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Customer Support Optimizing

Implementing a Jira-Based Ticketing System

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Degree Thesis for Bachelor of Engineering

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DEGREE THESIS

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Abstract

This bachelor's thesis was conducted for the Lifecycle support process at VEO Oy. The research was performed for a better understanding of ticketing systems and to research whether Jira is a suitable candidate. The purpose of the thesis was to research ticketing systems and set up a test environment in Jira to see if it is suitable for VEO.

The theoretical part examines topics such as ticketing systems and their core features, usage for ticketing systems, and different types of ticketing systems. It also gives an insight into the Jira software and what it has to offer. Additionally, chatbots are presented and how chatbots can be implemented for human-free support.

The practical part presents the Jira software from three different views, the administrative view, the agents' view, and the customer's view. The material presented in the theoretical part was used in the test environment set up in Jira.

The results of the thesis were improved knowledge of ticketing systems, their functions, features, and usage. The results also contain better knowledge of the Jira software and its features. A test environment was set up in Jira, revealing its suitability for VEO.

Language: English
Key Words: Ticketing System, Customer Support, Jira, Chatbot

EXAMENSARBETE

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Titel: Optimering av kundsupport Implementering av ett Jira-Baserat Ärendehanteringssystem

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Datum: 2.5.2025 Sidantal: 36

Abstrakt

Detta examensarbete genomfördes för Lifecycle support processen vid VEO Oy. Syftet med examensarbetet var att få en bättre förståelse för ärendehanteringssystem samt att undersöka om Jira är en lämplig kandidat. Målet med uppsatsen var att undersöka ärendehanteringssystem och skapa en testmiljö i Jira för att se om det är lämpligt för VEO.

Den teoretiska delen behandlar ämnen som ärendehanteringssystem och deras kärnfunktioner, användningsområden samt olika typer av ärendehanteringssystem. Dessutom ges en inblick i mjukvaran Jira och vad den har att erbjuda. Också Chatbottar och hur de kan implementeras för att erbjuda support utan mänsklig inblandning diskuteras.

Den praktiska delen presenterar Jira ur tre olika perspektiv: administratörens vy, agentens vy och kundens vy. Det material som presenterades i den teoretiska delen användes vid konfigureringen av testmiljön i Jira.

Resultatet av examensarbetet var förbättrad kunskap om ärendehanteringssystem, deras funktioner, egenskaper och användning. Resultatet innefattar även ökad kunskap om mjukvaran Jira och dess funktioner. En testmiljö upprättades i Jira, vilket visade dess lämplighet för VEO.

Språk: engelska
Nyckelord: ärendehanteringssystem, kundsupport, jira, chatbot

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Nimike: Asiakastuen optimointi Jiraan perustuvan tikettijärjestelmän käyttöönotto

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Päivämäärä 2.5.2025 Sivumäärä: 36

Tiivistelmä

Tämä opinnäytetyö toteutettiin VEO Oy:n Lifecycle-tukiprosessia varten. Tutkimuksen tarkoituksena oli saada parempi ymmärrys tikettijärjestelmistä sekä selvittää, onko Jira sopiva vaihtoehto. Tutkielman tavoitteena oli tutkia tikettijärjestelmiä ja luoda testausympäristö Jiraan sen soveltuvuuden arvioimiseksi VEO:lle.

Teoreettinen osa käsittelee aiheita kuten tikettijärjestelmät ja niiden keskeiset ominaisuudet, käyttö sekä erilaiset tikettijärjestelmien tyypit. Lisäksi tarkastellaan Jira-ohjelmistoa ja sen tarjoamia ominaisuuksia. Mukana on myös katsaus chatbotteihin ja siihen, kuinka ne voidaan ottaa käyttöön tukipalveluissa ilman ihmiskontaktia, osana asiakastuen optimointia.

Käytännön osassa esitetään Jira-ohjelmistoa kolmesta eri näkökulmasta: järjestelmänvalvojan näkökulmasta, asiantuntijan (agentin) näkökulmasta ja asiakkaan näkökulmasta. Teoreettisessa osassa esitettyä materiaalia hyödynnettiin testausympäristön rakentamisessa Jiraan.

Tutkielman tuloksena saatiin parempaa tietoa tikettijärjestelmistä, niiden toiminnoista, ominaisuuksista ja käyttötarkoituksista. Lisäksi opittiin lisää Jira-ohjelmistosta ja sen ominaisuuksista. Jiraan rakennettu testausympäristö osoitti sen soveltuvuuden VEO:n tarpeisiin.

Kieli: englanti
Avainsanat: tikettijärjestelmä, asiakastuki, Jira, chatbot

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1 Introduction

This thesis is conducted for VEO Oy and focuses on investigating and setting up a ticketing system to help them improve customer support and customer relations. To clarify and enhance the phrasing, translation, and language improvements in this thesis were carried out with the help of OpenAI's language model ChatGPT. (OpenAI, 2025)

1.1 VEO Oy

In 1989, Harri Niemelä and Mauri Holma founded Vaasa Engineering Oy, later the company was formally renamed VEO Oy. On Veo's website, they describe themselves as follows:

"VEO is an energy expert using automation and electrification to build a more sustainable and resource-efficient world. By constantly developing new innovative solutions, we create well-being, solve global energy challenges, and help different industries optimize their operations." (Company | VEO, 2023)

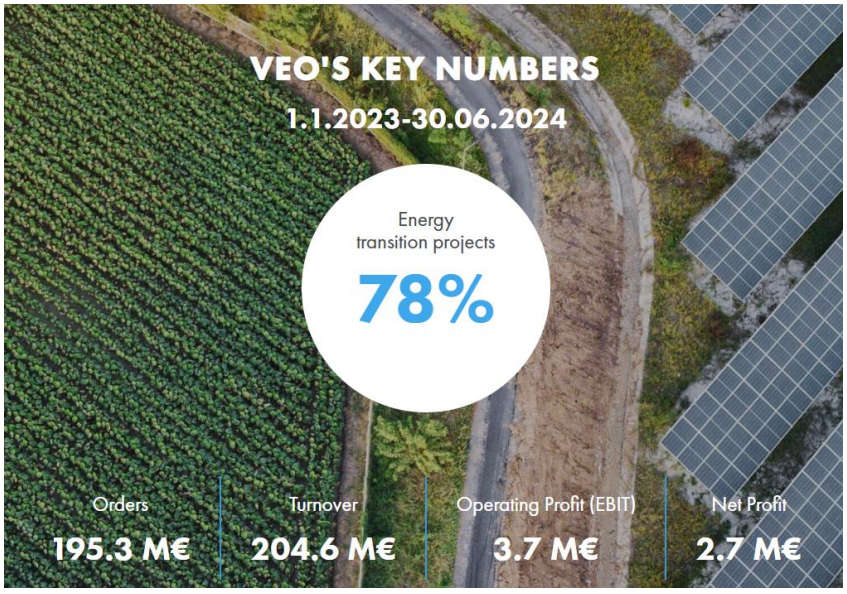


Figure 1 - Veo's key figures from the 2023 Annual Report (Veo Annual Report, 2023)

Veo's headquarters is located in Vaasa, Finland, but the company has subsidiaries in Sweden, Norway, and the UK. VEO Group employs 500 personnel and, as seen in Figure 1, had a turnover of 204.6 million EUR in 2023.

1.2 Purpose

VEO's customer base is continuously growing, and today it is a must to have a proper service offering or guidance on their installations. VEO is today actively looking for improvements related to customer service and to enable a Lifecycle Support Program for its customers. As one part of this initiative, a ticketing system is required, to support customer case handling, to offer faster response time, and to offer status information over a seamless interface for customers to submit their questions and cases. VEO is using Jira today as a tool for internal handling of various cases and is therefore interested in evaluating and testing Jira as a ticketing system for handling customer contacts and claims.

A ticketing system falls under VEO's newly launched Lifecycle support program, dedicated to maintaining and repairing their supplied automation systems and related equipment, and aims to provide their expert support for all their customers' needs throughout the lifecycle of their delivered automation systems and related equipment. The main objective is to research what a ticketing system is, how it works and figure out how VEO can use this to improve and maintain a fast and effective relation with customers and their problems. As a test software, I will be using Jira and setting up a test environment with a ticketing system, which they can test and decide if Jira is suitable for them or if there are any other options.

1.3 Current customer support

Currently, at VEO, there is no direct system for handling customer questions and problems, customers have direct contact with employees related to the project or product provided by VEO. On VEO's website, there is a form seen in Figure 2 used if you need to be contacted related to a specific category, technology, business segment or product.

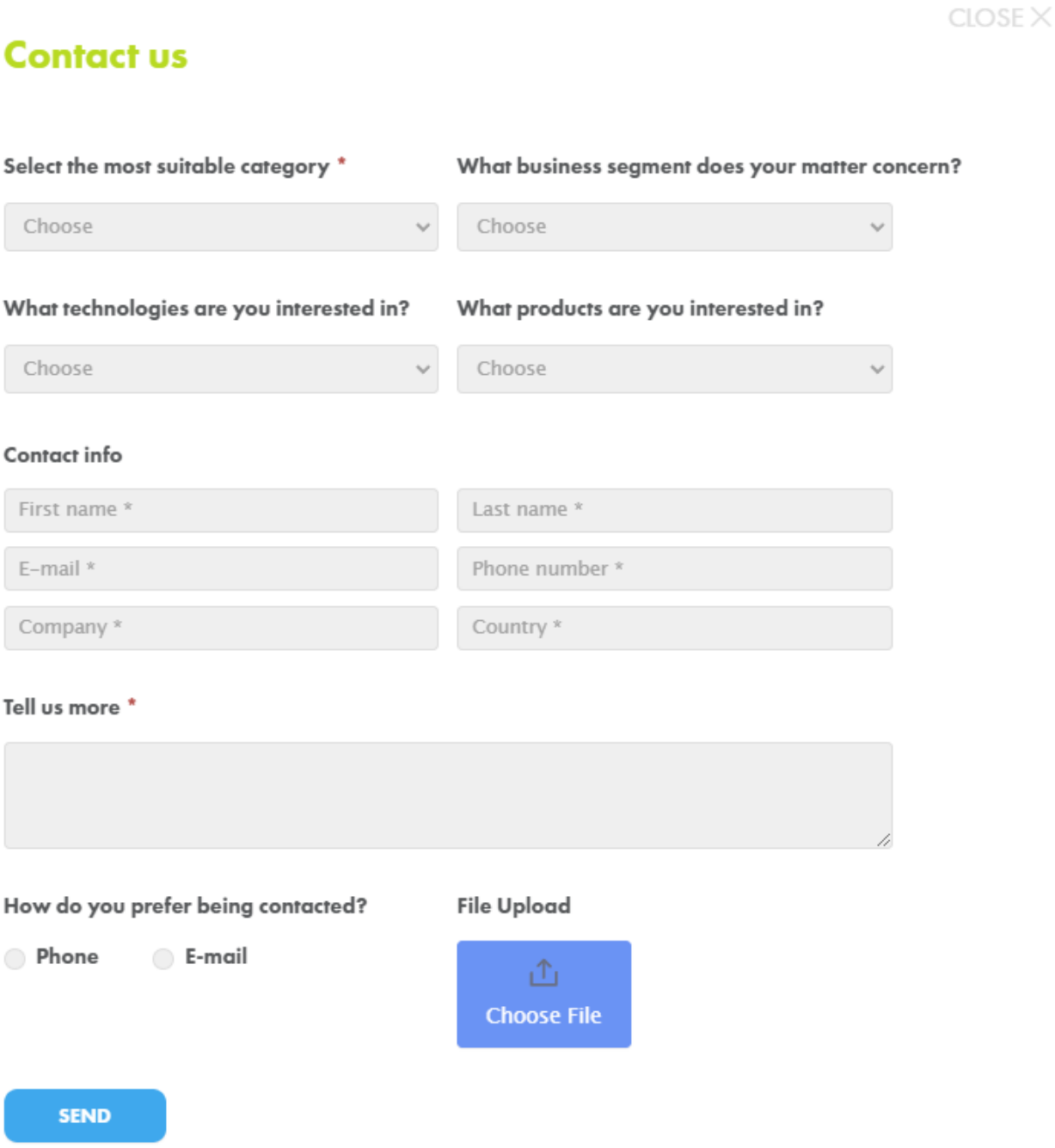


Figure 2 – VEO contact form (Company | VEO, 2023)

2 Theory

This chapter covers the theoretical parts of the thesis, explaining ticketing systems, chatbots, Jira and other terms later used in the practical part.

2.1 Ticketing system

Jira defines a ticketing system as follows:

“A ticketing system is a software solution companies use to manage and track incoming requests or issues from customers or internal users. It is a centralized platform for capturing, prioritizing, and resolving tickets or service requests. Each ticket typically represents a specific task, inquiry, or problem that needs attention, allowing teams to organize and address various issues efficiently.” (Jira service management, 2024)

2.1.1 How a ticketing system works

A user experiencing a technical issue submits a support request through a customer service portal, an email ticketing system, a live chat, a form, or by calling the department. The request includes essential details such as their name, contact information, and most importantly, a description of the problem. Once submitted, the system automatically generates a new ticket, assigns it a unique number for tracking, and categorizes it based on the nature of the issue. The ticket is then routed to an appropriate support agent and escalated to the appropriate support level, selected based on availability or expertise. The assigned agent receives a notification and can access the ticket details through the system. The agent begins troubleshooting, updating the ticket with progress notes, and communicating with the user as needed to gather additional information or provide updates. Once the issue is resolved, the ticket is marked as closed, and the user receives a notification confirming the resolution. Following closure, a survey can be sent to the user, requesting feedback on their support experience. This feedback helps assess agent performance and measure overall user satisfaction. (Ticketing System Guide: Definition, Features & Benefits Explained, 2025)

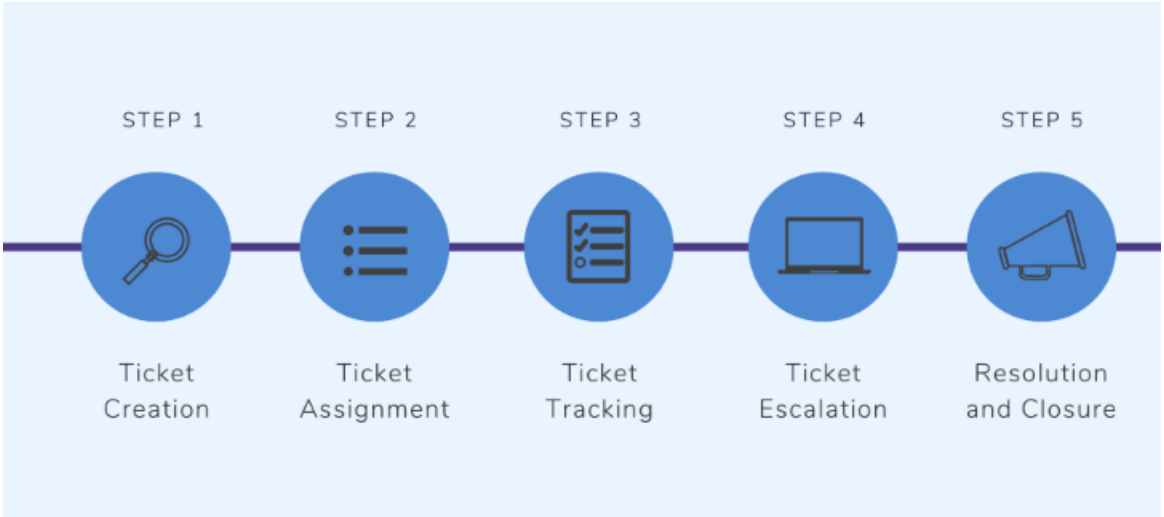


Figure 3 - How a ticketing system works (What is a ticketing system, 2025)

2.1.2 Usage

Ticketing systems are often used for managing and tracking various service requests, accidents, issues from within the company, customers, and other stakeholders. Ticketing systems offer an organized framework for logging, prioritizing, and addressing service requests, ensuring swift and efficient issue resolution. They improve communication and collaboration among support teams, streamline workflows, and ensure that businesses meet service level agreements (SLAs). Additionally, built-in reporting and analytics provide insights into support operations, highlight trends, and support data-driven decisions for continuous optimization. (Jira service management, 2024)

2.1.3 Types of ticketing systems

Ticketing systems come in various types, each serving different needs.

- **IT Service Management (ITSM)** ticketing systems are primarily used for IT support and incident management, helping businesses resolve technical issues efficiently.
- **Customer support** ticketing systems manage customer inquiries and support requests, ensuring that businesses can track and address customer concerns effectively.
- **Issue tracking systems** focus on bug tracking and project management, helping teams manage and resolve technical issues related to software development.
- **Event ticketing systems** are used for selling and managing tickets for events, making it easier for organizations to handle ticket sales and distribution.
- **HR and facility ticketing systems** are designed to handle employee requests, maintenance tasks, and internal service management, ensuring smooth operations within an organization. (Kaur, 2025)

2.1.4 Common features

Ticket Handling & Lifecycle Management – A powerful ticketing system enables seamless creation, assignment, and tracking of tickets from initiation to resolution. With automated categorization, prioritization, and real-time status updates, support teams can ensure every issue is handled efficiently without missing critical requests.

Effortless Workflow Automation – Reduce manual workload by automating repetitive tasks, ticket assignments, and escalation processes. Intelligent routing ensures tickets reach the right agent or department based on predefined rules, while automated follow-ups and alerts keep support teams proactive in addressing customer needs.

Integrated Knowledge Base for Self-Service – A centralized repository of FAQs, troubleshooting guides, and instructional articles empowers users to resolve common issues without direct support. AI-driven search functionality enhances efficiency by recommending relevant content based on ticket inquiries and reducing dependency on human agents.

Service Level Agreement (SLA) Compliance & Monitoring – Define, enforce, and monitor SLAs to ensure timely responses and resolutions. Automated alerts notify teams when deadlines approach, ensuring service commitments are met while maintaining high customer satisfaction and operational efficiency.

Actionable Insights with Reporting & Analytics – Gain deep visibility into support operations through advanced reporting dashboards that track ticket volume, response times, resolution rates, and customer satisfaction metrics. Data-driven insights help optimize workflows, improve agent performance, and enhance customer experience.

Seamless Team Collaboration & Communication – Facilitate smooth interaction among support teams, departments, and external stakeholders with built-in collaboration tools. Features like shared ticket ownership, internal notes, and real-time messaging prevent miscommunication and ensure faster issue resolution.

Tailored Customization for Business Needs – Adapt the ticketing system to match specific business requirements with customizable workflows, fields, and branding options. Personalized automation rules, email templates, and integrations ensure an intuitive and scalable support system aligned with company objectives. (Features of Help Desk Ticketing Software, 2024)

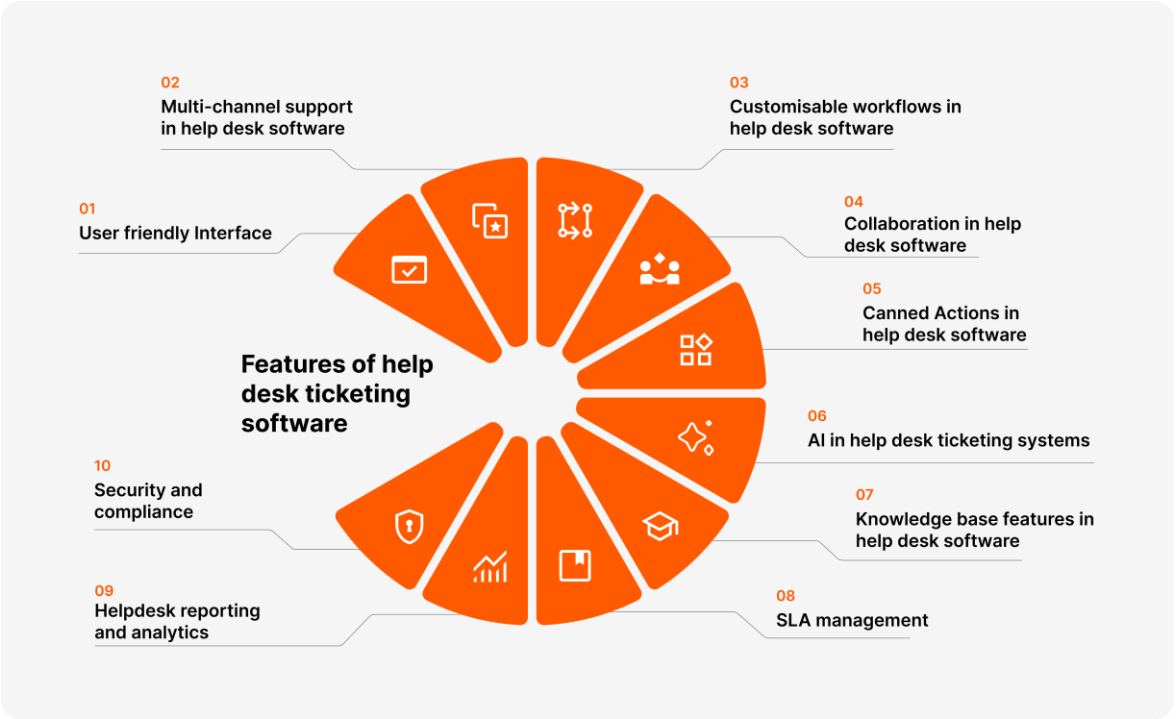


Figure 4 - Ticketing system features (Features of Help Desk Ticketing Software, 2024)

2.2 Chatbots

Companies often integrate some form of chatbot into their website or support line. Chatbots help companies by automating customer support, often by using the data analysis and reports from previous tickets in a ticketing system to help eliminate FAQ (Frequently Asked Questions).

“A chatbot is a computer program that simulates human conversation with an end user. Not all chatbots are equipped with artificial intelligence (AI), but modern chatbots increasingly use conversational AI techniques such as natural language processing (NLP) to understand user questions and automate responses to them.” (What is a chatbot?, n.d.)

2.2.1 How chatbots work

The first chatbots ever released were interactive FAQ (Frequently Asked Questions) programs, which relied on common questions with pre-written answers. Traditional chatbots rely on keywords and preset phrases, limiting their ability to interpret natural language. They struggle with complex questions and fail to answer even simple ones if not pre-programmed by developers.

Since then, chatbot algorithms have evolved to support more complex rule-based programming and natural language processing, allowing users to interact in a conversational way. This led to the rise of context-aware chatbots equipped with machine learning, enabling them to improve their accuracy by continuously learning from human interactions.

Modern AI chatbots leverage natural language understanding (NLU) to interpret open-ended user input, handling typos, translation issues, and ambiguities. Advanced AI tools identify user intent and generate relevant responses using conversational AI. By combining machine learning and deep learning, these chatbots build a refined knowledge base that improves over time. Recent advancements in large language models (LLMs) have further enhanced their capabilities, leading to greater customer satisfaction and broader applications.

The development time for an AI chatbot depends on factors like the technology stack, complexity, desired features, data availability, and integration needs. However, with no-code or low-code platforms, AI chatbots can be built much faster. (What is a chatbot?, n.d.)

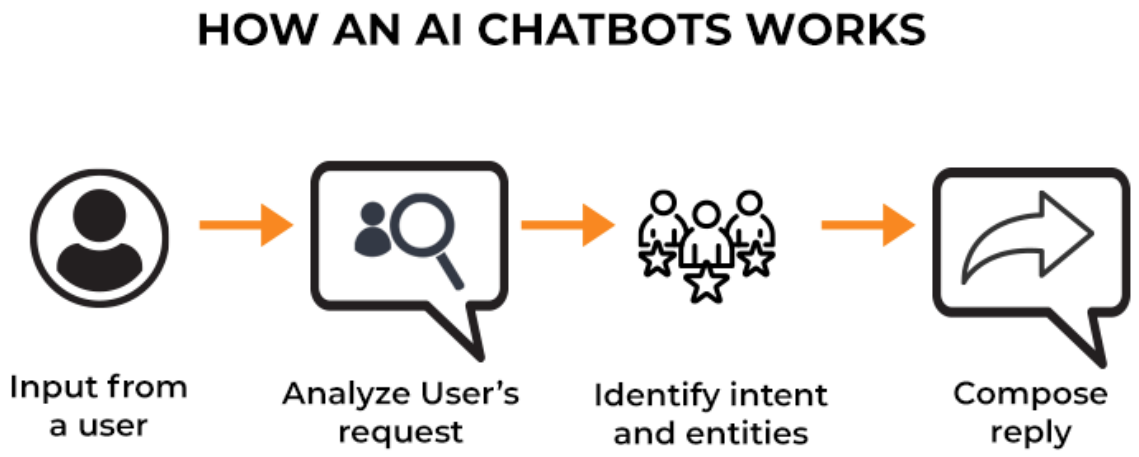


Figure 5 - How an AI chatbot works (What is a chatbot? Meaning, Working, Types and Examples, 2022)

2.2.2 Benefits and use cases of chatbots

Before chatbots, all customer inquiries required human responses, often leading to delays, especially outside business hours. Staffing support teams 24/7 was costly and inefficient.

Chatbots now provide instant, round-the-clock assistance, reducing wait times and improving response quality while keeping costs low. By automating workflows and handling repetitive queries, they free up human agents for more complex tasks. A seamless support experience leads to higher customer satisfaction and stronger brand loyalty.

Maintaining a fully staffed support center is expensive, and outsourcing can reduce control over customer interactions. Chatbots offer a cost-effective solution by acting as a first line of support, handling routine inquiries, and assisting during peak hours. By reducing reliance on human agents, businesses can scale operations more efficiently.

Consumers use AI chatbots for tasks ranging from mobile apps to smart home devices, while businesses leverage them for marketing, IT, HR, and customer support. Chatbots personalize experiences, automate workflows, and streamline communication.

Conversational AI chatbots remember past interactions, integrate with automation tools like RPA (Robotic Process Automation), and seamlessly transfer users to live agents when needed. They operate across various platforms, including messaging apps, websites, and phone-based IVR (Interactive Voice Response) systems.

Common Use Cases:

- 24/7 customer and HR support
- Personalized e-commerce recommendations
- Chatbot-driven marketing
- Form and financial data collection
- Healthcare scheduling
- Automated reminders for tasks

2.3 Jira

2.3.1 Atlassian

Atlassian is a software company founded in 2002 in Australia by Mike Cannon-Brookes and Scott Farquhar. Headquartered in Sydney with a key presence in San Francisco, it focuses on building tools that help teams collaborate, especially in software development and project management. Popular products include Jira, Confluence, Trello, and Bitbucket. Atlassian supports over 300,000 customers worldwide and employs more than 12,000 people (Atlassian company, 2025)

2.3.2 Jira Software

Jira Software is a project management and issue-tracking tool designed for technical teams. It enables teams to efficiently plan, monitor, release, and oversee software projects. With Jira, teams can establish project timelines, share status updates, and document any challenges encountered during development.

Additionally, Jira is a central hub for collaboration, ensuring all team members have access to up-to-date project information. It offers productivity-enhancing features such as automation and integration, which help streamline workflows and minimize manual tasks. Designed primarily for internal use, Jira facilitates seamless communication within technical teams rather than with external parties. (Short, 2025)

2.3.3 Jira Service Management

Jira Service Management is a ticketing system designed to manage both internal and external requests. While it is primarily aimed toward IT teams, it can also be used to handle support inquiries from various sources. Though mainly a communication tool, it includes features that support IT operations and strategic planning, aligning it with other ITSM solutions like SysAid and ServiceNow. (Short, 2025)

2.3.4 Templates for Service Management

Jira offers many pre-built templates that contain features depending on what type of application you plan on building. Figure 6 shows just the templates for the Service Management category. (Jira Templates, 2025)

Figure 6 - Jira template categories (Jira Templates, 2025)

Depending on what category you choose, you will get a page with about 4 to 8 pre-built templates to choose from. In Figures 7 and 8, you will see templates from the service management category. (Jira Templates, 2025)

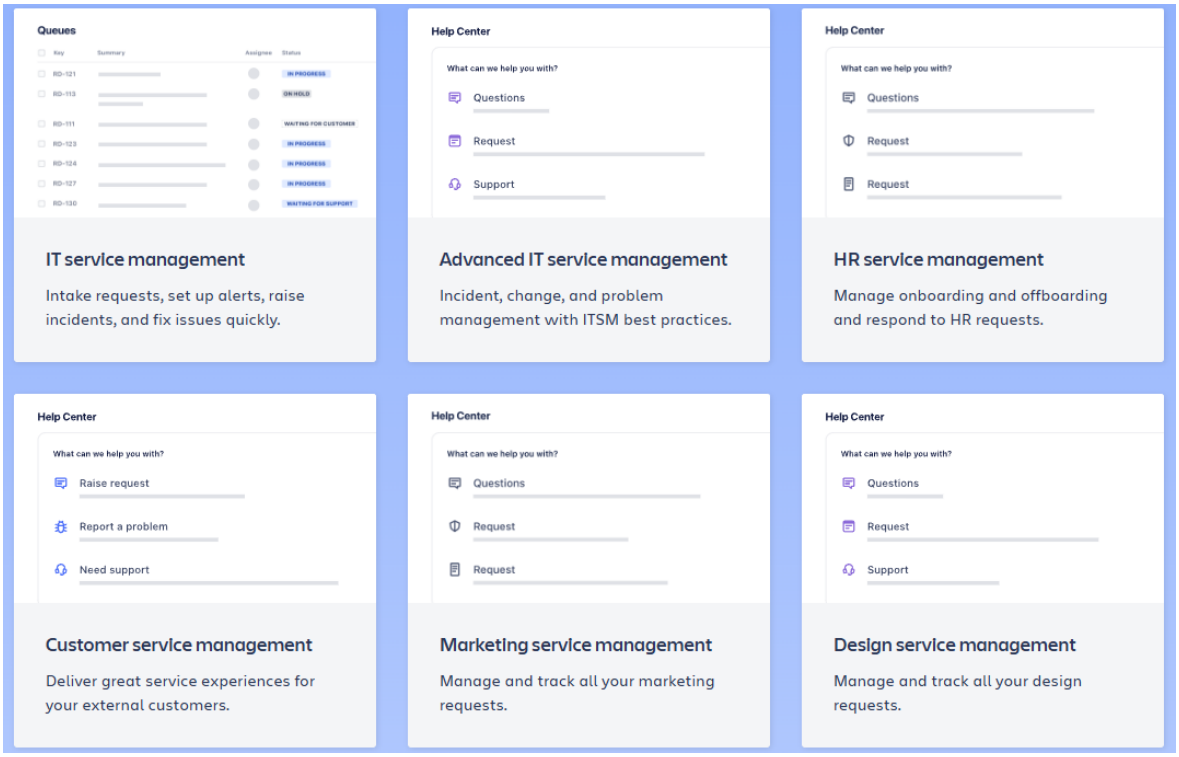


Figure 7 – Jira Service Management Templates 1 (Jira Templates, 2025)

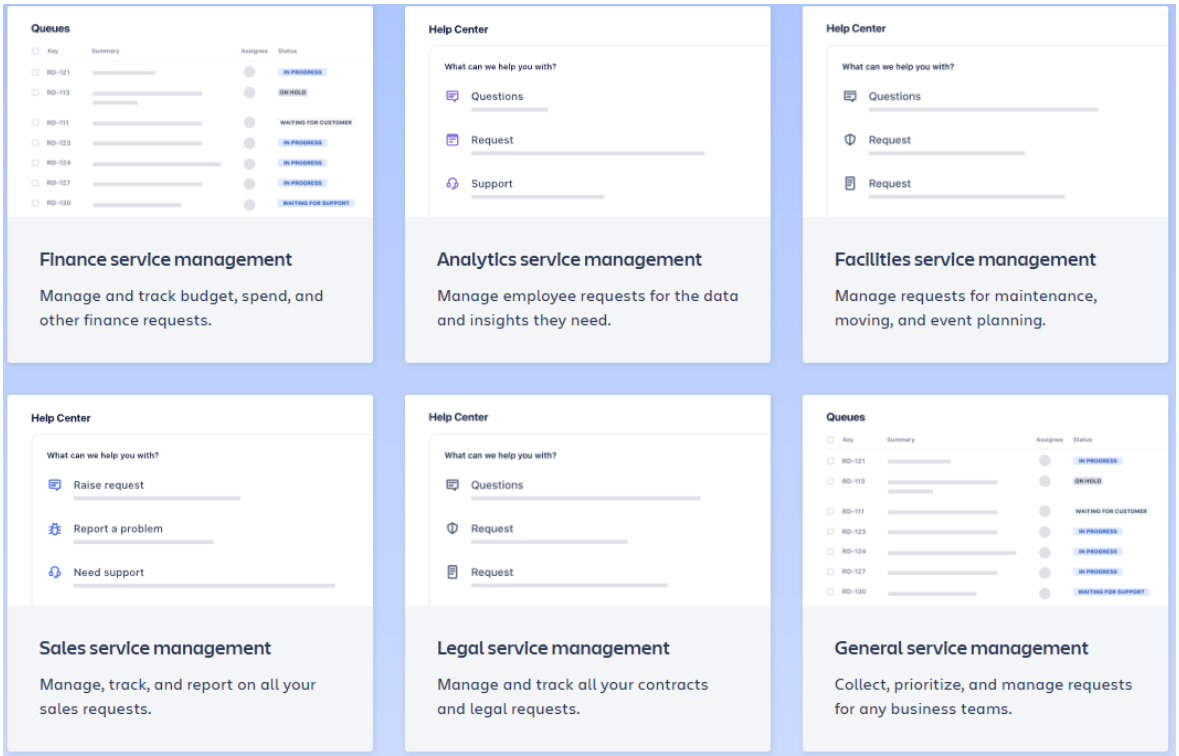


Figure 8 – Jira Service Management Templates 2 (Jira Templates, 2025)

2.3.5 Pricing

Jira service management offers different packages depending on what type of service you are looking for and the size of your operation.

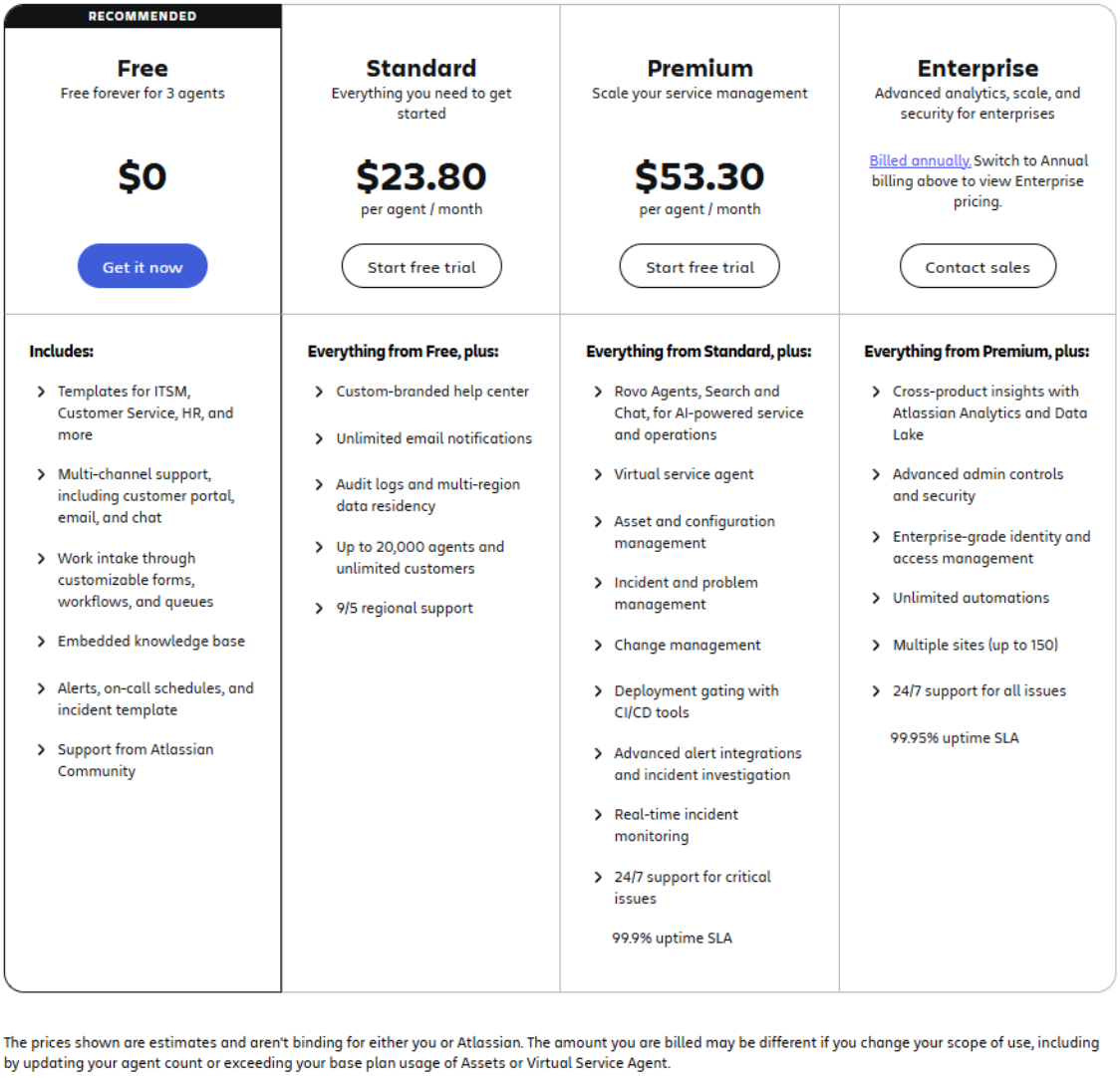


Figure 9 - Jira service management pricing (Jira Service Management Pricing, 2025)

2.3.6 Jira Cloud

Jira mobile app for iOS and Android complements the web version of Jira, offering a streamlined way to manage work on the go. While the web version includes advanced configurations for administrators, such as permission schemes and app integrations, the mobile app enables you to create issues, manage boards and backlogs, generate reports, and track releases and development information in real-time.

With Jira mobile, you can stay connected with push notifications, ensuring you're always up to date, and you can manage work from anywhere at any time. Updates made in the mobile app sync automatically with Jira Cloud on the web, ensuring seamless collaboration. (Jira On-The-Go, n.d.)

Key benefits include:

- Faster responses with push notifications.
- Real-time issue tracking and updates from anywhere.
- Effortless collaboration with automatic sync between mobile and web versions.
- Easy access to project status and critical information, keeping your teams on track, no matter where you are.

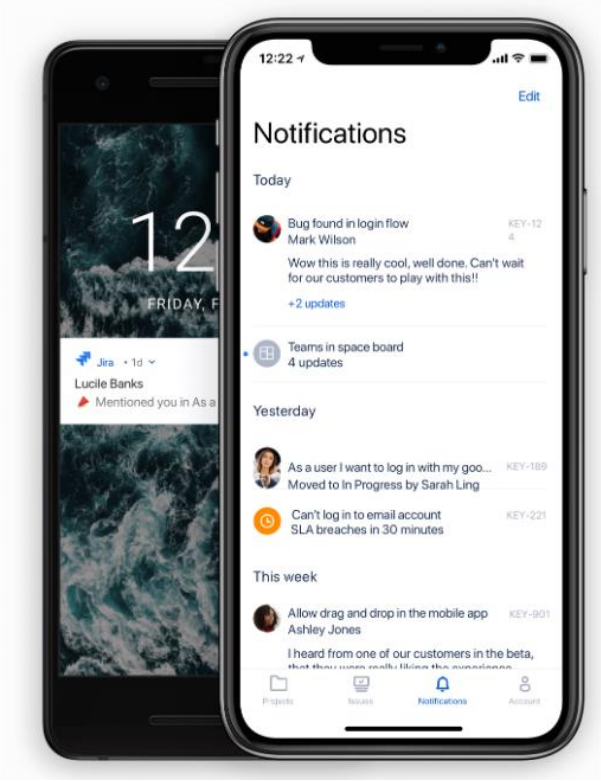


Figure 10 - Jira mobile app (Jira Mobile App, n.d.)

2.3.7 Alternative to Jira

Zendesk is a powerful and user-friendly platform designed to help businesses deliver fast, effective customer support. It brings together multiple communication channels—like email, chat, phone, and social media—into one place, making it easy for support teams to manage conversations and respond quickly.

One of Zendesk's biggest strengths is its simplicity. The interface is clean and easy to navigate, which means teams can get up and running with minimal training. Automation tools help streamline repetitive tasks, while built-in AI features assist with things like ticket routing and customer self-service.

Zendesk also offers strong reporting and analytics, giving teams insight into performance and customer satisfaction. Its flexibility and wide range of integrations make it a scalable solution for businesses of all sizes. And as seen in Figure 11 price difference between Jira and Zendesk is not that different. (Zendesk, 2025)

Figure 11 - Zendesk pricing

3 Practical

As part of the practical part of the thesis, a ticketing system in Jira is setup as a test environment. Customer organization names have been replaced with Customer 1, Customer 2, etc. for privacy reasons. Dummy accounts for both customers and agents have been created for testing.

3.1 Administrative view

This chapter demonstrates how the admin sets up the project and configures various settings in Jira.

3.1.1 Setup

You start by choosing a premade template. The customer service management template is the best fit since it offers many prebuilt settings for customer handling.

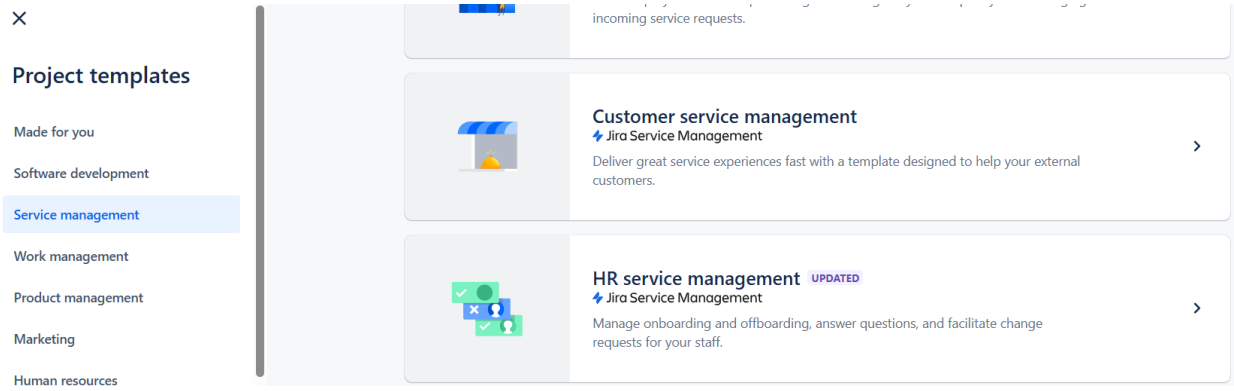


Figure 12 - Customer service management template

After choosing a template and creating the project, you get basic settings such as name, URL, team type, etc. In Figure 13, you can see some of the basic settings when creating a project.

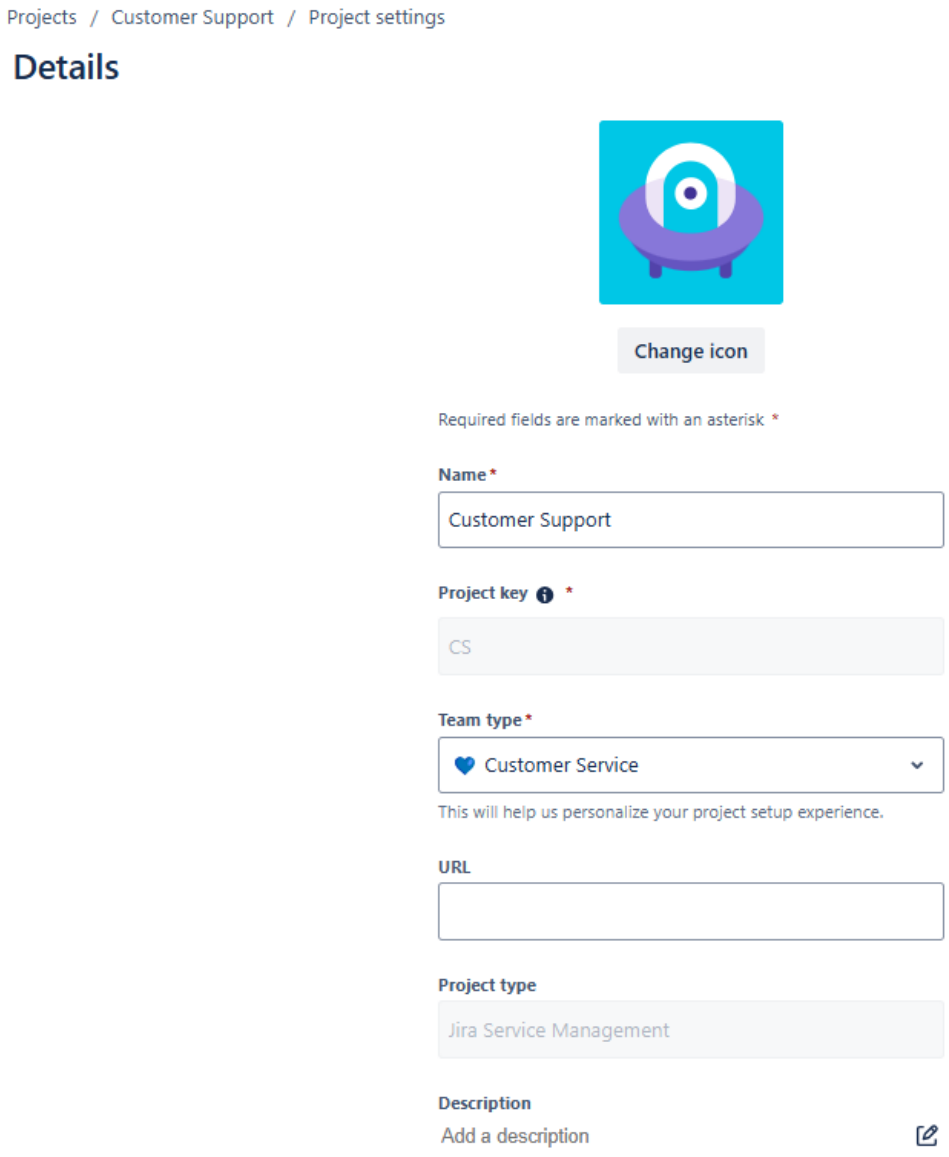
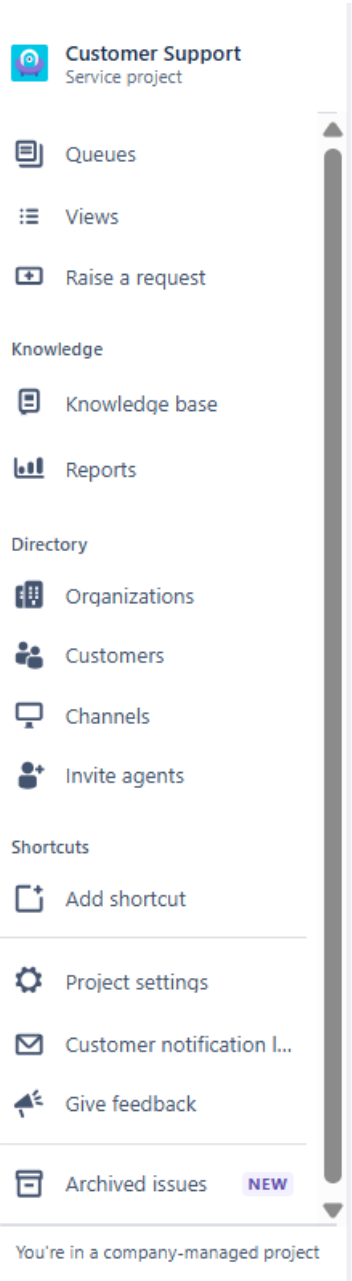


Figure 13 - project settings

Figure 14 shows the left side bar of the project where the main navigation occurs in Jira. Here you can start customizing the project however you want to. Figure 15 is the sidebar if you open “Queues” to see all the “queues” or tickets in the project.



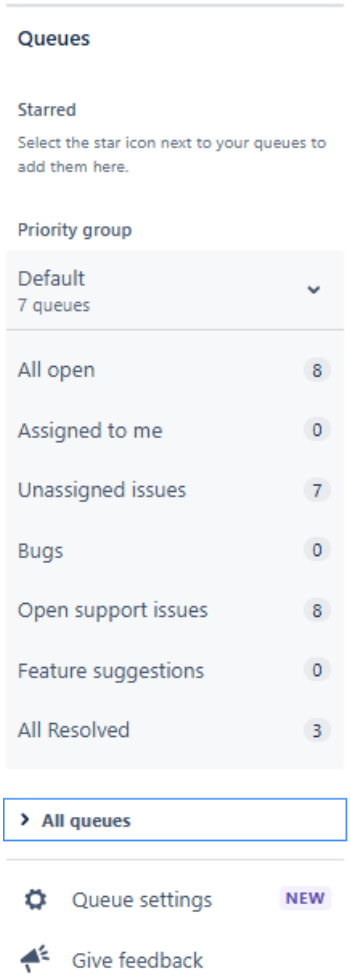


Figure 15 – Queue´s sidebar for ticket

Figure 14- left side bar in the project

3.1.2 Request types

When setting up the portal, it is important to decide what types of support to offer. The portal is what the customer will see and navigate through to find the right support. Figure 16 shows the basic setting for creating a request type.

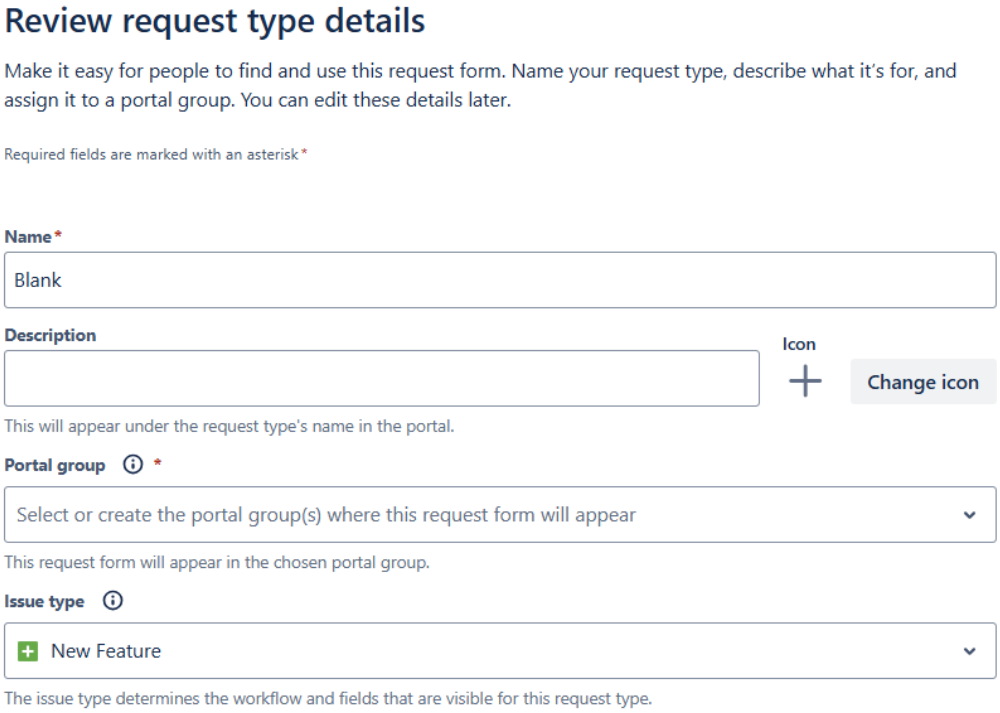


Figure 16 - Creating request type

After creating the basic settings, you will be sent to a more advanced page where you can customize your page more in-depth. Figure 17 is a page overview of some of the things you can customize. On the right side of Figure 17, there are lots of custom fields to add so the request suits your project.

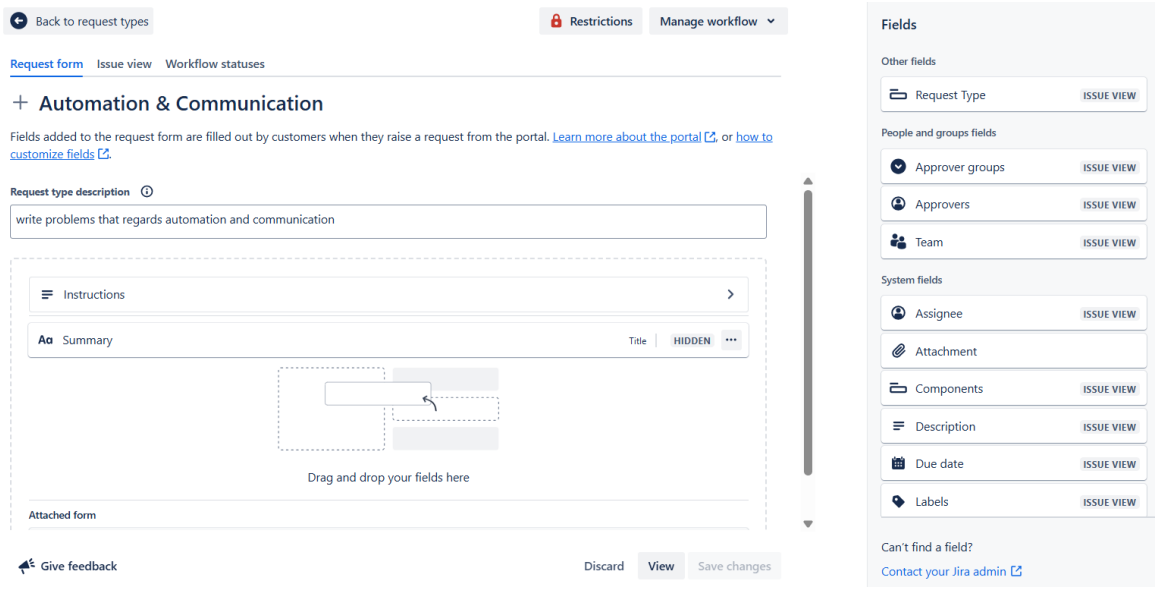


Figure 17 - Request settings

Figure 18 shows all the request types created for this project. There are duplicates of some names but as seen in the figure, they are restricted for different organizations and in different portal groups for optimal customer experience.

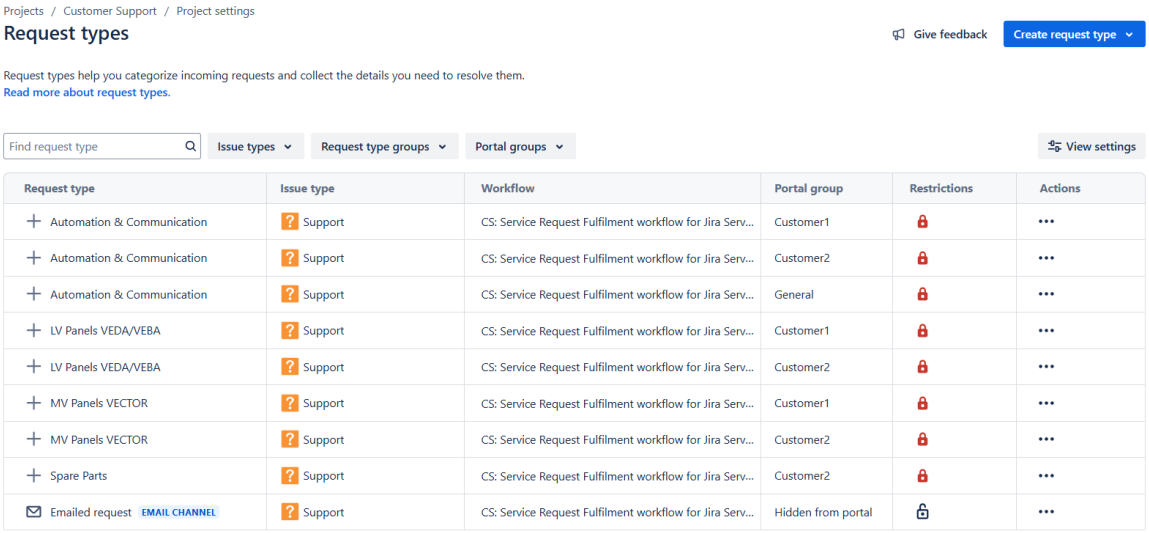


Figure 18 - Request list

For each Request type, different forms have been created depending on the organization and its needs. Forms are the key component that the customer will be filling in and submitting. Figure 19 shows a list of forms created for this project.

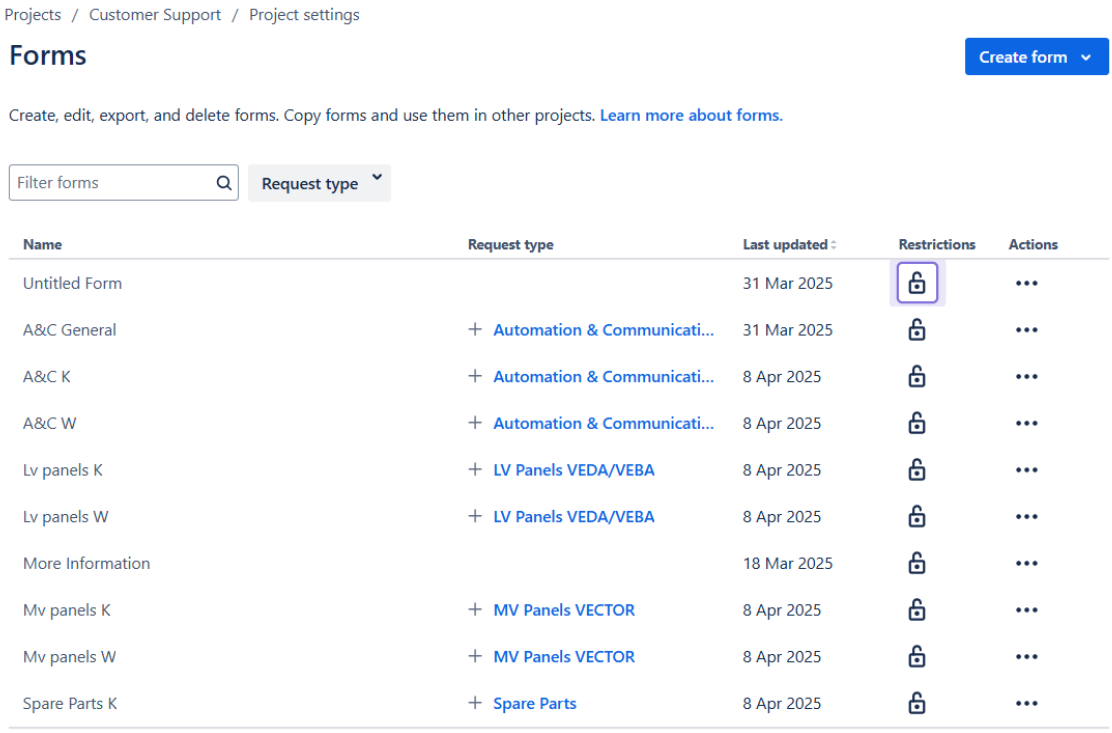


Figure 19 - Form list

Figure 20 is a preview of some fields added to a form that will later be used in a request type and shown in the portal for customer use.

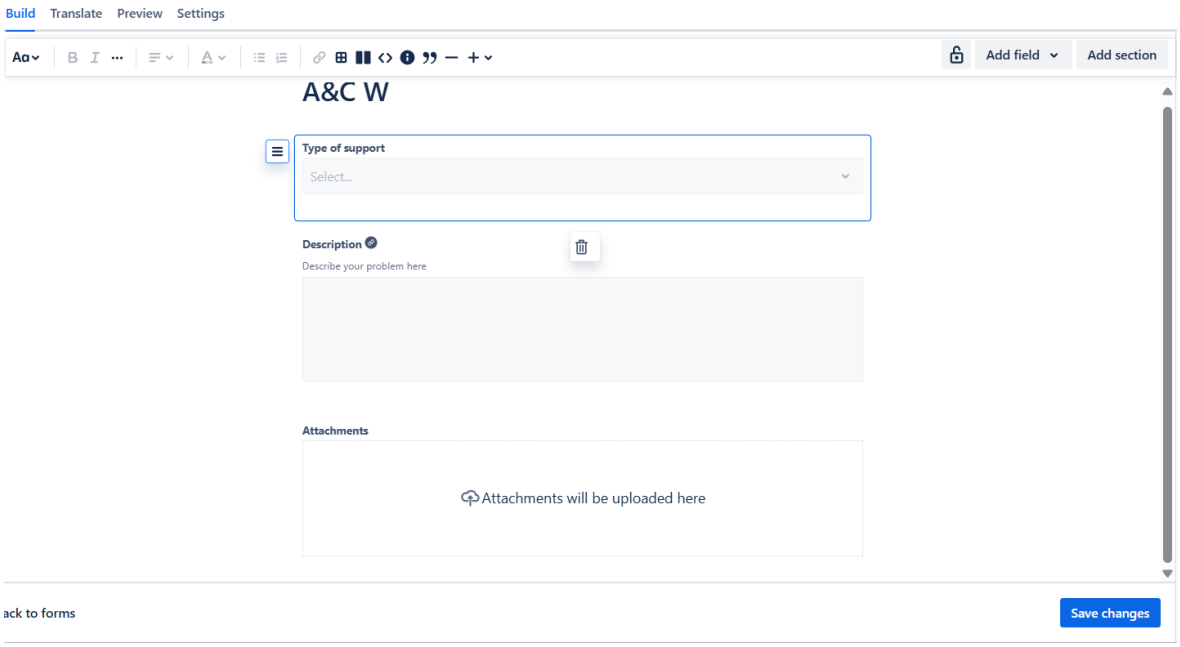


Figure 20 - Form settings

There are many different fields and form settings depending on what type of service you are offering. Figure 21 shows a drop-down list with different services offered by VEO to a specific customer. These services are listed so that the customer can better choose what type of service they need help with, and it is easier for VEO to categorize cases and escalate them to the right person, which leads to faster resolution time.

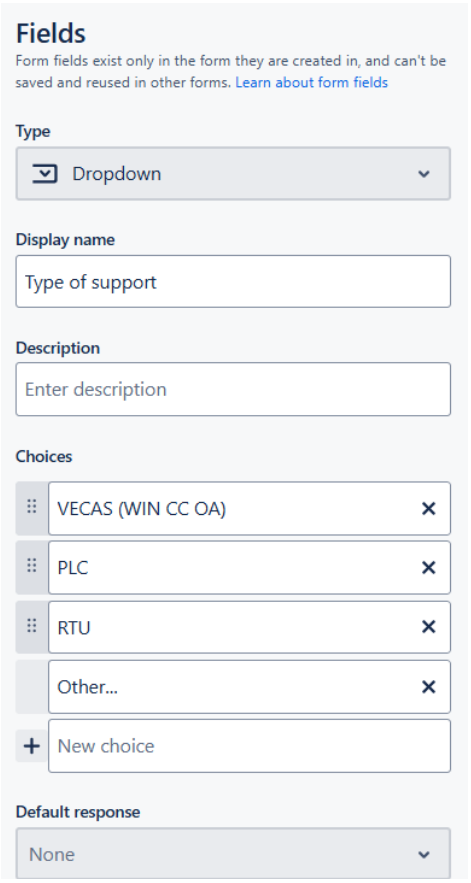


Figure 21 - Form dropdown settings

3.1.3 Customer handling

Organizations help categorize customers and their tickets. In this project, different organizations have been created as seen in Figure 22. If the customer does not fall under a specific organization, they will be put under "General" which has a more generalized range of request types.

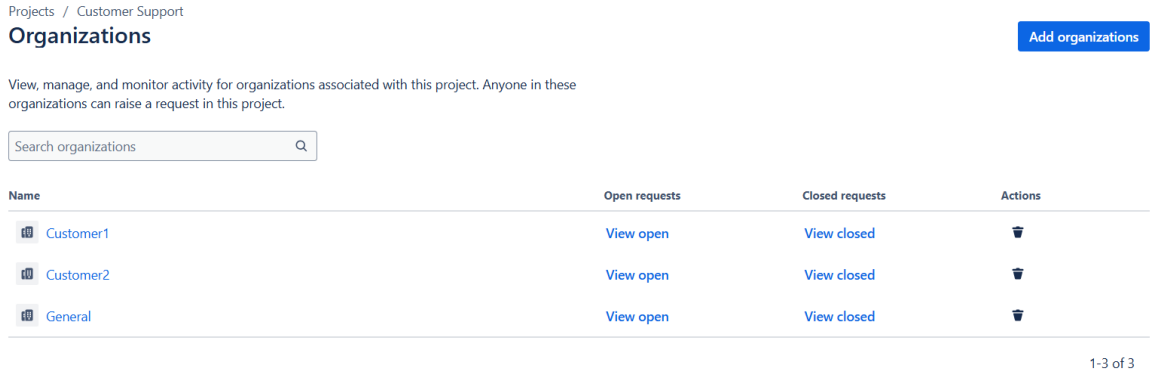


Figure 22 - Organizations for better handling

Figure 23 shows portal groups created for the project. As you can see, they have the same name as the organizations in figure 22, but this is a different type of categorization. Request types are added to the portal groups, and this is the main structure of the customer portal. For example, the organization customer1 will be added to the portal group customer1 and therefore only be able to view request types from the customer1 portal group. This is made for security reasons so that customers cannot see unauthorized request types, and so that the portal is user-friendly and easy to use for customers.

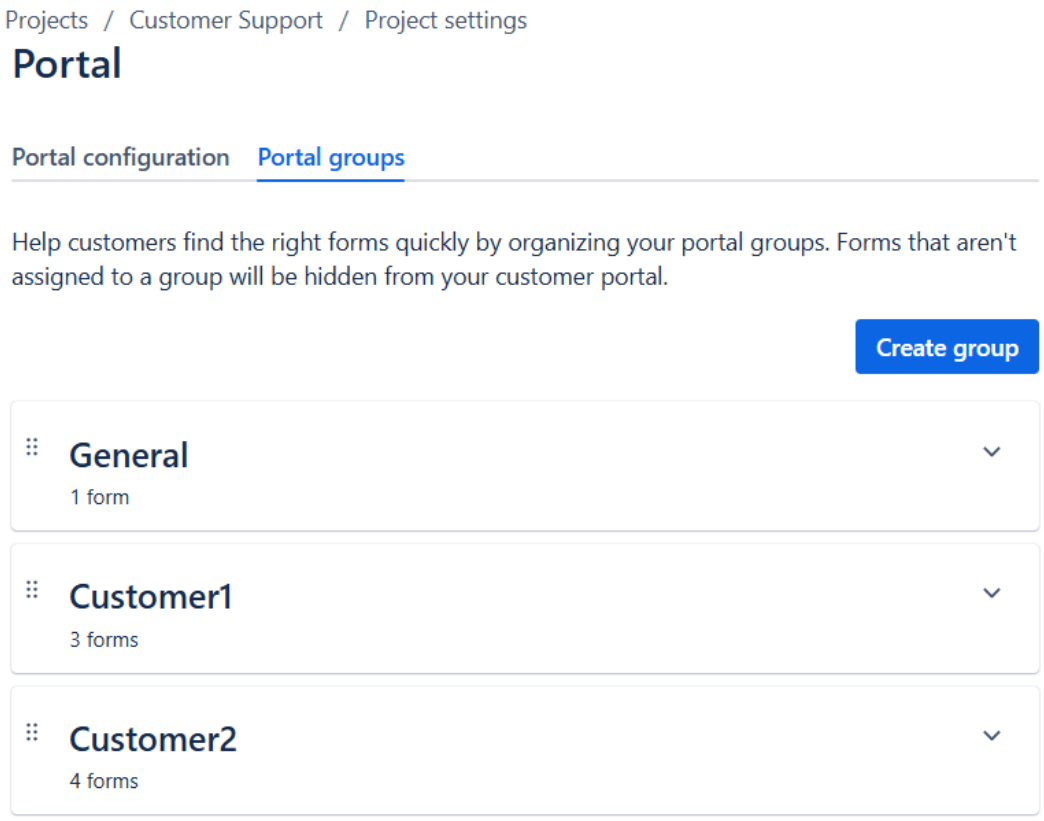


Figure 23 - Portal group for better handling

Under the tab People and access, you can see all the people that have been added to this project, their emails, and what role they have. Figure 24 shows that some are set as administrators, some as service desk team, which are the assignees handling customer tickets and problems, and lastly some as service desk customer, which are the customers creating the tickets.

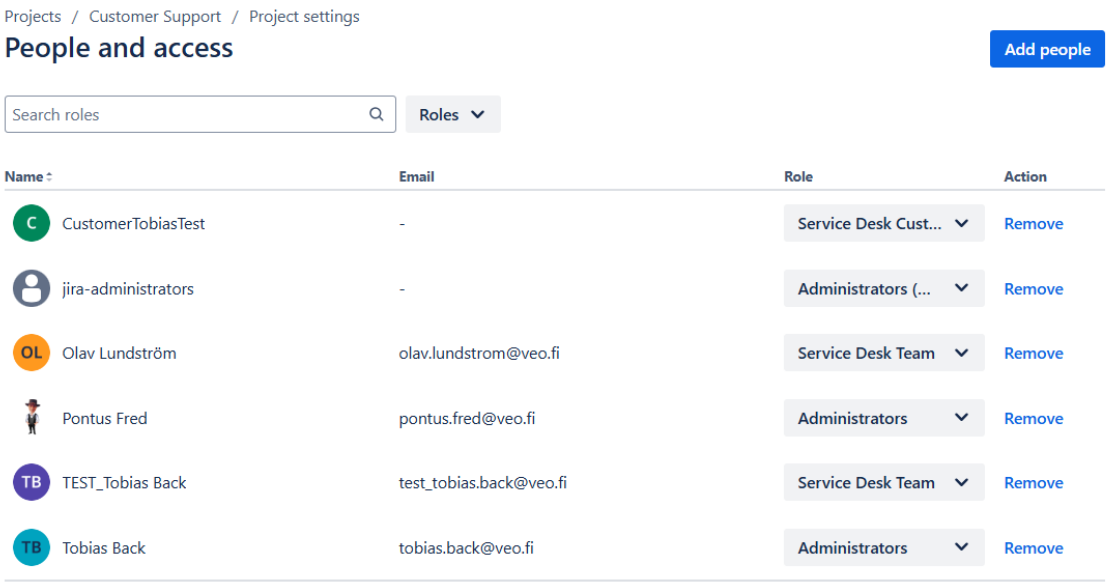


Figure 24 - People and access in the project

3.1.4 Automation

Automation is an important feature in a ticketing system to help relieve the workload of agents. In Jira, when creating a new automation rule, you can either create a blank rule or use the help of AI.

Figure 25 - New automation rules

When using the AI, all you must do is write a suggestion of what rule you want to implement, and it will compile work items for you.

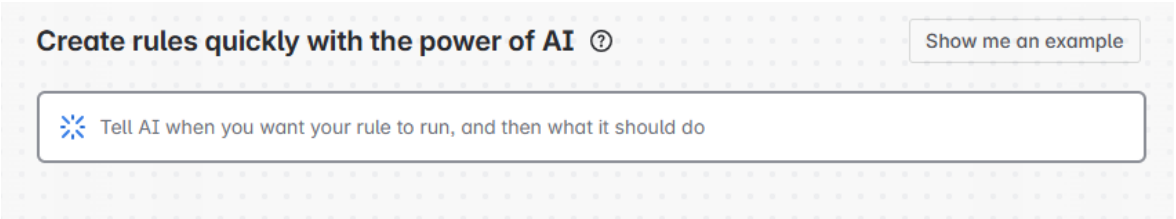


Figure 26 - AI automation rules

Create rule means creating it from scratch by choosing your work items. Every rule needs a trigger to activate. Figure 27 shows a few different triggers that can be used.

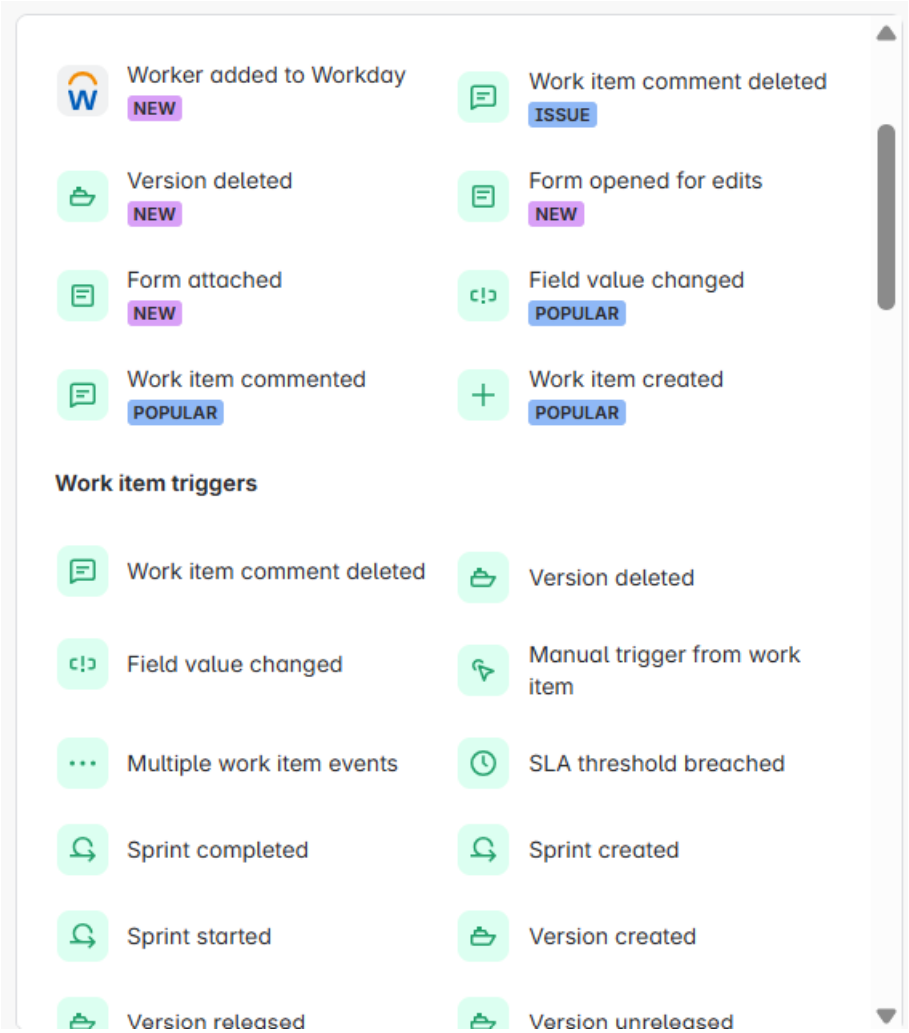


Figure 27 - Automation trigger

After a trigger is chosen, you can freely add components depending on what you want to automate and what happens when the trigger is activated. In Figure 28, you can see the main categories of components that can be used.

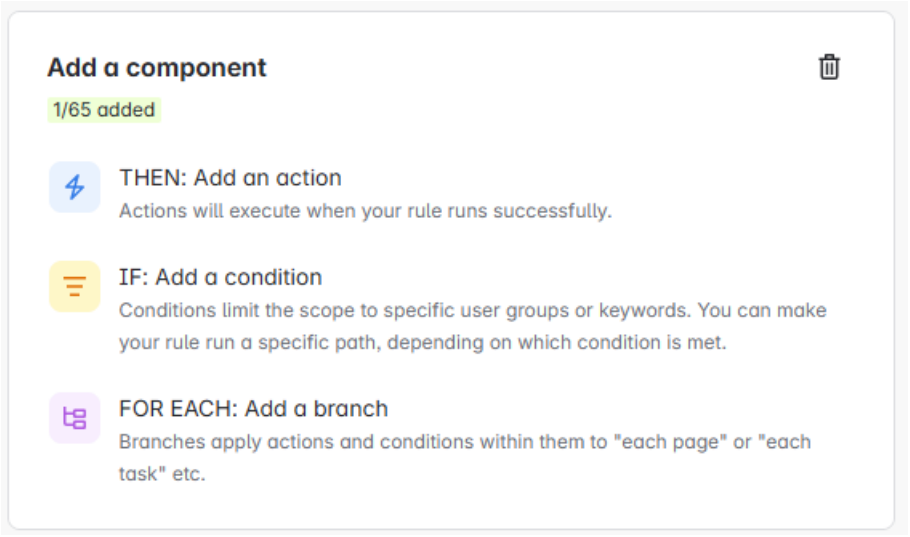


Figure 28 - Automation components

Choosing the IF components, you will get a list of components using some form of an IF condition.

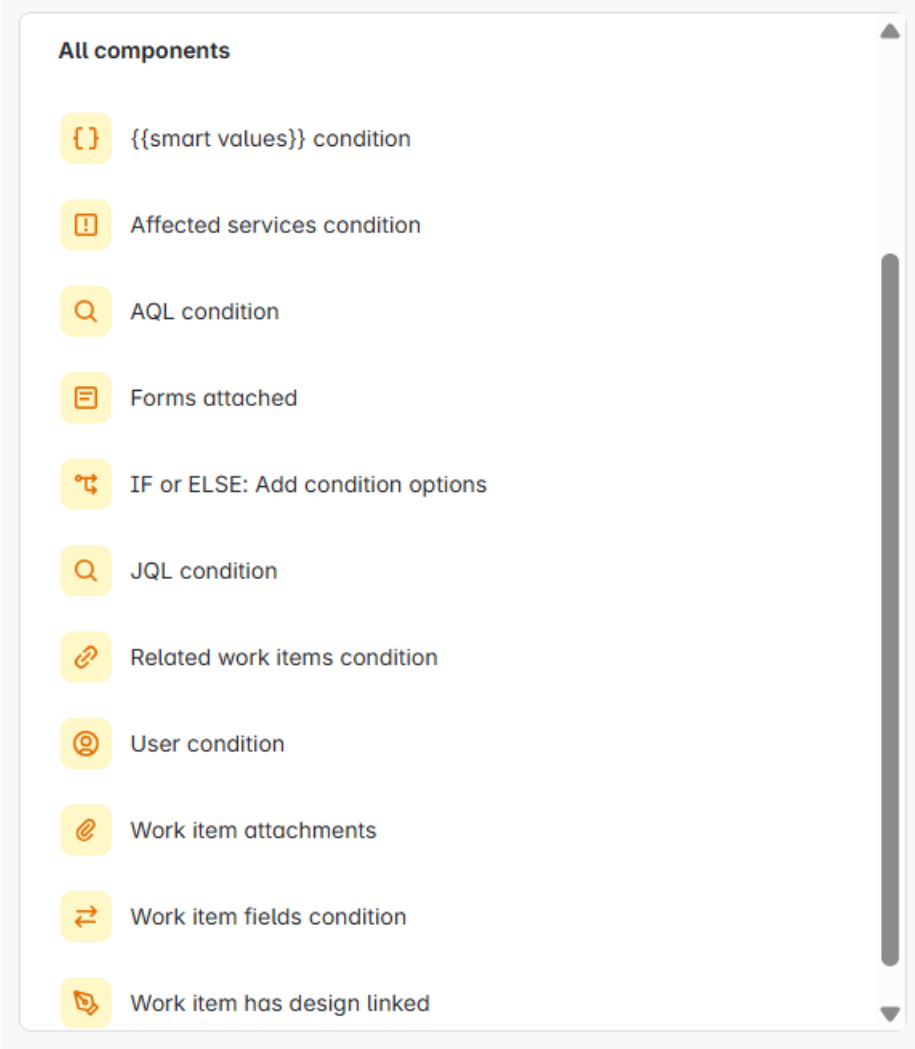


Figure 29 - Automation IF components

For example, I have created an automated rule that automatically assigns the ticket to my dummy agent account if any form used for customer 1 is used. The trigger for the rule is when the work item (ticket) is created. Figure 30 shows how the finished rule looks.

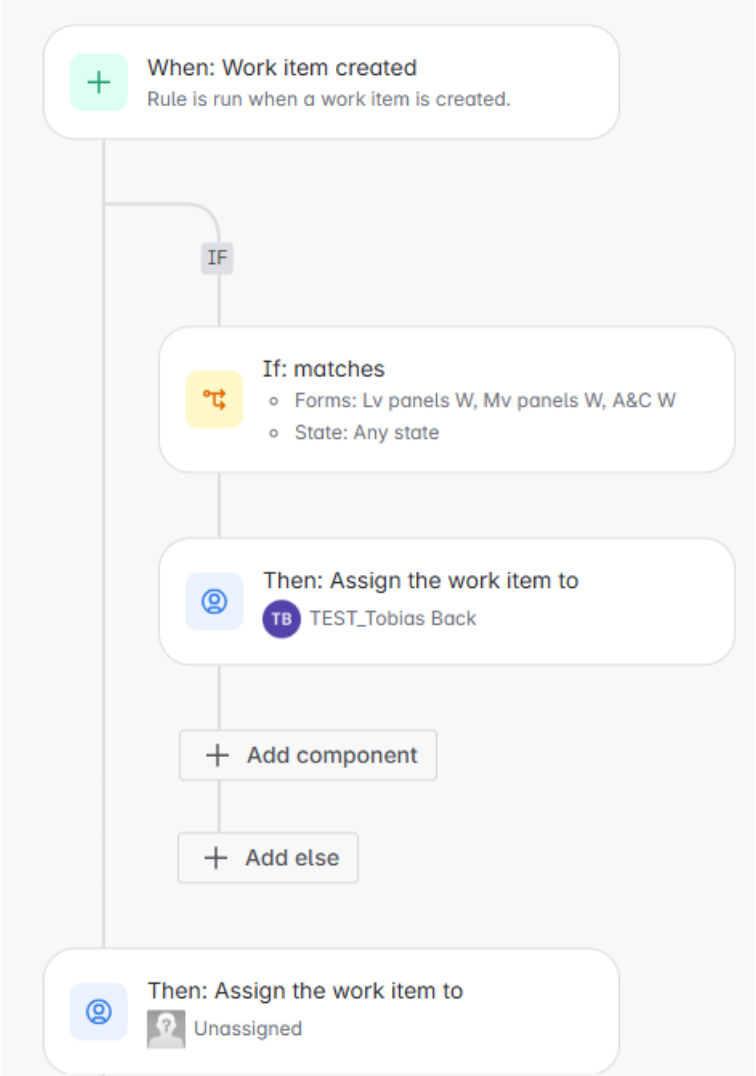


Figure 30 - Automation assignee rule

3.2 Agent view

This chapter explains and shows the view of an Agent handling the tickets submitted.

3.2.1 Ticket escalation and tracking

When choosing all open tickets from queues in Figure 15, you will get a list of all open tickets and some basic information about the ticket.

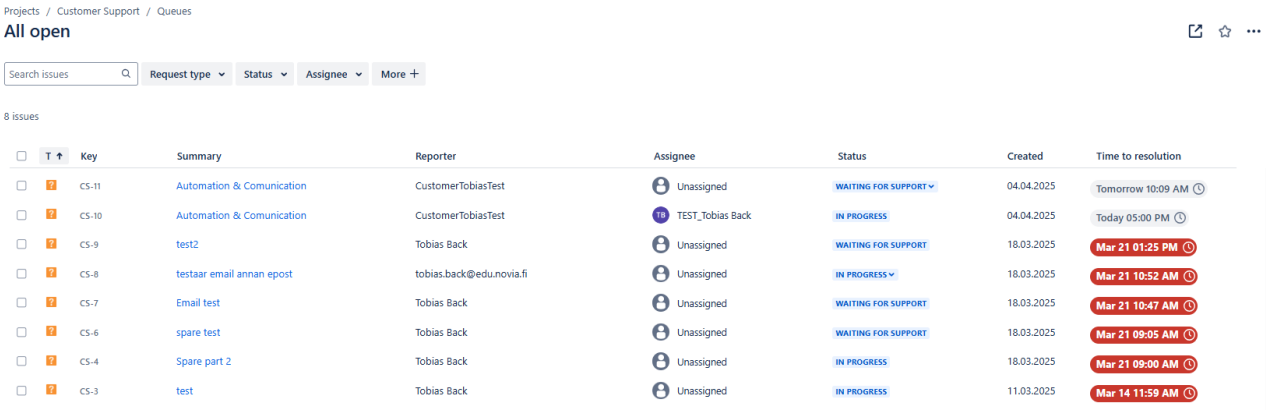


Figure 31 - open tickets queue view

Figure 32 is another way of seeing open tickets and what stages they might be in, just in a board. This view is often used in IT ticket handling for internal cases.

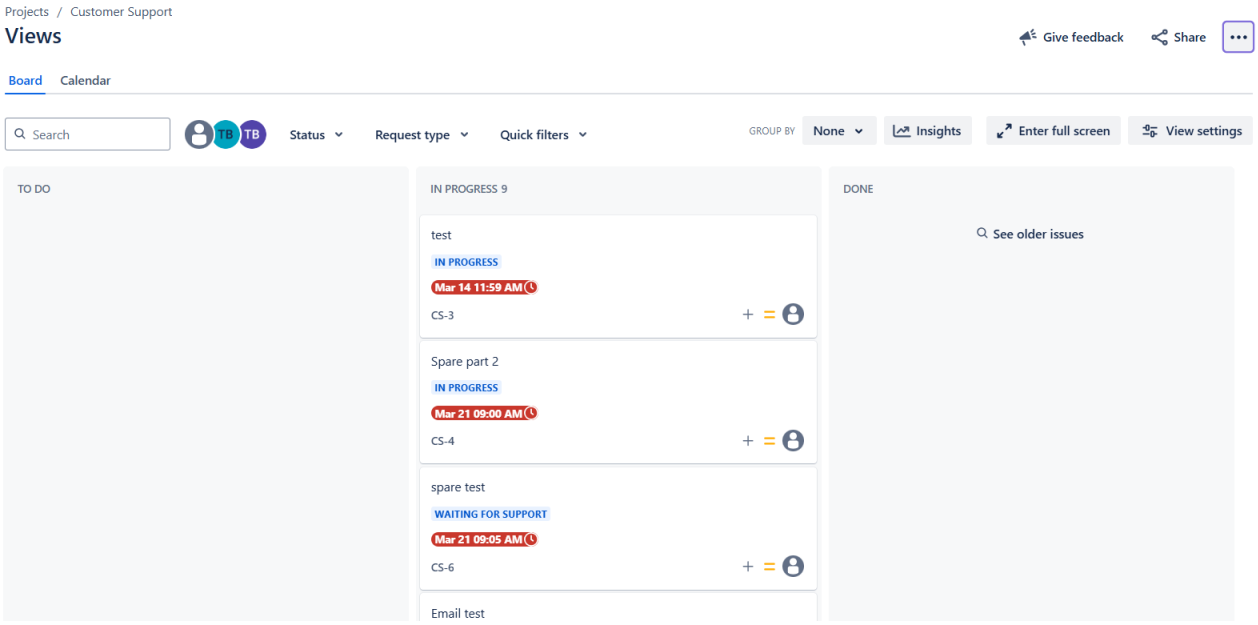


Figure 32 - open tickets board view

Figure 33 shows a ticket created and opened in Jira. This is where all the support from VEOs' side happens. Everything from responding to the customer, adding internal notes, escalating the ticket to the appropriate level or agent, to adding another form for the customer if they need more information about the case.

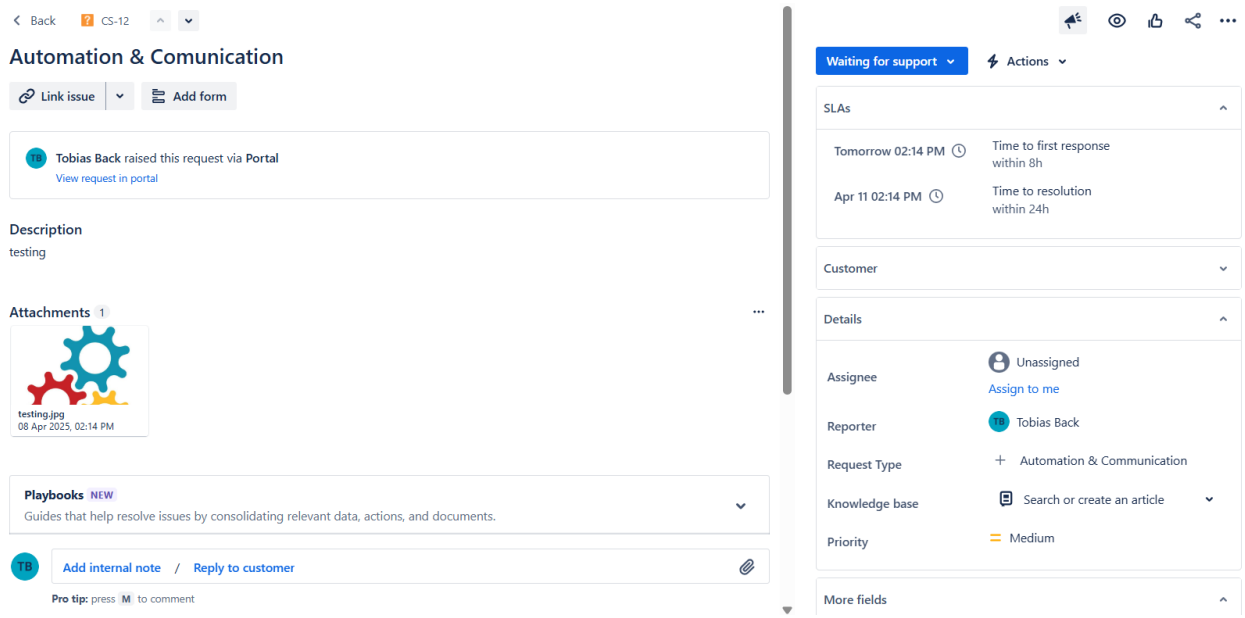


Figure 33 - Agents' view of a created ticket in Jira

In Figure 34, you can see the stages from which you can choose from the workflow, key for tracking and escalating the ticket, and one of the most important features.

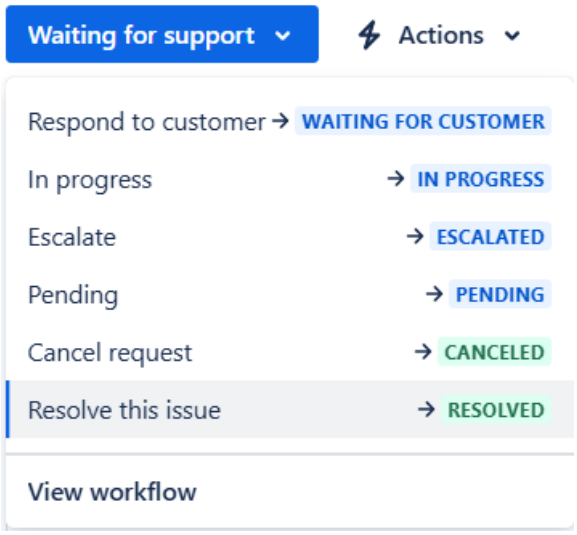


Figure 34 - Ticket progression

When a ticket is created, it is important to get on it right away so that the customer does not have to wait, since it might be urgent. SLAs (Service Level Agreements) are a good way of ensuring that the ticket is handled according to its priority (Figure 35).

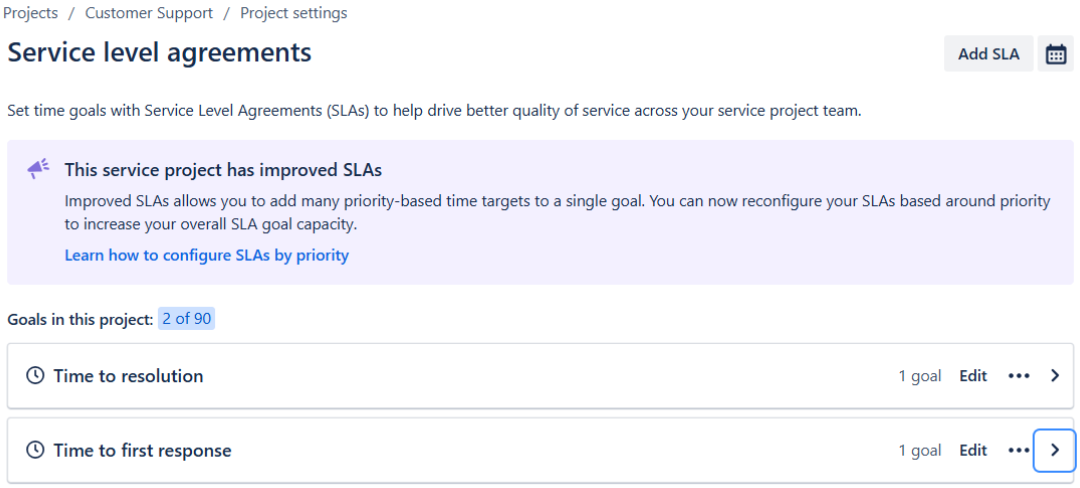


Figure 35 - SLA (service level agreement)

In Figure 36, examples of time to resolution can be seen, according to what priority level the ticket has been assigned.

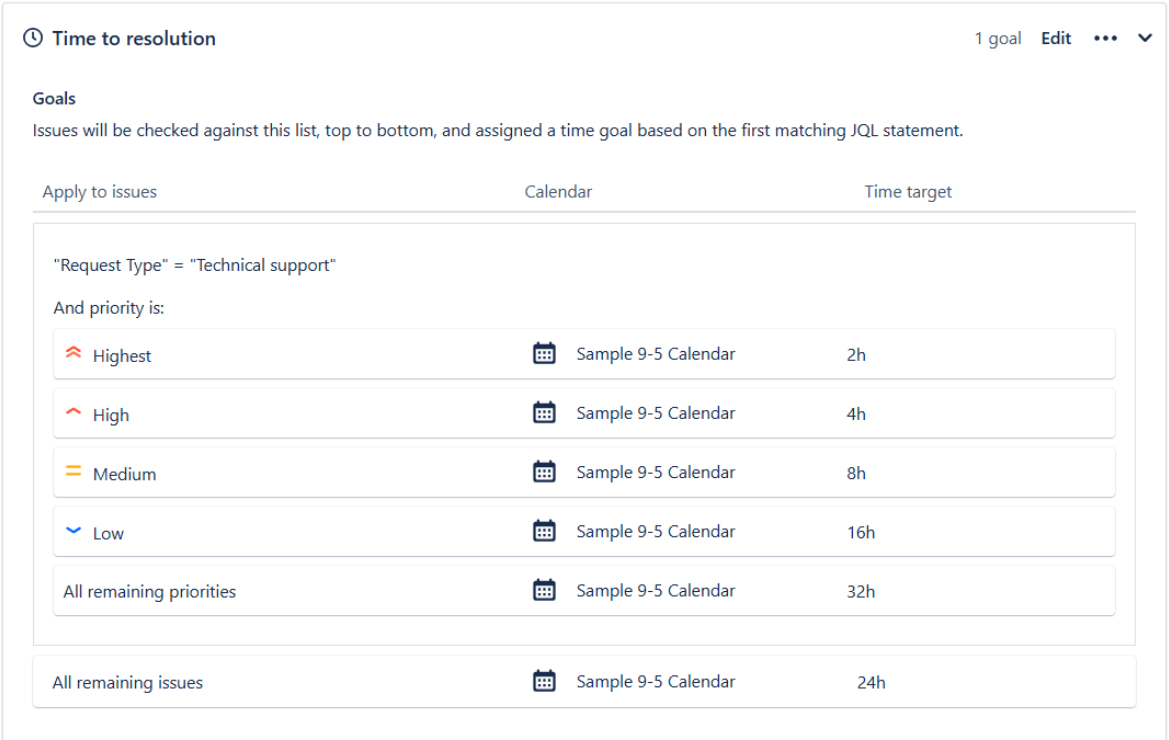


Figure 36 - SLA resolution time

Workflows are important to see in what stage the ticket is and being able to track the ticket's escalation, so that the assigned agent knows if he is the one needed to respond to the customer or if they are waiting for further information from the customer. Notifications are essential for this so that the ticket does not leave hanging when waiting for further information from either partner. The current workflow in use can be seen in Figure 37

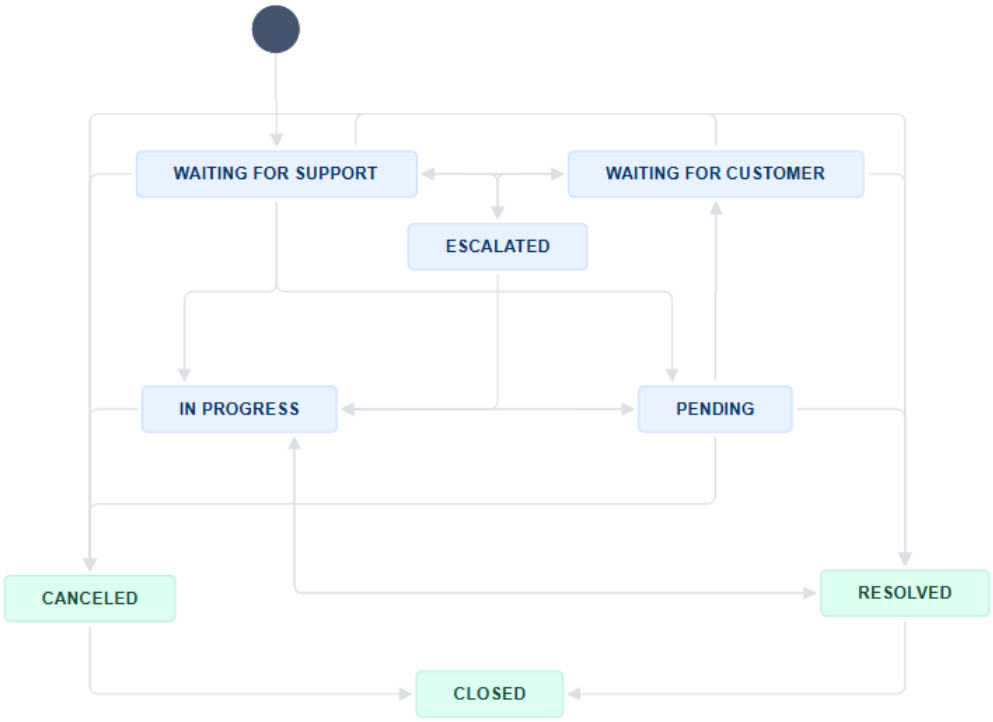
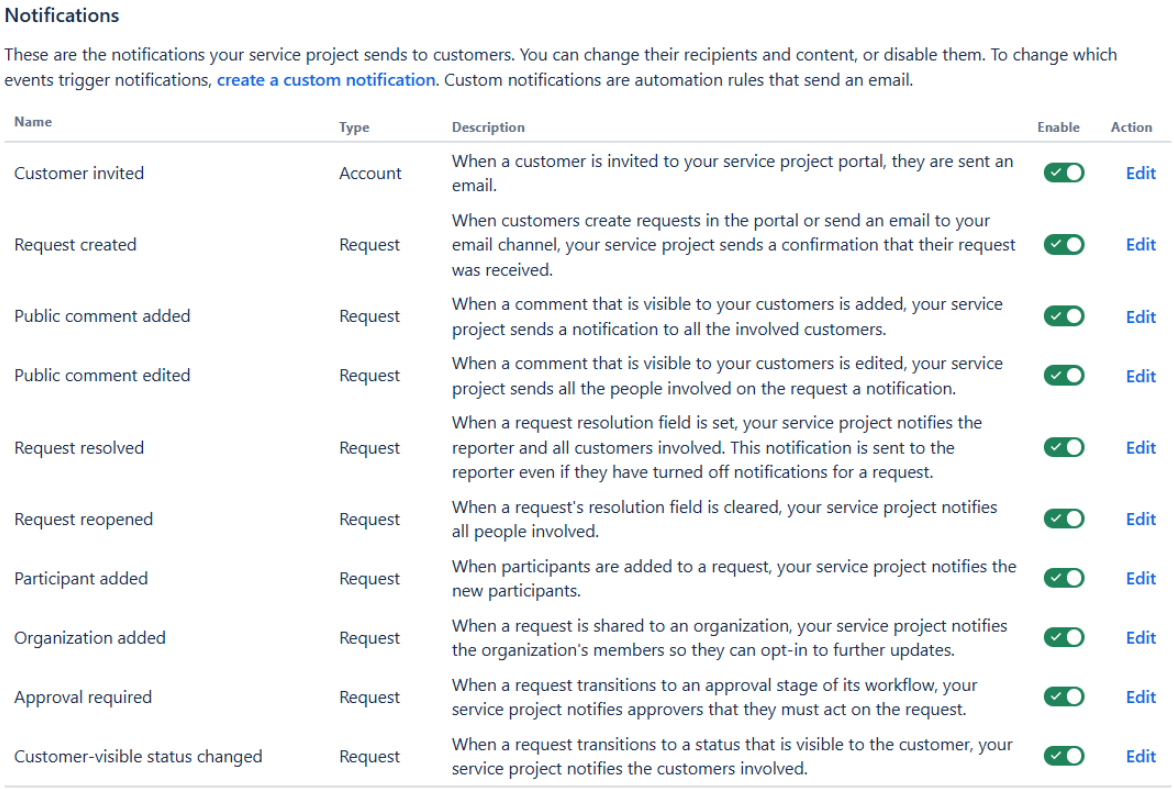


Figure 37 – Workflow

Therefore, as seen in Figure 38, notification settings are activated on every step of ticket escalation. Since the assigned agent is often online most of the workday, the notification for customers is a much higher priority since they might not be actively following the case.



Notifications

These are the notifications your service project sends to customers. You can change their recipients and content, or disable them. To change which events trigger notifications, create a custom notification. Custom notifications are automation rules that send an email.

Name	Type	Description	Enable	Action
Customer invited	Account	When a customer is invited to your service project portal, they are sent an email.		Edit
Request created	Request	When customers create requests in the portal or send an email to your email channel, your service project sends a confirmation that their request was received.		Edit
Public comment added	Request	When a comment that is visible to your customers is added, your service project sends a notification to all the involved customers.		Edit
Public comment edited	Request	When a comment that is visible to your customers is edited, your service project sends all the people involved on the request a notification.		Edit
Request resolved	Request	When a request resolution field is set, your service project notifies the reporter and all customers involved. This notification is sent to the reporter even if they have turned off notifications for a request.		Edit
Request reopened	Request	When a request's resolution field is cleared, your service project notifies all people involved.		Edit
Participant added	Request	When participants are added to a request, your service project notifies the new participants.		Edit
Organization added	Request	When a request is shared to an organization, your service project notifies the organization's members so they can opt-in to further updates.		Edit
Approval required	Request	When a request transitions to an approval stage of its workflow, your service project notifies approvers that they must act on the request.		Edit
Customer-visible status changed	Request	When a request transitions to a status that is visible to the customer, your service project notifies the customers involved.		Edit

Figure 38 - customer notifications

3.3 Customer view

This chapter demonstrates how a customer creates a ticket by using the portal.

3.3.1 Raising a ticket

Currently, there are 2 ways of creating a new ticket: through the customer portal and by sending an email. As seen in Figure 39, there are more ways of raising a ticket that might be used in the future.

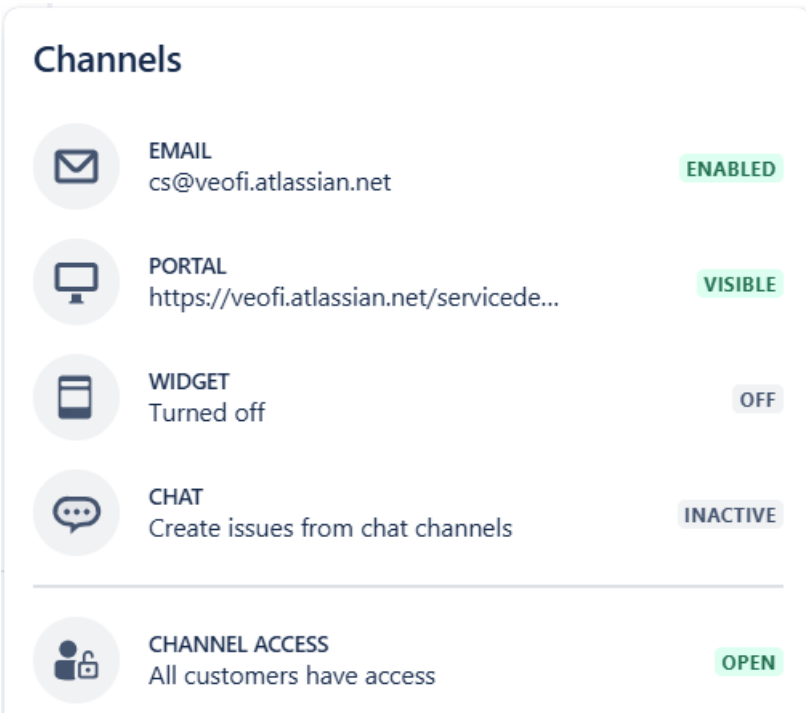


Figure 39 - Channels for raising a ticket

The customer portal is the easiest and the preferred way to create a ticket since everything is categorized and user-friendly. Figure 40 is a view of the customer portal as a customer user added to all organizations in the project. If a customer is added to only one organization, the customer would not be able to see the other portal groups.

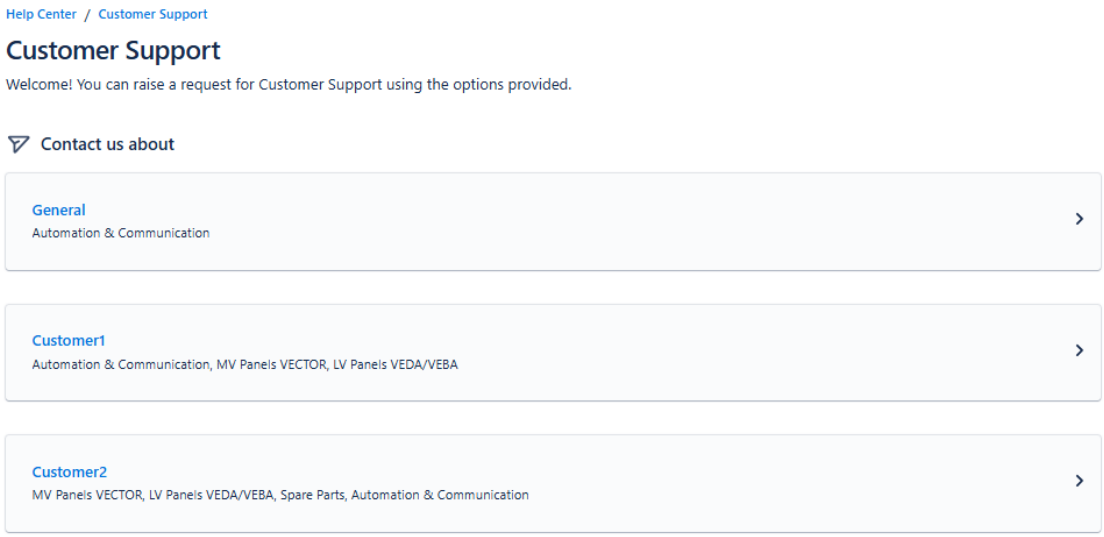


Figure 40 - Portal view

Figure 41 shows the different request types under the Customer1 portal group.

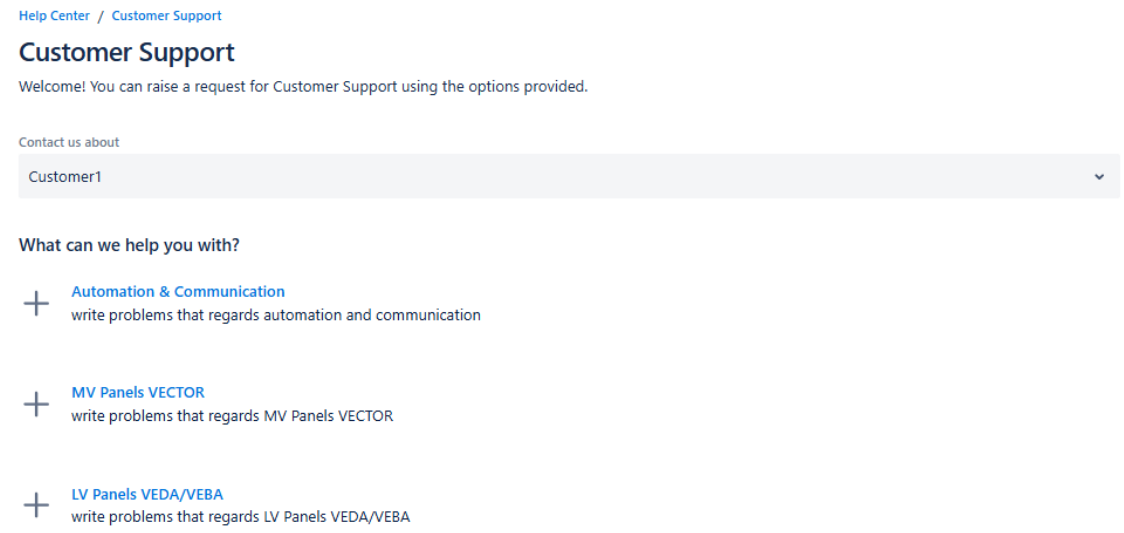


Figure 41 - Portal view customer 1

After selecting the type of request you want to raise, the different forms added to that request type will appear, and you can easily fill in the necessary information. Figure 42 shows an overview of an automation and communication ticket in creation.

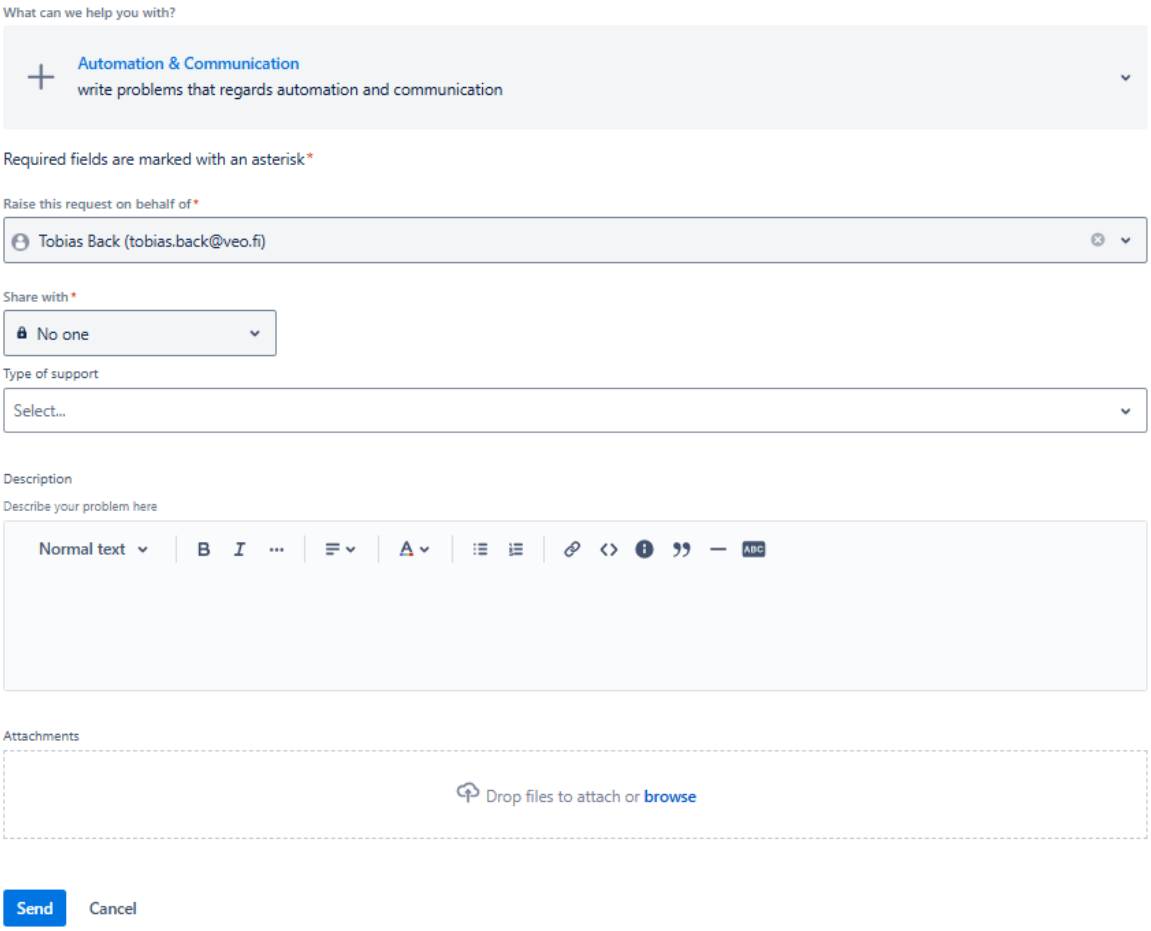


Figure 42 - Raising a ticket for customer 1

After hitting send and creating the ticket, you will be sent to a new page, which is the customer's view of the ticket, and here is where the remaining communication will happen and updates will be displayed. In Figure 43, a dummy ticket has been created for automation and communication. The customer will also be getting an email that the ticket has been created, and with the link to this page where the updates will happen.

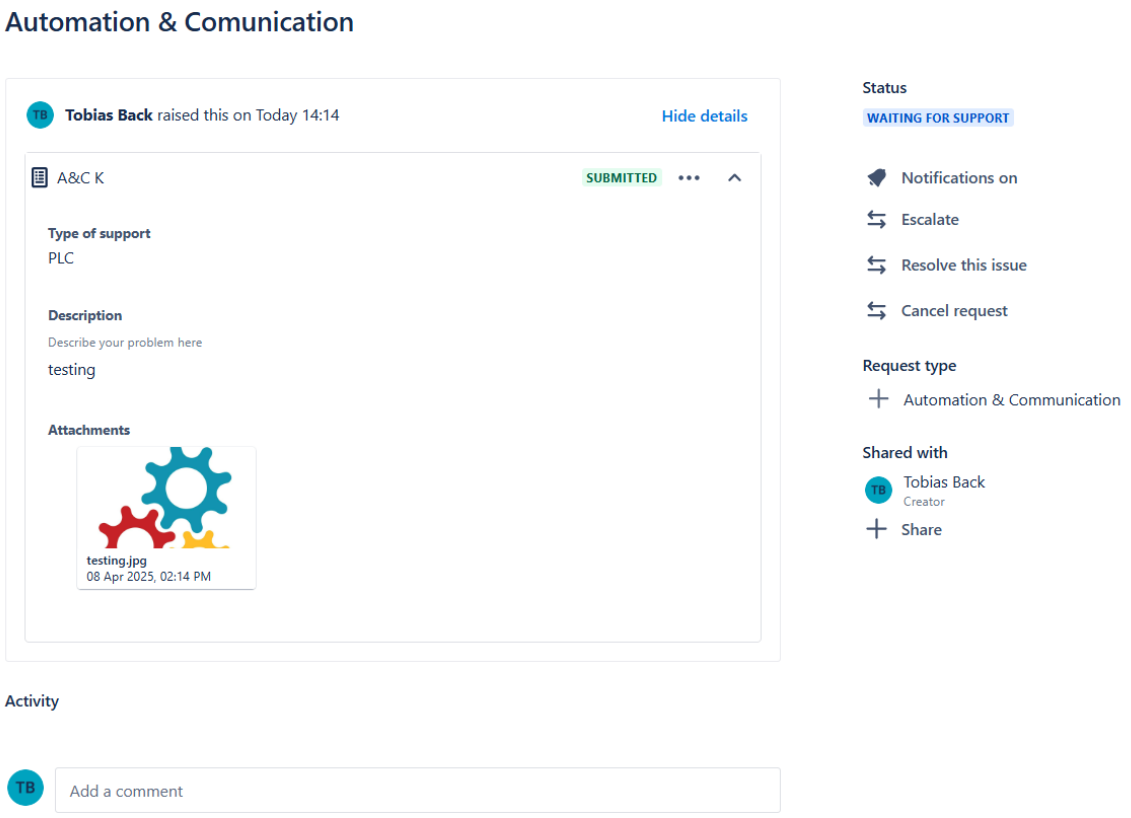


Figure 43 - Ticket created view

After the ticket has been created you will get an email confirming that you have created the ticket (Figure 44), in this email there will be a link to the page seen in Figure 43, this will be where all the updates and answers will be, even if you created the ticket by sending an email. When an agent responds, updates the status of the ticket, or changes something, you will automatically get another notification email. This email will be in the same email chain, so it will not fill your inbox.

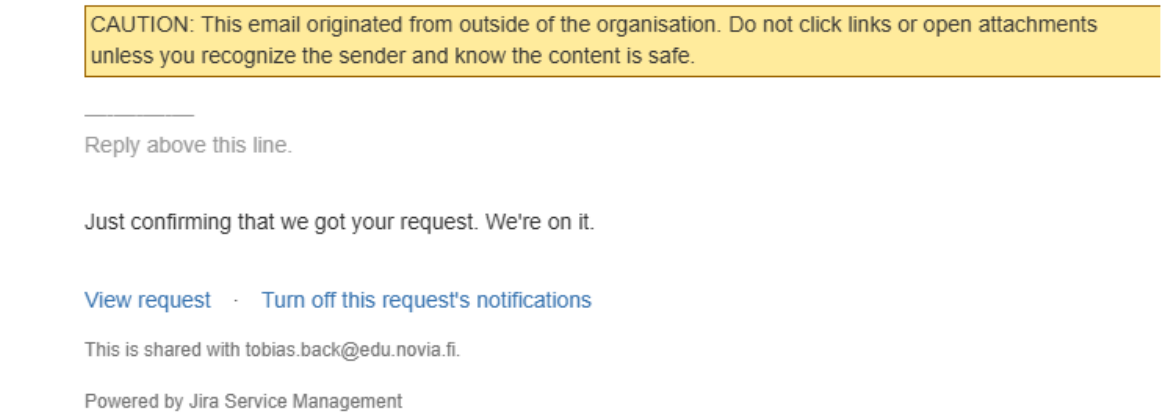


Figure 44 - Verification email for created ticket

3.3.2 Customer satisfaction

Customer satisfaction is very important for VEO. That is why, after every solved case, an automatic email will be sent for customer feedback. Figure 45 demonstrates how the feedback email looks on one of the tickets that was created by sending an email.

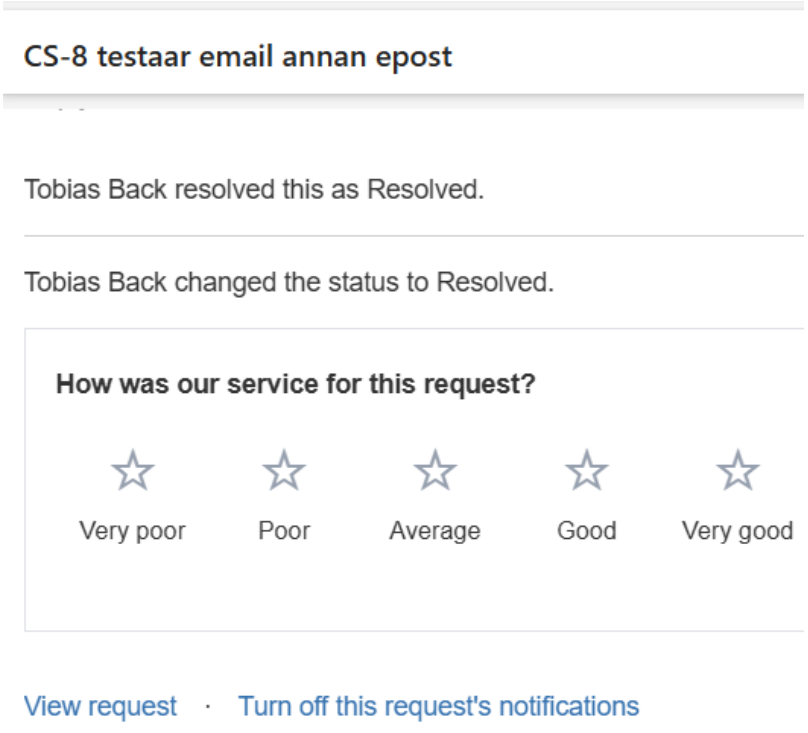


Figure 45 - Ticket feedback

4 Discussion and results

Customer support plays a crucial role in modern businesses. To effectively manage customer issues and requests in a professional setting, a ticketing system offers an ideal solution.

The research in this thesis has proven both theoretically and practically that Jira is a suitable option for VEO since Jira provides the most key essentials for a fully functional ticketing system for optimal customer support. And since VEO already is using Jira for internal use and has employees with good knowledge of the system, it does not take many resources to get a fully functioning version ready for customers.

As the goal of this thesis was to provide information about the basics of ticketing systems and set up a test environment in Jira, the goal has successfully been achieved. Since a full test run of the system with real customers and VEO employees as agents has not been conducted, there still might be slight changes to be made and other functions to be implemented in the system for the optimal experience.

Future research and development could be done on this thesis, as there are so many settings and options in Jira unexplored, and a full test run of the system with real customers and agents would help VEO further in seeing if Jira is the right fit for them.

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