

Scenario B

“Buy your ticket”



POLITECNICO
DI MILANO



pwc

Group 15

Leila Guidetti 10936225

Riccardo Grasso 10677625

Federico Folloni 10957061

Mattia Longobardo 10616746

Marco Andrea Brambillasca 10730677



Delivery 1: Product Canvas

“Secure Tickets”

Goal

Provide ticket officers with the possibility of selling ticket insurance seamlessly and efficiently during purchases at brick-and-mortar ticket counters. Furthermore, allow attendees to buy an insurance after their physical ticket purchase, to check the insurance status and explore additional offerings at their convenience.

Metrics

METRIC	MUST HAVE	NICE TO HAVE
% of insurances sold with physical tickets	> 15%	> 20%
Average time from scanned QR to sold insurance	< 2 min	< 1 min
Adoption Rate (% Physical seller that sold at least 1 insurance)	> 95%	> 99%

Target group 1



Linda Corbetta

Details

Works as a Box-Office Agent in a concert venue, reliable and with a lot of experience.

She is 57 years old, after the high-school diploma started working as a cashier.

Loves reading books, she is not an expert in using the PC, but has proficiency with the current platform given the long experience in this working environment.



Goal

Wants to provide the best service possible, without being too stressed because of the IT system.

Doesn't like complex processes, so it is mandatory that the insurance selling is not a big burden, but brings value added without slowing the purchasing process.

Target group 2



Simon Taylor

Details

Middle age man from Chicago, works in business administration for a mid size american company.

He is often in Italy both for business trips and leisure with his family.

He has two little daughters and a busy schedule, so his plans often face last minute changes.



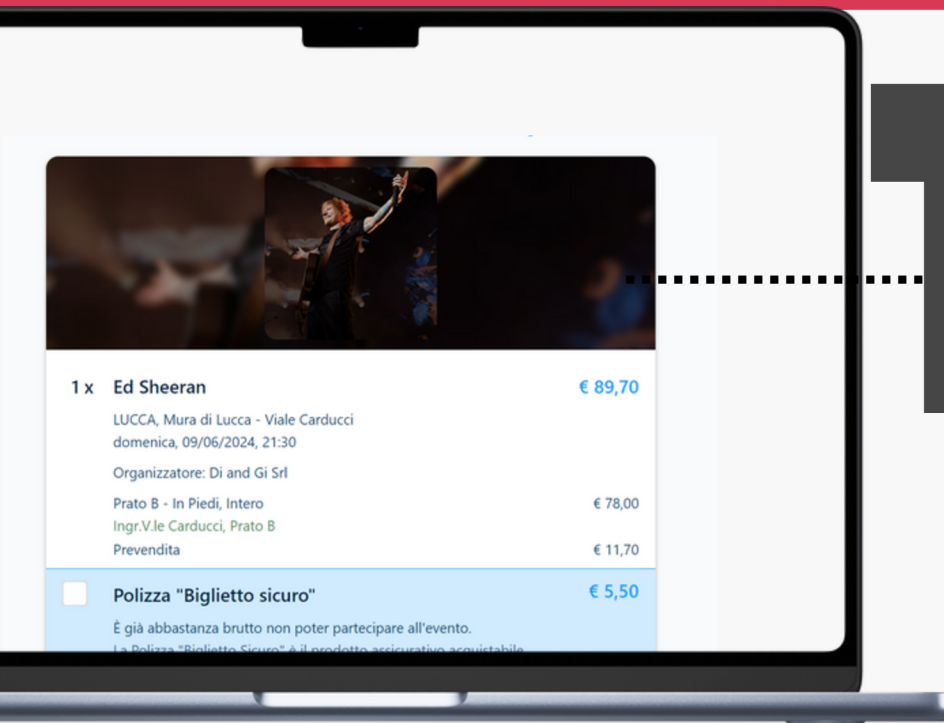
Goal

Wants to have flexibility on his decisions after the purchase of the ticket. Likes the possibility to add the insurance thereafter, to check before his schedule.

Preference for face to face interaction, to ask for further information on the event.

Willing to have a physical purchase, because of limited awareness of Italian online ticket platforms.

User Journey



1

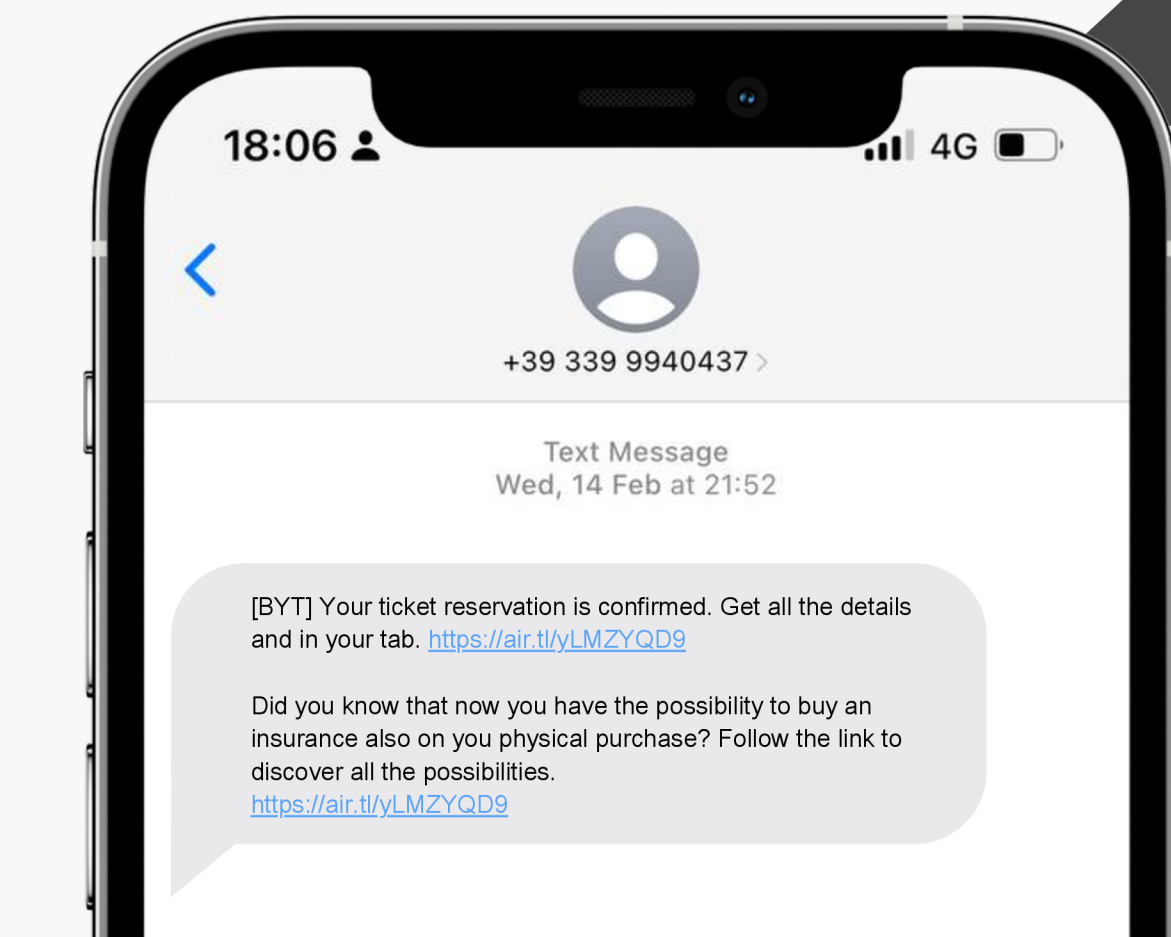
The new feature enables the operator to include and implement the **event-related insurance in few clicks** on the actual online platform. Of paramount importance will be to **ease the operator process**: making the insurance option implemented with a simple "tick" the effort will be reduced to the bone and a pop-up alert will avoid misclicks and errors.

2

After the purchase the customer will receive a **SMS message** to the designated mobile phone with a link to redirect the user to the resume page. There the event attendands can check at anytime the information about the event, can find a digital backup of the physical ticket and can **access the website to add a post-purchase insurance**. Everything he will need is just a click away.

3

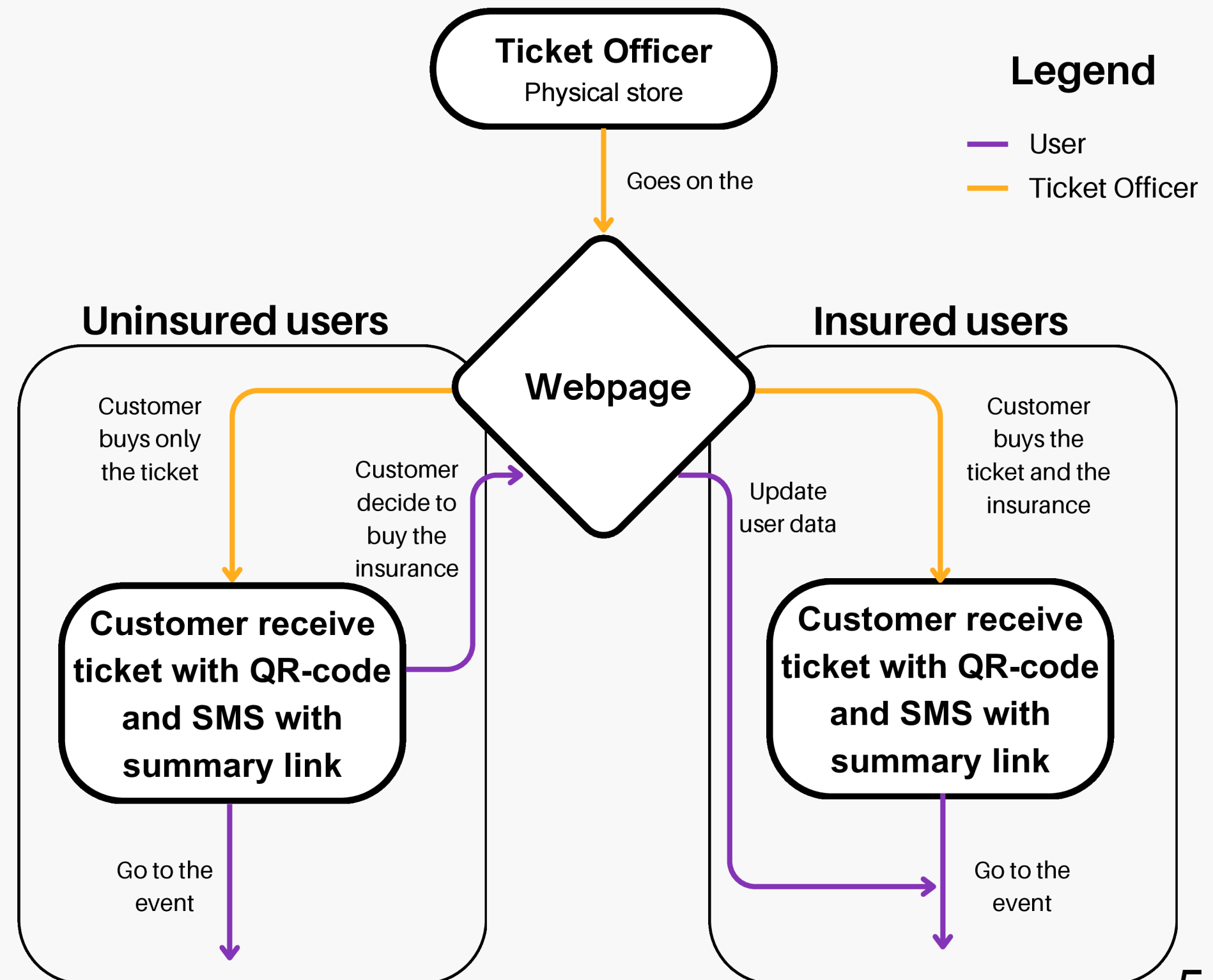
The **QR-code** printed on the paper ticket allows **quick and straightforward access to the afrometioned website**, reducing even more the effort and time needed to access the platform at any time.



Product details

Thereafter are reported the main features according to the order of implementation. Every step will have just enough items to make the product viable and tested in the real environment:

- An **Update of the platform** available for the ticket officer, will allow her to add an insurance at the time of ticket purchase. Event insurance provides an additional guarantee with regard to the reimbursement of the ticket, according to the clauses and rules of the specific policy.
- An **Integration of a notification system via SMS** is implemented to inform and redirect users to the webpage and enable them to add insurance after purchase.
- The **Users are provided with QR code**, directly printed on the ticket. The database of the ticket printers need to be updated with the new designs that include the scannable code.



Name

“**SecureTickets**”, the latest solution for buying insurance for your tickets

Goal

To enable ticket officers to sell ticket insurances in an easy and straightforward way during the purchase at the ticket counter, but also give to the final attendands the chance to buy them thereafter.

Metrics

- % of insurances sold with physical tickets
- Average time from scanned QR to buy the insurance
- Adoption Rate (% Physical seller that sold at least 1 insurance)

Target Group

Two segments have been adressed, specifically the **Ticket Officer and the Physical Buyer**. The Ticket Officer serves as the frontline staff responsible for guiding customers through purchases, while the Physical Buyer represents the end-user purchasing tickets. Understanding their needs and preferences is essential for designing a platform that enhances operational efficiency and user experience, ultimately driving increased adoption of ticket insurance services.

Big Picture

- Event insurance offers reimbursement to the ticket owner for the whole expenditure or a part of it, whether a specific event occurs, per policy terms.
- **Ticket officer’s Webpage** enables quick insurance incorporation during ticket purchase at the brick and mortar office.
- **SMS** sent with event summary and webpage link, for convenient access of the final user.
- **Ticket QR code** provides an alternative way to access, considered more friendly for any kind of users, to event details, attendee personal data, and insurance informations.

Product Details

- **Integration within the current ticketing webpage** of the possibility to sell insurance with ticket purchases
- The **notification system via SMS** also include a link to buy in a second moment an insurance, via the aforementioned platform.
- The **printed QR code** allows direct website access from the physical ticket.

Delivery 2A: The Product vision

The Elevator Statement



For our Client “Buy your ticket”

Who needs to enable buyers of physical tickets to purchase event insurance anywhere, anytime

The “Secure Tickets”

Is an additional section on the current company website

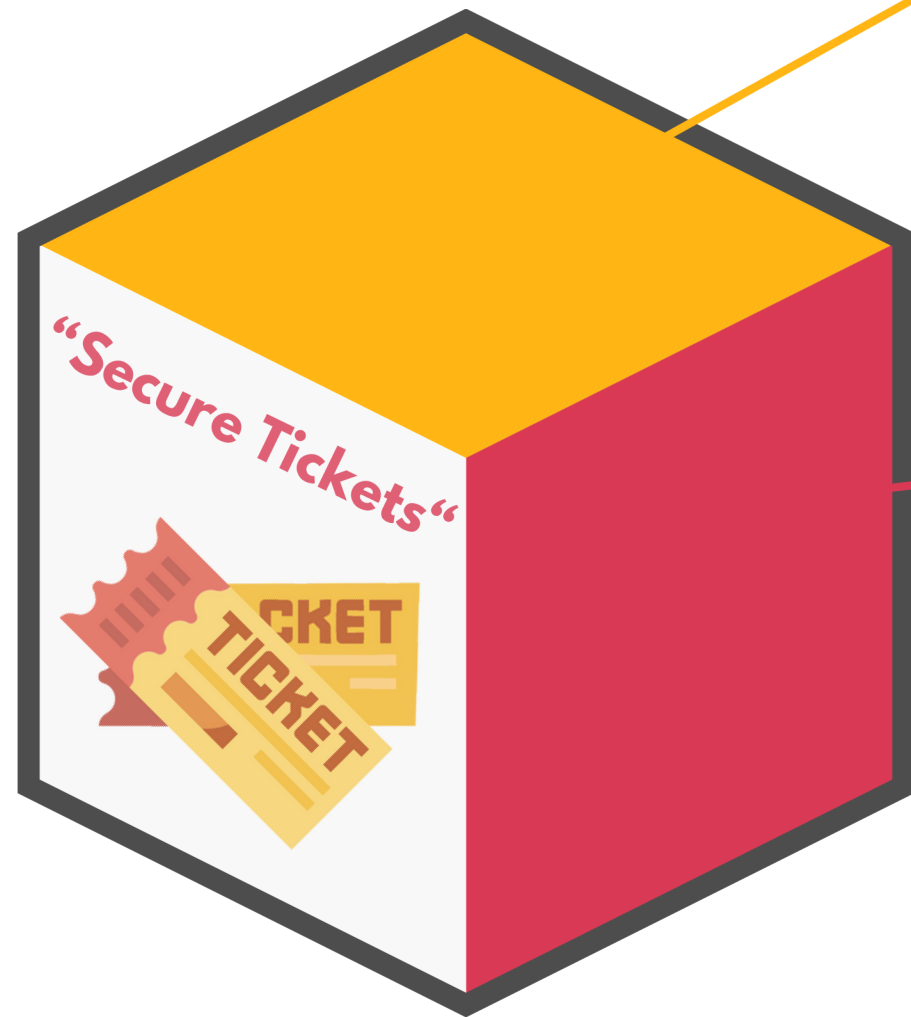
That allows the attendants to purchase the insurance at the box office or later through the dedicated webpage

Unlike the external website of the insurance company,

Our product

- doesn't require any special training for the ticket officer
- can be easily customized and used by the cashier thanks to check boxes
- is accessible directly from the physical ticket with the printed QR-code
- is fully integrated in the “Buy your ticket” platform, without involvement of external links.

The Envision box



o **Main functionalities:**

- Integrates the insurance selling during the purchase of physical tickets
- Enables autonomous insurance integration at a later stage
- Access to the event and insurance information at any time

o **Additional features:**

- Easy to learn and intuitive to use
- Allow postponed customization of the insurance plan by the event's attendant
- Friendly accessibility to the webpage through QR codes and SMS
- Modular software development allows easy future updates and improvements
- The "Buy your ticket" company has full ownership of data

Delivery 2B: User Stories

The User stories

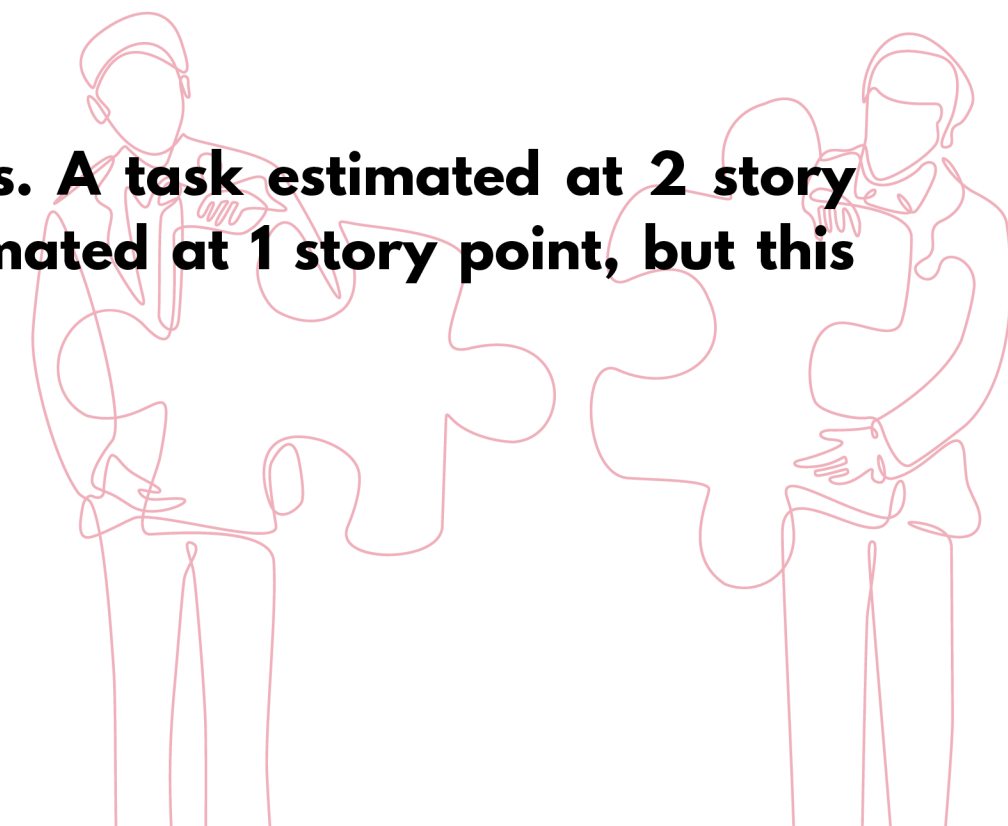
User stories are a prevalent tool employed in agile methodology. They are concise, straightforward descriptions of features from the **perspective of an end user**. By adopting a user-centric perspective, it enables software development teams to **align their work with client needs**, to ensure the delivery of value, and to foster collaboration between stakeholders and developers.

In the following slides we have developed relevant user stories for our project, clustering them according to 5 conventional types: **Functional, Non functional, Technical, Spike, Compliance**.

Furthermore, we have estimated the effort required to implement each user story in practice using a relative scale. Once the tasks that are less challenging have been defined (XS), the work required from the others has been assessed by comparison. Specifically we have defined 5 **different sizes**, whose relative weight is based on the “Fibonacci sequence”, to assign Story Points:

- XS = 1
- S = 2
- M = 3
- L = 5
- XL = 8

Story Points for a first draft of relative effort estimations. A task estimated at 2 story points should take roughly twice the effort of a task estimated at 1 story point, but this doesn't necessarily translate directly into time.



Functional User Stories

Customer Flexibility (M)

As a Buyer of physical tickets, **I want to** buy an insurance also in a second moment, **so that I** can be more flexible and take more conscious decisions.

Acceptance criteria: The system guarantees the activation of the insurance up to 3 weeks before the event. In the database all the events' dates must be available and recognizable by the software to guarantee alignment with the insurance policy. After the 3 weeks deadline it must not be possible to modify the insurance choice.

Information Availability (S)

As a user of the website, **I want to** see a clear and informative homepage, **so that I** can quickly understand the purpose and content of the website.

Acceptance Criteria: Major information about the website's services and promotions should be prominently displayed. The time spent by the user within the website should not exceed 6 min.

Access without registration (L)

As a Buyer of physical tickets, **I want to** be able to enter the webpage without a formal registration, **so that I** don't need to go through not user-friendly digital environments.

Acceptance Criteria: Users should be able to access securely to their personal area, thanks to an OTP received via SMS. The task is successfully concluded when the user enters the website after typing the right code.

Functional User Stories

Insurance Conditions (XS)

As a user, I want to see details about each insurance option, including coverage, price, and terms, **so that** I can take more conscious decision

Acceptance Criteria: Each insurance product page should provide comprehensive information about the product, including coverage details, pricing information, and terms and conditions. If all the pages recall to the right source the process can be considered accomplished.

Claim Process (M)

As a user, I want to know how to file a claim if I need to use my insurance coverage, **so that** I can receive assistance and reimbursement.

Acceptance Criteria: Information about the insurance claims process should be readily available on the website. Users should be provided with clear instructions on how to file a claim, including required documentation and contact information for claims assistance. If the number of support phonecalls received would be relevant, it will be a symptom of unclear instructions.

Purchasing Process (M)

As a user, I want to be able to purchase an insurance policy directly through the website, **so that** I can secure coverage easily and timely.

Acceptance Criteria: Users should be able to add desired insurance products to their cart and proceed to checkout and pay safely. The time of purchase will be measured as a proxy of the performance.

Functional User Stories

Customer service (S)

As a user, I want to communicate with customer service, **so that** I'm able to provide feedback or ask questions easily.

Acceptance Criteria: A feedback/contact form and a customer service phone number should be available on the website. Contact information (email, phone number, address) should be prominently displayed on the website.

Q&A Process (S)

As a Ticket Officer, I want to easily access to the information of the different insurance plans, **so that** I can answer all the possible questions made by the clients, whenever I propose them the insurance on their ticket.

Acceptance criteria: The website will host all the information needed, listed and divided on the basis of the different insurance plans available. It is possible to filter the content to easily find what is needed. Thanks to these precautions, the ticket officer will always need less than 2 minutes to properly answer to client needs.

Data Analytics (L)

As a data analyst, I want that our website integrate analytics tools, **so that** I can track user behavior and website performance and gather information to make statistically based market research.

Acceptance Criteria: Analytics tracking code should be properly integrated into the website's pages. Data analyst should be able to access analytics reports and insights through a dedicated platform: if all the needed KPIs are showed within the dashboard the task is satisfied.

Non Functional User Stories

Performance Optimization (L)

As a physical buyer, **I expect** the website to load quickly and respond promptly to my interactions, **ensuring** a smooth and efficient experience.

Acceptance Criteria: The website should achieve a page load time below 3 seconds on average. The website should handle concurrent user interactions without significant latency.

Scalability Enhancement (M)

As a user, **I want** the service to maintain its performance and responsiveness even during periods of high traffic, **ensuring** uninterrupted access to the services.

Acceptance Criteria: The website should be able to handle a 50% increase in concurrent users with respect to the average, without experiencing degradation in performance. Load testing should be conducted to verify the website's ability to scale as needed.

Error Handling Improvement (M)

As a user, **I expect** the website to provide informative error messages and handle unexpected errors, **to ensure** user-friendly experience in case of issues.

Acceptance Criteria: Error messages should clearly communicate the nature of the problem and suggest possible solutions or next steps. Proper monitoring mechanisms should be implemented to track and address recurring errors proactively. The recurrence of errors will be evaluated as a proxy of the performance.

Non Functional User Stories

Website User Experience (M)

As a physical buyer, **I want** intuitive navigation system, **so that** I can easily explore the website and find specific content.

Acceptance Criteria: The browsing toolbar should be prominently displayed, logically organized and easily accessible from any page.

Users should be able to navigate different sections of the website with minimal effort. The number of required clicks to find the right page should be lower than 5.

Website Accessibility (M)

As a user of the website, **I want to** be able to have access to the website through different devices, **so that** I can perform the various actions from the most convenient device.

Acceptance Criteria: If the system works on the majority of the devices (the website should be supported by the 80% of them) the task is satisfied.

QR and SMS Accessibility (XL)

As a user, **I want** the software to be accessible through the scansion of the QR code and/or by clicking on the link received by SMS, **so that** I can access the information with comfort everywhere anytime

Acceptance Criteria: The website should be accessible scanning the QR and clicking on the link. The time between the scan or click and the access to the website should be at max 1 minute.

Technical User Stories

Integration with current software (L)

As a developer, I need to merge my new system with the current one in order **to provide** an integrated platform

Acceptance Criteria: I need to use all the functionalities on the platform. This feature can be verified with a test of each single functionality.

API Integration for Payment Gateway (M)

As a developer, I need to integrate the website with a third-party payment gateway API, **to enable** secure and reliable payment processing for insurance purchases.

Acceptance Criteria: The website should successfully communicate with the payment gateway API to initiate and complete transactions.

Payment information should be securely transmitted and processed according to industry standards. To test the right integration a trial transaction need to be successfully performed.

Database Optimization (M)

As a developer, I need to optimize database queries and indexes **to improve** the website's overall performance and reduce response times, ensuring efficient data retrieval and storage.

Acceptance Criteria: The access to the database should be fast. To be successfully completed, the top 5 slowest queries need to be fastened by 40%.

Compliance User Stories

Accessibility Compliance (M)

As a developer, I need to ensure that the website meets accessibility standards **to provide** equal access and usability for users with disabilities.

Acceptance Criteria: Conduct an accessibility audit of the website to identify any barriers or issues affecting users with disabilities.

Implement necessary changes and enhancements to improve accessibility, such as keyboard navigation support, alternative text for images, and proper semantic markup. Verify compliance with relevant accessibility guidelines and standards through testing and validation.

Data Protection Regulation Compliance (M)

As a developer, I need to ensure that the website complies with local data protection regulations such as GDPR (General Data Protection Regulation), **safeguarding** the privacy rights of users and ensuring lawful processing of personal data.

Acceptance Criteria: Review and document the data processing activities, including data collection, storage, and usage. The documentation should pass an external authority test of conformance to be considered correctly implemented.

Spike User Stories

Evaluation of Third-party Services (L)

As a developer, I need to evaluate different third-party services or APIs (e.g., email delivery services, analytics platforms) **to determine** their suitability for integration into the website, ensuring compatibility, reliability, and cost-effectiveness.

Acceptance Criteria: Research and compare available third-party services based on features, pricing, performance, and documentation.

Conduct proof-of-concept tests or pilot integrations to assess compatibility and ease of implementation. To be correctly accomplished, a document of the different APIs used need to be drafted and should contain all the relevant types of APIs needed.

Server-Side Caching Implementations (S)

As a developer, I need to implement server-side caching mechanisms **to store** frequently accessed data and reduce database load, improving overall system performance and scalability.

Acceptance Criteria: Identify key data or query results that can be cached to reduce latency and improve response times. Implement caching strategies and configure caching servers to store and retrieve cached data efficiently. To be completed, a document with all the chosen queries to be cached need to be drafted.

Focus Group Feedback (S)

As a sales manager, I need to collect information about customer experience with the platform **in order to** assure market satisfaction.

Acceptance criteria: Evaluation of the information collected through a small but representative reasearch group, should demonstrate the effectiveness of the website. The platform is considered user friendly if it collects at least 70% of positive feedbacks.

MS.CoW

A first evaluation of the **value added** to the final users has been performed thanks to the “**Ms.Cow**” methodology. This agile technique for prioritization is used to manage requirements in projects, identifying four clusters with different relevance.

To ensure that critical functionalities are addressed first, we assigned a different weight based on the Fibonacci sequence to the four group, specifically:

- Must Have = 8
- Should Have = 5
- Could Have = 3
- Won't Have = 1

MUST HAVE:

- API Integration for Payment Gateway (M)
- Data Protection Regulation Compliance (M)
- Customer Flexibility (M)
- Information Availability (S)
- Insurance Conditions (XS)
- Claim Process (M)
- Purchasing Process (M)
- QR and SMS Accessibility (XL)
- Integration with current software (L)

SHOULD HAVE:

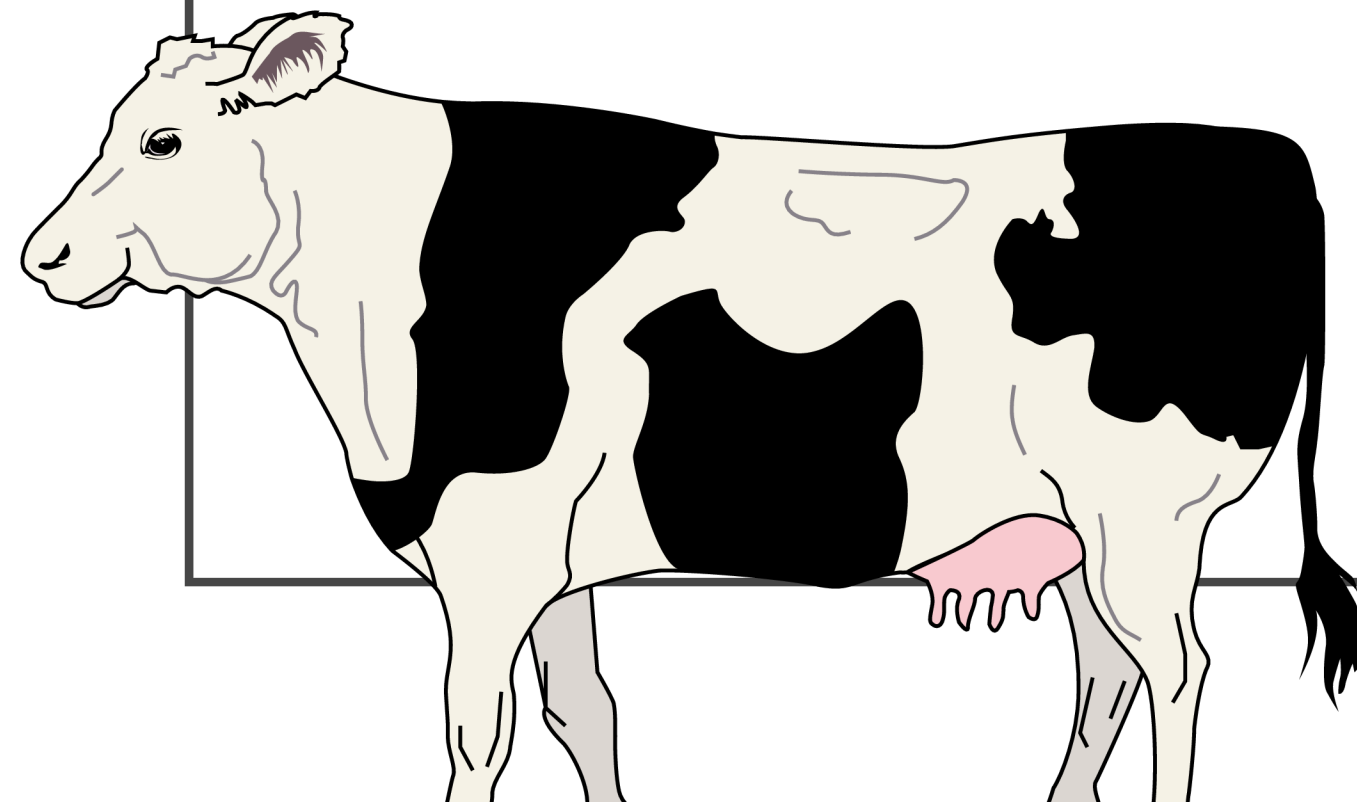
- Scalability Enhancement (M)
- Website Accessibility (M)
- Customer Service (S)
- Data Analytics (L)
- Access without registration (L)
- Accessibility Compliance (M)
- Focus Group Feedback (S)

COULD HAVE:

- Performance Optimization (L)
- Database Optimization (M)
- Server-Side Caching Implementation (S)
- Q&A Process (S)
- Website User Experience (M)
- Error Handling Improvement (M)

WON'T HAVE:

- Evaluation of Third-party Services (L)



Delivery 3: Backlog, MVP and Roadmap

Product Backlog

This first draft of the product backlog sum up all the work that must be done to achieve the desired outcome, divided in user stories. The US have been ordered considering both the value and the effort estimations done in the previous slides to evaluate a comprehensive priority scale: **“Relative Priority = Value / Effort”**.

Notice that the relative priority could evolve overtime, e.g. gathering feedback from the client and possible users, can change the evaluations. Thereafter, all the users stories are listed from the highest to lowest priority:

Relative Priority ≥ 3

Insurance Conditions; Information Availability;

Relative Priority ≥ 2

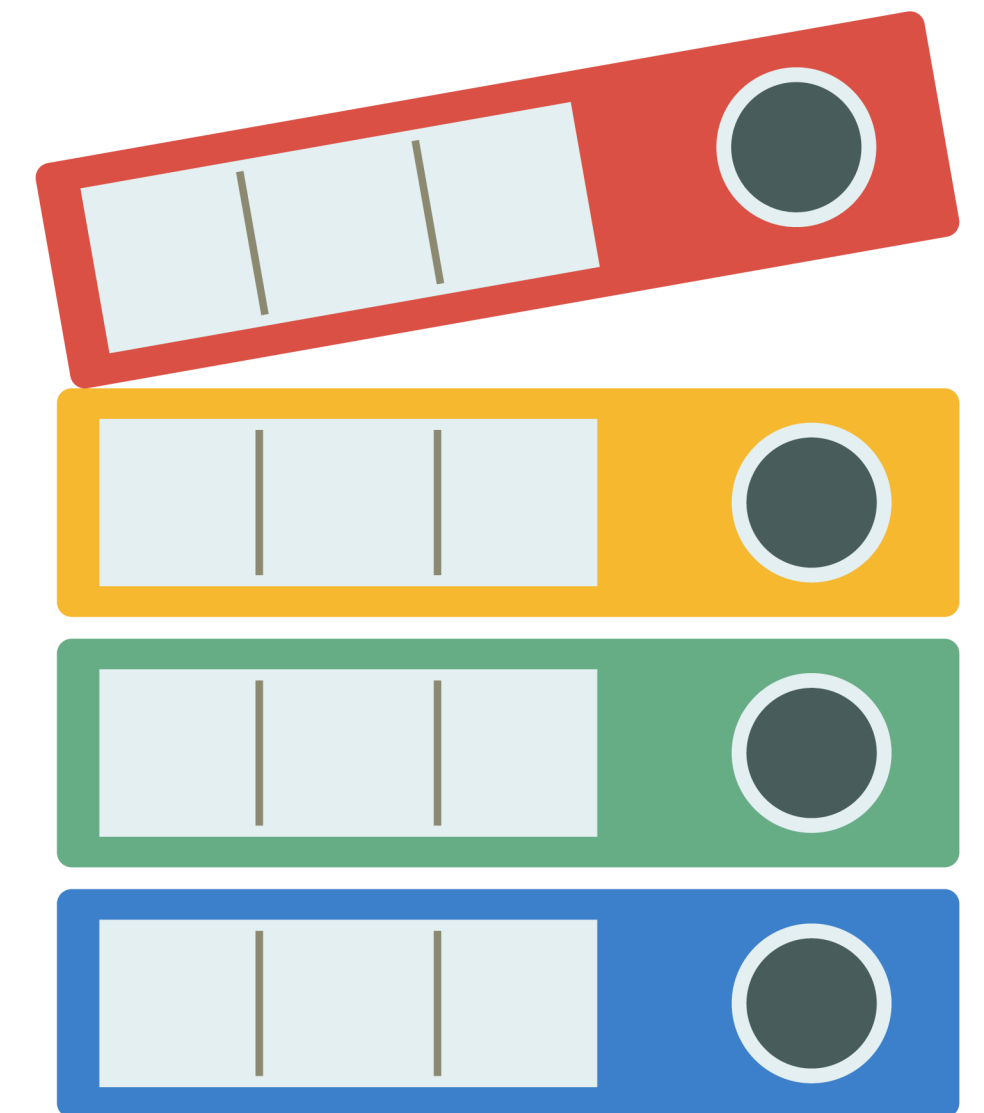
API Integration for Payment Gateway; Data Protection Regulation Compliance; Customer Flexibility; Claim Process; Purchasing Process; Customer Service

Relative Priority > 1

Scalability Enhancement; Website Accessibility; Accessibility Compliance; Focus group Feedback; Integration with current software; Server-Side Caching Implementation; Q&A Process

Relative Priority ≤ 1

QR and SMS Accessibility; Data Analytics; Access without registration; Database Optimization; Website User Experience; Performance Optimization; Evaluation for Third-party Services; Error Handling Improvement



MVP definition

The **minimum viable product** must deliver all the core functionality through a usable interface to show to “buy your ticket” management what the experience could be like for the end users.

In this way, it is possible to demonstrate the functionality of the software, provide an **initial trial version** and gather feedback directly from the business client. As a result, it is possible to validate the knowledge of the customer's needs and steer the project in the right direction.



Functional US:

Customer Flexibility
Info Availability
Claim Process
Purchasing Process

Non-Functional US:

none (will be included only in later release)

Technical US:

Integration with current software

Spike User US:

none (will be included only in later release)

Compliance US:

none (will be included only in later release)

Overheads and Dependencies

We created Sprints with a duration of **2 working weeks**. Each week will have 4 days dedicated to actual development and testing activities and 1 day of **overhead for planning and review activities**. It is shown in the table a possible schedule of all the activity that better depicts a real agile working environment as seen in theory.

We have then assessed a rough duration of the US, assigning a value of **one actual development day for each allotted Story Point**. Moreover, to schedule the roadmap, 2 weeks of company closure for Christmas Holidays have been taken into account.

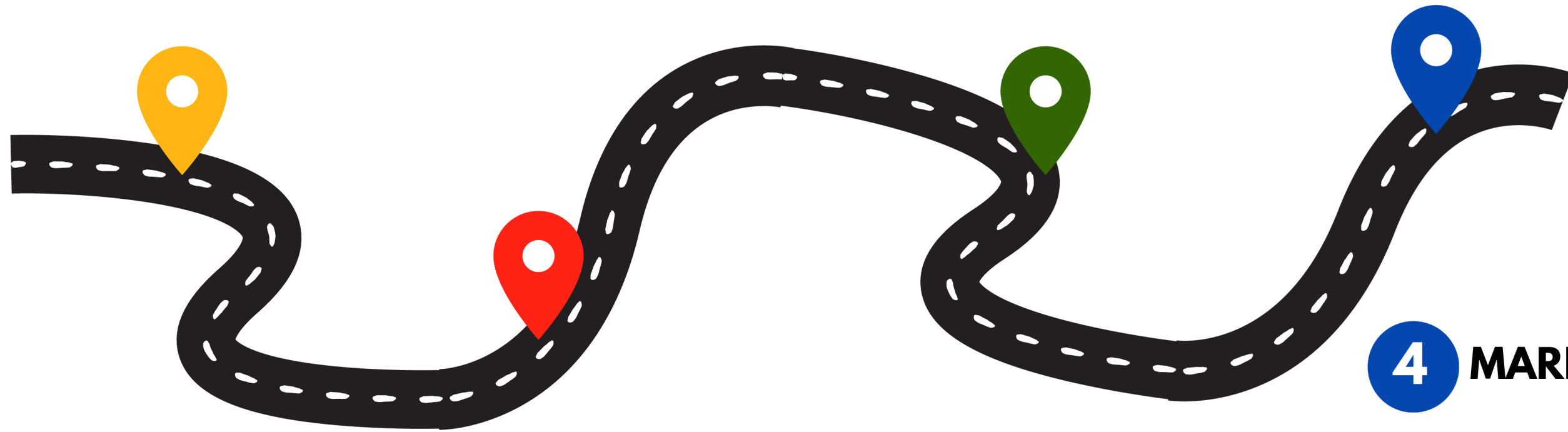
Lastly, notice that inside the sprints, we arranged the order of the user stories according to the **technical dependencies and the relative priorities computed in the previous slide**.

Development Sprint #1			Durations are clock hours, not effort hours		
	Monday	Tuesday	Wednesday	Thursday	Friday
Not Scheduled		Incorporate feedback from reviews	Incorporate feedback from reviews	Incorporate feedback from reviews	Incorporate feedback from reviews
10:00 AM	Sprint planning	Development and testing: 8 hrs	Development and testing: 8 hrs	Development and testing: 8 hrs	Sprint prep, for next sprint: 2 hrs
11:00 AM	Task breakdown and task estimates: 4				Development and testing: 6 hrs
10:00 AM					
12:00 AM					
1:00 PM					
2:00 PM	Development and testing: 3 hrs				
3:00 PM					
4:00 PM					
		Overhead	0.875 days	Dev & Test	4.125 days

Product Roadmap

Project launch

September 2th



Final handover

January 20th

1 MVP (16 days)

- Customer Flexibility (3)
- Info Availability (2)
- Claim Process (3)
- Purchasing Process (3)
- Integration with current software (5)

2 IMPROVED MVP (24 days)

- Focus Group Feedback (2)
- Data Analytics (5)
- QR and SMS Accessibility (8)
- Access without registration (5)
- Insurance Conditions (1)
- Website Accessibility (3)

3 BETA VERSION (8 days)

- Data Protection Regulation Compliance (3)
- Q&A Process (2)
- Website User Experience (3)

4 MARKET RELEASE (24 days)

- API Integration for Payment Gateway (3)
- Performance Optimization (5)
- Customer Service (2)
- Scalability Enhancement (3)
- Accessibility Compliance (3)
- Database Optimization (3)
- Server-Side Caching Implementation (2)
- Error Handling Improvement (3)

Release Planning

Date	September 30th	November 11th	November 25th	January 20th
Release	Minimum viable product	Improved viable product	Beta version	Full market release
Handover	1st draft of the software with core functionalities	Functional software for focus group	Functional software for business users (ticket officers)	Fully functional software released for all the final users
Goal	Gather feedback from “buy your ticket” management	Validate hypothesis concerning the market needs	Collect further information and improve accordingly	Reach contractual agreements and update the software over time
Metrics	We will use the KPIs defined as the user stories’ acceptance criteria in order to quantify and measure the achievement of the aforementioned milestones			

Delivery 4: Sprint Backlogs

1st release: MVP

1

FIRST SPRINT (8 days)

Goal: Implement basic website functions necessary for insurance purchase

1. Integration with current software
2. Purchasing Process



The “integration with current software” must be addressed as the first task because of technical dependencies of all the other stories

2

SECOND SPRINT (8 days)

Goal: include additional features and complementary information needed to deliver a testable website to the business client

1. Info Availability
2. Claim Process
3. Customer Flexibility

2nd release: Improved MVP

1

FIRST SPRINT (8 days)

Goal: Create the first functions necessary for an improved user access and navigation

1. Website Accessibility
2. Access without registration

2

SECOND SPRINT (8 days)

Goal: Adding features to allow testing of the application

1. Insurance Conditions
2. Data Analytics
3. Focus Group Feedback



“Data analytics” must be addressed before of “Focus Group Feedback” to allow gathering of quantitative data during research group analysis

3

THIRD SPRINT (8 days)

Goal: implement alternative access modes

1. QR and SMS Accessibility

3rd release: Beta version

1

FIRST SPRINT (8 days)

Goal: Adding tools to assure compliance of first public version and to make it testable by ticket officers

1. Data Protection Regulation Compliance
2. Q&A Process
3. Website User Experience

4th release: Full market release

1

FIRST SPRINT (8 days)

Goal: Optimize website performances

1. Performance Optimization
2. Database Optimization

2

SECOND SPRINT (8 days)

Goal: Integrate features that improve the responsiveness of the application

1. API Integration for Payment Gateway
2. Server-Side Caching Implementation
3. Error Handling Improvement

3

THIRD SPRINT (8 days)

Goal: Integrate features to improve user Quality Of Life

1. Customer Service
2. Accessibility Compliance
3. Scalability Enhancement



Thanks for the attention!

