LifeSavers Inc. insurance company. The claim will either be **Settled** or **Litigated**. In case it's **Litigated**, the client will send additional information, and based on that information, it will be decided whether the **Appraisal Process** must be redone or not. Finally, **Management** function has three sub-functions and relates to data management, financial management/transactions, and external communications. After the presentation on Milestone 4, it turned out that the **Management** Function of the Function Tree is too generic. On this behalf, the Function Tree. Figure 10 shows the final Function Tree that was introduced on behalf of Milestone 5. The top level of the Function Tree is still **Conduct Appraisal Process** which is the complex function. It can be broken down into four normal functions. In our case, these would be **Evaluate the claim** and **Suggest the claim** like before extended by **Information Management** and **Financial Accounting**. The functions **Evaluate the claim** and **Suggest the claim** have not been further changed. The **Information Management** function has two sub-functions that are necessary to communicate with third parties and to update the new or modified information. Finally, **Financial Accounting** consists out of two sub-functions for receiving/sending invoices and for monetary transactions.

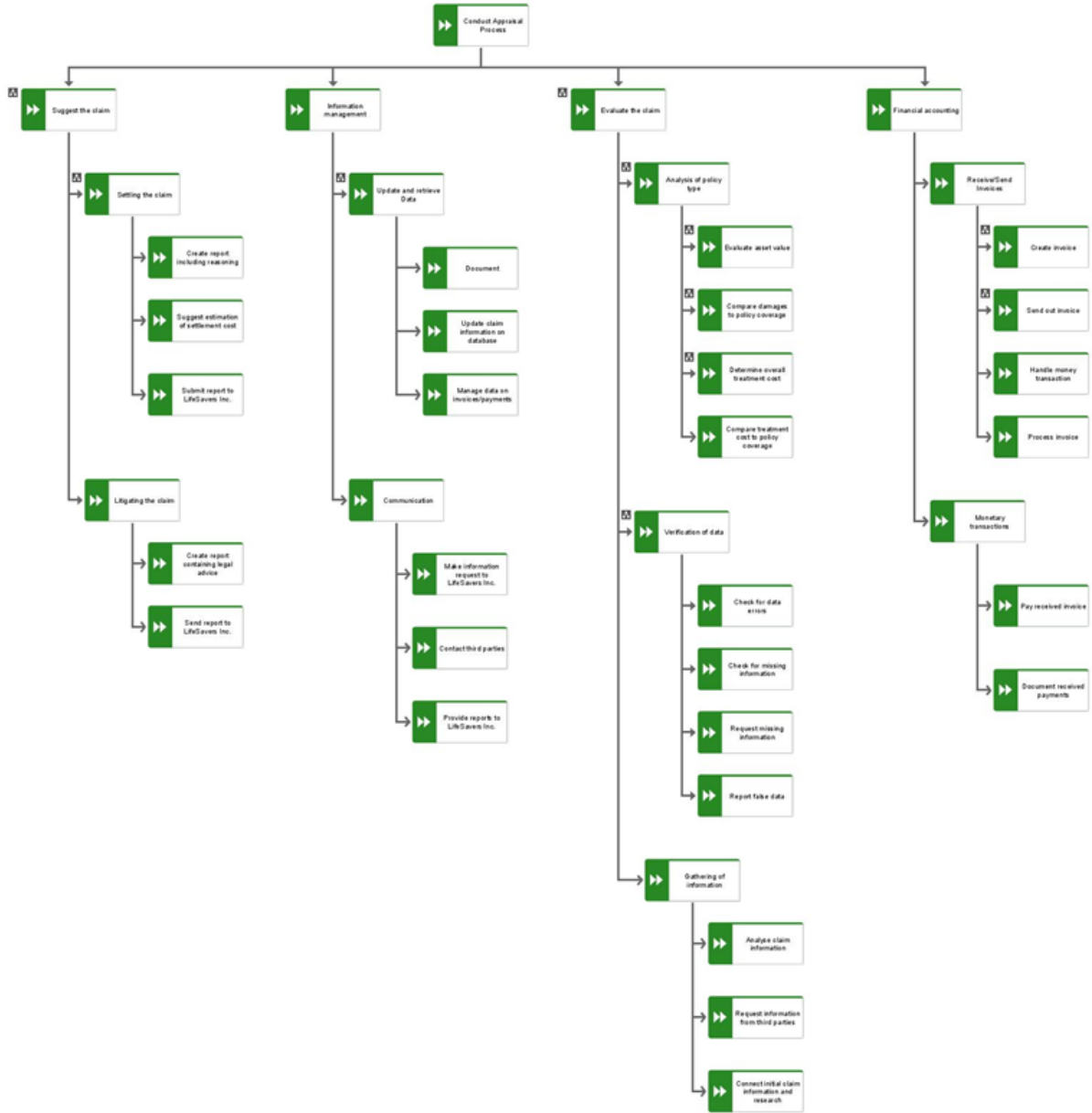


Figure 10. Final Function Tree

5 Inter-organizational Processes

Chapter 5 focuses on business collaboration between IAP AG and LifeSavers, Inc. The following section gives a verbal description of the inter-organizational processes that span over both companies as well as the costumers and external partners. Chapter 5.2 depicts this process using an E-Business scenario. Section 5.3 closes the chapter with the service and interoperability agreement that both companies negotiated, and that builds the legal framework under which the business collaboration will be executed.

5.1 Process Description

The inter-organizational process starts with LifeSavers, Inc.'s client who makes a claim. To do so, the client sends the request per mail as well as with scanned documents. A representative of LifeSavers collects the information of the claim and forwards the data and the records along with the official request to IAP AG. For this purpose, a security protocol is used to guarantee maximum security of this sensitive information and data. IAP AG starts the evaluation process with the verification of the received data. After the data is verified, the contract type is analyzed to clarify the further processing of the claim. In the next step, the asset value is evaluated, and the overall treatment cost is determined in case of a health insurance claim. This determination is handled by an outside expert that will be contacted via e-mail. The received information from this interaction is used to update the database. In the case of a vehicle or homeowners' policy, the reported damage is compared to the coverage of the policy in question. Based on this calculation and assessment, a suggestion for the claim is made which can either be a suggestion to settle or to litigate the claim. This client decision, along with the necessary data concerning the decision, is bundled to an appraisal report that is transmitted to LifeSavers, Inc. via e-mail. In the case that additional information was found during IAP AG's assessment and decision-making process, this data is forwarded to IAP AG by LifeSavers, Inc. IAP AG then processes the received information and reanalyzes the contract and the decision to prepare a second and final report. LifeSavers, Inc. communicates the appraisal decision to its customer, which can decide regarding the offer. LifeSavers, Inc. will then process the answer from its customer and initiate the payment process to IAP AG based on an invoice sent by IAP AG. Based on the response by the customer, LifeSaver, Inc. can decide to either pay the client or to enter a litigation process.

5.2 E-Business Scenario

The inter-organizational business process was transformed into an E-Business Scenario to visualize the concept more clearly and to serve as an overarching model for the formulation of IAP AG's organizational processes. Each business process in the E-Business Scenario is linked to an EPC model of the individual process. The EPC structure of IAP AG's inner-organizational operations will be shown in chapter 7.2. This section will show the development of the final version of the E-Business scenario from a first draft to the single remodeled and adapted version. These changes had to be conducted over the course of the project as results of modifications to the base processes of both companies. Figure 11 shows the first draft of the e-Business Scenario made for Milestone 3. In this Scenario, the functions of LifeSavers Inc. were modeled by our team since the American team provided a stable Scenario after Milestone 5.

The e-Business Scenario is a detailed model based on the Function Tree. It contains every function of the Function Tree and further information relating to the flow of documents and the attribution of roles to specific functions. **Document** will be used for sending and receiving information outside of the company. For the activity inside the company, **Intranet** will be used for exchanging the data between the employees. After every process, the intranet data will be updated, which can be seen in the EPC Models. The **Security Protocol** will be used for every document that enters or leaves the company. Due to the changes in the Function Tree, the e-Business Scenario was also modified.

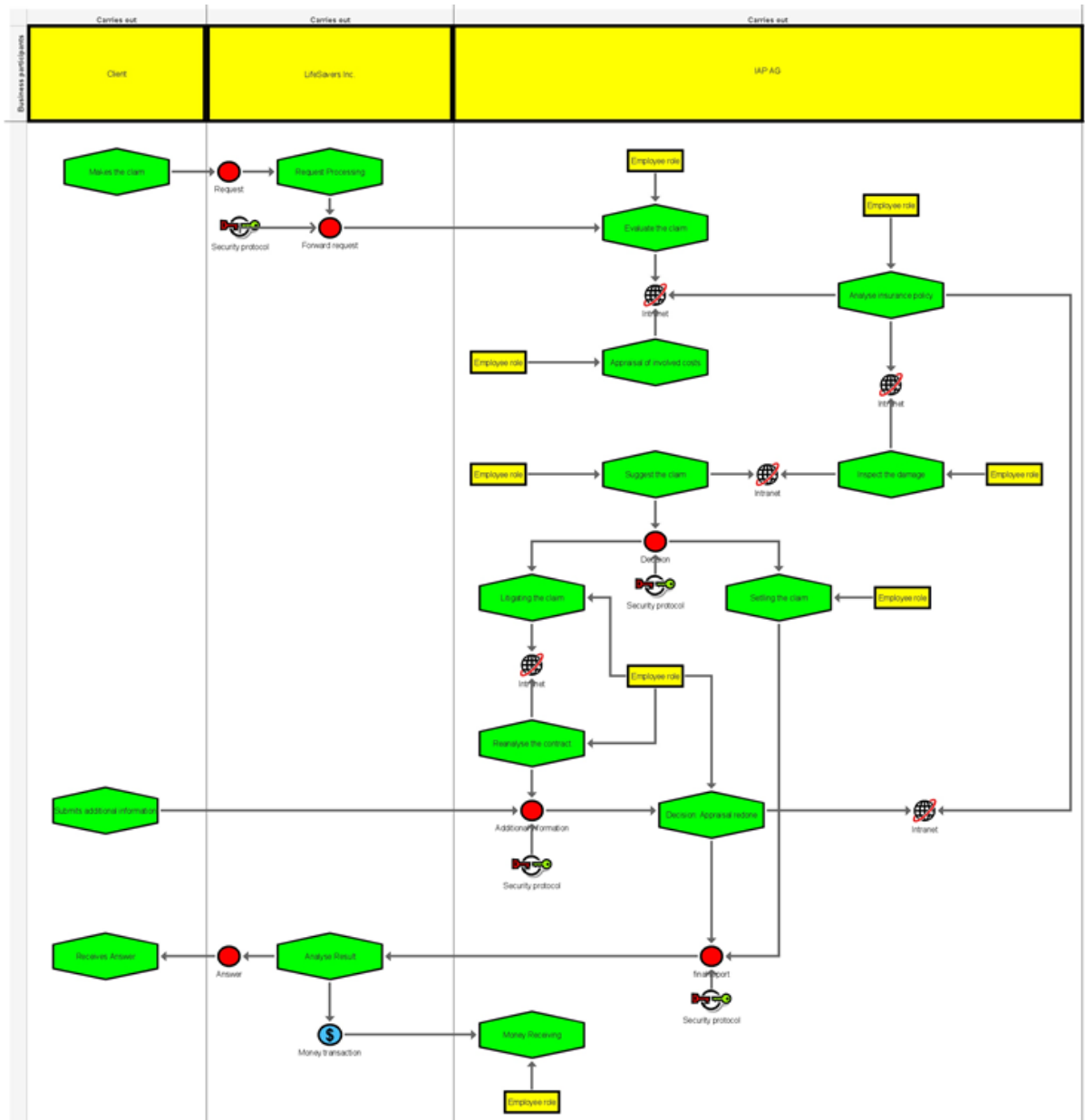


Figure 11. e-Business Scenario M3

Figure 12 shows the e-Business Scenario after the first change of the Function Tree for

Milestone 4. Further, employee roles have been removed. After the presentation on Milestone 3, it turned out that the **Money Receiving** function in the Scenario must be more specific concerning creating the invoice and receiving the money.

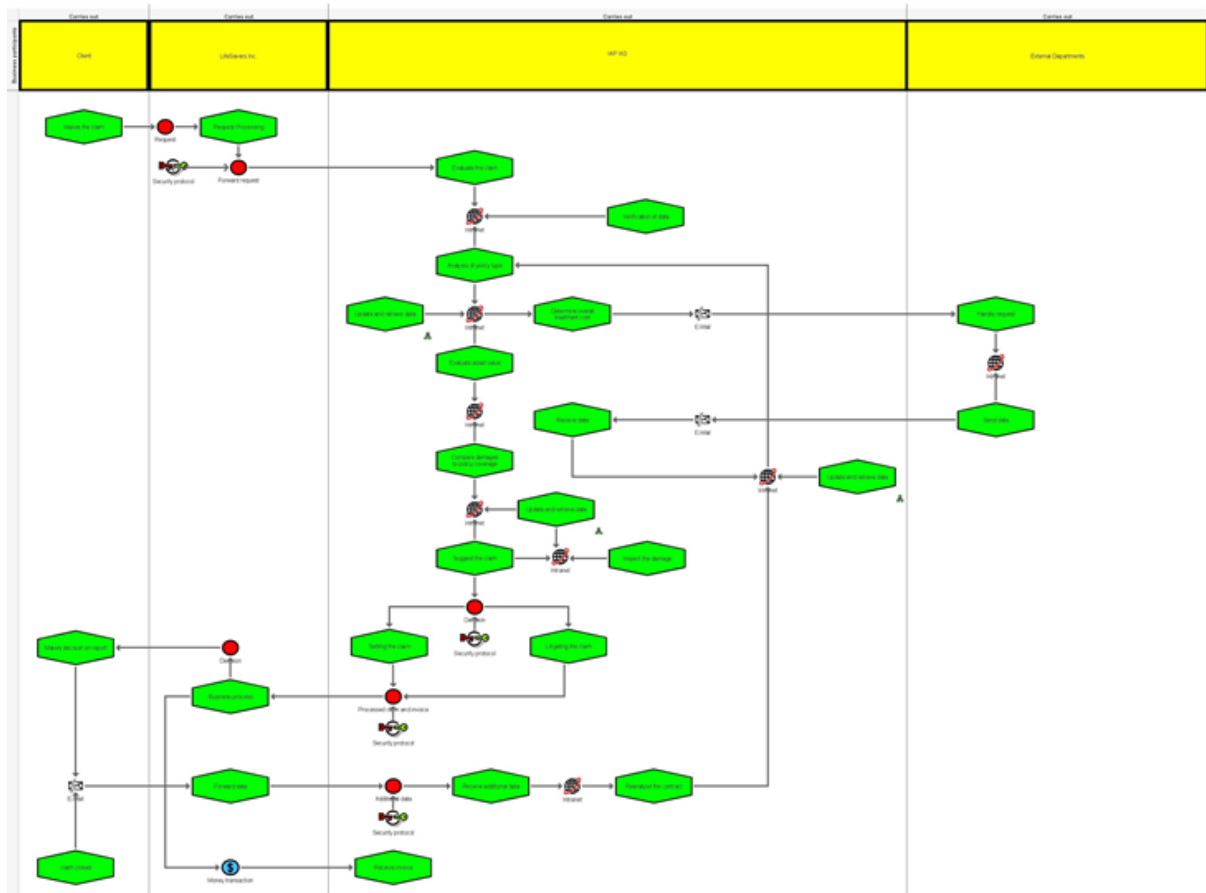


Figure 12. e-Business Scenario M4

The money handling from and invoice sending to LifeSavers Inc. has been further elaborated concerning the finalization of the e-Business Scenario. Figure 13 shows the presented e-Business Scenario on behalf of Milestone 5.

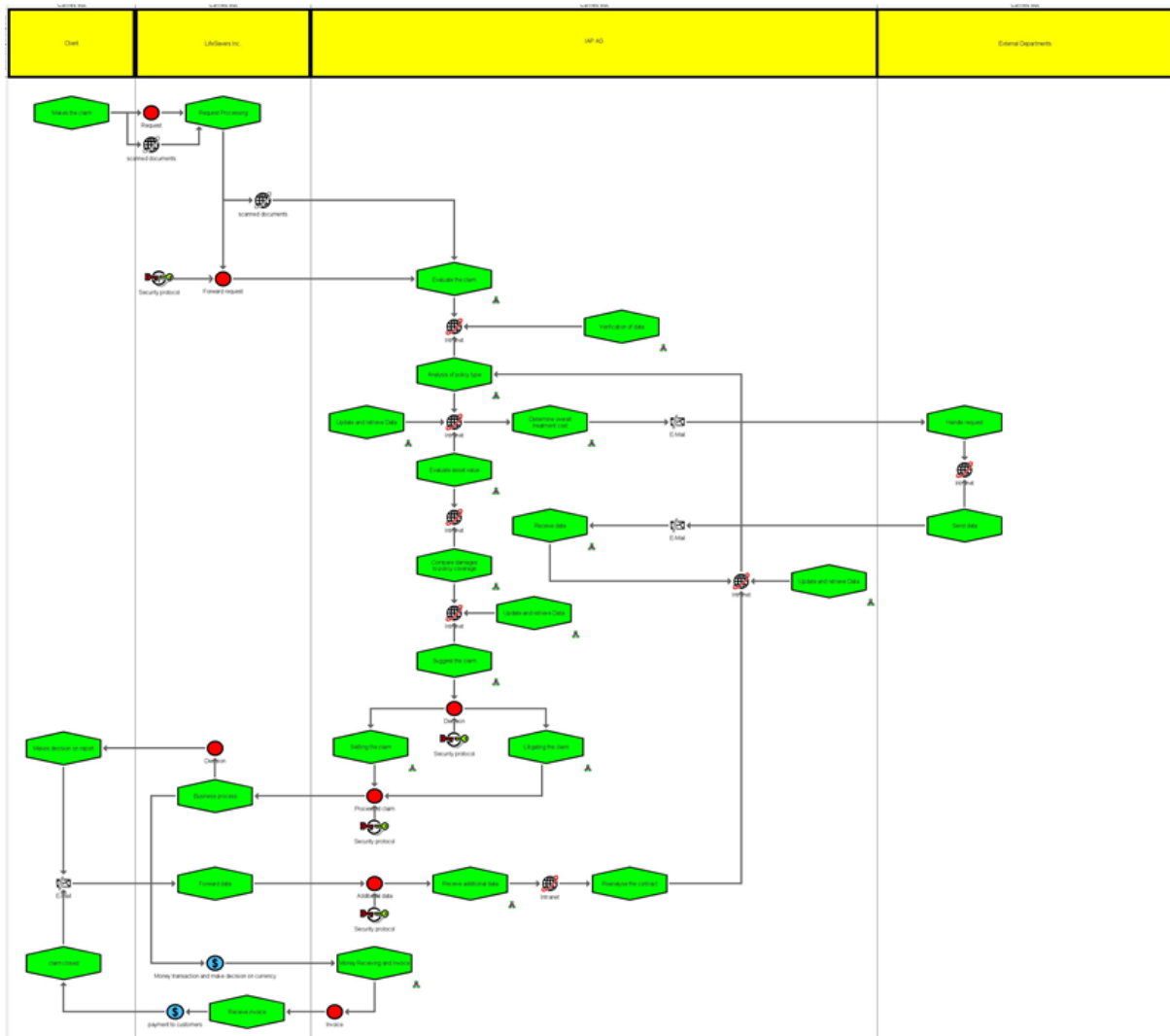


Figure 13. e-Business Scenario M5

Since LifeSavers, Inc. changed the finalized e-Business Scenario concerning their functions, the Scenario was partly changed. Figure 14 provides the finalized e-Business Scenario for IAP AG and LifeSavers, Inc.

aspects such as compensation, the terms of the agreement, dispute resolution and the obligations of both parties.

Service and Interoperability Agreement

Between

LifeSavers, Inc., One University Pl, Chester, PA 19013, USA

And

IAP AG, Stuhlsatzenhausweg 3, 66123 Saarbrücken, Germany

1. LifeSavers, Inc. is of the opinion that IAP AG is qualified and able to provide services to LifeSavers, Inc.
2. IAP AG is agreeable to provide services to LifeSavers, Inc. based on the terms and conditions set out in this Agreement.

Services provided

3. LifeSavers, Inc. hereby agrees to engage IAP AG to provide LifeSavers, Inc. with the following services:
 - (a) Verification of data
 - i. Identification of data errors
 - ii. Identification of missing information
 - iii. Reporting of false data/breach attempts
 - (b) Evaluation of insurance claims
 - i. Evaluation of asset values
 - ii. Determination of treatment costs
 - iii. Comparison of damages to policy coverage
 - iv. Comparison of treatment cost to policy coverage
 - (c) Gathering of information
 - i. Analysis of claim information
 - ii. Request of information from third parties
 - iii. Connection of initial claim information and research
 - (d) Recommendations about insurance claims

- i. Recommendation of settlement or litigation
 - ii. Creation of detailed report about decision-making
 - iii. Estimation of settlement costs and legal advice
4. The services will also include any other tasks on which the parties agree. IAP AG hereby agrees to provide such services to LifeSavers, Inc.

Terms of Agreement

5. The terms of this agreement will begin on the date of this agreement and will remain in force and effect indefinitely until terminated as provided in this agreement.
6. If either party wishes to terminate this agreement, that party will be required to provide 90 days' notice to the other party.
7. Except as otherwise provided in this agreement, the obligations of IAP AG will end upon the termination of this agreement.

Performance

8. The parties agree to do everything necessary to ensure that the terms of this agreement take effect.

Compensation

9. For the services rendered by IAP AG as required by this agreement, LifeSavers Inc. will provide compensation to IAP AG as follows:
 - LifeSavers Inc. will pay IAP AG per appraisal process. Each appraisal process has its own costs and IAP AG agrees to inform LifeSavers Inc. of the involved costs when providing the final report of an appraisal process and LifeSavers Inc. agrees to pay the total amount when the final report and the invoice are received.
10. The above compensation includes all applicable sales tax and fees as required by law.

Currency

11. Except as otherwise provided in this agreement, all monetary amounts referred to in this agreement are in US Dollars (USD).

Confidentiality

12. Confidential information refers to any data or information relating to the business of LifeSavers Inc., as well as to data or information surrounding the appraisal processes of LifeSavers, Inc.'s clients where the release or loss of that confidential information could reasonably be expected to cause harm to LifeSavers, Inc. or its clients.

13. IAP AG agrees that they will not disclose, divulge, reveal, report or use, for any purpose, any confidential information which IAP AG has obtained, except as authorized by LifeSavers, Inc. This obligation will survive indefinitely upon termination of this agreement.
14. All written and oral information and material disclosed or provided by LifeSavers, Inc. to IAP AG under this agreement is confidential information regardless of whether it was provided before or after the date of this agreement or how it was provided to IAP AG.

Return of Property

15. Upon the expiry or termination of this agreement, IAP AG will return to LifeSavers, Inc. any property, documentation, records, or confidential information, which is the property of LifeSavers, Inc.

Capacity/Independent Contractor

16. In providing the services under this agreement it is expressly agreed that IAP AG is acting as an independent contractor and not as an employee. IAP AG and LifeSavers, Inc. acknowledge that this agreement does not create a partnership or joint venture between them and is exclusively a contract for service.

Notice

17. All notices, requests, demands and other communication required or permitted by the terms on this agreement will be given in writing and delivered to the parties of this agreement as follows:
 - Document exchanges will be transmitted via e-mail and as scanned physical documents.
 - Data exchanges will be transmitted in standardized XML formats. These formats are agreed upon by both parties and contain claim information and contract details as well as necessary customer data.

Dispute Resolution

18. In the event a dispute arises out of or in connection with this agreement, the parties will attempt to resolve the dispute through friendly consultation.
19. If the dispute is not resolved within a reasonable time period, then any or all outstanding issues may be submitted to mediation in accordance with any statutory rules of mediation. If mediation is unavailable or is not successful in resolving the entire dispute, any outstanding issues will be submitted to final and binding arbitration in accordance with the laws of the State of Pennsylvania. The arbitrator's

award will be final, and judgement may be entered upon it by any court having jurisdiction within the State of Pennsylvania.

20. The parties hereby agree to submit to the exclusive jurisdiction of the courts of the state of Pennsylvania.

Modification of Agreement

21. Any amendment or modification of this agreement or additional obligation assumed by either party in connection with this agreement will only be binding if evidenced in writing signed by each party or an authorized representative of each party.

Assignment

22. IAP AG will not voluntarily or by operation of law assign or otherwise transfer its obligations under this agreement without the prior written consent of LifeSavers, Inc.

Entire Agreement

23. It is agreed that there is no representation, warranty, collateral agreement or condition affecting this agreement except as expressly provided in this agreement.

Governing Law

24. It is the intention of the parties to this agreement that this agreement and the performance under this agreement, and all suits and special proceedings under this agreement, be construed in accordance with and governed, to the exclusion of the law of any other forum, by the laws of the State of Pennsylvania, without regard to the jurisdiction in which any action or special proceeding may be instituted.

Severability

25. If any of the provisions of this agreement are held to be invalid or unenforceable in whole or in part, all other provisions will nevertheless continue to be valid and enforceable with the invalid or unenforceable parts severed from the remainder of this agreement.

Waiver

26. The waiver by either party of a breach, default, delay or omission of any of the provisions of this agreement by the other party will not be construed as a waiver of any subsequent breach of the same or other provisions.

In witness whereof the parties have caused this Business Agreement to be executed and delivered by their duly authorized representatives.

IAP AG

Signature and Date

LifeSavers, Inc.
Signature and Date

6 Data

The process of creating the necessary data structures and data exchange formats started with a written determination of the data that would be necessary for the inner- and inter-organizational business processes. These data needs were negotiated and agreed upon with the representatives of LifeSavers, Inc. These data served as the basis for the creation of the Entity-Relationship Model depicted in section 6.2. This ER-model shows the data structures that help the business processes between IAP AG and LifeSavers, Inc. To optimize data processing during the information exchange, both companies agreed on specific data exchange formats, which are XML-based. There are two formats. One is designed for the initial data exchange regarding an appraisal claim. The second format is supposed to serve in cases where additional data needs to be transferred. This format is shorter to reduce the necessary data storage space and to increase focus on the essential pieces of information.

6.1 Data Needs

- **Customer Data (Insurance Policy number, Name, DOB, contract number, etc.):** needed for identification of customer
- **Customer claim:** builds the information basis for the further processing of the case
House insurance: property certificate, owner ID, etc. Health insurance: Social Security Number (necessary for eligibility assessment in cases where customer is also eligible for state-subsidised treatment options) Vehicle insurance: auto registration information, driver information, etc.
- **Additional claim information, such as police report or property value estimation:** An official mandate will be received from LifeSavers Inc. in order to retrieve the necessary information from public/third parties.
 - Evidence of a claim may include the following:
 - * Health insurance – receipts and reports from doctors and/or a medical facility
 - * Homeowner's insurance – photos of damage and/or a receipt(s) for emergency work already performed

- * Vehicle insurance – photos of damage, a police report and receipts from doctors and/or a medical facility

6.2 Entity Relationship Model

A first draft of the Data Model (ERM) was prepared for Milestone 5. Figure 15 shows this draft. The Attributes are primary keys for each Entity.

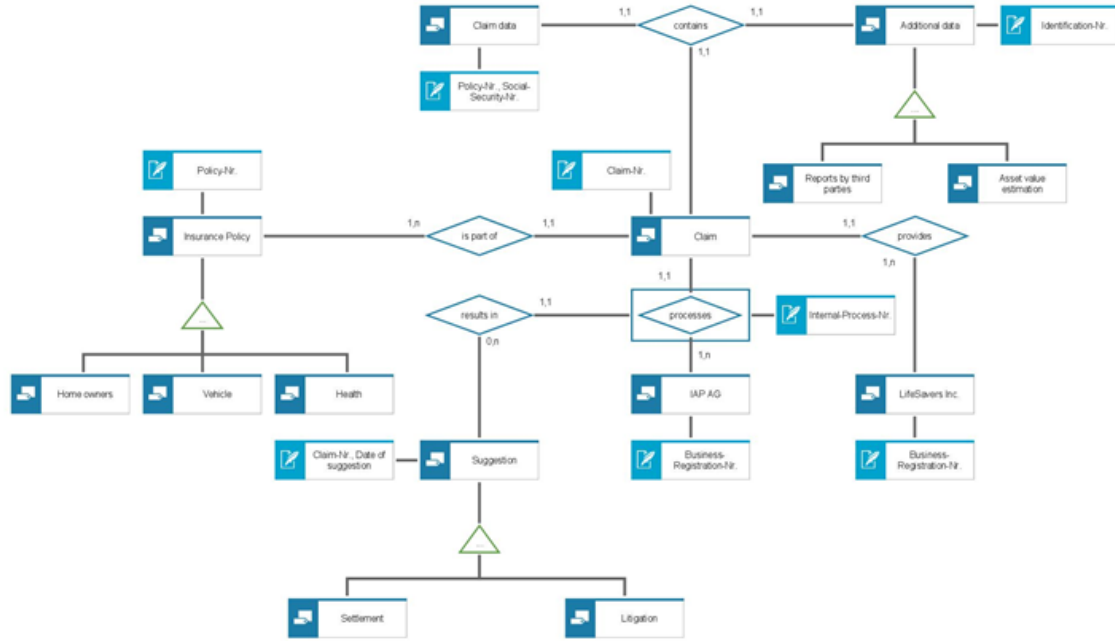


Figure 15. eERM (M5)

This ERM draft consists of instances (IAP AG, LifeSavers Inc.) which had been annotated in the discussion panel after the presentation. On this behalf, the ERM has been finalized by changing the instances into types. Note that the instance 'IAP AG' was modified to the type 'Analysts' instead of 'Insurance Companies' because only IAP AG as an Insurance Company is intended. Further, the cardinalities of 'Claim,' 'Additional Data' and 'Claim data' has been modified. Figure 16 shows the finalized Data Model, which was presented on behalf of Milestones 6, 7.

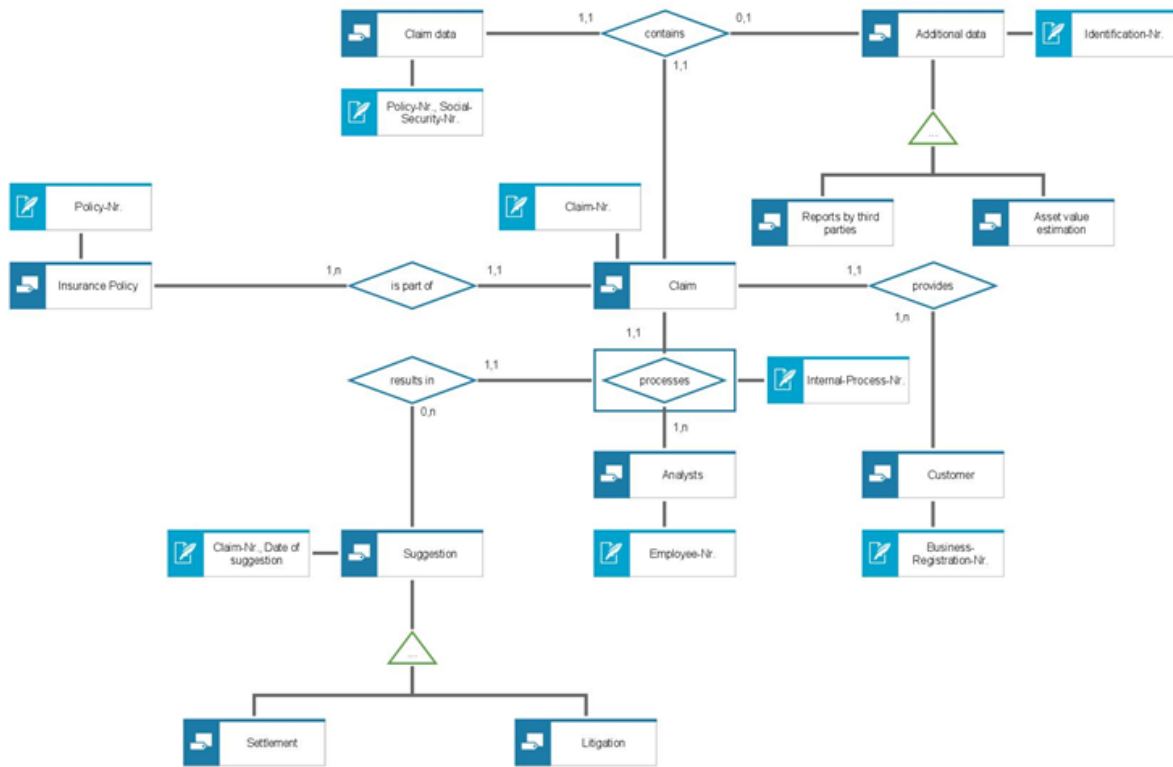


Figure 16. Final eERM

6.3 Data Exchange Formats

Parallel to the Data Model, the exchange format was developed. XML is used for the exchange format.

```

<application_form>
  <date>26 mar 2019</date>
  <application_completed_by>LifeSavers Insurance Inc.</application_completed_by>
  <customer_identification_data>
    <insurance_policy_number>HK789</insurance_policy_number>
    <name_of_the_policy_holder>Mr. Robertson</name_of_the_policy_holder>
    <date_of_birth>26th Mar 1970</date_of_birth>
    <contact_number>+491700000000</contact_number>
    <address>Kaiserstraße 77, Saarbrücken
    <state>Saarland</state>
    <postcode>66125</postcode></address>
  </customer_identification_data>
  <customer_data>
    <house_insurance>
      <property_certificate>attached</property_certificate>
      <owner_id>T8000</owner_id>
    </house_insurance>
    <health_insurance>
      <social_security_number>445 5558 558</social_security_number>
    </health_insurance>
    <vehicle_insurance>
      <auto_registration_information>attached</auto_registration_information>
      <driver_information>attached</driver_information>
    </vehicle_insurance>
  </customer_data>
  <claim_details>
    <description_of_claim>Car accident. High Damage, need to repair everything.</description_of_claim>
  </claim_details>
  <additional_information>
    <third_party_details>XY Company, Saarbrücken Hbf 69656, Saarbrücken, Mob: +49174562123</third_party_details>
  </additional_information>
</application_form>

```

Figure 17. Exchange_Format.xml:

This format was presented in the presentation of Milestone 5. After the presentation, the question was raised whether the company (IAP AG) wants to steadily transmit/exchange the complete information of a claim/process. On this comment, the XML was split into one main format (application_form) and one exchange format just for additional information if a claim has to be reprocessed (additional_data). The following two XML formats show the finalized exchange formats.


```

<application_form>
  <date>26 mar 2019</date>
  <application_completed_by>LifeSavers Insurance Inc.</application_completed_by>
  <customer_identification_data>
    <insurance_policy_number>HK789</insurance_policy_number>
    <name_of_the_policy_holder>Mr. Robertson</name_of_the_policy_holder>
    <date_of_birth>26th Mar 1970</date_of_birth>
    <contact_number>+491700000000</contact_number>
    <address>Kaiserstraße 77, Saarbrücken
    <state>Saarland</state>
    <postcode>66125</postcode></address>
  </customer_identification_data>
  <customer_data>
    <house_insurance>
      <property_certificate>attached</property_certificate>
      <owner_id>T8000</owner_id>
    </house_insurance>
    <health_insurance>
      <social_security_number>445 5558 558</social_security_number>
    </health_insurance>
    <vehicle_insurance>
      <auto_registration_information>attached</auto_registration_information>
      <driver_information>attached</driver_information>
    </vehicle_insurance>
  </customer_data>
  <claim_details>
    <description_of_claim>Car accident. High Damage, need to repair everything.</description_of_claim>
  </claim_details>
</application_form>

```

Figure 18. Application_Form.xml: (M6)

```

<additional_data>
  <date>26 mar 2019</date>
  <application_completed_by>LifeSavers Insurance Inc.</application_completed_by>
  <customer_data>
    <house_insurance>
      <property_certificate>attached</property_certificate>
      <owner_id>T8000</owner_id>
    </house_insurance>
    <health_insurance>
      <social_security_number>445 5558 558</social_security_number>
    </health_insurance>
    <vehicle_insurance>
      <auto_registration_information>attached</auto_registration_information>
      <driver_information>attached</driver_information>
    </vehicle_insurance>
  </customer_data>
  <additional_information>
    <third_party_details>XY Company, Saarbrücken HBf 69656, Saarbrücken, Mob: +49100110101</third_party_details>
  </additional_information>
</additional_data>

```

Figure 19. Application_Form.xml: (M6)

7 Business Process

Chapter 7 deals with the inner-organizational business processes owned by IAP AG. Section 7.1 gives a written description of the main business process necessary to handle the business relationship with LifeSavers, Inc. This process as well as all the subprocesses are depicted as event-process chains in chapter 7.2.

7.1 Business Process Description

The primary business process that centers the inner-organizational business activities of IAP AG is called 'Analyze contract'. After the appraisal information is received, analysts evaluate the claim information collected from IAP AG's intranet. After this initial evaluation, the data is verified by the administration department, which stores it in the intranet as well. If the data could not be verified, the communication support team contacts LifeSavers, Inc. to report the issue which will then be handled by LifeSavers, Inc. If the data could get verified, an accountant will determine the cost of the claim. Analysts will then check the policy type and evaluate the asset value. This evaluation is necessary for the following comparison of the damages to the policy coverage. Based on the result of this comparison, the analyst team will suggest the claim to either be litigated or settled. The communication support team sends this processed claim to LifeSavers, Inc., which will either accept the decision or deliver additional information. In this case, the new data will once again be evaluated by the analysts using the process described above. If LifeSavers, Inc. accepts the appraisal claim, the finance department will process a receipt which is the basis for the invoice that will then be sent out to LifeSavers, Inc., kicking off the payment process.

7.2 EPC Models

The EPCs were modeled between Milestone 4 and 7. The EPCs cover the functions of the e-Business Scenario. There has been one connected EPC created, that includes the whole process of the IAP AG and is based on the e-Business Scenario. Every function in this EPC has another detailed EPC. This connected EPC was the only one that has been modified during this course. Because of this, the changes in this EPC will be discussed first, and after that, the other EPCs will be documented.

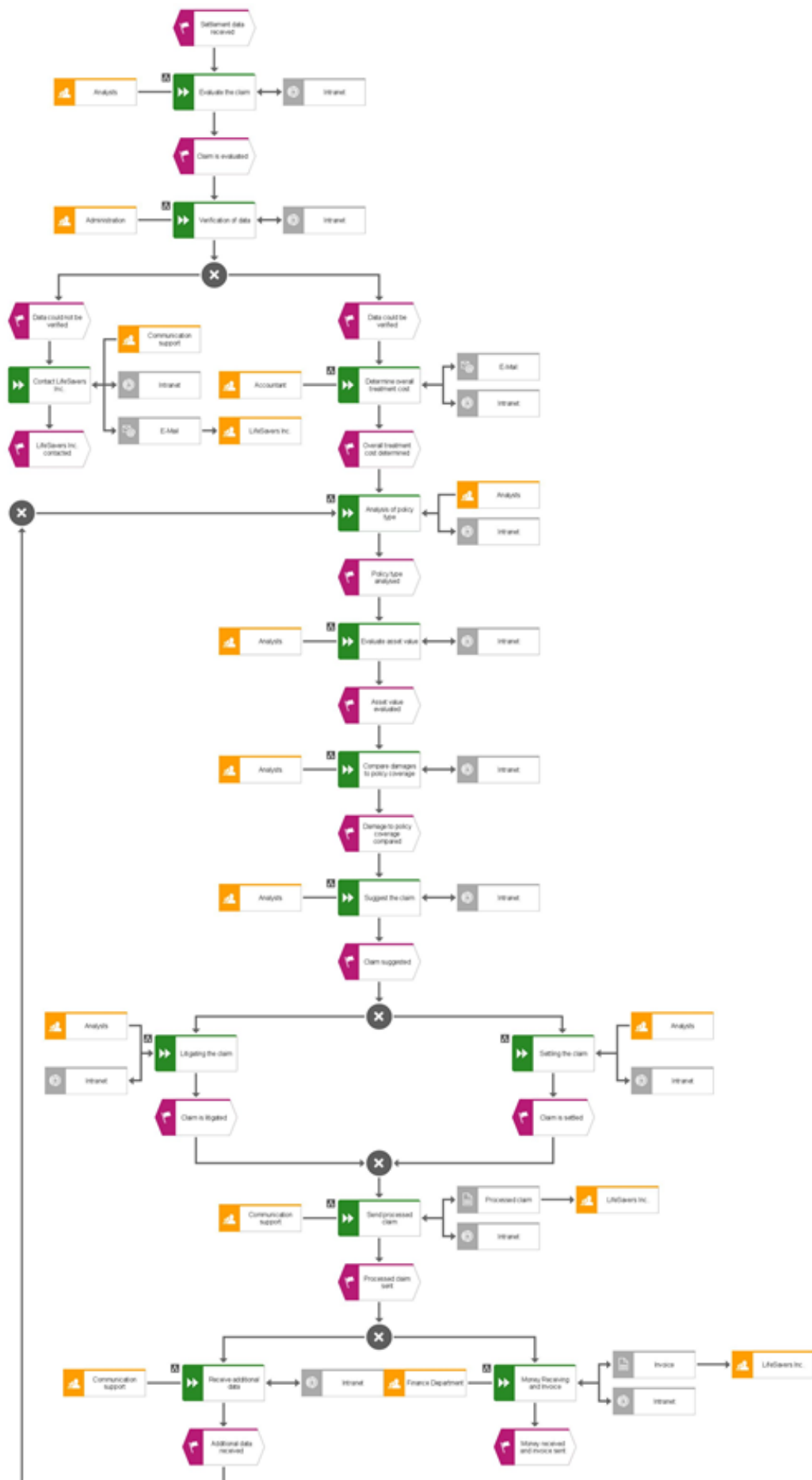


Figure 20. EPC Analyse Contract (M5)

Figure 20 shows the connected EPC presented on behalf of Milestone 5. After the presentation of this EPC, it was asked in the discussion panel if the process is finished after a failed data verification. Due to this fact, the EPC was finalized by creating an interface for handling this error to LifeSavers Inc. Additionally, the xor connector was removed, because it was recognized that the connector is not necessary since it is a normal process flow. Figure 21 shows the finalized connected EPC presented on behalf of Milestone 7. After this figure, the other 15 EPCs will be documented.

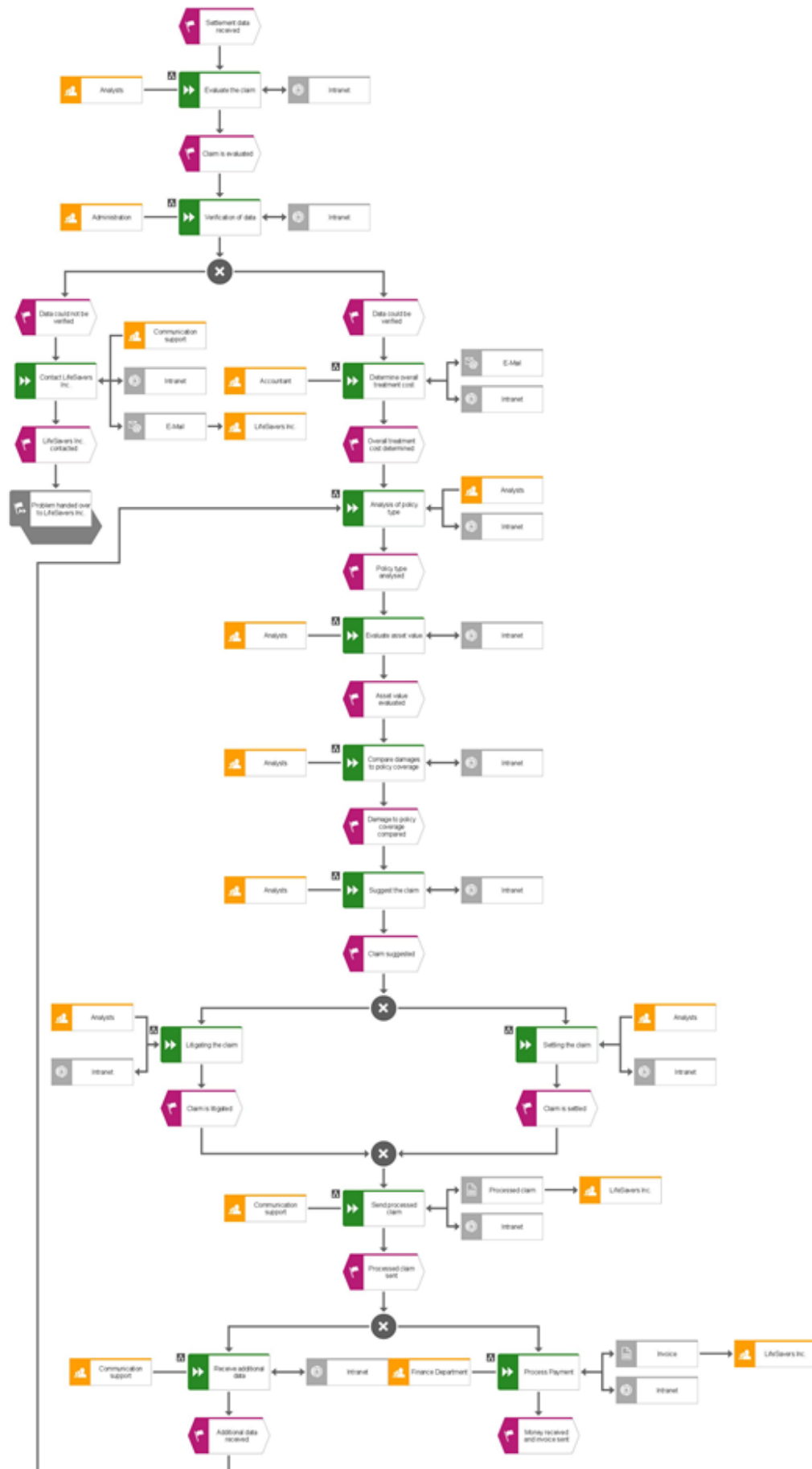


Figure 21. EPC

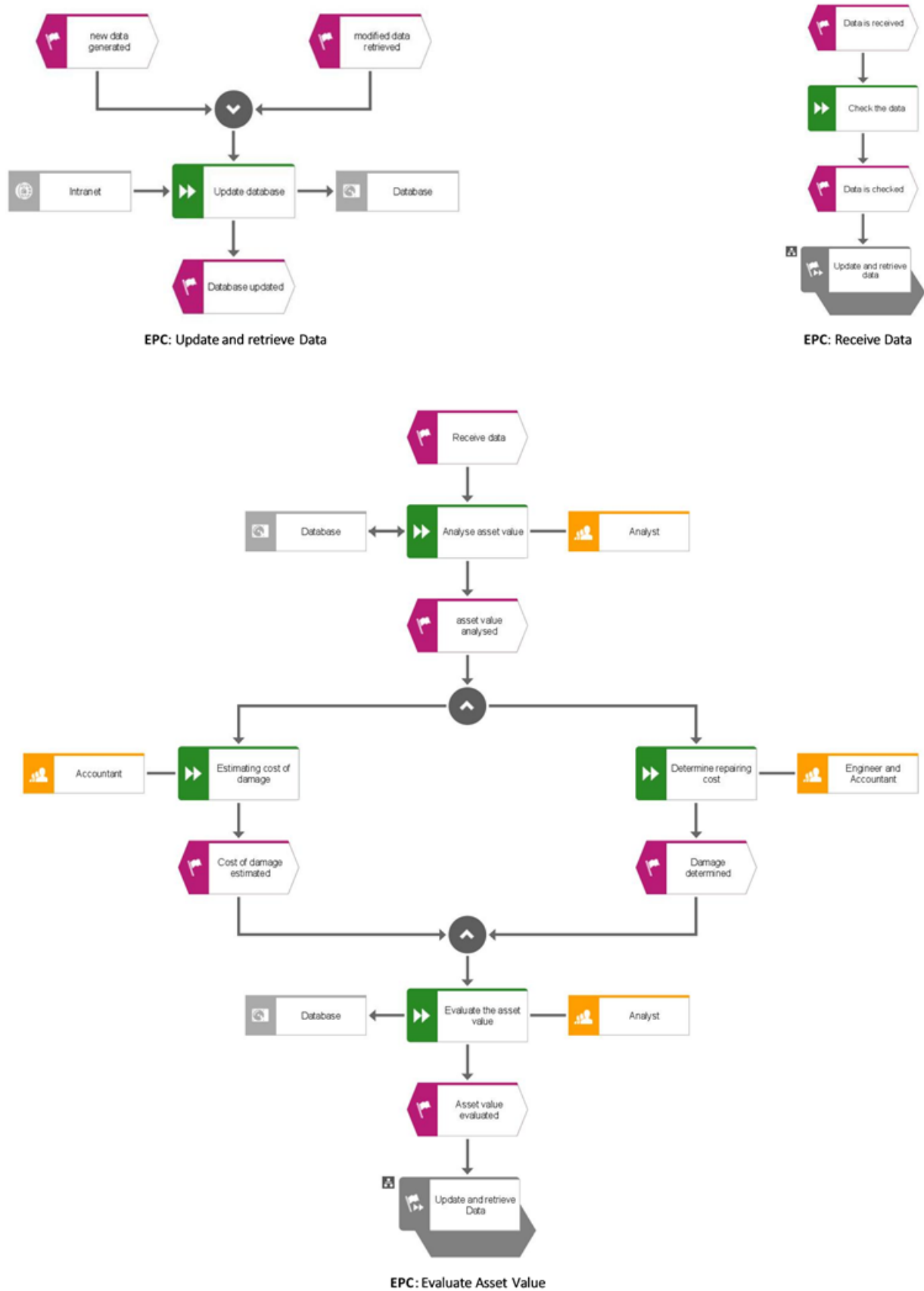
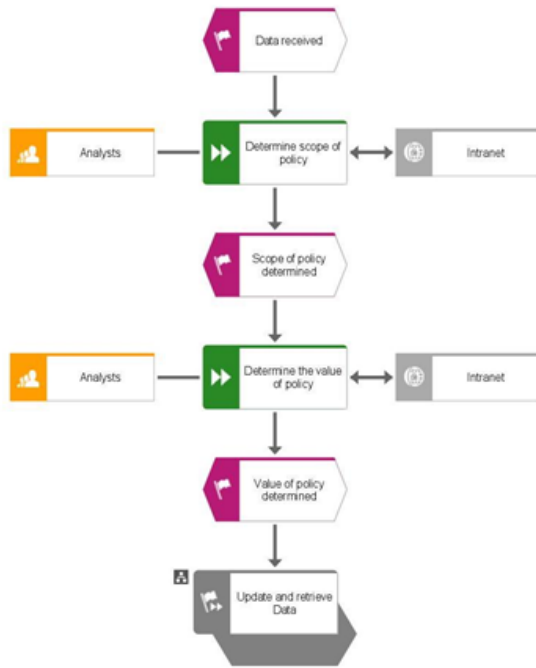
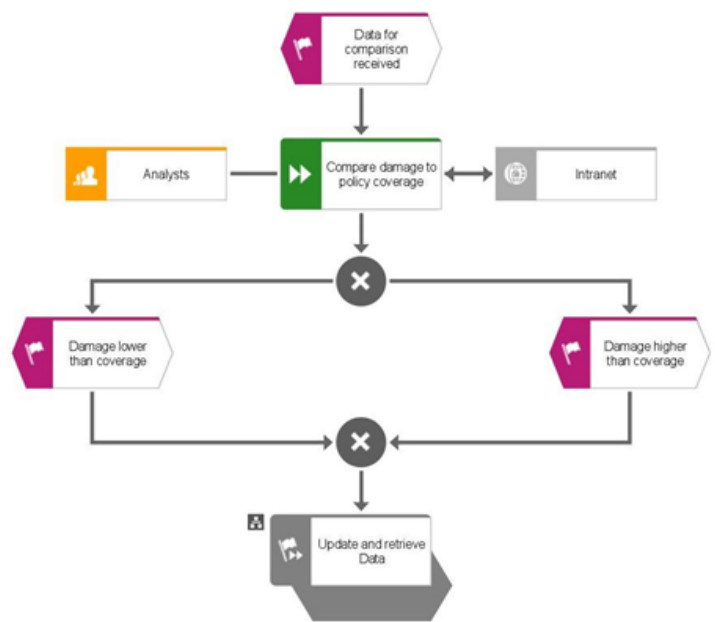


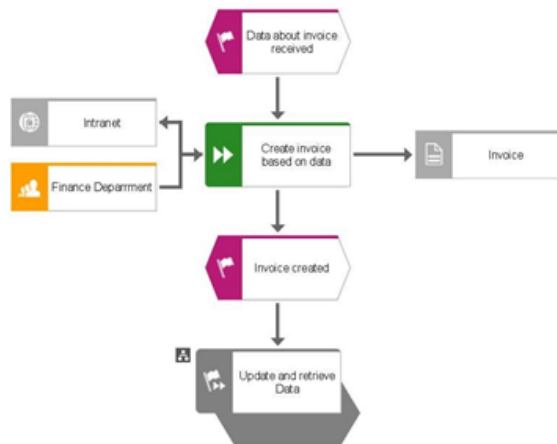
Figure 22. EPC



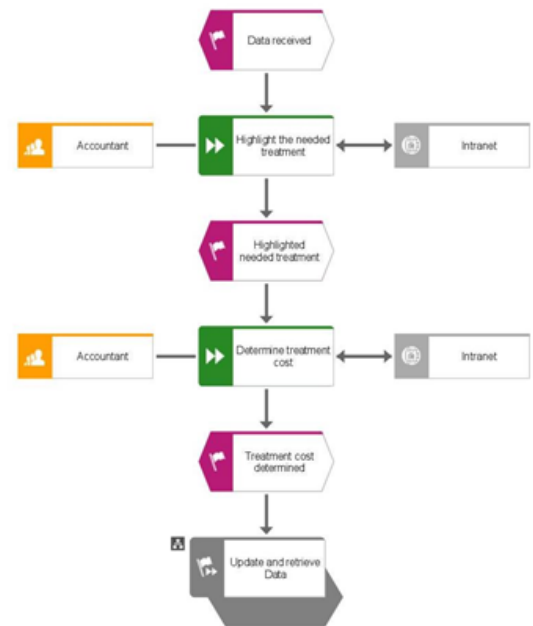
EPC: Analysis of Policy type



EPC: Compare damage to Policy coverage



EPC: Create Invoice



EPC: Determine overall treatment cost

Figure 23. EPC

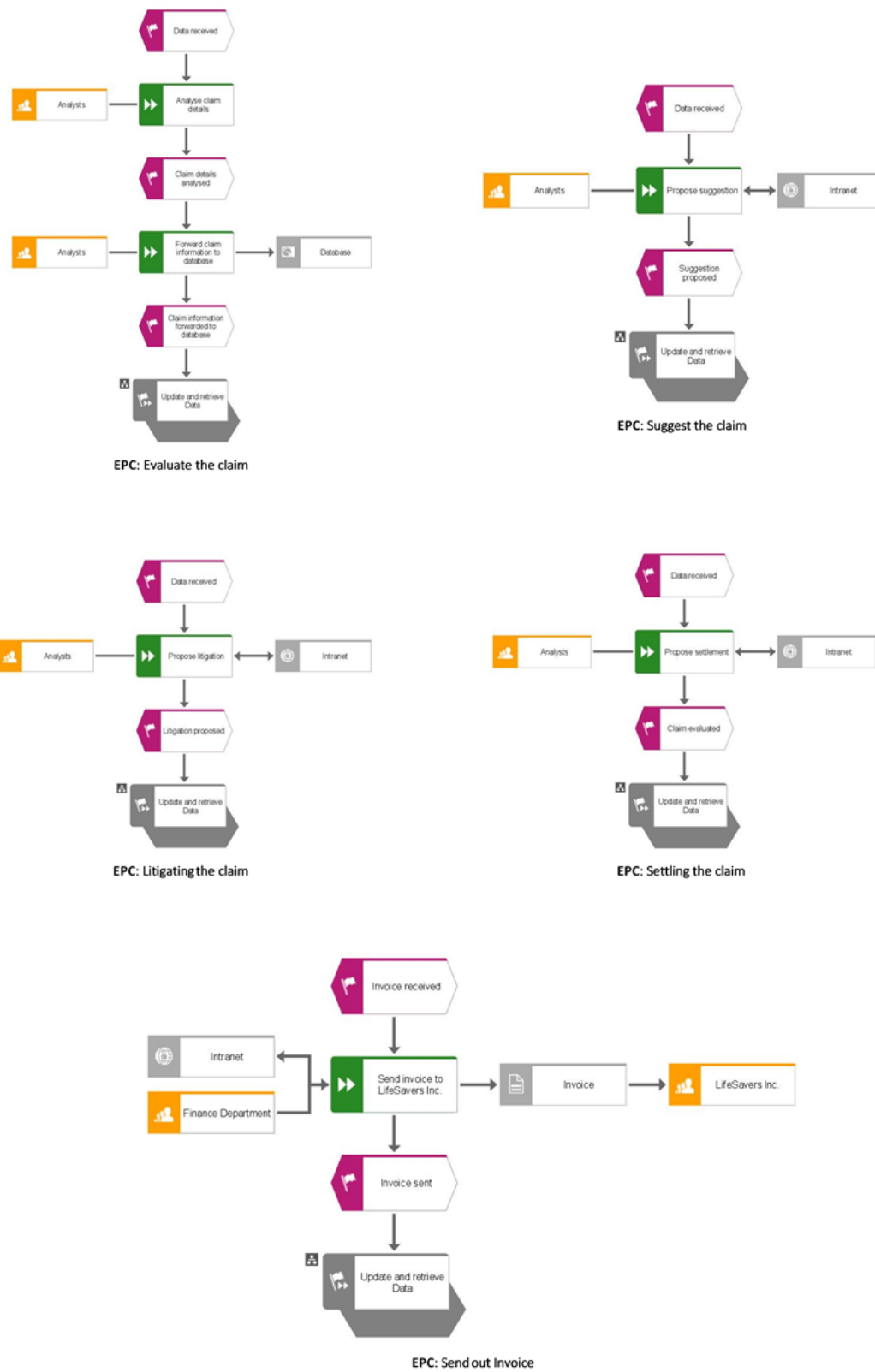
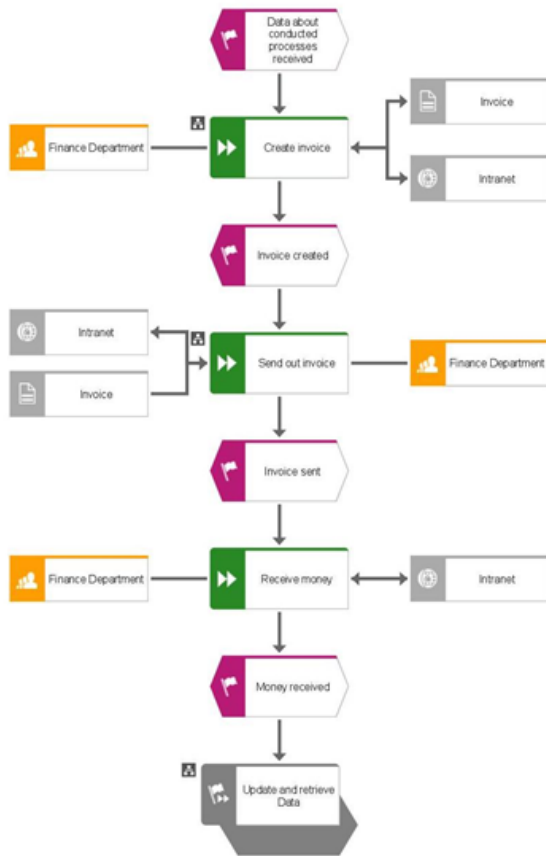
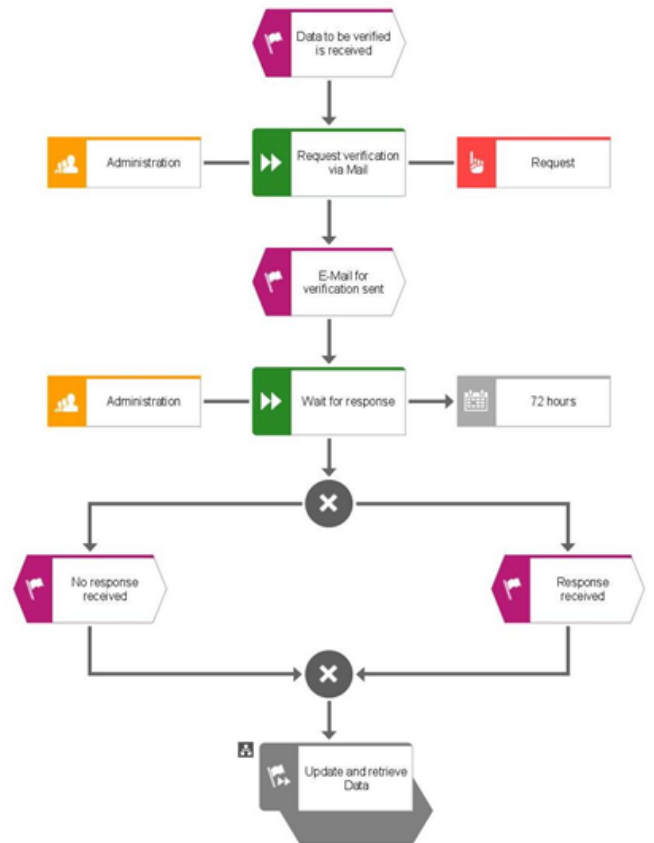


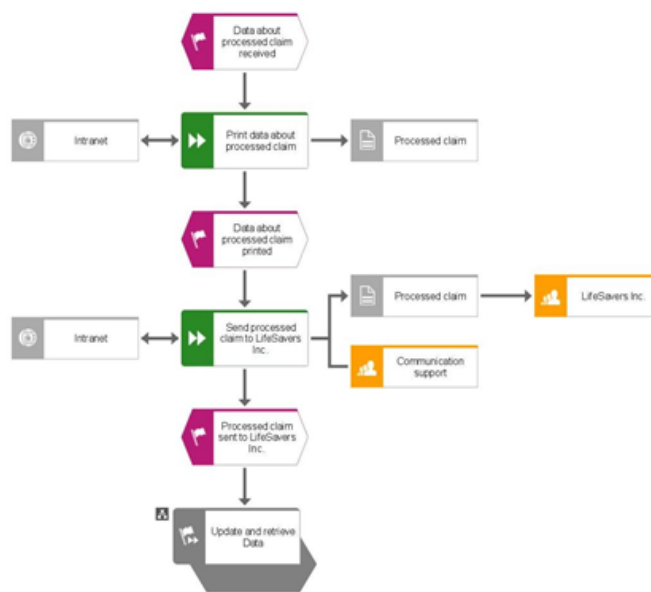
Figure 24. EPC



EPC: Process Payment



EPC: Verification of Data



EPC: Send processed claim

Figure 25. EPC

8 Implementation Plan

The following implementation plan was a direct result of our business planning and modeling activities mentioned in the previous chapters. The schedule and time frame of this document has been agreed upon with LifeSavers, Inc. to line up the progress towards the technical feasibility of the business relationship. Included in this plan is information concerning the topics of security, process details, measurements for the control of the implementation process as well as personnel, software, and hardware requirements. Furthermore, the implementation plan contains a prognosis regarding the financial development of the business venture.

Implementation plan IAP AG

8.1 Introduction

8.1.1 Purpose

The purpose of this plan is the implementation of a software and hardware architecture to support the business processes of IAP AG. This document is designed to assist the management of IAP AG as well as third parties involved in the building process with the intended system structure and necessary information for a successful finalization of the infrastructure necessary for IAP AG to begin operating the business relationship with LifeSavers, Inc. This document should be considered private and may only be shared with contacts outside of IAP AG with the expressed written consent of management, as the sharing of this information might result in security issues. This implementation plan includes detailed information about the nature and purpose of the implemented system, a description of the implementation strategy and management, a timetable for the organization of the implementation process as well as information about staffing and IT requirements. Furthermore, information about risk management and monitoring processes are provided. The intended impact of a successful implementation of this plan lies in the digitalization of the required process steps as well as in a reduction of errors in the workflow.

8.1.2 Business Process Overview

The main purpose of the system is the processing of insurance claims resulting from the business relationship between LifeSavers, Inc. and IAP AG. The intended functionality of the system matches the business functions related to the collaboration of the companies. IAP AG analyzes the customer's insurance policy and the appraisal of the involved costs.

After evaluating the claim, IAP AG makes suggestions about whether to settle the claim or litigate the claim. If a claim is litigated, IAP AG asks the insurance company to send the additional data for the customer. IAP AG starts analyzing the additional data and makes a new claim. If a claim is settled, the insurance company contact the customer and send the customer a check based on the estimated damages. IAP AG receives the claim and analyses the claim. After analyzing the claim, IAP AG starts evaluating the claim which includes comprehension of policy types, verification of data and gathering of information from third parties. IAP AG communicates with insurance companies and third parties via emails. IAP AG uses its own cloud and servers for exchanging data inside them. There are several departments in IAP such as Analysis, Finance or Admin/HR department. Analysis department handles the analysis of contracts and claims, they are assigned for claim evaluation. Finance department handles money exchanges such as the creation, sending and reception of invoices. The admin department communicates with the insurance companies and requests additional information if it is needed. Finally, IAP AG makes the decision about the claim and if necessary, processes the evaluation again based on additional data. At the end of the business process, IAP AG receives payment from the insurance company.

8.2 Management

8.2.1 Description of Implementation

IAP AG is dedicated to assist the insurance sector to operate more profitably by ensuring increased quality and efficiency in appraisals of claims. IAP has several managerial and sub managerial people and division. Such as,

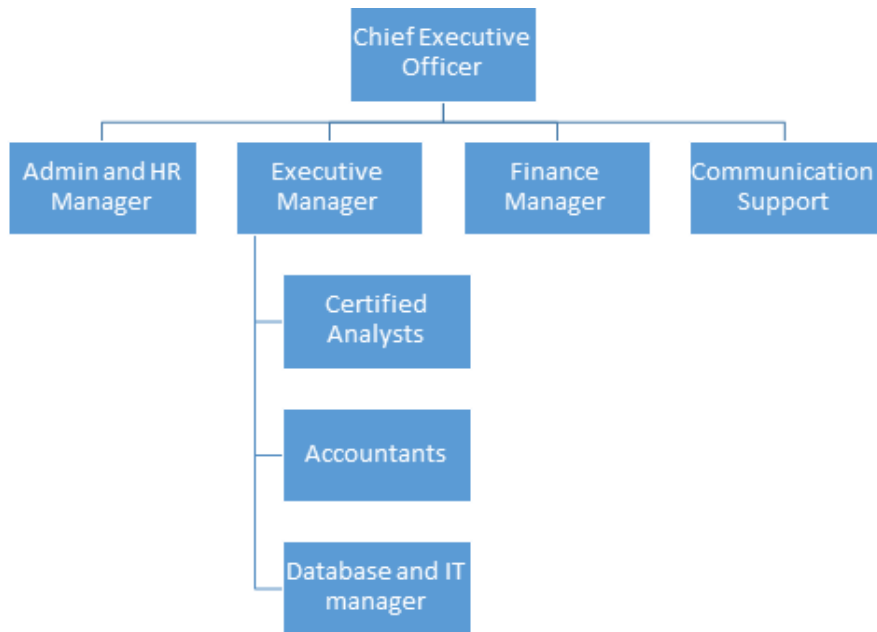


Figure 26. Managerial Division

8.2.2 Points of Contact

Role	Name	Contact Number
Chief Executive Officer (CEO)	Mr. ABCD	01700000000
Admin/Marketing Officer	Mr. EFGH	01700000000
Executive Manager	Mr. IJKL	01700000000
Lawyer	Mr. MNOP	01700000000
Finance Manager	Mr. QRST	01700000000
Analysts	Mr. UVWX	01700000000
Accountant Manager and Consulting Engineer	Mr. AVFG	01700000000
Database and IT Manager	Mr. QWSD	01700000000
Communication Support	Mr. ASDF	01700000000

Figure 27. Points of Contact

8.2.3 Major Tasks and Plan

The agency performs daily ongoing processes to ensure that the three main tasks are performed: processing claims, consultancy services and market researches. The cooperation between employees in a timely manner results in an efficient processing of each task. The detailed tasks and relevant responsibilities are presented in the below table.

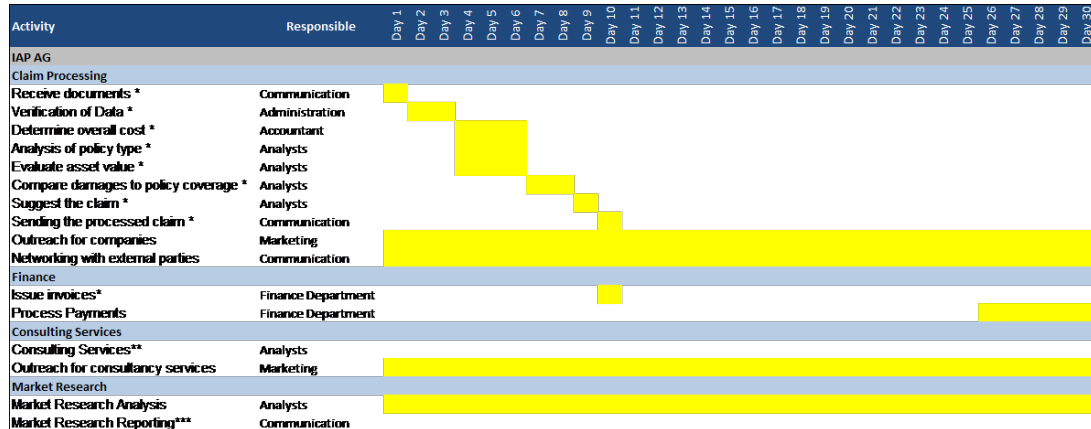


Figure 28. Major tasks and plan

* Shows implementation time for each claim

** Ongoing activity based on an agreement with the company

*** Preformed with the completion of research

8.2.4 Security and Privacy

One of the biggest challenges for IAP AG agencies is ensuring data privacy. All the data is protected using EU General Data Protection Regulation to protect our customers and their respective clients. To ensure the regulation is implemented, a data protection officer will work with the Database and IT Manager on data protection. As the agency will receive and send both electronically and hard copies, the officer will determine how the data is best stored, what is it used for and who within the agency has the right to access the data, and how long is it kept before being disposed. The security and privacy will be enhanced using data encryptions and control in access to the data through credentials.

8.3 Implementation

8.3.1 Phases of the plan

The following table describes each phase of the plan with an estimation of the needed time for implementation. It explains an example of how IAP AG processes a claim. The single steps can serve as a basis for the definition of modules to be implemented in a Workflow Management System.

<i><u>Task</u></i>	<i><u>Priority</u></i>	<i><u>Completed (%)</u></i>	<i><u>Status</u></i>	<i><u>Start Date</u></i>	<i><u>Estimated End Date</u></i>	<i><u>Assigned by</u></i>	<i><u>Note</u></i>
Understand the claim	medium	100	completed	01-Mar	02-Mar	ALL	****
Claim evaluation	high	100	completed	02-Mar	03-Mar	Analysts	****
Analyze policy	high	90	completed	03-Mar	04-Mar	Analysts	****
Evalute Asset Value	high	70	completed	04-Mar	05-Mar	Analysts	****
Compare damages	medium	100	completed	05-Mar	06-Mar	Analysts	****
Determine cost	high	80	completed	06-Mar	07-Mar	Analysts	****
Compare cost to policy coverage	medium	100	completed	15-Mar	16-Mar	Analysts	****
Data Varification	high	100	completed	16-Mar	17-Mar	Admin	****
Information Gathering	high	100	completed	17-Mar	18-Mar	Admin	****
Communication	high	100	completed	18-Mar	19-Mar	Admin	****
Contact LifeSavers	high	100	completed	25-Mar	30-Mar	Admin	****
Contact Third Party	high	100	completed	31-Mar	09-Apr	Admin	****
Suggest Claim	high	0	remaining	10-Apr	11-Apr	Analysts	****
Send Report	medium	0	remaining	11-Apr	12-Apr	Admin	****
Ask for additional data (if required)	medium	0	remaining	12-Apr	13-Apr	Admin	****
Update and retrieve Data	high	0	remaining	13-Apr	14-Apr	Admin	****
Send Final Report	high	0	remaining	14-Apr	15-Apr	Admin	****
Financial Accounting	high	0	remaining	15-Apr	16-Apr	Finance Manager	****
End the deal	medium	0	remaining	16-Apr	17-Apr	CEO	****

Figure 29. Each phase of plan

8.3.2 IT requirements

Hardware:

- Good set of computers (min. Core i3 3rd Generation)
- Server Equipment
- Good range Wi-Fi Router
- RFID system for recording of the working hours of the employees (in order to determine billing hours)

Software:

- Windows Operating System
- MS Office packages

- Internal Email medium
- Database storage (Oracle)
- Cloud service
- Work Flow Management System

8.3.3 Staff requirements

As we separated our work schedules among various specialties, a high specialization in the required tasks is achieved in order to minimize errors and to increase the speed of processes. The following table illustrates staff role and requirements.

Role name	Requirement
Analyst	M.Sc. in business informatics, 3 years work experience as an analyst, should have experience in MS package, Tableau.
Database and IT Manager	B.Sc. in informatics, 1 to 3 years work experience as DB or IT manager, should have knowledge on MS SQL, Oracle, Windows Server, knowledge on Linux.
Executive Manager	M.Sc. in business administration, 3 years work experience, should have worked within relevant fields.
Finance Manager	M.Sc. in Finance, 2 years work experience, should have knowledge on insurance policies.
Accountant Manager and Consulting Engineer	MBA or M.Sc. in accounting or operational engineering, 3 years work experience, should have experience in consulting.
Admin/Marketing Officer	MBA in Marketing or M.Sc. in Public Administration, 3 years work experience, experience in relevant fields.
Lawyer	LLM, must enroll as member of Bar Council, should have experience regarding insurance policies.

Figure 30. Staff Requirements

8.3.4 Training of Staff

The following table tells the required training of staff.

Role name	Training	Time (hour)
Analyst	Insurance Policy, IAP AG internal software, Advance Excel, Tableau.	60
Database and IT Manager	Insurance Policy, IAP AG internal software, Win Server, Cloud, Company's IT architecture.	60
Executive Manager	Insurance Policy, IAP AG internal software.	30
Finance Manager	Insurance Policy, IAP AG internal software.	30
Accountant Manager and Consulting Engineer	Insurance Policy, IAP AG internal software.	30
Admin/Marketing Officer	Insurance Policy, IAP AG internal software.	30
Lawyer	Insurance Policy, IAP AG internal software,	30

Figure 31. Training

8.3.5 Software Impact

A web-based database server will be maintained in order to track the work from a data perspective. Data elements for work tracking are the following.

- Date of discovery description
- Date of deliverable
- Date of validation
- Deadline of milestones
- Date of Approval
- Missing Days

8.3.6 Monitoring and Controlling

Following is a list of mechanisms that will be followed to track schedule.

- Contact weekly project status meeting with the team members and update MS project with undivided task process.
- Compare actual start date and planned start date.
- Use EVA (Earned Value Analysis) bi-weekly to progress qualitatively.

- The CEO will take special measure depending on the situation if any task or group of tasks slips for two consecutive weeks.
- The CEO will ensure that quality assurance measures are executed as planned.

8.3.7 Risk management

Two risks have been identified as described below

Risk_ID	Description	Probability	Impact
Risk_1	Problems in database storage can be happened.	30%	high
Risk_2	Communication can be delayed if insurance company doesn't reply in timely manner	70%	medium
Risk_3	Miscalculation of estimated damage can happen	50%	medium
Risk_4	Evaluation can be hampered if IAP AG received wrong data	10%	high
Risk_5	Delay of work can happen if employees don't have enough experience	25%	medium
Risks_6	Delay of work can happen if IAP AG doesn't have backup employees	30%	medium

Figure 32. Identifying Risks

8.3.8 Implementation metrics

The project plan collects following metrics data.

- Actual project completion time
- No. of missing information
- No. of pages in documentation
- No. of files
- Quantity of input and output information
- Time spent on each phase of task
- No. of deadlines successfully accomplished

8.3.9 Implementation time schedule

The following schedule is supposed to assist the process management of the implementation plan. The individual tasks lead up to the start of operations by IAP AG. The GANTT chart depicts this process graphically.

Task Name	Start	End	Duration (days)
Lease of necessary bureau space	01.05.2019	01.08.2019	92
Personnel hiring process	01.05.2019	01.09.2019	123
Hardware installation	05.08.2019	15.08.2019	10
Software installation	17.08.2019	25.08.2019	8
Staff training	05.09.2019	12.09.2019	7
Metric implementation into software	27.08.2019	31.08.2019	4
Task rehearsal	27.08.2019	31.08.2019	4

Figure 33. Time schedule

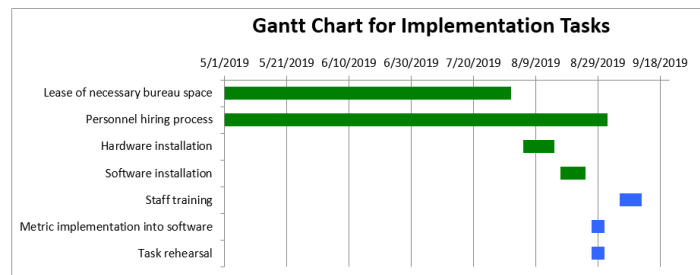


Figure 34. Gantt chart for implementation tasks

9 Meeting Protocols

Meeting Milestone 3

Present team members: Amin, Tim, Lara, Koushik

Date: 08.03.2019, 15:00 – 17:30

- Personal Introduction of team members
 - We spent the first 15 minutes exchanging personal details and qualifications, just getting to know each other's interests and strengths
 - This exchange should ultimately prove to be helpful with project. planning as well as the attribution of project parts to individual team members.
 - Meeting points on campus were established for future meetings.
- Discussion about organizational general conditions as well as communication media.
 - WhatsApp was chosen as the preferred way to communicate within the German team.
 - Ease of use and general availability were considered the main reason for this decision.
 - Documents will be exchanged via e-mail.
 - Interaction with American teams will be based on Zoom meetings.
- Creation of first version of function tree.
 - Collaboration of all team members, using the ARIS Toolset.
 - Amin operated the ARIS Toolkit (being streamed with a beamer) .
 - Initial proposal on paper was drawn by Tim.
- Drafted first version of e-Business Scenario.
 - This initial scenario was based on a first draft conducted by Lara.
 - As with the function tree, all team members contributed to the development of the e-Business scenario, Amin developed the ARIS model during group discussion.
- Creation of GANTT-Chart to organize process planning.
 - Developed by Koushik, includes milestones and time capacity planning for the entire project.

- Draft of presentation for the meeting on 15.03.
 - Conducted by Koushik.
 - Integration of the function tree and e-Business scenario as JPEG into PowerPoint-file.

Meeting Milestone 4

Present team members: Amin, Lara, Koushik, Tim

Date: 19.03.2019, 10:00 – 12:00 **Topics:**

1. Function Tree
2. E-Business scenario
3. EPCs
4. Data needs
5. Market research

Topic 1:

- The Function Tree was remodeled and extended based on the feedback received during the presentation for Milestone 3.

Topic 2:

- The e-Business scenario was adjusted and modified based on prior feedback.

Topic 3:

- A first draft of the main EPC was created in collaboration of all team members.
- Further work on the proposal will be done by Amin and Koushik.
- More detailed EPCs will be prepared by Amin and Koushik.

Topic 4:

- Lara's research on possible data needs were discussed.

- Lara will elaborate the work until the milestone presentation.

Topic 5:

- The information found by Lara and Tim was discussed.
- Lara and Tim will look for further detail information regarding the insurance market.
- Tim will prepare a SWOT analysis of IAP AG.

Meeting Milestone 5

Present team members: Amin, Lara, Koushik, Tim

Date: 26.03.2019, 10:00 – 12:30

Topics:

1. Minor changes in e-Business scenario
2. Review of EPCs
3. Review of service and interoperability contract draft
4. Review of draft for business model
5. Creation of data model and exchange formats
6. Preparation of Zoom meeting with American team
7. Determination of further tasks until deadline

Topic 1:

- Minor changes to the e-Business scenario were conducted as reaction to changes made by the American team.

Topic 2:

- Discussion of the EPCs prepared by Amin and Koushik.
- Adding of further detail to the EPCs.
- Discussion and determination of connection between EPCs.

- Creation of 4 more detailed EPCs on the second level.

Topic 3:

- First draft of service and interoperability contract developed by Tim were discussed.
- Adjustments were proposed by the other team members.

Topic 4:

- Business model proposal of Lara was analyzed and discussed.

Topic 5:

- ERM was created collaboratively using ARIS Architect.

Topic 6:

- Further negotiate data exchange and inter-organizational processes.
- Discuss e-Business scenario and function trees.

Topic 7:

- Tim will update the function tree.
- Lara will make a list of data points and forward it to Koushik.
- Koushik will then create XML format based on this information.
- Tim will continue drafting service and interoperability contract and research details for business plan.
- Lara will prepare the presentation for Friday's meeting.
- Amin will create the documentation and upload it.
- Tim will hold the conference call with the American team.

Meeting Milestone 6

Present team members: Amin, Lara, Koushik, Tim

Date: 02.04.2019, 10:00 – 11:30

Topics:

1. Modelling details
2. Service and Interoperability Agreement
3. Development of a business model
4. Implementation plan
5. Attribution of tasks

Topic 1:

- Minor changes were applied on the structures of two EPCs, based on comments and tips Topic 2:
- WERNER tool and business model CANVAS were analyzed and compared.
- Decision to use CANVAS was made, main factor being the language setting of WERNER in German.

Topic 2:

- The first draft of the service and interoperability contract was sent to the American team on Friday, we have yet to receive feedback on the proposal.

Topic 3:

- Business model proposal of Lara served as a basis for further discussion and creation of new points to fill out the CANVAS scheme.

Topic 4:

- Research regarding a possible solution for an implementation plan was conducted collaboratively.
- Possible method and template were found.

Topic 5:

- Tim will search for innovation potentials on process and model levels and hold contact with the American team.
- Lara will continue working on and refine the business plan.
- Koushik will begin creating the implementation plan.
- Amin will conduct changes to the data exchange formats and create a smaller format for additional data needs.
- Amin will create the documentation and upload it.

Meeting Milestone 7

Present team members: Amin, Lara, Koushik, Tim

Date: 09.04.2019, 10:00 – 11:00

Topics:

1. Finalizing the Service and Interoperability contract.
2. Final work on implementation plan.
3. Determination of further tasks until deadline.

Topic 1:

- The Service and Interoperability agreement was finalized.
- Due to lack of feedback from the American side, the missing parts were determined by the present team members.
- Minor layout changes and the end of the agreement were added

Topic 2:

- Koushik's work for milestone 6 was used as a basis for the determination of part projects for the remainder of the week.
- Final layout decisions were made.

Topic 3:

- Koushik will finish chapter 3 of the implementation plan.

- Lara will be in charge of chapter 2 of the plan.
- Tim will extend chapter 1 of the implementation plan.
- Amin and Tim will work on refinement of implementation plan.
- Lara will prepare Friday's presentation.
- Tim will try to contact the American team.

10 Documentations of Zoom meetings

Team 3

Meeting Summary for March 14, 2019

Key Items Discussed

- ARIS Items
 - The Saarland Team (Saarland)
 - * The eBusiness Scenario and Function Tree are available for review.
 - The Widener Team (Widener)
 - * The eBusiness Scenario diagram is available for review.
 - * The Function Tree should be available sometime tomorrow, March 15th.
- Communications
 - Saarland and Widener will use email and Zoom for external communications.
 - WhatsApp will only be used for external communications should Saarland need to add Widener to their WhatsApp group to obtain information, address an issue, etc.
- Saarland's due dates are late Wednesdays, so another online meeting was scheduled next Tuesday, March 19th, at 5 PM (EDT).
 - Only 1 person from each team is required.
 - Widener will send a meeting link.
- Time change mentioned – as of March 31st, the time difference for the 2 teams will increase to 6 hours.
- Widener will provide Saarland a draft project plan/timeline and a recording of today's meeting.

Zoom Meeting 04/23/2019, 3:00 – 3:45 p.m. ET

- A final Zoom meeting was conducted
- Call members: Denise Woolsey, Tim Zimmer
- Remaining details regarding the Service and Interoperability Agreement were discussed
- The XML format was revised and agreed upon
- The implementation plans of both companies were compared and August 18th, 2019 was determined to be the starting date of the collaboration
- Interactions between companies were discussed and agreed upon as previously negotiated

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