LAUREA
AMMATTIKORKEAKOULU
Yhdessä enemmän

The development of a modern customer support model: a case study of ‘Universe’

Pippuri, Tapio

2016 Laurea

Laurea-ammattikorkeakoulu

The development of a modern customer support model: a case study of ‘Universe’

Tapio Pippuri
Business Information Technology
Bachelor’s Thesis
Kuukausi, 2016

Laurea-ammattikorkeakoulu **Tiivistelmä**
Koulutus
Tutkinto (AMK)

Pippuri, Tapio

The development of a modern customer support model: a case study of 'Universe'

Vuosi 2016 Sivumäärä 38

Internetin ja pilvipalveluiden kehityksen myötä yritykset ovat lisänneet pilvipohjaisten työkalujen ja ratkaisujen käyttämistä toimintatapojen kehittämiseksi sekä kilpailukyvyn lisäämiseksi. Gapps Oy on 2010 perustettu Googlen yritysratkaisuja jälleenmyyvä asiantuntijaorganisaatio, jonka tarkoituksena on auttaa yrityksiä pilvipalveluihin siirtymisessä. Yrityksen palveluihin kuuluvat kokonaisvaltaiset käyttöönottoprojektit, konsultaatiot, koulutukset sekä uutena tuotteena yrityksen kehittämä Universe niminen sosiaalinen intranet alusta. Uuden palvelu ympärille perustetaan uusi yritys, GetUniverse, vuoden 2017 aikana. Jatkossa Gapps Oy toimii Universe tuotteen jälleenmyyjänä.

Uuden tuotteen etenemissuunnitelma sisältää myös asiakastukimallin luomisen sekä jälleenmyyjälle, että sisäiseen käyttöön ja liiketoiminnan kehityksen kannalta tukimallin luominen on ajankohtaista. Tavoitteena on kehittää GetUniversen liiketoiminnan ja sen jälleenmyyjien asiakastukimalli, jolla pyritään vähentämään asiakas- sekä jälleenmyyjävaihtuvuutta sekä tukemaan tuotekehitystä. Tarkoituksena on kehittää palvelu arvoa tuottavaksi toiminnoksi, jota voidaan käyttää tukena sekä organisaation myynnissä, että tuotekehityksen puolella. Tarkoituksena on myös todentaa tarve asiakastuelle sekä testata rakennettua mallia Gapps Oy:n liiketoiminnan avulla.

Projektin aikana kehitimme DevOps ajatusmallia käyttävän tukipalvelun, kirjalliset käyttöohjeet tuotteen perusominaisuuksista sekä skaalattavan palvelumallin uusien jälleenmyyjien avuksi. Uuden palvelun suunnittelussa hyödynnettiin palvelumuotoilua, sekä liiketoiminnan parhaita käytänteitä.

Opinnäytetyö keskittyy uuden mallin kehittämiseen sekä sen käyttöönottoprosessin suunnitteluun.

Asiasanat: Pilvipalvelut, asiakastuki, palvelumuotoilu, asiakastyytyväisyys, tuotekehitys, DevOps

Laurea University of Applied Sciences **Abstract**
Degree Programme in Business Information Technology
Bachelor's Thesis

Pippuri, Tapio

The development of a modern customer support model: a case study of 'Universe'

Year 2016 Pages 38

With the development of the internet and cloud services, companies have increased the use of cloud-based tools and solutions to develop business operations and enhance competitiveness. Gapps Oy, founded in 2012, is an expert organization reselling Google enterprise solutions, whose main target is to help companies on move their services into the cloud. Gapps Oy offers services in full G Suite deployments, consultation services and trainings. As a new product, they offer a software as a service named 'Universe', which is a social intranet platform. A new company, called GetUniverse.com, will be established in 2017 and Gapps will work as a service reseller in the future.

The roadmap, or development plan, of 'Universe' includes a customer support model creation for resellers and for internal use and to expand the business, the support model creation is current. The goal is to create a customer support model for GetUniverse the company and to its resellers. The goal of the support function is to reduce customer and reseller turnover rate due to customer satisfaction and to help product development. The aim is to develop a value creating function, that can be used to support company sales and for product development. These findings will also work as a solution validation for customer support and testing of the developed model with the help of the Gapps Oy business.

During the project a new support model was created leveraging DevOps thinking. In addition, a basic user guide of the product features was written, and a scalable service model that a reseller can implement was created. The project was approached using service design principles and business best practices.

The thesis report concentrates on the design of the model and plans the implementation process.

Keywords: Cloud services, customer support, service design, customer satisfaction, product development, DevOps

Table of contents

1 Introduction

The growth of internet-based technologies and services is emerging organizations from small businesses to large enterprises to re-think their business processes, information infrastructures and service models. In addition, Hugos and Hulitzky (2011) address that modern companies need to understand the importance of having a proper IT strategy to guide their decision making. One of the most typical and major transformation companies are doing at the moment is moving business processes and organization infrastructures to the cloud. Although the transformation is not easy to manage and execute, company executives understand the demand of change to retain current business and gain new business opportunities.

One of the most universal and adaptable technologies that have been deployed has been cloud computing services. The reason for this is often financial, although it creates much more value than only financial. Cloud computing brings all the same services as traditional computing, but when leveraging cloud, organization do not have the burden of maintaining the infrastructure of decentralized hardware, software and licensing models, instead all these features can be bought as a service. Other reasons for adopting cloud services for a business could be to create a business strategy that is built on agility and responsiveness (Hugos & Hulitzky 2011).

Because cloud service models, like software as a service (SaaS), are built to be easy to deploy and most often the creators allow a trial period for testing, the procurement process of new software is faster than ever. This possibility creates a possibility for customers to test and validate proper tools for need. Often times, there are several service providers offering similar tools, so companies providing cloud services need to put a lot of effort to build customer satisfaction, loyalty, and trust through value-adding functions and processes.

In this thesis, author will review how a SaaS-provider can create more value for a product through customer support, and how to make it more intriguing to resellers and customers. The thesis will also consider about how to evaluate and use data gathered from customer support to help the product and customer development enhance the product and strengthen the customer relations. These findings will also work as a solution validation documentation.

Gapps as a company will provide a test domain for building the reseller support model, as they work as a reseller for Universe product.

1.1 Gapps Oy

Gapps Oy, founded 2010, is a cloud services company which focuses on reselling Google Cloud's G Suite services, an all-in-one suite, which includes Google ecosystem-based business solutions like email, calendar, storage and collaboration tools. The company was founded because there was a demand for service providers concentrating on this particular business section of Google in Finland.

When founded, the company kept focus on small and medium-sized businesses (SMBs) to gain experience on deployment projects and to build expertise through business cases. The company represents for new ways of working, business agility and the idea of working anywhere, anytime with any device. Gapps succeeded in acquiring the business in SMBs area and developed the business by adding new services like training workshops, customer support, and consultancy services. Company sales often encountered inquiries and questions for Google ecosystem utilizing intranet solutions, but suitable solutions were missing. In 2013 Gapps was selected to perform an enterprise level Google Apps deployment project which included the development of a cloud-based social intranet utilizing Google ecosystem.

Through the project, Gapps had a possibility to define, develop, test and deploy a version of a social intranet solution which worked as a prototype for the new product, Universe.

1.2 Universe platform

Universe is a modern social intranet and collaboration platform that is built utilizing Google ecosystem. The vision behind the product is to help companies utilize digital collaboration, open communication and agile working habits to customer organizations. The platform gathers Google Apps for Work office suite tools under one user interface and users can also launch other SaaS- application through the Launcher.

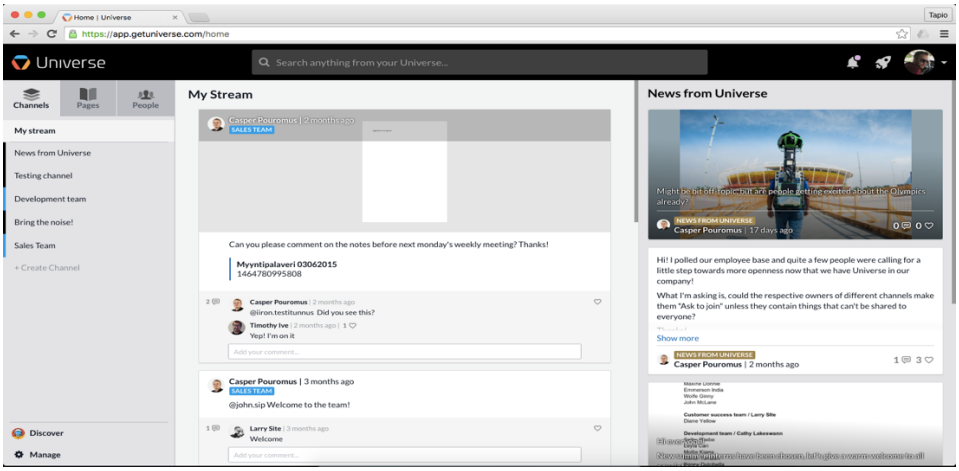

Figure 1: User interface of Universe

Universe is a SaaS solution, which is being delivered to customers through resellers and Google's own marketplace. The pricing model is common SaaS pricing model, where pricing is based on the active users. Each active user needs a license which is billed either in monthly basis or annually. GetUniverse, as a company will follow the subscription business model, in which the business relies strongly on reseller network. The model was originally used by magazines and newspapers but has been implemented in SaaS business also. (Wikipedia 2016) Universe public launch was held in Las Vegas in March 2016 and by August 2016 the platform had already 15,000 users.

Universe is planned to be spun off as an own company, called GetUniverse, in the first or second business quarter of the year 2017.

1.3 Goals of the thesis

Before the launch of Universe, the development team had enough time and resources to define and implement needed features for the product that would be released. Products user experience and interface were designed and tested with experts and by launch date the company had a minimum viable product to release. The launch went well and the product got a good response in the field of sales, but through increased user base the further development of the product slowed down as the development team started working on bug fixes and performance improvements.

The GetUniverse team understood, that to leverage the momentum and building larger customer base, there needs to be continuous development lifecycle with feature and function requests from the end users. Improvements can be done through bug reporting, but to understand user needs more in-depth, there needs to be data and experience on what tasks the users are trying to achieve with the solution.

The product doesn't have a dedicated support team working to help the end users, but the possibility is left to the resellers to create business and value for their customers through providing end user support. The information loop between GetUniverse team and resellers has been implemented by GetUniverse customer success team, but to be able to help and support self-deployed customers and resellers, a support model is needed. Well implemented customer support will also aim to reduce customer churn rate through increased customer satisfaction.

The thesis will be delivered for GetUniverse as a company and Gapps's business will be leveraged as a test domain for testing reseller support function, as Gapps works as a reseller for the product. Thesis author has an employment relationship with Gapps Oy.

1.4 Terminology

In following section, the key terminology and concepts will be explained. It helps to understand the ideas, findings, and approaches of the study.

Cloud computing is a concept of delivering computing services as a service, in which case the computer, tablet or smartphone works as a client on accessing the servers through the internet. Before cloud computing, enterprises used on-premises solutions, the problem with these solutions is, that they demanded resources like maintenance, updating, downtime, and upgrading. On-premises services are also harder to scale to meet peaks and quiet seasons. Deployments demanded large workload, they were slow and procurement processes were difficult. When using cloud computing services, enterprise or company have a opportunity to buy only needed resources, or pay-as-you-go pricing. This means, that instead of setting up own resources, you buy them from a service provider according to company or enterprise's needs. Most common cloud computing models are Platform as a service (PaaS), Infrastructure as a service (IaaS), Software as a service (SaaS) (Kavis 2014).

Software as a service is a cloud business model, where a company or individual developer or group of developers create a software which can be accessed and used with different devices like laptops, smartphones or tablet via internet (Kavis 2014). Although usually services are delivered through internet connection, a modern software can also be used in offline mode through a web browser. The benefits of cloud service models are, that they are easy to deploy and updating these services doesn't require installing any updates or batches, but the product is updated straight to the server it locates on.

DevOps is modern approach which emphasizes internal collaboration between business units, automatization of infrastructure, continuous development and releases, measuring and monitoring benefits and experimenting new ideas (Kavis 2014). In DevOps-minded organizations, product development is executed by development, business and operations working together. Operations and business have often further knowledge on customer pain points and usability issues and feature requests, that a team of developers can examine and further develop the product on customer requests. DevOps is more of a mindset and is a supporting methodology for agile software development.

Information technology infrastructure library (ITIL) is a collection of information technology service management (ITSM) frameworks and best practices for aligning IT services with business needs and processes. ITIL framework helps large organizations to design their ITSM procedures through policies and processes that can be cross-provisioned across business units. One of the most important characteristics of ITIL use is to use information technology as an

enabler for business. Other reasons for organizations to implement and align IT services is to enhance business continuation and design unified service (ITIL Service design 2007).

Customer churn rate is measurable rate, that tells a company basically how many non-returning customers they have through a determined period. The concept is popular in cloud-based business, as it can be applied easily for both single purchase and subscription-based business models. It is calculated by calculating non-returning customers and reducing this amount of the last reported total count. This difference is divided by the original sum, which gives a churn rate number. Churn rate can be followed monthly, quarterly or yearly basis (Investopedia 2016).

1.5 Limitations

Now, Universe product is administrated and managed under Gapps Oy, but the product will be separated to an own company, named GetUniverse. This separation has been planned to happen in 2017. As most of the current resources in GetUniverse, are invested in software development and sales, no designated support personnel are being recruited now. At the moment, GetUniverse team will exploit the support function of Gapps Oy for customer support and sales technical support, but there must be an implementable plan for own business unit.

2 Methodology

The thesis will approach the topic with qualitative research, this particular method was selected as according to Dawson (2009), if the goal is to increase comprehension of a certain subject. One of the goals is to understand how a business function can create value for all stakeholders, what is value creation and how to implement DevOps thinking on a company.

The research part of the thesis will rely on action research method. The mentioned method was chosen, as the goal is to solve a particular issue and measuring results and for this goal Dawson (2009) recommends action research. The hypothetical issue is, that GetUniverse will have higher churn rate on customers and resellers if the customer support function is not developed. Data gathering to research validation will focus on interviewing, benchmarking and literature review. Findings will be analyzed and they will have a great impact on designing the processes and models of the function.

Actual design approach will exploit service design methodology, flowcharts to clarify processes, end user personas to visualize needs and roles and value proposition canvas for segmenting and listing value adding characters.

2.1 Interviewing

To understand the needs and wishes of all stakeholders, an unstructured interviewing method was applied. The unstructured method was selected because, as Dawson (2009) states, it makes it possible to interviewee give extensive answers. Because different business units have their own expectations and ambitions, the same questions were asked from development, operations, and business units. The interview documents can be found in appendix 1.

Interviews were conducted both face to face and remotely, as one of the business owners lives abroad. Google products like Google Docs and Google Hangouts were used to leverage possibility of simultaneous editing of a document.

2.2 Benchmarking

The goal of benchmarking is to take an existing service or a product and analyze possible success factors and evaluate use in another context. When benchmarking, the goal is to create or develop services so you can have a competitive advantage on the markets. Benchmarking is also an excellent tool for setting goals and developing processes (Harrington, 1999).

By authors own observations, in SaaS industry, benchmarking is highly used approach when creating new products and services. More often businesses, especially the one's which are in the start-up phase, benchmark each other's ideas and businesses openly to generate new ideas, business opportunities and to develop existing products and services.

In this thesis, other SaaS solution provider support centers will be benchmarked in features and design. Also, a comparison for different service desk solutions will be performed. Benchmarked features and design elements are listed in appendix 2 and appendix 3.

3 Theoretical concepts and frameworks

The following section will aim to deepen the comprehension level and knowledge of the used frameworks and methodologies when creating new services or products. Also, a customer support tool comparison was done to select a proper tool for development. Frameworks were selected mirroring existing agile business culture and development environment.

3.1 Service design

Service design is a modern design methodology, in which certain conceptual approaches and tools are implemented to design a new service or improving an existing one. The benefits of service design methodology are high scalability, visual tools and can be executed in several concepts inter alia in social sciences, business, technology, design or industry.

As one of the goals of the thesis is to design services for end users of a certain product, service design thinking was implemented on the design process. According to Stickdorn and Schneider (2010), service design thinking is a process which relies on five basic principles.

It is user-centered - All new and existing services or products aim to solve a problem a user is having, but not all users are identical. The designer should understand for who is he designing the services or products to. Understanding the user, either through observations or statistical data, is a key element of the design.

It is co-creative - The process encourages collaboration and user engagement. When setting the user on the center of the design, the user segment should be involved in the processes. This does not mean, that the process should only consider one user group, but involve several segments to understand needs and expectations better.

It is sequencing - The product or service needs to have a timeline or journey map, which the end user is following. This timeline or journey map should be easy to follow and linear for the end user and all touchpoints and interactions should follow each other.

It is evidencing - Because end user must be in the middle of everything, there is a need to give him the power of evaluating the subject or gaining a tangible item. In service design thinking, the object is to create as many tangible items or subjects as possible.

It is holistic - The service design thinking process aims to handle the service or product as a whole. Understanding and visualizing the end users whole journey from point A to point B helps the designer to design and build products and services that the customers come back to.

All previously mentioned principles will be taken into consideration when designing the support function.

3.1.1 Value proposition canvas

The Value Proposition Canvas (Figure 2) is a design tool to target service customer segments and value that the service will bring. It is a visual tool where you visualize and describe customer jobs, pains and gains, the products and services and outline a way how you intend to create value. It is a tool that can be used either on the development of existing products or services or totally new ideas (Osterwalder, Pigneur, Bernarda & Smith 2014). It is a more in-depth tool on understanding customer segments and values when using the Business Model Canvas.

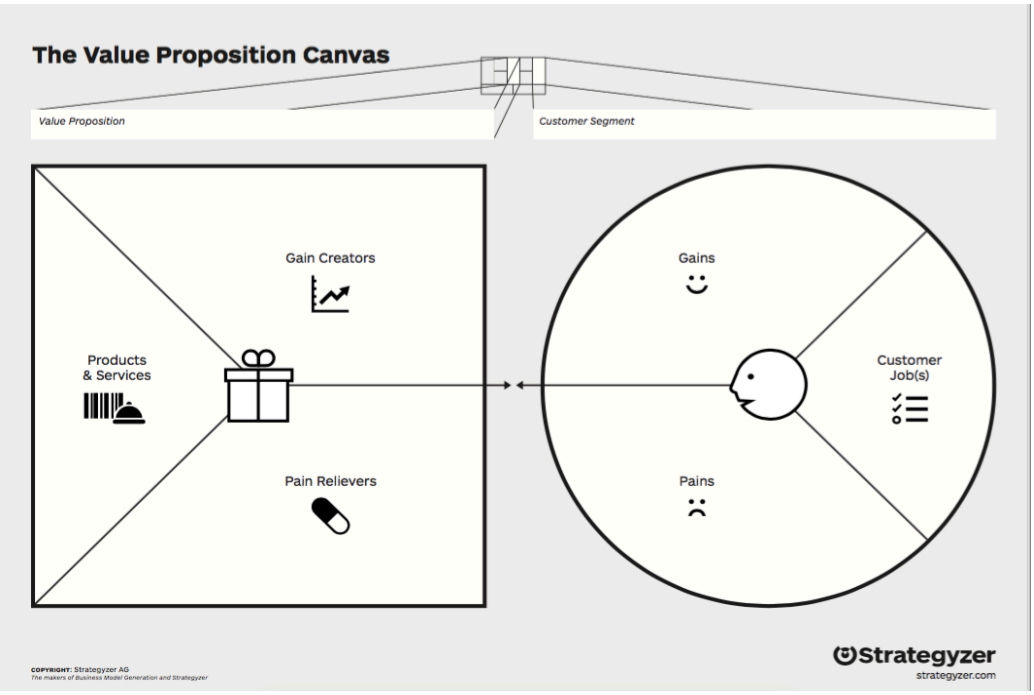

Figure 2: The Value Proposition Canvas

As previously mentioned, service design thinking is highly user centric and one goal of the support function is to reduce customer churn. The value proposition canvas visualizes the user segment in more general aspect.

The value proposition canvas was used on mapping business values of an operations function for GetUniverse business.

3.1.2 End user personas

As the provided SaaS product is not free to use, but subscription based, the user base relies strongly on existing customers. The product offers two separate user roles which are administrator and user and each user can have different a role in a channel. All the user relations are presented in figure 3.

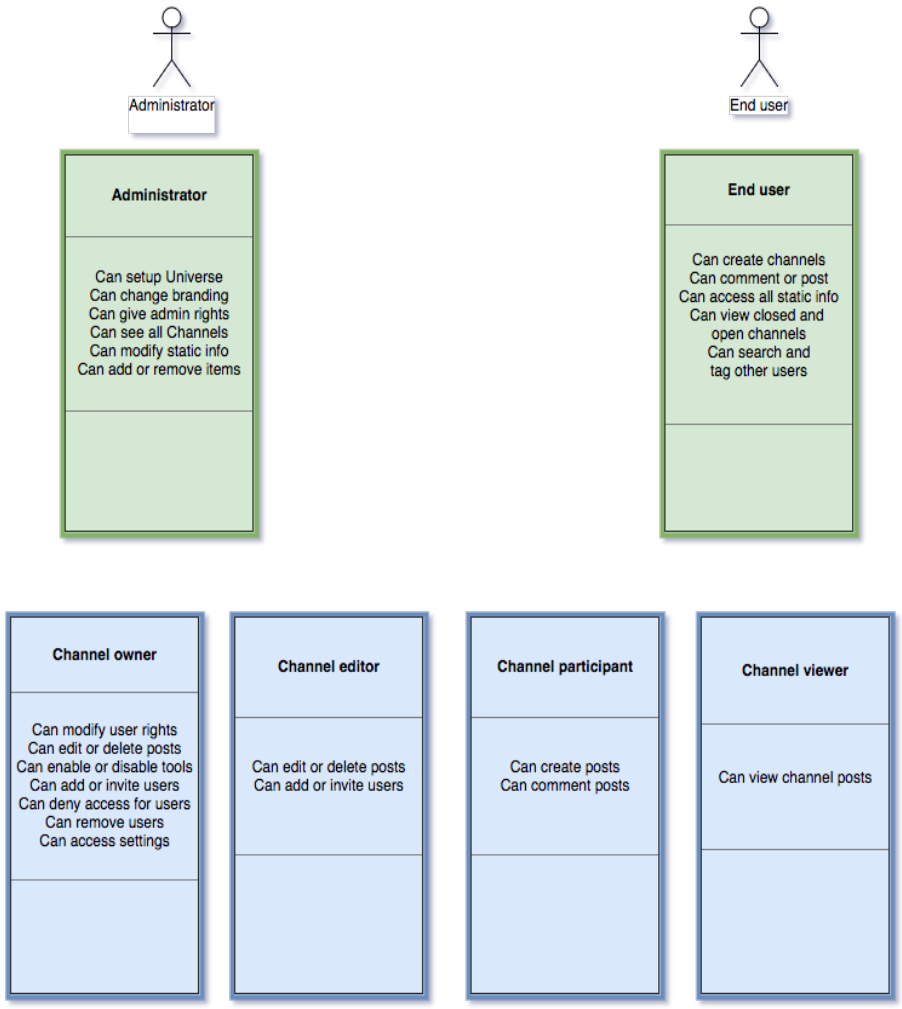

Figure 3: User roles and channel permissions

Personas are a service design tool, that can help representing users and the tasks they want to achieve or roles they might be in. According to Moritz (2015), using personas in service design help on strengthening the relationship between service provider and the customer.

The reason for understanding the user's basic needs and possibilities helps on planning the content of the support center. It was also stated that the information must be easy to find with predictive search and simple design where articles are divided for both end users and administrators.

3.2 Value creation

The concept of business value can easily be interpreted multiple different ways, depending on the person's values, beliefs, and cultural background. As in one occasion business value might mean that the organization is a non-profitable one, which makes choices with the aim of helping people to achieve something with getting nothing in exchange. In other organization, business value might mean streamlining or even outsourcing processes in production to

make it more efficient. Often times this is the case, but as Bhatia (2012) addresses in his book, the concept of business value is changing. According to him, company executives should start thinking business value as a combination of differentiation, simplification, and execution.

Differentiation is thinking business or service through the eyes of the customer and the elements that make it special or unique. Simplification is thinking business or service inside the organization, is it easy to implement and are the services and processes aligned. Execution is the most self-explanatory term of the three, but it means that the organization should have strong leadership, culture and management skills.

Benefit of business value thinking is scalable throughout the organization, starting from a single employee or a team all the way to business units or the whole company or enterprise. It is highly important to understand how and in what level business value can be created when considering creating a sellable product of the service.

In GetUniverse support case, the value creation is divided into two categories, internal value and external value. These values are listed in table 1. Value mapping was done using value proposition canvas.

Internal value	External value
Customer data and insights	Helping the customer, keeping the end user in middle
Marketing value	Helping resellers in challenging issues and business cases
Good service builds reputation	End user can easily find help and use the support center
Using ticket data to prioritize feature requests and development	Possibility to engage users better, good tools with good support create satisfaction
Helping Customer Success	Less workload to service desk
More revenue	Cost efficiency
Excellent customer experience to reduce churn rate	Higher adoption rate of purchased services

Table 1: Business values of a SaaS product support

Internal value lists key factors that the support function will bring to GetUniverse company. The External value, on the contrary, lists key factors that the support function can bring to customers and resellers.

3.2.1 Measuring impact

To build successful value chain with the customer, the company should build measurable metrics that can be used to verify the impact of processes built to bring value.

In GetUniverse's case, the team wants to understand and measure, how customer support helps the customer to gain value and also how to measure the internal value of the gained data. Measurable metrics and elements are listed in Table 2.

Internal value - metrics	External value - metrics
Adoption rate	Adoption rate
Returning users	Continuity of operations
Heat maps	Amount of channels, posts, and comments
Ticket volumes and feedback	Usage of collaboration tools
Customer satisfaction (Surveys and feedback)	

Table 2: Metrics used to measure impact.

These metrics are delivered using existing tools like Keen.io for all user related data, ticket-related data will be gathered through the chosen support platform, collaboration tool adoption is available in Google Apps Admin panel and satisfaction rate can be gathered through individual surveys executed by GetUniverse business units.

3.3 Customer support trends

As Forrester research (2016 Leggett) indicates, external service delivery creates value and help control costs, as the company does not have to concentrate on customer experience and developing internal services.

3.3.1 Customer support in SaaS

With cloud-based services, the business often aims to engage users and share knowledge to customers proactively. The service providers do not want wait for the customer to contact them with a problem, as usually at this point the customer is already feeling either confused or irritated. This easily creates bad customer experience and if the customers often come across issues, they will not adopt the service and in worst cases, will tell about the bad experiences to other possible customers. To address this issue, it is more common to integrate different communication and marketing tools which can be used to send updates and release in-

formation to the application itself. There are several services available for this task, like AppBoy, Intercom Engage and Freshdesk. As integration for existing tools was held as important aspect, Intercom Engage was later chosen as solution of choice.

The in-app notification model helps service providers on delivering valuable information for users and with the help of proper support center articles, decreases the amount of support requests as the information is brought to the users. These tools are often leveraged in user onboarding, an example of this approach can be seen in figure 4. This approach makes the user feel personal approach as it recognizes users name and there is a picture of the company representative.

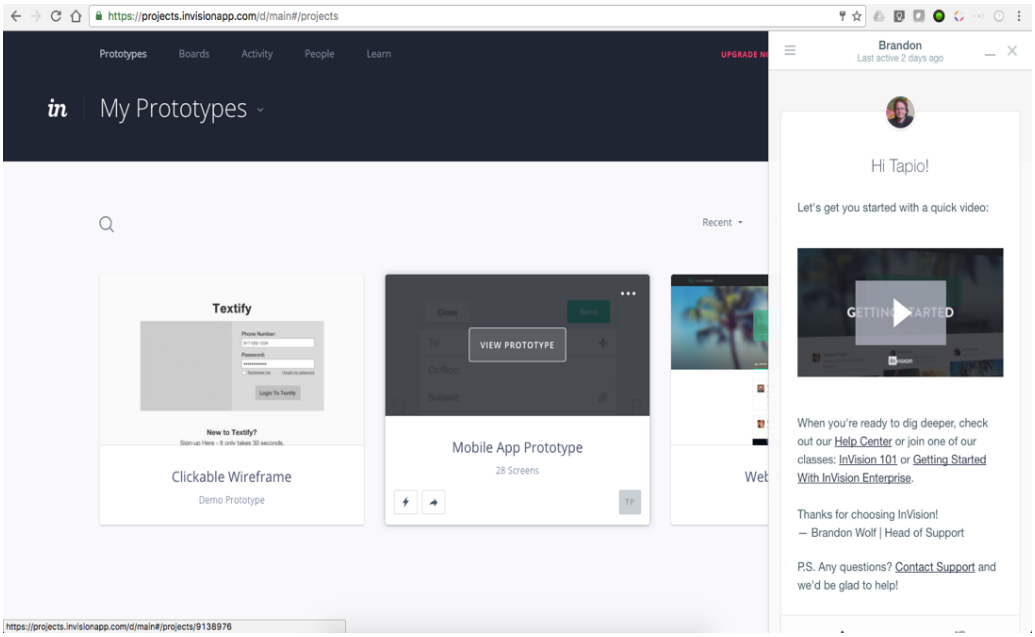

Figure 4: Example of using in-app notifications for onboarding

https://projects.invisionapp.com/d/main#/projects

For time being, GetUniverse team has implemented a function name Shepherd to the platform, which basically guides the user through basic functionalities in the service. This approach has been delivered by using JavaScript code, but for maintaining, communication and updating purposes, in app messaging will be implemented. A feedback form has also been included inside the product, to enable users to give feedback and report bugs.

Although it is possible to reduce support request through these processes, there is always disruptions and a need for contacting support personnel on solving issues, and for that reason, there should be personnel working on the customer support.

3.3.2 ITIL-approach

When using ITIL framework on service desk planning, few main goals are creating a single point of contact for all support cases and implementing different levels of service, as shown in figure 5. Although GetUniverse team will not follow ITIL framework strongly, in most enterprise customers, Universe's own support can act as 2nd or 3rd line support for internal service desks.

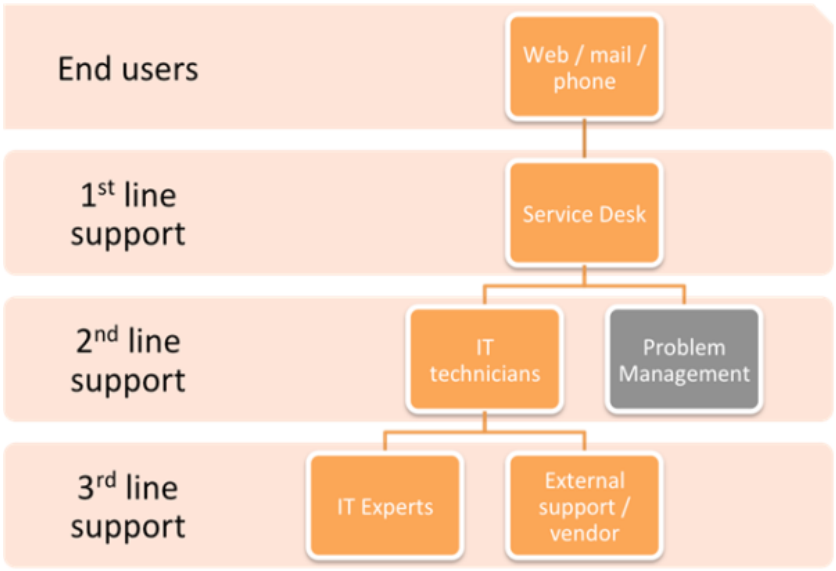

Figure 5: ITIL Service desk levels

ITIL approach is scalable for smaller organizations and the framework is beneficial as all IT related requests and incidents can be handled through a single destination. In ITIL, all requests are treated as incidents, which need to be resolved. The incident process flow is visualized in figure 6.

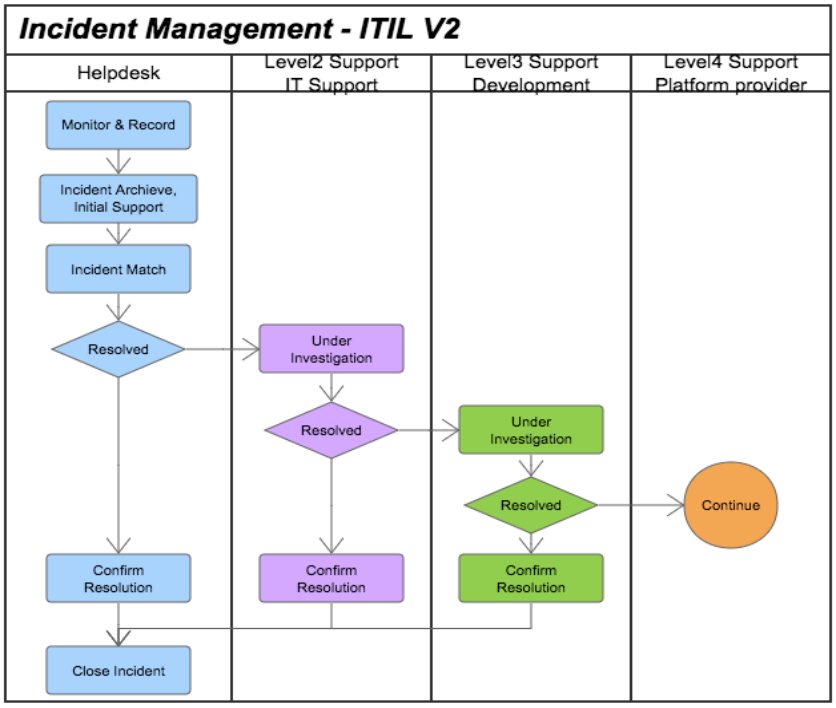

Figure 6: Ticket flow in ITIL

Because the goal is to resolve and close these incidents, there is a lot of silent information which stays with the service desk agents and systems and often the data is not being leveraged. This is also a common approach because the service portfolio of enterprise-level ITIL service desks may include a huge number of different software and hardware products to be maintained and supported. ITIL framework demands strong governance and as GetUniverse wants to build autonomous business units, internal ITIL approach should not be implemented.

In GetUniverse's business case, ITIL framework and the role of it needs to be understood, as the product is developed for enterprise level companies. Also, the ticketing model structure will be taken into consideration.

3.3.3 Service level agreement

Service level agreement (SLA) is an agreement between service provider and the customer. SLA is usually linked to the products Terms of Service. It is not a contract between service provider's each customer, but more often a generic collection of service availability, issue or ticket resolution time, or other business specific details. In the most simplistic way, the SLA simplifies roles and expectations for both customer and the service provider. Clearly written SLA will also prevent problems that somehow could interfere ongoing business processes and operations. (Hugos & Hulitzky 2011)

Now, Universe platform does not provide any SLA for feedback or tickets. Present Universe SLA includes following statements for the platform;

Hours of operation – Universe provides support services during weekdays in EET time zone business hours (9.00-17-00)

Response times – The response time is linked to the severity of the issue, there are three different categories.
Severe error – First response in 2 hours, resolution time 1 day
Standard error – First response in 4 hours, resolution time 4 business days
Minor error – First response in 8 hours, resolution time 10 business days

Through the growth of the products customer and reseller network, the SLA needs to be adjusted to meet international requirements. The hours of operations should be aligned with the key business regions, which are Europe, North America, and South America.

3.3.4 DevOps in customer support

DevOps originally concentrated strongly on software development, where Dev or development contained most people working on the code of the software and Ops or operations on the infrastructure and deployment of the software. The collaboration, communication, and automation between these two units were critical which created the DevOps ideology. For past years, businesses have started adopting DevOps methodology to other IT functions and especially in technical support. As Suri (2015) states, one of the main transformation is building a culture that enhances autonomous business units working together. This culture is already strongly constituted in both companies, GetUniverse and Gapps.

DevOps culture and thinking is quite a new approach in other concepts than just software development, which doesn't offer similar bibliography and frameworks as in ITIL, which makes the implementation and adoption more difficult, but there are certain concepts which should take in place.

Communication and knowledge sharing between different business units. Not only is it crucial for development and operations to communicate, involve sales and customer development in the cycle. Encourage people to share all information through agreed channels and arrange short check-up meetings between business units.

Collaboration between these units. Collaboration is a process or methodology where all the people included work on a certain subject. With technology evolution, collaboration is easier

day by day, as people can arrange video conferences easily, work on documents simultaneously or use chat services for fast communication. A meeting can be considered to be a form of a simple collaboration session, where information is shared.

Integration between tools. Integration in simple is incorporating data or best practices between tools or processes. Each unit has their own tools and processes. Where sales use customer relationship management tools, support use service desk software and development use version management and task management tools, there is always some kind of connection between them. Think all the executable integrations between these tools.

According to a research performed by the organization named HDI, the association for technical support professionals, implementing DevOps in support functions improves internal employee satisfaction, enhances software change and release management time and helps support agents to help end user better (Rains 2016).

As DevOps in customer support is more of an abstract, concrete measurable metrics for impact need to be created. GetUniverse should keep track on how many features, bug fixes, and new functions are being implemented on the product roadmap. As DevOps strongly believes in collaboration and agile business environments, internal feedback should be surveyed amongst all stakeholders which are the business, development, and operations. Other measurable metrics could be applied to developments change and release management cycles. The measuring should be on-going process and evaluation of findings should be done quarterly for the first year and if no impact is found, the processes and goals of operations should be re-evaluated.

3.4 Service consumerization

In modern SaaS business, it is common for service providers to offer support at various levels, depending on either the number of active users or the amount of money spent. These levels diverge on the service offerings, response times, coverage amongst several other offerings depending on the service. In figure 7, an example of different service levels offered by a SaaS provider can be seen.

Feature Description	Standard Server/DC Support	Standard Cloud Support	Premier Support^
Self-help resources support	✓	✓	✓
Online ticket creation	✓	✓	✓
Weekday coverage 24x5	✓	✓	✓
Weekend coverage**		✓	✓
24 x 7 Phone support			✓
Mission critical response L1 - 30 min, L2 - 2 Hours*			✓
Staffed only with dedicated senior engineers			✓
Development escalation priority			✓
Health checks & preventative system analysis			✓
On-boarding and environment familiarity			✓
Global warm handoffs for critical issues			✓
Post-incident report requests			✓

Figure 7: Atlassian Confluence support levels.

https://confluence.atlassian.com/support/atlassian-support-offerings-193299636.html

GetUniverse business strategy relies heavily on large reseller network and they want to offer resellers a possibility to sell their own end user support. Most common situation is, that Universe reseller is also a Google Apps for Work reseller for the company, often times the same reseller offers also support in Google products so it is easy for them to implement end user support. For this reason, at the moment GetUniverse provides support through documentation and knowledge base articles and treats all tickets as ad hoc tasks. The implementation of own customer support function will be discussed more thoroughly in the following chapter.

4 Modern customer support

As previously mentioned, GetUniverse as a business currently does not have a dedicated support function or knowledge base to support its users or resellers. Through the gathered knowledge, research and interviews, it became clear that GetUniverse should eventually implement dedicated customer support for the product. The implementation should be brought in different stages which eventually aims at building a support function which is available 24 hours a day 7 days a week. There should also be automated processes regarding the ticket handling and data gathering and especially procedures for leveraging gathered data.

Modern customer support approach is going through a transformation. Reviewing two published articles by Forrester (Leggett 2016 & Forrester research Inc. 2013), it is clear, that customers are adjusting the way they contact customer support. Where in 2013 most common

way, according the survey, was to contact customer support through calling them, in 2016 majority of respondents preferred searching for information personally or having a chat session with a company representative.

As Leggett (2016) states, modern customer service should be easy to access, effective and produce positive emotions for the customer.

4.1 Company requirements

As any company which is in the start-up phase, the most critical tasks include building a working product, customer base, and possible reseller networks in order to success. This approach demands aggressive marketing and sales efforts and business agility for the company to develop their business strategy and product roadmap to meet the customer needs.

When interviewing business owners, the recurring subject was that Universe software aims to make enterprise employee's life easier so one key aspect of maintaining and developing the product is to achieve this goal. When achieving good customer experience either through the actual product or customer support, business can increase chances of returning customers. The interviews showed that the business owners keep support functions in high regard, both for internal and for external value. At the same time, the company is facing a situation where they need to focus strongly on customer acquisition and product development and all support issues, bugs and feedback will be handled as ad hoc tasks.

The eventual goal in all of the interviews was clear, the support function needs to be available and easy to find for all users anytime and anywhere.

4.2 Support and development

The goal is to build an easy to find and use support function, which helps end users, administrator users, and resellers on deploying, using and achieving wanted goals with the tool. To achieve all the business value aspects, aligning the function with company ideology and reaching service levels, the author determined that the support must be more than an acknowledge and resolve approach.

The business does not want to treat customer support as an obligatory function, it needs to build around the value adding subjects listed earlier in the thesis. Because GetUniverse is still a small company and majority of customers will be brought through resellers, the actual business unit should be labeled more of an Operations function, which will participate also on customer and reseller acquisition and product development processes.

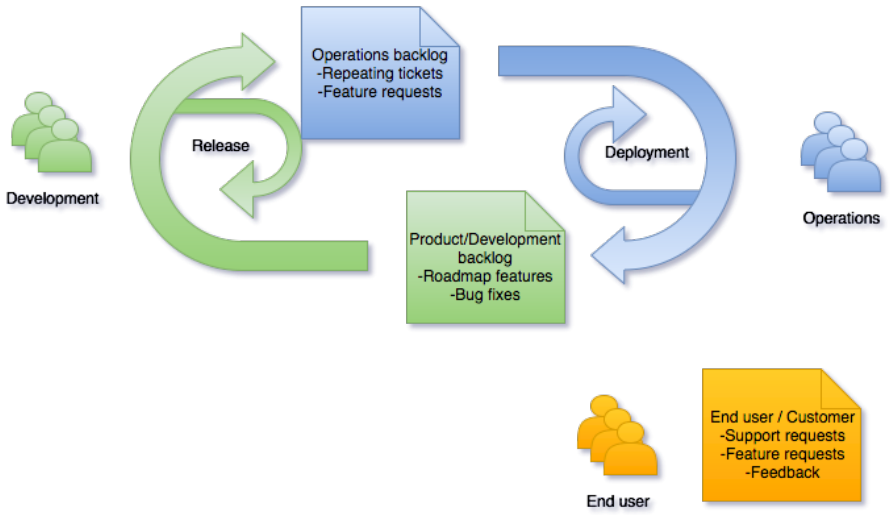

Figure 8: Support process model

The relations of end users, operations and development are visualized in figure 8. End user tasks are forwarded to operations through built channels, like support center, and operations will be responsible for process initiation and development. As DevOps methodology suggests, automated processes should be implemented in all possible phases and all manual inputs should be minimized or eliminated.

4.2.1 Reseller support

As the majority of customers are acquired through resellers, who provide end user support for their own customers, the resellers needs to understand how to support them and acquire important data on issues the users are facing with the product. The relations of GetUniverse, reseller and customer are visualized in figure 9.

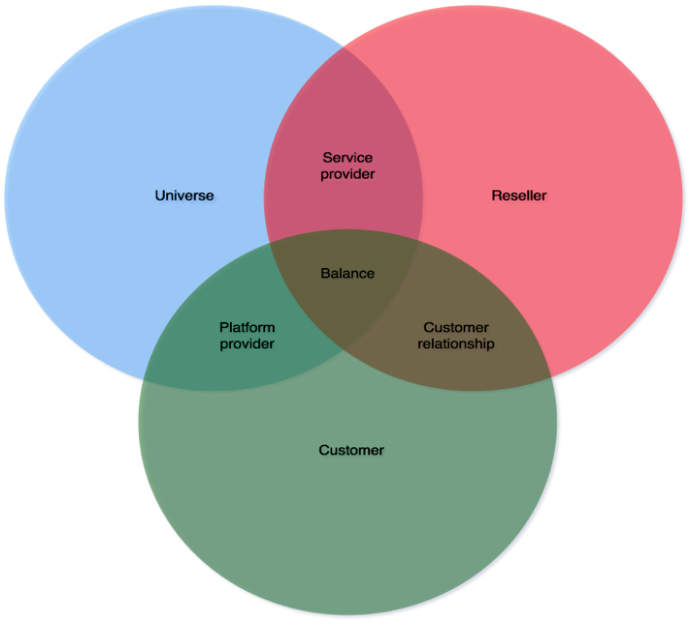

Figure 9: Relations between all parties

GetUniverse does not want to only work as a platform provider but also help resellers and customers to successfully deploy and operate the service. For this reason, GetUniverse will take part on resellers sales processes and have a continuous feedback loop through a reseller channel. For this reason, GetUniverse has built a simple approach for deployable reseller function model for resellers to implement. (Figure 10)

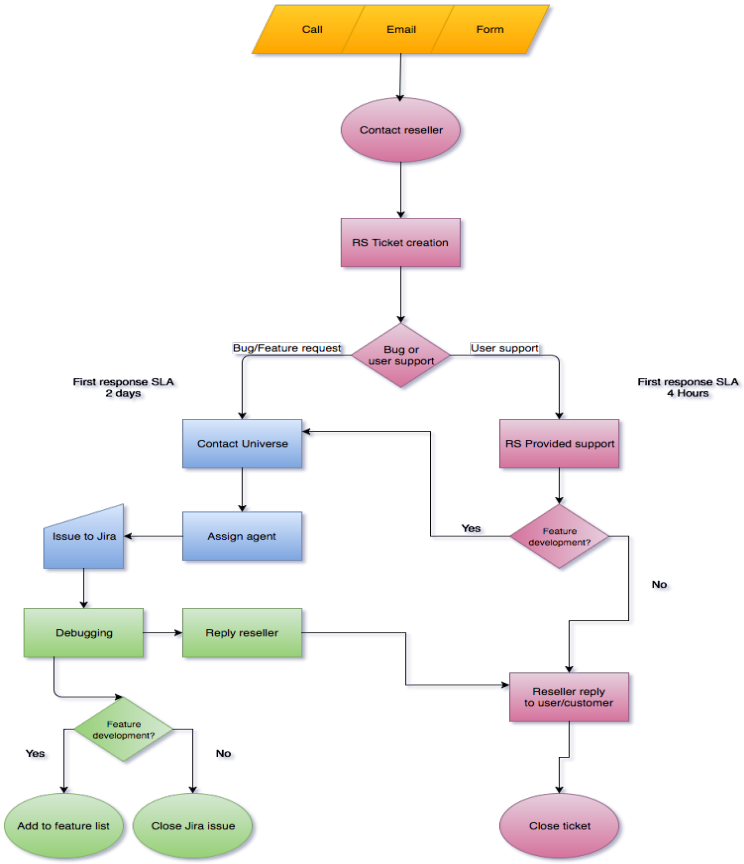

Figure 10: Flowchart of ticket processing.

The benefit of having tailored process is to encourage resellers to offer similar product support for end users and making it easy for them to implement it. Plan, train and implementation of customer support is part of reseller onboarding.

4.2.2 GetUniverse customer support

The main task was to determine and understand the where, why, by whom and how the support requests are generated and how will they be treated. As any SaaS product, Universe service can be self- deployed by customers and although the company strategy strongly relies on versatile reseller network, there must be preparedness to service the direct customers. As mentioned before, the best approach for GetUniverse is building an Operations team, which

act as the owner of the support function and partakes in customer acquisition and product development as a technical specialist.

Because the volume of direct customers and revenue don't align financially with the cost of designated employees, the operations unit should be implemented and recruited gradually. In present stage, where customer volume is under 50,000 users, only available support for end users about the Universe software, are articles and how to videos delivered by development and customer success. Tickets, feedback, and bug reports are gathered from the product itself using a feedback form, this information is delivered to the development team and automatically issued in Jira, the used issue and project tracking tool. The recruiting and operational hours could follow three stages which are shown in figure 11.

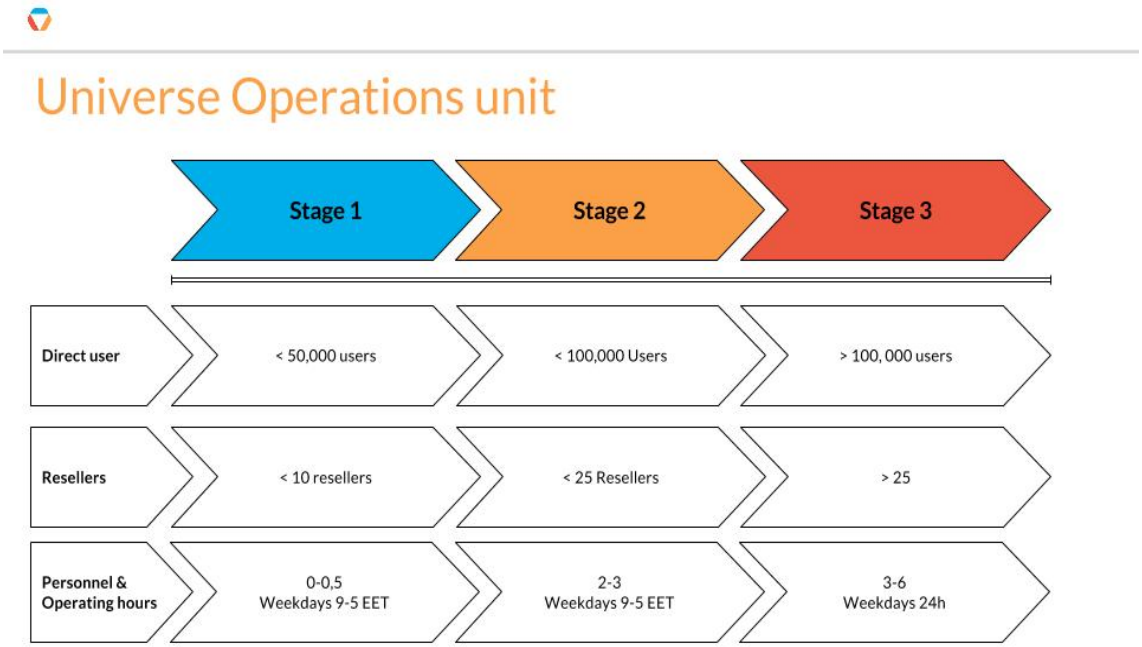

Figure 11: GetUniverse operations

The author suggests, that at the initial phase of building operations unit, the customer support will only be delivered through electronic sources. These channels need to be easy to find and the content should be divided for end users and administrators. Through service desk tool comparison (Appendix 3) GetUniverse team should implement the support centers technical solution using a combination of Zendesk and Intercom Engage. Zendesk will work as a platform for providing customer support where Intercom Engage will work as a tool for in-app messaging. Zendesk is also recommended, as it integrates with present customer relations management tool Hubspot and development team's development management tool Jira Software. Feedback channels will be accessible inside Universe software, the customer support

can be contacted through a web portal and email. Ticket process model and issue severity levels are visualized in figure 12.

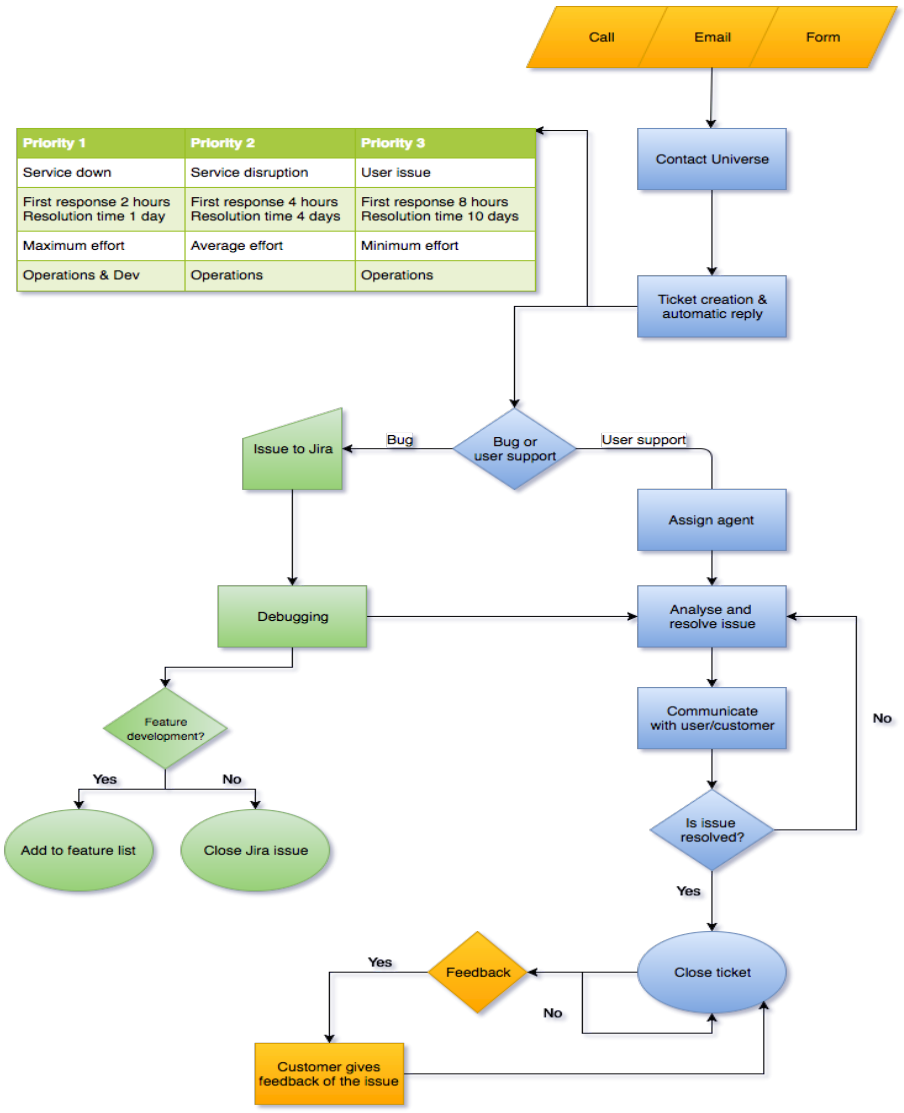

Figure 12: Ticket flow model

In addition, to previously mentioned support channels, Zendesk offers the capability to integrate social media channels with the software. This opportunity, if implemented, gives all available agents a possibility to also manage all messages received through social media.

One crucial part of each handled ticket will be gathering customer feedback on how the agent performed on the issue. After each resolved ticket, the system will automatically send out an email, where the customer has an opportunity to evaluate the agent response or the service the customer received.

All tickets will be categorized by handling agents, to create manageable data and customer insights. These categories and the customer feedback options will be further discussed in the following topic.

4.2.3 Service desk specification

In this thesis, the subject of gathering data and leveraging it has been brought up several times. There needs to be understanding, that gathering, filtering and analyzing a mass of data is often unnecessary and cumbersome unless there is a clear object for the data. In this case, the goal is to understand issues users or administrators have with the product, finding out the bugs of the product and getting insights on features which would help the users and would make them use the product more. For this reason, certain ticket fields will be implemented in the ticketing system. These fields are illustrated in figure 13.

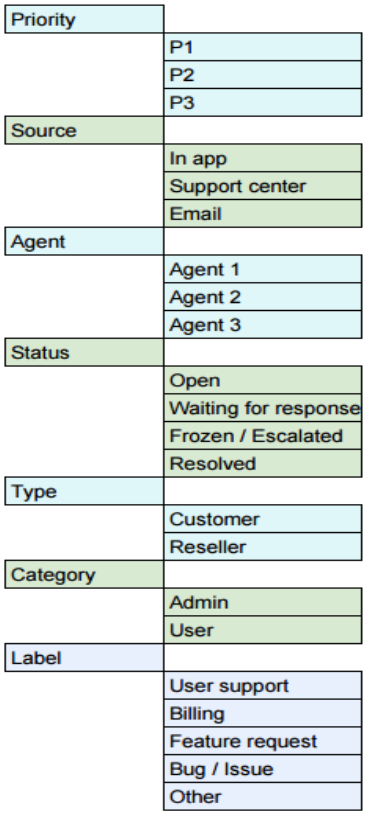

Figure 13: Ticket fields

The aim is to keep the ticket fields as simple as possible as it is mainly manual input at the initial stages of implementing the system, but as DevOps methodology suggests, all possible manual stages will be automated. This can be executed with the support platform, but to teach the system to automate ticket fields, there must be ticket volume first. The determined service level agreements will be incorporated in the system, which gives the business

an opportunity to follow all service level violations and evaluate performance. All open and waiting for response status tickets will consume service level agreement times.

As it is also important to understand how satisfied the customer for the provided service, customer feedback will be gathered automatically every time a ticket is being resolved through an automated email sent to the customer. As recommended by Hoisington (2016), feedback and support channels should be easy to find, fill, and follow. The automated email was selected as the approach, making it easy for customers to give feedback. The email gives a feedback channel for user without him having to search for it and it is connected on a touchpoint, which is the interaction with the support agent.

4.2.4 Data and reporting

The support platform has reporting system integrated, this system draws diagrams on ticket trends and volumes and agents can filter reports with different fields or according to a customer or reseller. This information is highly valuable especially for customer success business unit, every time they meet a customer or a reseller, they have insights on the issues they might have. This gives a firm foundation for strengthening the customer relationship and especially for additional sales. All this information can be brought to the customer relations management system used by the customer success unit, as Zendesk can be integrated with Hubspot.

Other use cases for the gained data is teaching the in-app messaging solution for providing users automated help. In example, a user has an issue with posting a message in the Universe product, the system automatically triggers after few attempts a notification which helps the user to achieve the desired result.

As Forrester research (Leggett 2016) indicates, over 80% of US online adults used different self-service channels, frequently asked questions document, help articles or an integrated chat service to contact customer support when facing an issue. GetUniverse understands the value of properly built knowledge base for providing answers for recurring questions and simple articles on how to use the tool. As one part of the future operations team, the goal is to build a simple knowledge base, that has divided articles according to the user's role, either normal user or administrator. (Figure 14)

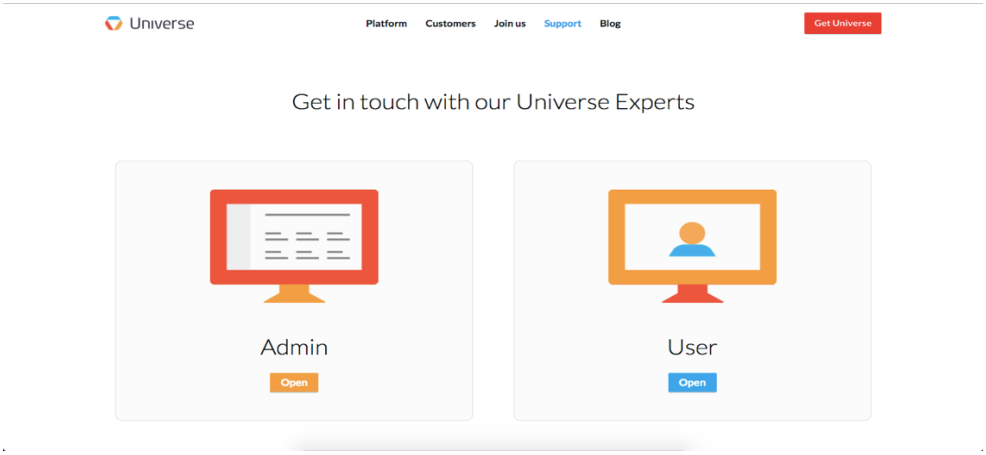

Figure 14: User interface of Universe's support channel

For now, these destinations link to a form, which delivers the information for Universe's development team, but in the future, they would provide help articles on how to use the product. These articles are The knowledge base will also provide a chat, which is integrated into the service desk solution and gives the opportunity for customers to talk in real-time with the support agent.

Until significantly large companies are acquired as direct customers, GetUniverse will only provide electronic support via chat, email and ticket forms available in dedicated support channel.

4.2.5 From ticket to development

GetUniverse has a development team which includes six dedicated software developers at the moment. The team follows agile working methods and exploits continuous integration, where software updates are sent in to mainline for testing and all changes are deployed periodically. The author had an opportunity to talk with GetUniverse's chief technical officer, Perttu Ristimella, who clarified the current methods. The team is aiming for the continuous delivery model, but at the moment, the products code is not structured to support this methodology.

The team has several tools for different purposes, but for managing development, bug fixes, and feature ideas, the team uses Jira Software. Inside the tool, the team has Kanban board for categorizing tasks and resourcing team members. Because suggested tool for support is Zendesk, there is a possibility to leverage an integration between Zendesk and Jira Software.

The integration gives the support agents a possibility to create a task card to Jira Software straight from the Zendesk environment and through automation rules, the system can be taught to handle the similar types of tickets automatically. This also provides a possibility to

send automated messages for the ticket issuer, informing them that the particular subject is known issue or something that will be delivered to the product in the future.

4.2.6 Churn rate goals

As GetUniverse follows the subscription business model and aims to build an extensive reseller network, there needs to be measurable churn rate for both customers and resellers. The primary measurable churn rate must be customer churn rate, as the licenses are the main source of company income.

For customer churn rate, the calculated rate should be taken from the volume of licenses and how it shifts. As majority of the licenses are sold through resellers, the customer success should also try to connect the increased rates to the resellers to understand the root cause. As all licenses denote paying users, this churn rate is the most important to understand and control. Starting from the beginning, the company should aim for a churn rate that is a maximum of 2% yearly.

Although reseller contracts length varies and plans differ between Sales partner and Full Service partner, there should be a single churn rate, which will be treated on a yearly basis. As reseller network is smaller, the goal for reseller yearly churn rate should be less than 20% a year for the first year, less than 10% after the second year and eventually the business should aim to less than 5-7% churn rate.

Churn rate as a metric is highly valuable information for business to understand the customer and reseller turnover, but it is extremely important to understand the reasons why the business is losing customers or resellers. All negative turnover should be analyzed by company business units and management to maneuver company strategy accordingly.

5 Evaluation

The conclusion and idea of a GetUniverse Operations unit were delivered to stakeholders and the model was welcomed by both business and development units. Stakeholders kept collaborative working model and internal tool integrations in high regard and saw a lot of potential in leveraging the gained data. The challenge in the model is, that finding a suitable person for the task externally would be hard and even if a right person can be found, the onboarding would take too many important resources at the moment, which means that the recruitment will be held until enough customers and revenue are generated.

As one of the goals was to validate need and approach of the support function, this goal was met in a theoretical level. The reseller support model was implemented and is currently being tested with Gapps Oy and simple how to guide and help articles were created. This how to guide needs to be updated regularly as new features and options are available for the product. This guide will also work as a foundation for help articles, which will be added to Universe support center.

Because there is not enough measurable data on the success or impact of the plan in churn rate, but the set goals were in line with the business goals. Overall GetUniverse business owners were happy for the findings and as all information on the case is available through Gapps Oy business unit and through this document, the operations unit can be implemented even without the help of the author.

6 Conclusion

Throughout working with the thesis, the author had an excellent opportunity to learn about different levels of building a successful business in the cloud-service area. A recurring issue for the author was, that as the product has only been on the market for less than a year, all hypotheses were based on the views of the business owners, author's own vision and on the literature found on the subject. Using modern methodologies and approaches like DevOps and service design, created challenges, but also gave an opportunity and strong foundation to build a scalable and easy to approach and implement a function which meets the business needs and criteria. Outcomes for author were learning and better understanding of how a business unit or function can create value both internally and externally.

The thesis addresses mostly the first two stages of building the operations unit, but there is already concepts and ideas on how to develop the function even more through partners and resellers, first of these development steps should be adding the possibility for customers to contact support via phone and accessing the end user support at any time.

For time being, GetUniverse has low customer churn rate for existing customers and resellers, as all contracts are made in yearly periods, so there have not been situations where the customer would be leaving. As the author has an opportunity to work in close relations with GetUniverse business through Gapps Oy, the success and measurable metrics can be followed up in the future. The author will also be an available resource for GetUniverse business unit as soon as the operations unit will be implemented, which most likely will happen in the first or second business quarter in 2017.

References

Print sources

Harrington, H., Business Process Improvement: The breakthrough Strategy for Total Quality, Productivity and Competitiveness. 1999. Baskerville: McGraw-Hill Professional Publishing

Hugos, M. & Hulitzky, D. Business in the Cloud: What every business needs to know about cloud computing. 2011. Hoboken: Wiley

ITIL Service design. 2007. London: The Stationary Office

Kavis, M. 2014. Architecting the cloud: Design decisions for Cloud Computing Service Models (SaaS, PaaS and IaaS). Hoboken: Wiley

Stickdorn, M. & Schneider, J. This is service design thinking. 2010. Amsterdam: BIS Publishers

Osterwalder, A., Pigneur, Y., Bernarda, G. & Smith, A. 2014. Value proposition design: how to create products and services customers want. Hoboken: Wiley

Electronic sources

Hoisington, K. 2016. Design a customer feedback strategy that doesn't annoy the customer. Accessed 28 September 2016. http://blogs.forrester.com/kara_hoisington/16-04-19-design_a_customer_feedback_strategy_that_doesnt_annoy_customers

Investopedia, 2016. Churn rate. Accessed 10 October 2016. http://www.investopedia.com/terms/c/churnrate.asp

Leggett, K., Powers, S. Jacobs, I., Schmidt-Subramanian, M., Ephraim, A. & Harrison P. 2016. Trends 2016: The future of customer service. Accessed 15 October 2016. https://www.forrester.com/report/Trends+2016+The+Future+Of+Customer+Service/-/E-RES61372

Moritz, S. Service design, practical access to an evolving field. 2005- Accessed 30 September 2016. http://hci.liacs.nl/files/PracticalAccess2ServiceDesign.pdf

Rains, J. 2016. The scoop on technical support & development. Accessed 20 October 2016. https://www.atlassian.com/it-unplugged/devops/it-support-and-devops-report

Suri, S. 2015. DevOps and IT Support: 4 principles to keep your team ahead of the curve. Accessed 2 September 2016. https://devops.com/devops-and-it-support-4-principles-to-keep-your-team-ahead-of-the-curve/

The five imperatives to delivering a great customer service. 2013. Forrester Research Inc. https://www.salesforce.com/assets/pdf/misc/FiveImperatives_SalesforceTLP.pdf

Wikipedia, 2016. Last modified 5 September 2016. Subscription business model. Accessed 20 September 2016. https://en.wikipedia.org/wiki/Subscription_business_model

Tools referenced in thesis

Zendesk Software. 2016. Accessed 24 October 2016. https://www.zendesk.com/

Intercom Engage Software. 2016. Accessed 26 October 2016. https://www.intercom.com/customer-engagement

Hubspot Software. 2016. Accessed 26 October 2016. http://www.hubspot.com/products/crm

Jira Software. 2016. Accessed 26 October 2016. https://www.atlassian.com/software/jira

Keen.io Software. 2016. Accessed 10 September 2016. https://keen.io/

Figures

Tables

Appendixes