



# DEVELOPMENT OF SHIPIT PRO'S FULL- SCALE CROSS-BORDER ECOMMERCE SERVICES PLATFORM



# COMPANY DESCRIPTION



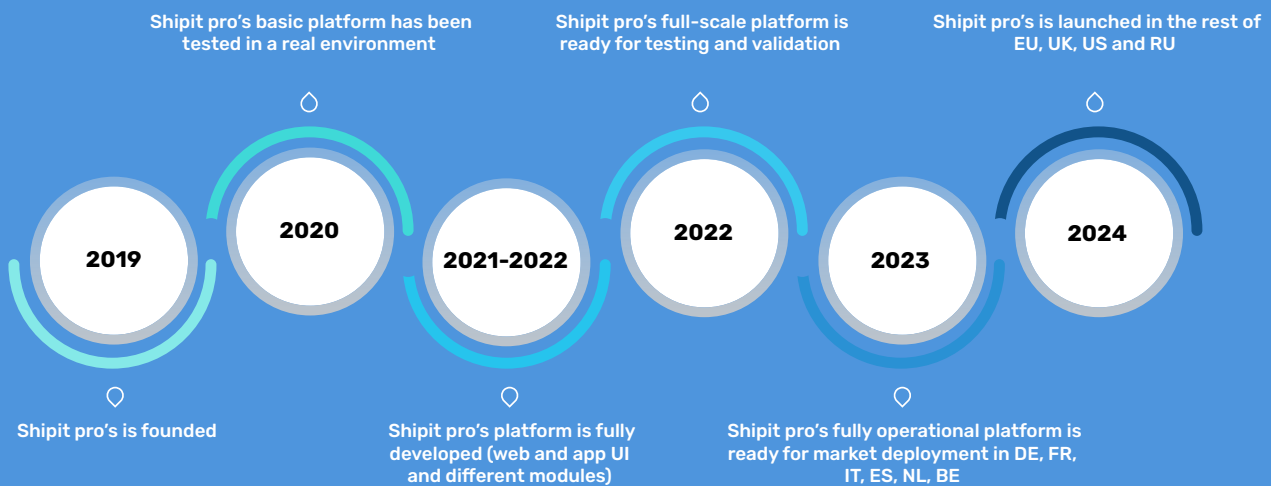
Shipit pro is a fast-growing **cross border eCommerce software company** headquartered in Tallinn, Estonia. The company is currently focused on building the world's first **full-scale eCommerce services platform and application enabling sellers from European Union (EU) and importers from 3rd countries to sell into the EU** with a fast, transparent, and seamless process that is **secured with blockchain-based timestamps**.

The full-scale solution will provide cross-border eCommerce companies all of the necessary components of cross-border online trade: **CO2 tax management, green delivery, value-added tax (VAT) & import duty management,**

**payments, insurance, and returns handling.** The ultimate goal of Shipit pro is to achieve **20% market share in the European eCommerce services market by 2026**.

Today, Shipit pro's platform has a functioning logistics module which is already used by its first customers to import and deliver goods from China to the EU. Shipit pro has formed preliminary partnerships with relevant stakeholders (national customs authorities, post offices, and multi carrier networks) and secured the needed resources (team incl. advisors and researchers, finances, time) To enter next round fundraising, crypto funding.

**FIGURE 1. SHIPIT PRO'S KEY MILESTONES AND DEVELOPMENT ROADMAP**



**Shipit pro has passed high level EU Commission evaluation process  
and has achieved Seal of Excellence**



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***Certificate delivered by the European Commission,  
as the institution managing Horizon 2020,  
the EU Framework Programme for Research and Innovation 2014-2020***

The project proposal  
**969809, ShipItPro**

**Development of ShipItPro's full-scale cross-border eCommerce platform**

submitted under the Horizon 2020's **SME Instrument (grant only and blended finance)**  
call **H2020-EIC-SMEInst-2018-2020 (H2020-EIC-SMEInst-2018-2020-3)** of 7 October 2020  
in the area of **EIC-SMEInst-2018-2020**

**SME instrument**

by  
**ShipItPro OÜ**  
Pirita tee 28a-72  
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Estonia

following evaluation by an international panel of independent experts

**WAS SCORED AS A HIGH-QUALITY PROJECT PROPOSAL  
IN A HIGHLY COMPETITIVE EVALUATION PROCESS\***

This proposal is recommended for funding by other sources, since Horizon 2020 resources available for this specific Call were already allocated following a competitive ranking.

\* This means passing all stringent Horizon 2020 assessment thresholds for the 3 award criteria (excellence, impact, quality and efficiency of implementation) required to receive funding from the EU budget Horizon 2020.

**Elisa Ferreira,**  
Commissioner for  
Cohesion and Reforms

**Mariya Gabriel,**  
Commissioner for Innovation, Research,  
Culture, Education and Youth

Brussels, 25/11/2020

# SUMMARY

Shipit pro aims to develop its current solution to an innovative new level, taking into account the **EU's climate policy** and offering a **unique and disruptive value proposition** to the cross-border eCommerce industry with CO2 tax management features and blockchain-based timestamping. Shipit pro will offer a **novel CO2 leakage calculation solution**, whereby customers will see the cost of goods, VAT & import duties, and delivery together with the **CO2 emissions of the delivery at checkout**.

Moreover, the entire data flow between sellers, importers, and EU customs authorities will be **transparent and secured with blockchain-based timestamp middleware**, guaranteeing the authenticity of the product and transaction data.

The online business-to-consumer (B2C) eCommerce market in the EU was worth €621 billion in 2019, and the global B2C eCommerce market is expected to reach €7,110 billion by 2025. eCommerce companies selling in the EU need a solution that helps them to comply with the new 2021 EU VAT rules, avoid high levels of errors in product classification for customs declarations, and guarantee a safe and fast delivery to the customer's doorstep with **green transport solutions**.

## Relation to the overall strategy of Shipit pro

Shipit pro's overall goal is to develop into a full-scale eCommerce ecosystem **disrupting and leading the B2C ecommerce industry to become more environmentally friendly, secure, and transparent**. Today, Shipit pro has a functioning logistics module that allows users to create labels and track parcels together with the option to upload manifests, manage quotes and bookings, create reports and analyse data, and manage invoices.

Shipit pro focuses on further developing the platform by adding **additional modules** for cross-border eCommerce platforms, marketplaces, and eShops located in the EU and in 3rd countries. During the project, key partnership agreements will be established with the **national customs authorities in the EU**, which processes declarations, VAT & import duties, EU Member States' post offices, and **multi carrier and crowd courier networks (crowdsourced)** to develop the proposed platform together with the **CO2 tax management and blockchain-based timestamp functions**.

Thus developed, Shipit pro's platform is projected to grow and generate €45 million in revenue by 2023 and create 100 high-value jobs. The company targets a **20% market share of the European eCommerce services market by 2026**. The crypto funding will ensure timely market uptake and cover the complete financing needed to optimise the solution and carry out testing and validation with Shipit pro's partners.



# SECTION 1 - EXCELLENCE



## Background and challenges

Currently, there are over 800 000 online stores in borders, with the most eCommerce websites found in Germany, the United Kingdom, and the Netherlands.<sup>1</sup> The eCommerce industry generated €621 billion in online sales in Europe in 2019.<sup>2</sup> Moreover, global parcel volume reached 87 billion parcels in 2018, and 9.<sup>3</sup> billion parcel shipments were generated by European companies.<sup>3</sup>

Cross-border eCommerce is gaining popularity in Europe as more customers are buying from online shops located in other countries. The current COVID-19 global pandemic and the resulting lockdowns enforced in Europe and elsewhere have increased demand for eCommerce and will affect the global online sales market for years to come.<sup>4</sup> Online shoppers are buying more and more from eCommerce websites in other countries because the prices can be lower, and many of these eShops offer free international shipping.

Shoppers also want to know the exact delivery, VAT & import duty charges at the time of the purchase. Non-EU traders are currently distorting the EU market by abusing the EU Value Added Tax (VAT) exemption for low-value consignments (less than €22) in order to gain a competitive advantage. In 2018, **the unpaid VAT due from all economic sectors in the EU was calculated to be worth €137 billion.** In the eCommerce sector, it is expected that around €7 billion in tax revenues will be lost in 2020.<sup>5</sup>

Moreover, the EU is looking to counter the phenomenon of 'carbon leakage', whereby EU industries are penalized by cheaper imports from countries that apply less strict rules to tackle climate change.<sup>6</sup> There is a clear and growing need for a secure and transparent data flow about the origin and delivery of imported goods, especially as the EU is considering imposing a carbon border adjustment mechanism, more commonly referred to as a carbon border tax.

Overall, Shipit pro crypto funding project aims to address **six key EU-wide ecommerce challenges.**

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<sup>1</sup> Ecommerce News Europe, Over 800,000 online stores in Europe, 06.10.2017. [<link>](#)

<sup>2</sup> Ecommerce News Europe, Ecommerce in Europe, retrieved 22.04.2020. [<link>](#)

<sup>3</sup> Ecommerce News Europe, Europe: 9.3 billion parcels in 2018, retrieved 22.04.2020. [<link>](#)

<sup>4</sup> World Trade Organization, E-Commerce, trade and the COVID-19 pandemic, Information note, 04.05.2020. [<link>](#)

<sup>5</sup> European Parliament, Closing VAT loopholes for sales through online platforms, 14.11.2019. [<link>](#)

<sup>6</sup> Reuters.com, Explainer: What an EU carbon border tax might look like and who would be hit, retrieved 18.05.2020. [<link>](#)

## **CHALLENGE 1:**

### **THE RISK OF CARBON INCREASES AS EU ADOPTS MORE AMBITIOUS CLIMATE POLICIES**

With the European Green Deal, the EU is looking to become climate neutral by 2050. One of the key risks in pursuing that goal is that of carbon leakage, which is defined as the leaking or transfer of carbon emissions to 3rd countries because of differences in climate policies and regulations.<sup>7</sup> When companies transfer their production from the EU to 3rd countries that have a lower ambition in terms of emission reduction, or when EU products are replaced by carbon-intensive imports, global emissions will not be reduced and the global climate objectives of the Paris Agreement will be harder to meet.<sup>8</sup>

The European Commission intends to propose in the near future a carbon border adjustment mechanism, which will aim to ensure that the price of imports reflect more accurately their carbon content, and hence to reduce the risk of carbon leakage.

The EU's ambitious climate goals also mean that logistics service providers, eCommerce platforms, marketplaces, and eShops who are dependent on these logistics companies have to switch from traditional delivery options using combustion engine vehicles to electric vehicles and other carbon-free delivery methods. Currently, there is no solution available on the eCommerce services market that provides an overview of the total carbon footprint of a product together with the option to choose a carbon-free delivery method.



## **CHALLENGE 2:**

### **CYBER-ATTACKS AND TECHNICAL ISSUES HAVE A GROWING IMPACT ON ECOMMERCE**

Technical failures are another risk for Europe's eCommerce market as instances of cyber-attacks and hackings are on the rise. This is a serious problem for businesses across various sectors, but even more so for eCommerce companies, as the majority of their activities take place online and involve the transfer of personal data including credit card information. Retail is expected to be one of the top 10 most-attacked industries in the period 2019-2022.<sup>9</sup> The risk is heightened when ordering from eCommerce platforms situated in 3rd countries, as the exact data about the purchase time, place, and cost of goods is not always fully known.

However, transparent data is needed if the seller needs to prove to customs authorities the origin and the actual cost of goods imported.

<sup>7</sup> REEEM, D3.2 – Case study on carbon leakage and competitiveness, August 2018. [<link>](#)

<sup>8</sup> European Commission, Communication from the Commission, The European Green Deal, 11.12.2019. [<link>](#)

<sup>9</sup> Cybercrime Magazine, 2019 Cybersecurity Almanac: 100 Facts, Figures, Predictions And Statistics, 06.02.2019. [<link>](#)

### CHALLENGE 3:

## ECOMMERCE COMPANIES NEED A SOLUTION THAT HELPS TO COMPLY WITH THE NEW EU VAT RULES

The current EU VAT rules (“the VAT Directive<sup>10</sup>”) are outdated, as they were agreed upon before online commerce really gathered steam in the Member States. On the 1st of July 2021, new EU VAT rules will enter into force. They will have a profound effect on eCommerce companies, whose IT systems need to be adapted to the new rules.

When goods are imported into the EU for the first time, a VAT number is needed to clear the goods through customs. Therefore, cross-border eCommerce platforms, marketplaces, and eShops from 3rd countries, serving clients who order their shipments to the EU, must register for a VAT number or appoint a Fiscal representative. The latter is a locally-registered company managing queries and filing obligations for dealings with the tax authorities. From Shipit pro’s experience, these eCommerce companies from 3rd countries often prefer appointing a Fiscal representative rather than registering for a VAT number. **Therefore, there is a rising demand from companies located in 3rd countries for a solution** complying with the new EU VAT rules and offering a technical solution for the Fiscal representative service.

Moreover, starting from the 1st of July, 2021, the €22 VAT-free threshold will no longer exist and European consumers will pay the VAT percentage of their home country for all items coming into the EU. Thus, every single shipment from EU and non-EU countries will be subject to VAT upon importation. The new regulations will introduce a significant bureaucratic and financial burden for international traders importing into the EU. However, the EU has a new rule allowing companies that sell goods online to take care of all their VAT obligations in the EU through a digital online portal (“One Stop Shop”), hosted by their own tax administration and in their own language. These rules already exist for online sellers of electronic services.

This means **that large eCommerce companies from the EU and 3rd countries will be responsible for ensuring that VAT is collected on all sales made to EU consumers on their websites.** As a result, eCommerce companies will benefit from fairer rules, lower compliance costs, and lower administrative burdens.<sup>11</sup>



<sup>10</sup> EUR-Lex, Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, retrieved 21.04.2020. [<link>](#)

<sup>11</sup> European Commission, Modernising VAT for e-commerce: Question and Answer, retrieved 21.04.2020. [<link>](#)



## CHALLENGE 4:

### PRODUCT CLASSIFICATION FOR VAT & IMPORT DUTY IS COMPLEX AND ERROR-PRONE

When goods cross an international border, they need to be properly taxed according to their product category. Every country in the EU and around the world has a classification system for monitoring and taxing the goods coming in from abroad. More than 200 countries in the world follow the Harmonized Commodity and Coding System, also known as HS codes, which are maintained by the World Customs Organization.<sup>12</sup>

The system is used as a basis for calculating the VAT & import duty and for the collection of international trade statistics. Over 98% of the merchandise in international trade is classified with the HS. With this system, goods are assigned twelve-digit codes from a classification system of over 200,000 categories before the goods are shipped cross-border.<sup>13</sup>

The eCommerce platforms, marketplaces, and eShops from the EU and 3rd countries usually have many products for sale from different eShops, which means that the companies have to manage invoices in different formats as well as with different forms of product labels and scannable bar codes. eCommerce companies have to map the different orders from the different eShops correctly onto various country codes, package the orders correctly, and ship with accompanying product information. This means that the **margin of error for cross-border eCommerce companies is very high**. Failure to classify HS codes correctly can lead to **border delays, seizure of goods, non-compliance penalties, and denial of import privileges**.



As a result of the complexity of product classification, cross-border eCommerce companies operating in Europe are not always easily scalable because their labour and systems costs will rise significantly when the number of orders and shipments increases. Further more, different EU countries have different VAT rates for different types of goods and services (including reduced rates, special rates, super-reduced rates, zero rates, or intermediary rates) and eCommerce businesses must comply with these rules, which is often time-consuming and costly. In summary, accurate product classification is a key requirement for eCommerce to run smoothly.

<sup>12</sup> World Customs Organization, What is the Harmonized System (HS)? Retrieved 21.04.2020. [<link>](#)

<sup>13</sup> European Commission, EU product classification system, retrieved 05.05.2020. [<link>](#)



## CHALLENGE 5: CUSTOMERS HAVE INCREASINGLY HIGH STANDARDS FOR THE COST AND SPEED OF DELIVERY

Slow and late deliveries are one of the primary problems for eCommerce businesses around the world. Customers who experience bad service in terms of delivery are less likely to use the same eCommerce brand again, but they are also more likely to provide negative feedback that can impact a company's reputation. According to a recent survey by International Post Corporation, delivery speed had the lowest level of consumer satisfaction in all of the 41 surveyed markets.<sup>14</sup>

Despite the proximity and close transport links between many European countries, the cross-border delivery process can sometimes be slow and costly due to weather conditions, politics, and the use of unreliable delivery firms.



**Currently, there is no cross-border eCommerce software solution on the market that can address all of these challenges that eCommerce marketplaces and eShops located in the EU and in 3rd countries are facing. There is a growing need for a software solution that would enable the rising number of cross-border eCommerce companies to calculate CO2 emissions of product and delivery, offer green delivery options, comply with the new EU VAT rules and offer correct and fast product classification for calculating VAT & import duties, and offer full integration with payment, insurance, and logistics service providers.**

## Solution

Shipit pro is an innovative and novel ecosystem aimed at cross-border eCommerce companies as it streamlines all of the necessary components of cross-border online trade: CO2 tax management, green delivery, VAT & import duty management, payments, insurance, and returns handling with all of the data secured by blockchain-based timestamp middleware. No other solution on the market offers blockchain secured data flow from the origin of the sale through the entire cross-border goods movement chain. Shipit pro is the only solution on the market guaranteeing that the data flow is not altered during the logistics chain before the information is forwarded to the EU customs authorities and customers. Therefore, Shipit pro helps to lower trade risks, increase operational efficiency, and improve cross-border sales. Moreover, Shipit pro is integrated with logistics partner software and offers direct quotes and a payment gateway in order for the customer to pay for the product, delivery, VAT & import duty, and CO2 tax all at checkout.



<sup>14</sup> International Post Corporation, Cross-Border E-Commerce Shopper Survey 2019, retrieved 16.04.2020. [<link>](#)

## SHIPIT PRO'S SOLUTION FOR OVERCOMING KEY CHALLENGES

### CO2 TAX MANAGEMENT

Shipit pro's platform calculates the CO2 emissions of the entire parcel's cross-border movement chain by obtaining the carbon emissions cost of the transportation (future potential of production as well) of the product straight from the manufacturer or the eShop selling the product. In addition, together with the strategic partners of Shipit pro, the entire carbon emissions cost of the delivery will be displayed to the customer. As a result, Shipit pro's CO2 tax management function will be the pioneering solution for the carbon border adjustment mechanism that the EU will develop in the upcoming years.



Together with Tallinn University of Applied Sciences, a novel and innovative green logistics module for Shipit pro's platform will be developed. Shipit pro's load optimization function will reduce "empty running" levels by logistics service providers to 10%, which is considerably less than the EU average of 20% empty run kilometres in road freight transportation.<sup>15</sup> The reduction of empty running will be achieved by helping to better organize loads of different transport modes and by optimizing the route of the delivery to use different modes of transport (air, ocean, rail, and road) when needed. In addition, Shipit pro's platform is connected with multi carrier and crowdsourced carrier networks who offer carbon-free delivery, which means that the customers of the eCommerce companies can choose an environmentally friendly delivery option at product checkout. For logistics service providers, a tokenized bonus system is used to motivate the shift towards carbon-free delivery options, and in cooperation with South Pole or other carbon finance organizations, emissions from traditional delivery methods will be completely offset. Tallinn University of Applied Sciences will help Shipit pro to develop a green logistics module that includes green delivery, eco-friendly packing, sustainable warehousing, waste management, and data collection and management.



### BLOCKCHAIN-BASED TECHNOLOGY TO TACKLE CYBER-ATTACKS

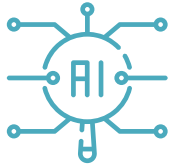
Shipit pro's software is secured by blockchain middleware, which ensures that the information exchanged by the system, such as personal or credit card information, is secured and timestamped with the purchase date. Secured data flow between the seller, importer, and EU customs authorities will allow eCommerce companies to verify the original cost, origin, and transaction data to the authorities. In addition, the payments and parcel insurance modules will help clients to securely pay for the product and make sure that the parcel's value is returned when something unexpected happens during delivery..



### COMPLIANCE WITH EU'S NEW REGULATORY SYSTEM

Shipit pro's solution utilizes original eCommerce transaction data for automatic VAT & import duty calculation and creates consignment labels that are linked with automatic EU customs declaration generation. AI-based proprietary HS code assessment (see description above) is used for declared information evaluation that is important for all eCommerce, logistics chain, and customs clearance stakeholders. The customs declarations will be digitally signed at an eIDAS security level and archived in the EU Member State's repositories with access rights for authorized viewers including carriers. A blockchain timestamp middleware solution provides the means of securing the provenance of digital assets and the integrity of logs. This means that the middleware guarantees that no information can be modified or erased in the closed loop process. Shipit pro's platform will be linked to the new European IOSS VAT regime, allowing for fully digital management of all customs- and VAT-related administrative relations to authorities.

<sup>15</sup> Eurostat, Annual road freight transport vehicle movements, loaded and empty, by reporting country, retrieved 12.05.2020. [<link>](#)



### AI-BASED TECHNOLOGY TO INCREASE ACCURACY

Shipit pro's AI-based product classification function will provide fast and correct HS codes for customs taxation.



### ADAPTING TO THE INCREASING NEEDS OF END-USERS

Shipit pro's platform will be integrated with the top logistics solution providers operating in Europe such as DHL, DPD, FedEx, and EU post offices (full list of planned integrations is brought out in Document 2). Integrations with these post offices and logistics companies will ensure that delivery through Shipit pro's platform is reliable, fast, and with the best price for the end user. Moreover, Shipit pro will combat geo-blocking by integrating via API connections with the biggest eCommerce platforms, marketplaces, and EU post offices and logistics providers. Shipit pro will be integrated with the most popular eCommerce platforms and marketplaces in the EU and as a result, it will have the necessary volume of shipments to offer competitive delivery rates and solutions for eSellers and, in turn, the customers of eCommerce companies. The end users will be able to save up to 80% compared to standard delivery prices, and customers will have an easy return solution available.

## Innovativeness

Shipit pro's platform has **high potential to become a groundbreaking innovation** in the EU market, as the company aims to become a **pioneer in offering a C02 tax management** solution for eCommerce platforms, marketplaces, and eShops with **100% transparent** and correct data flow enabled by **blockchain-based timestamps**. Shipit pro's platform will also automatically collect and deliver VAT-m the imported goods to the country of delivery. Shipit pro's aim is to contribute to working out the **EU's unified approach and provide the technical solution for C02 tax calculations**. Shipit pro's co-founder and COO Sid Hart is engaged in different EU policy working groups specifically in this field. For the first time, Shipit pro will allow customers of eCommerce platforms, marketplaces, and eShops to see the **C02 emissions cost of their delivery and choose carbon-free delivery options at product checkout**.

Moreover, Shipit pro is collaborating with Tallinn University of Applied Sciences, who will help to develop **novel route and load optimization functions** that will have a clear and measurable effect on the parcel delivery industry. Tallinn University of Applied Sciences will help Shipit



pro to develop a green logistics system that includes **green delivery, eco-friendly packing, sustainable warehousing, waste management, and data collection and management**. Shipit pro will save time and tens of thousands of euros in integration costs for eCommerce companies, as the platform is integrated with different major freight networks and other modules needed for successful cross-border sales management. Moreover, the complete integrations made for the platform ensure that **Shipit pro can offer competitive delivery rates to eSellers, which are up to 80% cheaper than standard delivery prices** due to the large number of deliveries handled by Shipit pro.

**TABLE 1.**  
**COST COMPARISON BETWEEN SHIPIT PRO'S PLATFORM AND MARKET STATE-OF-THE-ART\*.**

Cost line	Market state-of-the-art (separate software solutions for each function)	Shipit pro (full-scale)
<b>Integration</b>	<b>€114 000</b> <i>Cost per integration: €3 000 38*€3 000=€ 114 000</i>	<b>€0</b> <i>No need for separate integrations individually for each client – Shipit pro is a full-scale solution.</i>
<b>Delivery</b>	<b>On average €20-€70**</b>	<b>€9-11</b> (economies of scale obtained by offering full-scale solution)

\* In case of 28 post offices and 10 major carriers.

\*\*Compared to Easyship company. <link>

The CO2 tax management solution has not been created before and, therefore, it is non-bankable because of the innovation's high risk of failure. However, Shipit pro is convinced that the experienced **core team with the help of its strategic partners and advisors** will succeed in developing the CO2 tax management solution.



**Shipit pro's solution will greatly contribute to two pressing issues for the EU:**

- **The CO2 tax management solution will be a market creating innovation and a pioneer for other eCommerce services benefiting the entire EU.**
- **Member States will gain from the increase in VAT revenues as the platform will help cross-border eCommerce platforms, marketplaces, and eShops to correctly collect and deliver VAT to the country of delivery due to the secured blockchain timestamp middleware.**



**TABLE 2.**  
**OVERVIEW OF SHIPIT PRO'S MODULES AND FUNCTIONALITIES.**

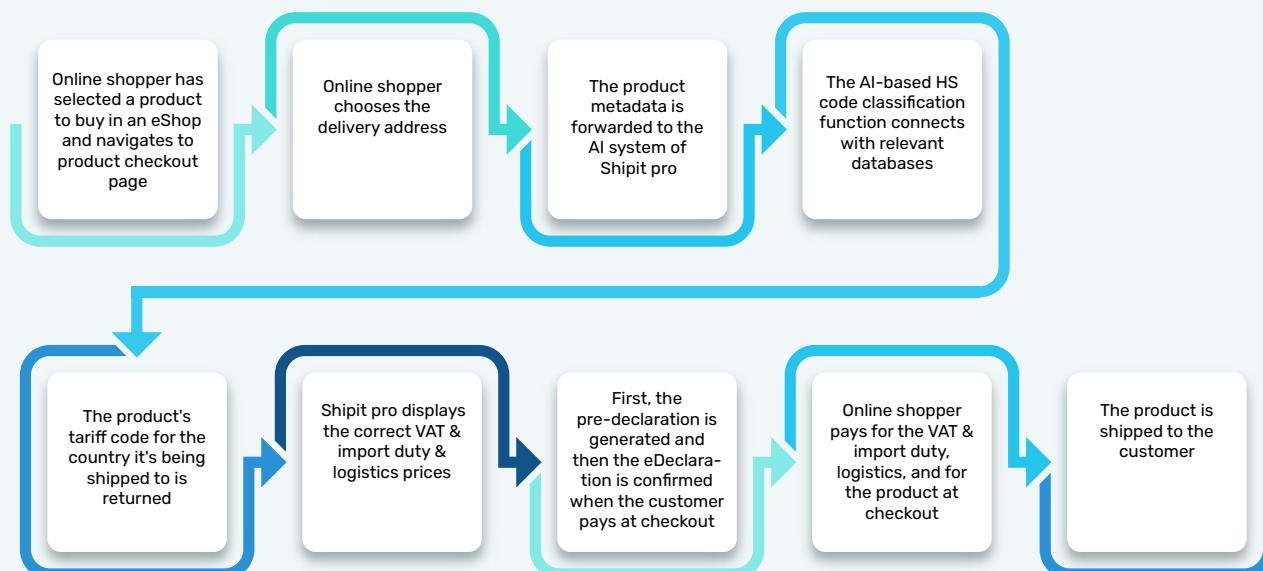
Module	Functionalities/Features
<b>Green module</b>	<ul style="list-style-type: none"> <li>• CO2 tax management</li> <li>• Green transport, including load and route optimization functions, transport method options (air, ocean, rail, and road) and carbon-free delivery options (electric vehicles, bicycles, scooters, etc.)</li> <li>• Packing options (eco-friendly and reusable packing materials and more efficient packing solutions)</li> <li>• Warehousing/fulfilment</li> <li>• Waste management</li> <li>• Data collection &amp; management</li> </ul>
<b>Customs</b>	<ul style="list-style-type: none"> <li>• Secured data communication between the seller, importer, and EU customs authorities powered by blockchain-based timestamp middleware</li> <li>• AI-based HS verification and commodity classification</li> <li>• Connected with relevant databases (incl. TARIC, AEO, EORI, REX)</li> <li>• Real-time VAT &amp; import duties calculation and management</li> <li>• eDeclaration generation</li> <li>• 100% compliance with EU 2021 VAT regulations</li> </ul>
<b>Logistics module</b>	<ul style="list-style-type: none"> <li>• Fully transparent shipment tracking</li> <li>• Freight solutions</li> <li>• Returns handling</li> <li>• Multi carrier network</li> <li>• Crowdsourced courier network</li> <li>• Consignee notification and communication throughout the full logistics chain</li> </ul>
<b>Payments and insurance module - standardised interface for cross-border goods trade</b>	<ul style="list-style-type: none"> <li>• One payment at a checkout for the CO2 tax, VAT &amp; import duty, logistics, insurance, and product cost</li> <li>• Automatically transfers the money to relevant parties (seller, logistics partner, tax office)</li> <li>• Option to insure the parcel at checkout</li> </ul>



### Technology in detail

HS Codes are used to assign goods the correct VAT & import duty. The AI-based proprietary HS code classification function is used for declared information evaluation that is important for all eCommerce, logistics chain, and customs clearance stakeholders. In order to avoid having your goods seized, losing your import privileges, or having goods held up at the border, proper HS code classification is a must for cross-border eCommerce companies. The AI-based HS code classification function by Shipit pro is an innovative solution for eCommerce companies, because the software is secured with blockchain-based timestamps that guarantee the original transaction data from the point of sale. Figure 2 provides an overview of the workflow of the AI-based HS code classification function of Shipit pro.

**FIGURE 2. WORKFLOW OF AI-BASED HS CODE CLASSIFICATION OF SHIPIT PRO**



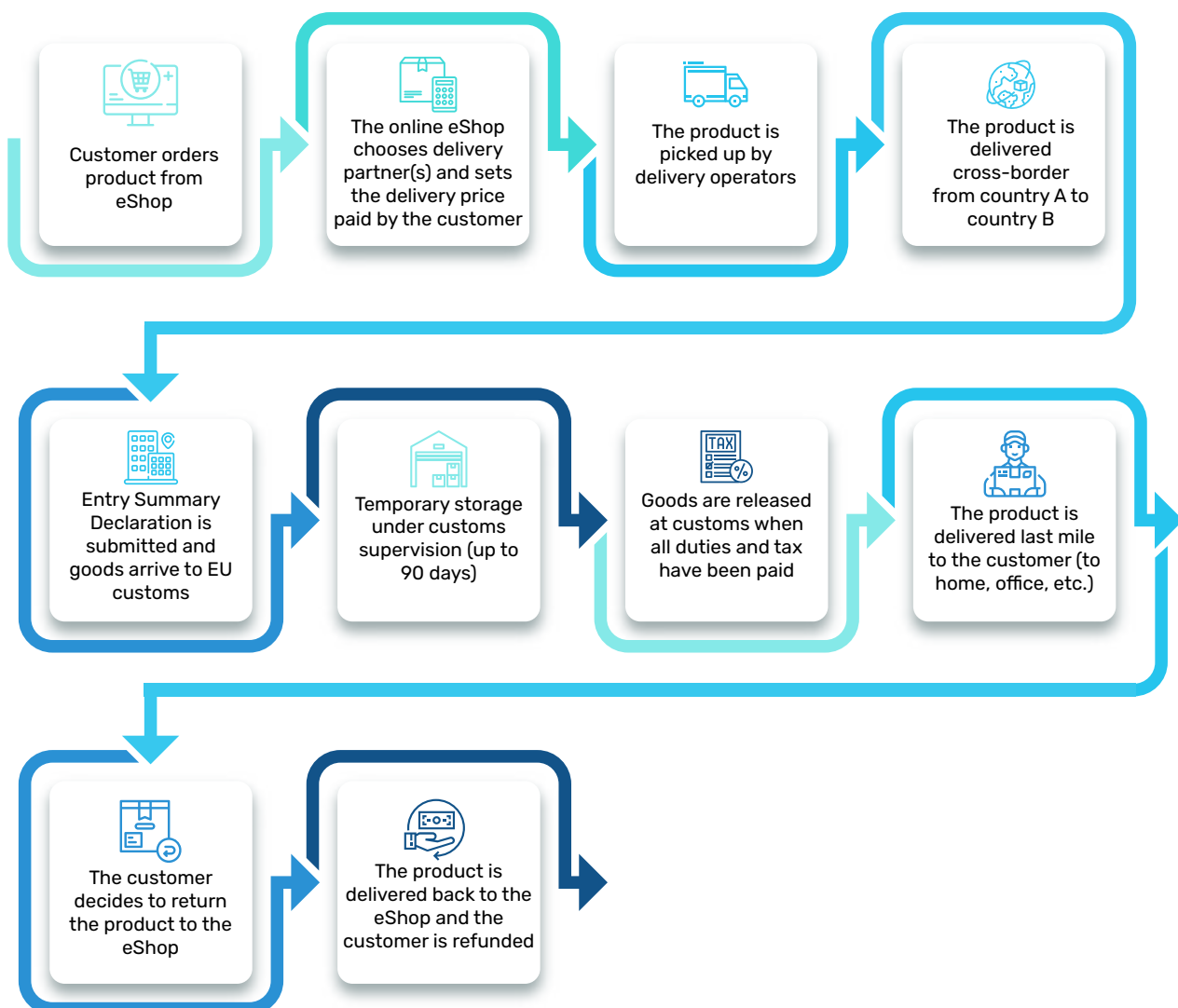
## Market state-of-the-art

Cross-border online shopping is a process that involves many different parties: customer, eShop, logistics partners, and customs authorities (see Figure 3 for an overview of the cross-border goods movement chain).

Overall, the competing solutions available on the market right now help to solve some particular problem in the cross-border goods movement

chain, but none of these competitors offer a full-scale solution and no other competing solution can guarantee a secured data flow from the point of sale until the goods arrive to the import country. Shipit pro helps cross-border eCommerce companies located in the EU and 3rd countries to manage all of the processes of the cross-border goods movement chain in one seamless platform, save on delivery costs, and guarantee a transparent and secure data flow of transactions.

**FIGURE 3. CROSS-BORDER GOODS MOVEMENT CHAIN FOR 3RD COUNTRIES**





**Shipit pro goes beyond the state-of-the-art by offering the following benefits:**



- **TRANSPARENT AND SECURE DATA FLOW.**

After the customer has confirmed the order, all of the data is timestamped with blockchain middleware to make sure that the data cannot be tampered with after the sale has been finalized. This guarantees that the correct eDeclaration is forwarded to the EU customs authorities. Currently, no other competitor on the market offers an eCommerce service that is secured with blockchain middleware.



- **FULL-SCALE SOLUTION FOR THE CROSS-BORDER GOODS MOVEMENT CHAIN.**

When the customer orders a product from an eShop, the cost of the product is displayed together with VAT & import duty costs, delivery costs, optional insurance costs, CO2 emissions for the product, and any other related costs. The AI-based HS classification function guarantees that the product is correctly classified, correct VAT & import duties are shown, and the correct eDeclaration is automatically generated. Currently, separate software is needed by eCommerce platforms and marketplaces to complete their orders (e.g. Semantics3 platform for HS classification, Payground.se for VAT & import Duty calculation, or Easyship for label generation) and separate integrations with these systems is time-consuming and expensive.



- **SAVINGS ON THE DELIVERY COSTS.**

Shipit pro is connected with the biggest cross-border eCommerce platforms and marketplaces, which means that the large number of deliveries allow for up to 80% reduction in the standard delivery rates. Shipit pro is integrated with multi carrier and crowd courier networks to offer a green last-mile delivery solution while displaying the total CO2 emissions of the delivery for the customer. Currently, no other solution on the market is offering a similar innovative approach.

Shipit pro aims to be the first on the market to integrate all of the mentioned functions to one platform and secure the data flow with blockchain timestamp middleware.

The components and functions developed during the project will evolve Shipit pro to an independent eCommerce ecosystem.

## Why now?

A combination of regulatory advances, a growing eCommerce industry, and demand for more environmentally friendly solutions provides a perfect opportunity for introducing the Shipit pro solution to the market. The EU is looking to counter carbon leakage, and even though the exact carbon border tax mechanism has not yet been revealed by the EU authorities, Shipit pro will add a novel CO2 tax management solution to their platform that calculates the CO2 emissions of the entire delivery and displays the CO2 emissions of the product from the seller or producer. This technical solution developed by Shipit pro will help the EU detect carbon leakage by providing a transparent and secured data flow of goods arriving to the EU that is powered by blockchain-based timestamp middleware.

The new EU VAT regulations that will come into effect on the 1st of July, 2021, mean that online businesses will be looking for software solutions that will help provide a clear overview of the VAT & import duty costs, delivery, and returns processes for the end users. In addition, compliance with the new VAT regulations and accurate classification of goods at customs is needed so that the eCommerce companies do not overpay or even worse, underpay and get fined. Shipit pro helps cross-border eCommerce companies to comply with the new rules taking

effect at the beginning of 2021 and process their packages quickly and in a scalable fashion.

The demand for cross-border eCommerce has been affected by the COVID-19 global pandemic, as lockdowns, social distancing, and other measures have ramped up online shopping, resulting in spikes in B2C and B2B eCommerce.<sup>16</sup> Now more than ever, novel and innovative solutions such as Shipit pro are needed to facilitate the cross-border movement of goods and strengthen international cooperation.

EU's new climate policy (The European Green Deal<sup>17</sup>) will have a major impact on the eCommerce and logistics industry in Europe in the upcoming years. Part of this new roadmap is a shift towards green mobility, including reducing pollution from cars, lower energy consumption in transport, and less car traffic in cities. Shipit pro's solution is integrated with the biggest logistics solution providers in Europe, who offer environmentally friendly delivery options for the customers of eCommerce companies. In addition, Shipit pro aims to provide a tokenized bonus system for electric vehicle couriers or other carbon-free last-mile delivery methods. With this innovative new solution, Shipit pro's system chooses the most carbon neutral solution for delivery and the most optimized routes to reduce empty run kilometres.



<sup>16</sup> World Trade Organization, E-Commerce, trade and the COVID-19 pandemic, Information note, 04.05.2020. [<link>](#)

<sup>17</sup> European Commission, A European Green Deal, Retrieved 26.03.2020. [<link>](#)

## Current stage of development

The current stage of development of Shipit pro is shown in the table below.

**TABLE 3.**  
**CURRENT STAGE OF DEVELOPMENT FOR Shipit pro**

TRL	Shipit pro'S ACTIVITIES
<b>1-2</b>	The R&D work on Shipit pro's platform started at the end of 2019. During this R&D work process, the concept and core features of the cross-border eCommerce ecosystem were drafted. The risks and challenges were mapped, the initial development roadmap was created, and the technical configurations were outlined. As a result, the technological concept for the whole platform (including the logistics and customs module) was formulated and an experimental proof of concept was created.
<b>2-4</b>	In parallel, a detailed business feasibility study was completed to analyse the market conditions (with a focus on the legislation regarding CO2 emissions and VAT rules of the target markets), market size, and growth rate in the primary regions of interest. Also, an in-depth competitor analysis was conducted to achieve an overview of the existing solutions operating in the market today (see chapter 2 for an overview).
<b>4-6</b>	<p>Shipit pro has developed the basic logistics module that has allowed sellers and importers in China to send parcels to customers in Europe. Shipit pro's basic logistics module allows users to create labels, upload manifests, and track parcels together with the option to upload manifests, manage quotes and bookings, create reports and analyse data, and manage invoices. Shipit pro has an international team covering EE, UK, and NL and programmers from BG and BY. Therefore, Shipit pro has the logistics module as a core of the system and validated it in a relevant environment. As a result of the development activities, a platform that handles goods has been created by Shipit pro:</p> <ul style="list-style-type: none"> <li>• Sellers and importers around the world can integrate their system with Shipit pro's ecosystem or access their account in Shipit pro's system;</li> <li>• companies can create shipments and parcel labels - the system automatically generates the correct labels to be printed and shipped;</li> <li>• the entire logistics process is tracked by Shipit pro's system, including the delivery path, customs processes, and last-mile delivery;</li> </ul> <p>In summary, the logistics module with label generation and delivery tracking functions has been demonstrated in a real environment.</p>

After the token sale, the final development phase of Shipit pro's platform will be completed. Shipit pro has formed partnerships with ProLox OÜ from Estonia; EQT Logistics Ltd. Takesend Logistics Co. Ltd., SendFromChina, Maxway Logistics in China, and PostPlus in Netherlands. As a result of the project, the platform will reach readiness for high scalability as a CO2 tax management function together with a green transport module to be fully developed. In addition, the customs module and blockchain-based event and transaction verification integration, payment, and insurance modules will be developed as well.

**The key objectives and concrete steps of the Shipit pro crypto funding project are:**

**1. Shipit pro module development**

- green module development (CO2 tax management, green delivery, etc.);
- customs module development (Blockchain timestamp, VAT & import duty, AI-based HS classification, eDeclaration, etc.);
- logistics module development (multi carrier and crowd courier network, etc.);
- payment and insurance module development together with returns management.

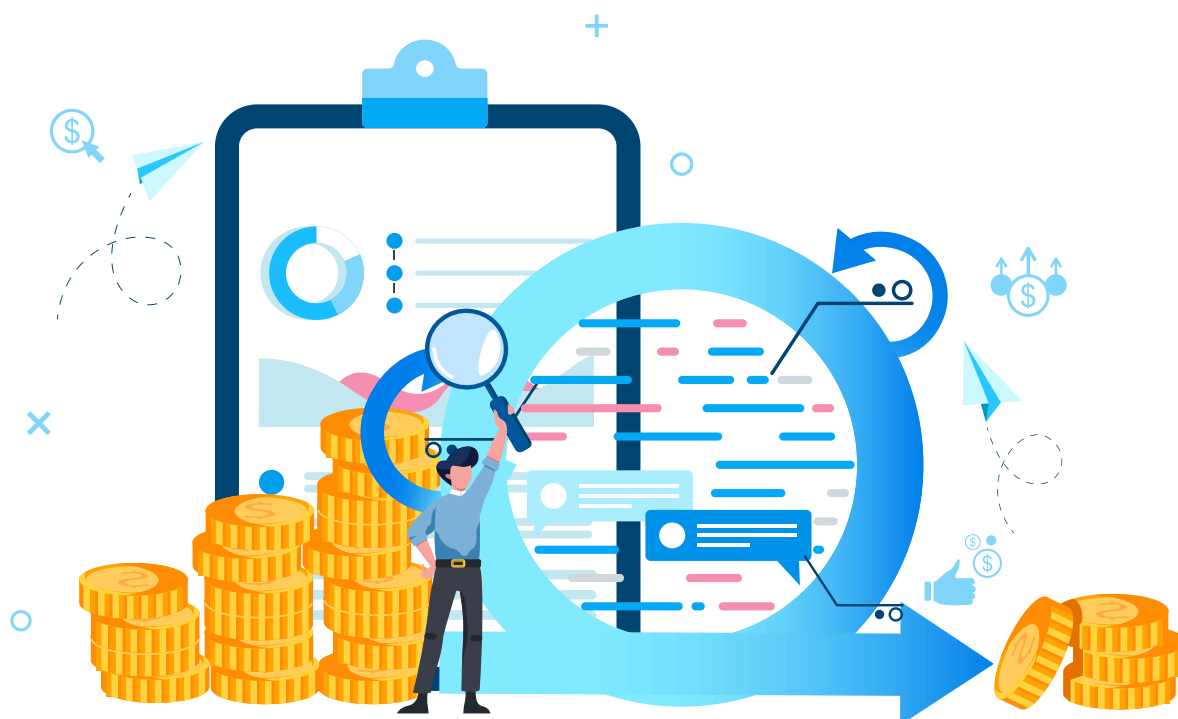
**2. Demonstration of the solution in operational environment**

- Integrations with 20 pilot partners (freight providers, eCommerce platforms, and marketplaces, EU post offices, and EU customs authorities)
- Run at least 20 pilots with piloting partners
- Analyse the performance and improve the system accordingly

**3. Business and IPR strategy development**

- Business model and value proposition development
- Legislative environment analysis
- Trademark, patents, and other possible IP protection analysis and processes

As a result of the project, Shipit pro will be ready for full commercialisation by achieving TRL 8 and high scalability. TRL 9 activities are described in chapter 2 under subchapter Business model and commercialisation strategy Business model and commercialisation strategy.



## Innovation feasibility

Shipit pro has created the first working prototype of the solution that has a functioning logistics module. The logistics module has allowed business partners in China to send parcels to the EU. Shipit pro has received feedback from these business partners and validated the software in a real environment. In addition, Shipit pro has integrated the software with General Logistics Systems (GLS) Belgium and PostPlus Netherlands, GLS is one of the leading parcel service providers in Europe and successful integration with their systems means that Shipit pro can be easily integrated with different logistics providers to offer value for cross-border eCommerce companies operating in the EU and in 3rd countries.

### What are the risks faced?

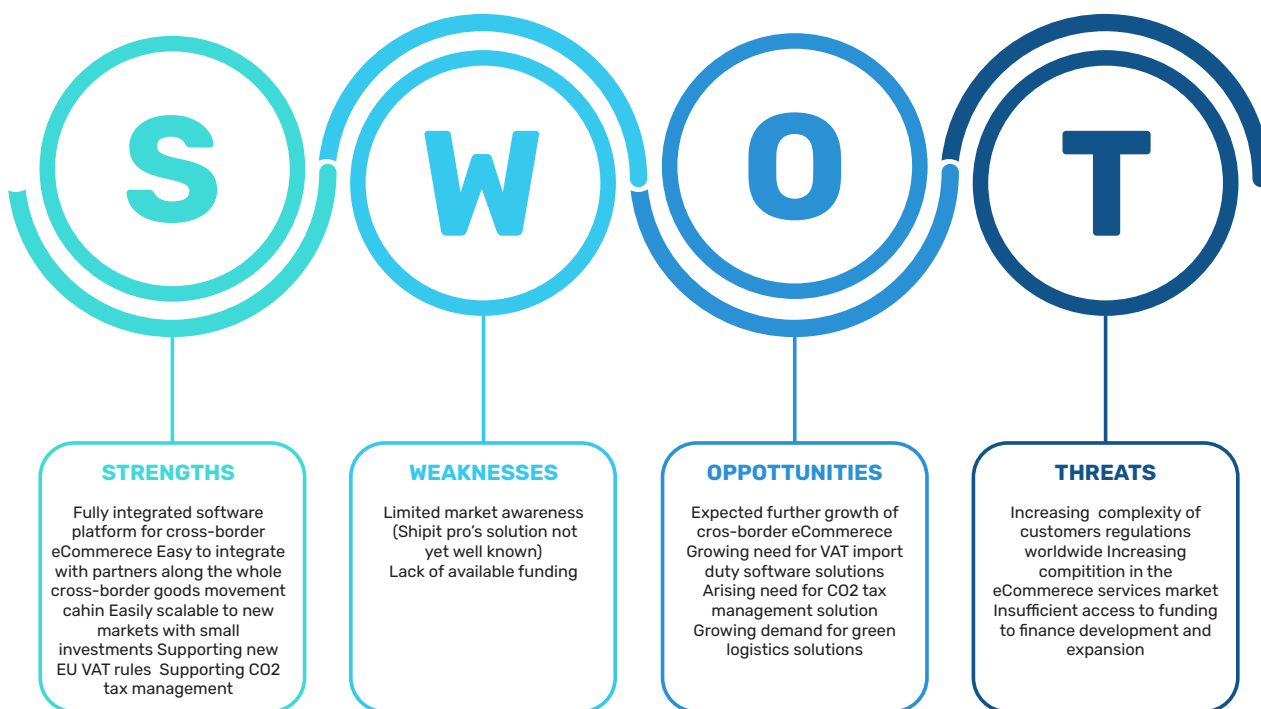
Shipit pro's SWOT analysis shows that the software has many strengths and opportunities that will help with the successful commercialization of the solution. However, there are some threats and weaknesses that need to be addressed first before market entry.

Shipit pro's strengths include a one-of-a-kind full-scale cross-border eCommerce software solution for the main target groups that is easily scalable to new markets with small investments. The timing for Shipit pro's software solution is perfect, as the new EU VAT rules will be implemented in July 2021 and the EU carbon border tax mechanism will be introduced in 2021. This means that the market demand for Shipit pro's solution will increase considerably as eCommerce platforms, marketplaces, and eShops will be looking for companies that provide automatic VAT & import duty and CO2 tax calculation solutions.

Shipit pro's biggest business risk includes the commercialisation aspect of the innovation, as building trust among eCommerce platforms, marketplaces, and eShops will take time. Focusing on informing the relevant stakeholders about the innovation together with extensive marketing activities will be important steps undertaken to mitigate this business risk.

The most important threat to consider is the growing complexity of the worldwide customs legislation. Shipit pro's legal team must be ready to face any legal and trust issues regarding changing customs legislations in the world (e.g. Brexit).

**FIGURE 4. SWOT ANALYSIS OF Shipit pro**



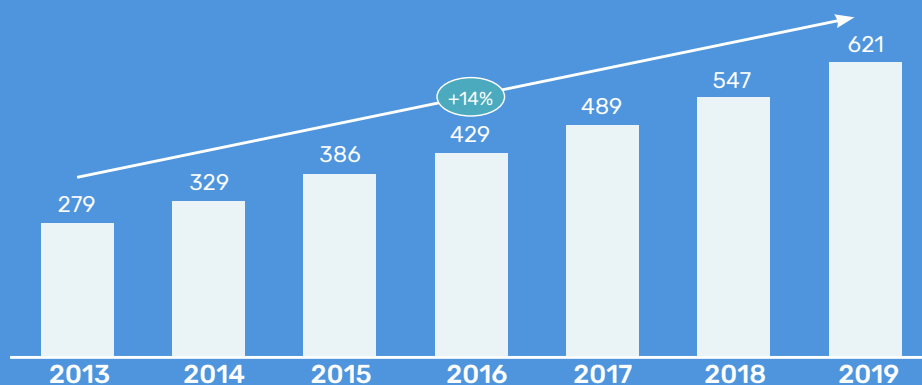
# SECTION 2 - IMPACT



## Market and customers

The total turnover in the European B2C eCommerce market has increased from €279 billion in 2013 to an estimated €621 billion by the end of 2019 with a compound annual growth rate (CAGR) of 14% (see Figure 5).<sup>18</sup> The global B2C eCommerce market is anticipated to reach more than €7 110 billion by 2025 with a CAGR of 11.7%.<sup>19</sup>

Most of the online turnover is generated in Western Europe, accounting for approximately 66% of the total European online retail turnover, while Eastern Europe only accounted for only about 4.2% in 2018.



<sup>18</sup> Ecommerce news.eu, Ecommerce in Europe: €621 billion in 2019, 11.06.2019. [link](#)

<sup>19</sup> Grandviewresearch.com, B2C e-commerce Market Worth \$7,724.8 Billion By 2025 | CAGR: 11.7%, Retrieved 08.04.2020. [link](#)

Still, Northern Europe is the region with the highest spending per online shopper, with €2 046 per year compared to €1 464, which is the estimated average online shopper spending in Europe overall.<sup>20</sup>

Cross-border online purchases are one of the indicators that point to the smooth functioning of a single market for eCommerce. As online shoppers in the EU are becoming more price conscious and looking for a better selection of products, the number of shoppers who have bought or ordered goods or services from sellers in other EU countries has increased significantly from 29% in 2014 to 35% in 2019. Moreover, 27% of online shoppers have bought from sellers outside the EU in 2019, compared to 17% in 2014. Eight out of 10 people who bought from abroad purchased physical goods (e.g., electronics, clothes, toys, food, groceries, books, or CDs/DVDs).<sup>21</sup>

The demand and market potential for Shipit pro's software is expected to grow rapidly as the EU will simplify VAT rules and change the EU market significantly, creating new business models and value chains for cross-border trade companies. Currently, online cross-border sales in the EU are worth €96 billion a year. When the new rules come into effect in 2021, it will raise €7 billion in VAT revenue for EU Member States and the new system for cross-border VAT collection on online goods and services will give 430 000 businesses better access to EU trade.<sup>22</sup>

The market entry of Shipit pro is targeted at global cross-border eShops (e.g. LightinTheBox, Otto, Zalando, ASOS, etc.) and eCommerce marketplaces (e.g. DHgate, Wish, Shopify, etc.). Eshops allow merchants to manage a digital storefront for their products or services.

The platforms are an ecosystem for products originating from many different eShops, and they also contain personalized data from customers who are browsing and shopping on the platform. This allows eCommerce companies to customize product information, manage web content and layout, allow online transactions, and adjust the platform according to the needs of the businesses and customers. The client segments are further divided into eCommerce platforms, marketplaces, and eShops located in the EU and outside the EU.

In Shipit pro's main market (Europe), there are more than 800 000 active eShops and eCommerce marketplaces and each of these eShops delivers, on average, 1 000 parcels per year. Taking into account the identified end-user needs and market trends, Shipit pro's unique selling points are brought out in the table below.



<sup>20</sup> Ecommercenews.eu, Ecommerce in Europe: €621 billion in 2019, 11.06.2019. [<link>](#)

<sup>21</sup> Statistics Explained, E-commerce statistics for individuals, January 2020. [<link>](#)

<sup>22</sup> European Commission, VAT for online businesses, retrieved 08.04.2020. [<link>](#)



## CLIENT SEGMENTS

## UNIQUE SELLING POINTS

**CROSS-BORDER ECOMMERCE, MARKETPLACES & ESHOPS THAT ARE SITUATED OUTSIDE THE EU** but they are selling to customers in EU. These companies need a software solution that complies with future carbon border adjustment mechanisms, correctly classifies HS codes for the VAT & import duty calculation, generates automatic eDeclarations that are forwarded to customs authorities, and offers the end users of eCommerce companies to pay for the logistics, VAT & import duties, and parcel insurance in one place on the product checkout page. Moreover, these companies need a fiscal representative in the EU instead of registering for the VAT number on their own, and Shipit pro offers the technical solution needed for the fiscal representative service. In summary, Shipit pro provides an effective and automatic software solution for sellers from 3rd countries importing goods into the EU.

- **CO2 TAX MANAGEMENT.** Shipit pro's platform calculates the CO2 emissions of the entire parcel's cross-border movement chain by displaying the product's carbon content and the total emissions of the delivery. When the EU's carbon border adjustment mechanism is enforced, Shipit pro will be the leading software solution for CO2 tax management.
- **BLOCKCHAIN TIMESTAMP** middleware provides the means of securing the provenance of digital assets and the integrity of logs, guaranteeing that no information can be modified or erased in the closed loop process. Linked to the new European One-Stop-Shop VAT regime, the software will allow fully digital management of all customs- and VAT-related administrative relations to authorities.
- **Shipit pro IS A ONE-STOP SHOP FOR ECOMMERCE TRADERS.** Shipit pro's platform includes all the technical solutions that are required once the customer has bought a product online. This means that eCommerce companies do not have to integrate with all necessary systems separately.
- **COMPETITIVE DELIVERY RATES AND SOLUTIONS FOR ESELLERS.** Up to 80% savings compared to standard delivery prices and an easy return solution. Shipit pro offers an API connection with eCommerce platforms, marketplaces, EU post offices, and multi carrier and crowd courier networks to connect eCommerce trade with end-to-end logistics solutions and combat geo-blocking.

**ECOMMERCE MARKETPLACES AND ESHOPS OPERATING IN THE EU.** These companies mainly need a software solution that complies with future carbon border adjustment mechanisms, correctly classifies HS codes for VAT management in EU cross-border sales, and offers logistics solutions, payment, and insurance options for end users. Shipit pro will allow the end users of these eCommerce companies to choose their delivery option and insure the parcel at product checkout.

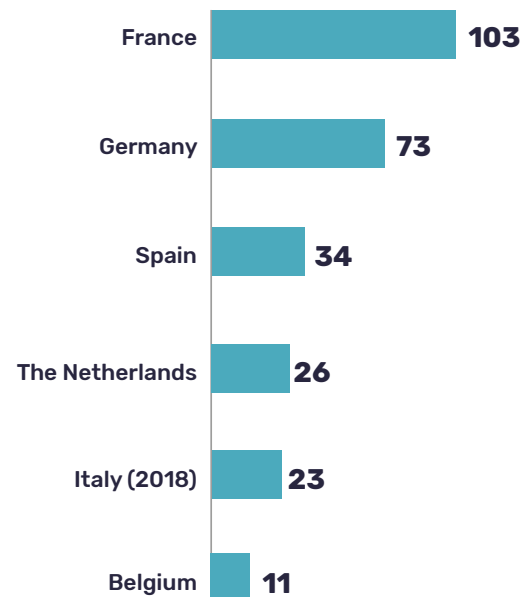
- **Shipit pro'S SOLUTION UTILIZES ORIGINAL ECOMMERCE TRANSACTION DATA** from the point of sale at the exact date and time for automatic VAT & import duty calculations and an automatically generated consignment label linked with EU customs declaration generation. These functions will be essential to eCommerce companies after the EU VAT exemption is abolished in 2021, as these companies need a VAT registration number or a fiscal representative service.
- **AI-BASED PROPRIETARY HS CODE CLASSIFICATION** is used for declared information evaluation that is important for all eCommerce, logistics chain, and customs inspection stakeholders. The declaration is digitally signed at an eIDAS security level and archived in the EU Member State repository with access rights for authorized viewers, including carriers.
- **BETTER SERVICE FOR THE END-CUSTOMERS (ONLINE SHOPPERS)** meaning that CO2 tax, VAT & import duties, and the cost of delivery is calculated and displayed with a currency conversion on top of the cost of goods with precision at the point of transaction, reducing the number of mislabelled packages. Moreover, the carbon emission cost of the delivery will be displayed to the end-customer, which means that the customers can choose an environmentally friendly delivery option at product checkout.

## Target markets

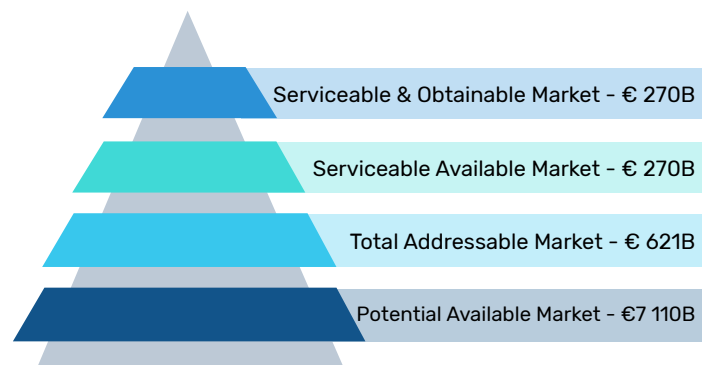
Taking into account the USPs mentioned above, the main initial target markets for entry include **Germany, France, Spain, Italy, the Netherlands, and Belgium** (see Figure 6). Those countries represent nearly 65% of the total EU B2C eCommerce market. Figure 6 displays the serviceable available market (SAM) of these main initial markets, and Shipit pro estimates that the serviceable & obtainable market is 5% of the SAM of countries mentioned above (DE, FR, ES, IT, NE, BE). When the necessary integrations with the biggest logistics providers, eCommerce platforms, marketplaces, eShops, EU post offices, and EU customs authorities are completed, achieving 5% of the market is feasible by 2026. Shipit pro's **main target in the foreseeable future is to operate in the entire EU**, and Shipit pro will target the eShops and eCommerce platforms operating in all Member States. There are 800 000 eShops in Europe that deliver, on average, 1 000 parcels per year. In the long term, the UK, USA, and Russia will be potential target markets as the eCommerce trade in these countries is expected to grow rapidly in the next years.

- **ECOMMERCE IN FRANCE WAS WORTH €103.4 BILLION IN 2019**, which is an increase of 11.6% compared to the previous year. In addition, more than 1.7 billion transactions were recorded by 190 000 listed eCommerce sites, which is an annual increase of 15.7%. It is expected that in 2020, eCommerce sites in France will achieve a turnover of €115 billion and nearly 2 billion in transactions.<sup>23</sup>
- **ECOMMERCE IN GERMANY WAS WORTH €72.6 BILLION IN 2019**, which is an increase of 11.6% from the previous year, and it is expected that the eCommerce will be worth €80 billion by the end of 2020.<sup>24</sup>
- **ECOMMERCE IN THE NETHERLANDS WAS WORTH €25.8 BILLION IN 2019**, which is a 7% increase from the previous year. The online retail industry in the Netherlands accounts for 10.3% of the country's total retail industry. This means that in 2019, a total of 258 million purchases were made, which is a 4% increase compared to 2018.<sup>25</sup>

**FIGURE 6. OVERVIEW OF TARGET MARKET SIZES IN 2019, BILLION EUROS**



- **ECOMMERCE IN BELGIUM WAS WORTH €11.46 BILLION IN 2019**, which is 900 million euros more than the previous year. Belgians shopped, on average, 13.4 times online, which means that 112.9 million purchases were made online in Belgium in 2019.<sup>26</sup>
- **ECOMMERCE IN ITALY was forecasted to be worth €23.1 billion in 2018**<sup>27</sup>, which is an increase of 9% compared to the previous year, and ECOMMERCE IN SPAIN was forecasted to be worth €33.56 billion in 2019, which is an increase of 20% compared to the previous year.<sup>28</sup>



<sup>23</sup> Fevad.com, Bilan du e-commerce en France 2019 : le e-commerce franchit le cap des 100 milliards d'euros en 2019, retrieved 16.04.2020. [link](#)

<sup>24</sup> Ecommercenews.eu, Ecommerce in Germany was worth €72.6 billion in 2019, retrieved 16.04.2020. [link](#)

<sup>25</sup> Ecommercenews.eu, Ecommerce in the Netherlands: €25.8 billion in 2019, retrieved 16.04.2020. [link](#)

<sup>26</sup> Ecommercenews.eu, Ecommerce in Belgium: €11.46 billion in 2019, retrieved 16.04.2020. [link](#)

<sup>27</sup> Ecommercenews.eu, Ecommerce in Italy will be worth €23.2 billion in 2018, retrieved 14.05.2020. [link](#)

<sup>28</sup> Ecommercenews.eu, Ecommerce in Spain was worth €27.96bn in 2018, retrieved 14.05.2020. [link](#)

## Competition

Competition analysis has confirmed that the value proposition of Shipit pro is unique and disruptive (see Figure 8 for an overview of the competing solutions):

- **NO CO2 CALCULATION AND BLOCKCHAIN TIMESTAMP FUNCTIONALITIES.** None of the competing solutions offer a green delivery module with CO2 tax management. Moreover, none of the competing solutions offer a full-scale eCommerce solution that is secured with blockchain timestamp middleware, which would simplify the logistics and customs related problems associated with cross-border eCommerce in the EU and offer a secured data flow between importers, sellers, and EU customs authorities. Shipit pro is a fast connection between users' sales channels and carriers, making cross-border eCommerce seamless and transparent.
- **NO FULL-SCALE SOLUTION.** There are no solutions on the market that offer all of the essential functions for eCommerce

companies in one complete package: AI-based HS code classification and automatic VAT & import duty calculation in compliance with the new EU 2021 VAT rules, automatic shipping label generation, payment and insurance options, and API connections for tracking the carriers who complete the last-mile delivery. Moreover, none of the competing solutions have blockchain timestamp middleware, which secures that information cannot be modified or erased after the sale has been completed, nor a technical solution for CO2 tax management.

- **INTEGRATIONS ARE TIME CONSUMING.** All competitive solutions are aimed at offering just one of the services offered by Shipit pro, which means that users would have to integrate their systems with other necessary software solutions separately for each function which would be time-consuming and expensive. However, Shipit pro's platform is integrated with multi carrier and crowd courier networks, payment and insurance providers, and the tax, customs, and postal offices in the EU, which makes it easier for Shipit pro's clients to start using the platform.

**FIGURE 8. COMPETITIVE POSITION OF Shipit pro**

	CO2 calculation and blockchain timestamp	VAT and important duty calculation	AI based HS classification	Logistics solutions	Automatic shipping labels
Competitors Analysis	1	2	3	4	5
Payground.se	×	✓	×	×	×
Semantics3	×	×	✓	×	✓
Easyship	×	✓	×	✓	✓
ShippyPro	×	×	×	✓	✓
Unifaun	×	×	×	✓	✓
ShipStation	×	×	×	✓	✓

## More detailed description of Shipit pro's direct competitors and comparison with Shipit pro's solution:

### PayGround™

Payground.se<sup>29</sup> offers a unique Delivery VAT and Tax payment exchange platform for the global logistics and eCommerce industry. The system handles manifests, customs, and payment data automatically and enables an effective communication with the consumers. Compared to Shipit pro, Payground's platform:

- Payground.se offers their delivery VAT & duty function only in the Nordics and the platform is connected to personal databases only in the Nordic region;
- has no blockchain-based timestamp or CO2 calculation functions and the software does not offer logistics solutions, an option to insure parcels, nor automatic HS code classification.

### Semantics3

Semantics3<sup>30</sup> is a data and AI platform for eCommerce marketplaces, logistics, and brands. For eCommerce brands, Semantics3 offers trend spotting and price monitoring, and their AI tool helps to classify eCommerce goods to standardized taxonomies. For the logistics industry, Semantics3 offers an automatic assignment of HS codes to products. The system also estimates the weight and price for real-time calculations of the shipping costs of a product and helps to flag dangerous or restricted goods. Compared to Shipit pro, Semantics3:

- offers only the HS code classification function without the CO2 calculation functions, blockchain middleware, payments and insurance functions, automatic VAT & import duty calculations, or logistics solutions that are essential for cross-border eCommerce companies operating in the EU;
- Semantics3 is US-based and does not operate in the EU, with the UK as the nearest active market for the company.

### easyship

Easyship<sup>31</sup> is an end-to-end logistics platform aimed at SMEs and startups, which is built to enable local and cross-border eCommerce. The platform connects sellers directly to over 100 shipping options. The platform's functions include automatic shipping label, packing slip, and customs declaration generation; shipment tracking; and full cost visibility with parcel insurance options at checkout. Compared to Shipit pro, Easyship:

- does not offer AI-based HS code classification, and the company is operating mainly in Asia and the USA, not the EU;
- the software has no CO2 calculation function or blockchain timestamp middleware to guarantee that information cannot be modified or erased after the sale has been completed.

<sup>29</sup> Payground.se homepage, retrieved 08.04.2020. [<link>](#)

<sup>30</sup> Semantics3 homepage, retrieved 08.04.2020. [<link>](#)

<sup>31</sup> Easyship.com homepage, retrieved 14.04.2020. [<link>](#)



Shippypro<sup>32</sup> is a shipping management platform for eCommerce companies. ShippyPro connects the users' sales channels to the carriers and helps to manage orders, create shipping labels, track the packages, add optional insurance to parcels, and simplify the return process. Automated shipping label creation, live delivery rates, and already-working integrations with more than 114 carriers and 58 sales channels make the software a powerful shipping management platform. Compared to Shipit pro, ShippyPro:

- does not have the CO2 calculation or automatic VAT & import duty calculation functions or blockchain-based timestamp middleware;
- the system lacks the functionality to auto-categorize products to corresponding HS codes, choose a logistics provider or pay through the system.



Unifaun<sup>33</sup> offers a transport management software for the Nordic market that, among other features, has a function for the automatic label management of its shipments. The software allows the users to generate and print shipping and return labels for their online store orders, add additional insurance to parcels, and track all of the orders through the system. Compared to Shipit pro, UniFaun:

- does not have the VAT & import duty calculation module, HS code classification functions, or the option to pay through the platform;
- the software has no CO2 calculation function or blockchain timestamp middleware to guarantee that information cannot be modified or erased after the sale has been completed.



ShipStation<sup>34</sup> is a shipping software company based in Texas, USA. ShipStation combines order processing, production of shipping labels, and customer communication in an easy-to-use, web-based interface that integrates directly with major carriers and online platforms. The software enables import and management of orders from more than 70 sales channels, generates discounted shipping labels for merchants' online orders, tracks all of the orders, processes payments through the platform, adds additional parcel insurance, and processes returns in a dedicated returns portal. Compared to Shipit pro, ShipStation:

- does not have the VAT & import duty calculation that is in compliance with the EU rules;
- the software does not have automatic HS code classification functionality, CO2 calculation functionality, or the blockchain timestamp middleware, and the company is operating in USA, Canada, UK, and Australia, not the EU.

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<sup>32</sup> ShippyPro homepage, retrieved 08.04.2020. [<link>](#)

<sup>33</sup> Unifaun homepage, retrieved 08.04.2020. [<link>](#)

<sup>34</sup> ShipStation homepage, retrieved 08.04.2020. [<link>](#)

## Business model and commercialisation strategy

### Market entrance

Once Shipit pro's platform is fully developed, it will be scalable and ready to enter new markets. The first focus will be on the EU market, however, after the project, Shipit pro is planning to first enter the UK, USA, Asian and Russian markets. Shipit pro has identified two market entrance possibilities:

- 1) **THE FIRST ADOPTERS** are planned to be the current Shipit pro MVP users: ProLox OÜ, EQT Logistics Ltd., and Shenzhen Takesend Logistics Co. Ltd. Shipit pro is already in negotiations with companies in the Netherlands and Belgium, where they already have a wide network of industry contacts. In addition, when the integrations with main logistics providers have been completed, it will be easier to find new eCommerce companies in the target markets. It takes about one month for Shipit pro to complete a new integration with a logistics provider such as GLS in the Belgium and Post Plus Netherlands. Existing contacts in target markets will be directly contacted.
- 2) **PROVIDING MODULES ACCORDING TO THE DEMAND.** Shipit pro will enter new markets with only the customs module or only the green transport module without offering other working functions to certain clients. This means that the clients can choose only the relevant modules necessary for their cross-border eCommerce platform. This entrance strategy is best-suited for small cross-border eShops who will be targeted through the large eCommerce marketplaces.

### Barriers to entry

Barriers to entry and responsive mitigation measures include:

- **NO COMPETING FULL-SCALE SOLUTION** means that there are a lot of competitors on the market offering one of the functions of Shipit pro's platform. Mitigation measures: the technical and commercial feasibility has been assessed and proved that there is a need for a full-scale solution such as Shipit pro.
- **NETWORK EFFECT.** Shipit pro has to create a working network of logistics providers and

eCommerce platforms. There are already many successful eCommerce and logistics networks, but Shipit pro must create a new ecosystem that includes both networks so that the end user could benefit from using the platform. Mitigation measures: Shipit pro has been in talks with logistics providers who agree to create a new ecosystem.

- **GOVERNMENT REGULATIONS.** Shipit pro has to comply with all target country, EU, and global level trading, logistics, and taxing regulations to be able to offer its unique value proposition to the target customers. Mitigation measures: Shipit pro will hire specialists whose role is to inform the core team and keep track of changing government regulations and communicate with policy makers and other stakeholders in the global cross-border goods movement chain.

### Shipit pro's market entry and commercialization strategy is based on the following events:

- during the first year of the project, customer and partner networks will be developed based on existing contacts in the target markets. These include mainly the large eCommerce, postal, and carrier companies;
- during the first year, a special marketing campaign aimed at multi carrier and crowd courier networks will be created that introduces Shipit pro's novel tokenized bonus system for carbon-free delivery methods;
- during the first year of the project, Shipit pro will be integrating with the main software solutions used by tax and customs offices and postal and carrier companies in the target markets. In addition, Shipit pro will be integrated with the main eCommerce platforms operating in the EU and 3rd countries (Shopify, WooCommerce, Magento, etc.) and eShops will be contacted through app stores;
- participation at industry fairs and events for increasing the visibility of Shipit pro among potential target users will be carried out during the first year of the project, including at conferences and workshops as an exhibitor or presenter to introduce Shipit pro's solution and discuss cross-border eCommerce sector pain-points in general;



- during the second year, the creation of sales and marketing material will be carried out together with press releases updating on the project's progress;
- during the second year, onboarding will be done through webinars to reduce customer acquisition costs;
- at the end of the second year, the full product will be launched in the target markets: Germany, France, Spain, Italy, the Netherlands, and Belgium;
- after the project, the product will be launched in the rest of the EU, UK, USA, Asia and Russia;
- Shipit pro will continue with their customer and partner network development, press releases, and direct sales through contacts obtained at different industry events or referrals and marketing activities;

Once these development activities have been completed, Shipit pro's market uptake strategy will be based on a combination of outbound sales and inbound marketing. For onboarding, Shipit pro will continue to use webinars to reduce customer acquisition costs. Dissemination activities will continue to be mostly participating in major industry fairs, conferences, and workshops, and publishing press releases, articles, and marketing materials.

## Revenue model

Shipit pro is first focused on serving eCommerce platforms, marketplaces, and eShops who sell cross-border and are operating in the EU and in 3rd countries. In summary, Shipit pro aims to achieve a 20% market share of the European eCommerce services market by 2026.

## Pricing

- Shipit pro will charge their customers on average €0.77 per e-declaration. The exact price depends on the number of annual declarations for the client, ranging from €2 per declaration for clients with 100 000 declarations a year to €0.1 per declaration for clients with 10 million declarations per year.
- Shipit pro estimates that 20% of all their clients' shipments need some kind of HS code classification. Shipit pro charges €0.03 per HS code classification on average. Clients with an average of 25 000 classifications per year pay €0.05 for one HS classification, while clients with 2.5 million yearly classifications pay €0.01 per HS classification.
- Shipit pro charges a €0.05 payment fee and €0.05 insurance fee per purchase.
- Shipit pro estimates that 10% of the total number of parcels will be returned. Clients with 100 000 annual returns will pay €0.25 per return, while clients with up to 10 million will pay €0.005 per return.



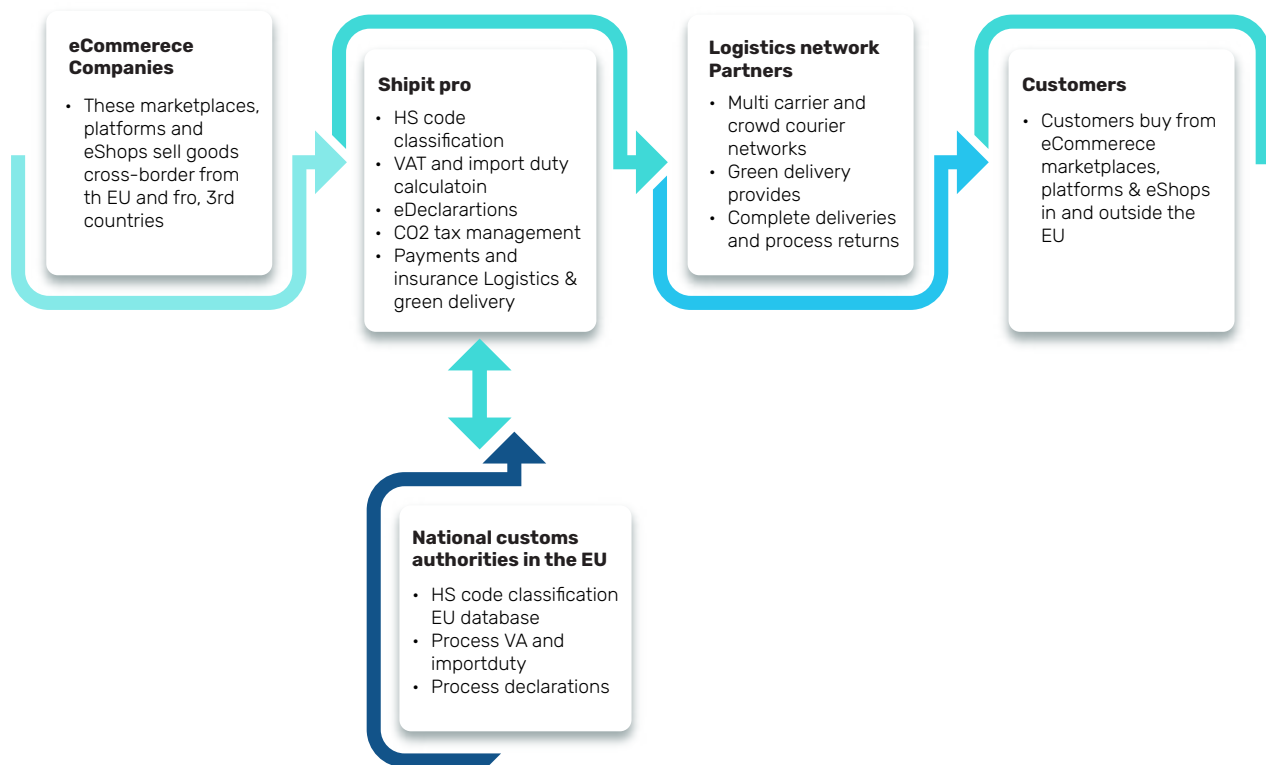


## External Strategic Partners

Shipit pro's core competence is in software development and know-how of the logistics value chain (see Figure 9 for an overview of Shipit pro's value chain). Shipit pro will be integrated with eCommerce platforms, marketplaces, and eShops operating in the EU and in 3rd countries, logistics network partners, and with the systems of the national customs authorities in the EU. Shipit pro's external strategic partners include:

- National customs authorities in the EU who process declarations, VAT & import duties.
- EU Member States' post offices (national post offices of 27 EU countries: Deutsche Post, Bpost, PostNL, Omniva, etc.);
- Multi carrier solutions (e.g. DHL, DPD, FedEx, etc.) allow users to compare quotes from carriers, choose their preferred shipping partner, and track and trace the freight process;
- Crowd courier networks offering crowdsourced courier services for the personalized delivery of freight.

**FIGURE 9. VALUE CHAIN OF Shipit pro**



## Intellectual property

Shipit pro has conducted a freedom to operate analysis and concluded that there are no similar solutions on the market. Shipit pro's legal and regulatory analysis will be further updated and completed in WP 6 and with the crypto funding Shipit pro will be focusing on developing a software solution that cannot be copied. As a result, the following measures will be taken into account:

- Shipit pro's code and all other documents are accessible only through authenticated methods; their general Terms of Agreement signed by clients say that they are only licensed to use the software and do not have the rights over the IP;
- all data provided by the clients can be used anonymously for research purposes;
- partners who get access to some parts of the IP (e.g. sales or marketing materials, etc.) have to sign an agreement saying that all the aforementioned and future IP belongs to Shipit pro.

Reverse engineering the technology is highly complicated, as the software solution is based on unique data and complex software integrations with different sales channels and carrier platforms.

## Scale up potential

Shipit pro is expected to scale up fast, because no other company in the EU market is providing a full-scale CO2 tax management, green delivery, VAT & import duty management, payment, insurance, and returns handling service platform aimed at cross-border eCommerce platforms, marketplaces, and eShops. The solution will be an end-to-end solution attractive to cross-border eCommerce companies, as Shipit pro's dataflow from the point of sale will be accurate and reliable. Accurate and reliable dataflow is necessary to smoothen and speed up the customs processes when importing goods to the EU from 3rd countries and intra-EU, and in case of disputes, the data about sales can be traced back to the exact date and time of the purchase. Moreover, the software will provide an exact estimate of the VAT, import duty, and logistics costs associated with each individual order. In the future, Shipit pro's blockchain-based timestamp middleware will be used to track imported goods for recycling, which means that Shipit pro will track the data flow of the imported goods from production until the end of the product's lifecycle, when the goods are disposed of. As a result, Shipit pro's unique solution will show the transaction and CO2 emission data for the entire existence of imported goods.

The project will have a major impact on Shipit pro's revenues, profits, employment, and market uptake plans. After the successful implementation of the project, Shipit pro's business will be able to grow and generate €45 million in revenue by 2023 and create 100 high-value jobs.



TABLE 5.

## SHIPIT PRO OÜ FINANCIAL FORECAST 2020-2026, IN TH EUROS

P&L	Actual (If applicable)			Forecast					
	N-2 (n/a)	N-1 (n/a)	N 2020 (Esti- mates)	N+1(2021)	N+2(2022)	N+3 (2023)	N+4(2024)	N+5 (2025)	N+6 (2026)
Revenues	0	0	26.00	260.00	2,930.00	45,050.00	90,100.00	135,150.00	206,240.00
<b>GrossMargin</b>	<b>0</b>	<b>0</b>	<b>26.00</b>	<b>260.00</b>	<b>2,930.00</b>	<b>45,050.00</b>	<b>90,100.00</b>	<b>135,150.00</b>	<b>206,240.00</b>
Sales and marketing expenses	0	0	00.00	-260.00	-293.00	-4,505.00	-9,010.00	-13,515.00	-20,624.00
Personnel expenses			-239.22	-1,254.49	-3,866.60	-9,288.02	-13,870.23	-27,000.00	-45,000.00
Outsourced services	0	0	00.00	-310.00	-310.00	00.00	00.00	00.00	00.00
Other operational expenses	0	0	-170.00	-570.00	-1,200.00	-4,200.00	-9,600.00	-27,030.00	-41,248.00
<b>EBITDA</b>	<b>0</b>	<b>0</b>	<b>-383.22</b>	<b>-2,134.49</b>	<b>-2,739.60</b>	<b>27,056.98</b>	<b>57,619.77</b>	<b>67,605.00</b>	<b>99,368.00</b>
Interest	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other revenues/ expenses (including grants)	0	0	0.00	1,145.76	763.84	0.00	0.00	0.00	0.00
<b>EBT</b>	<b>0</b>	<b>0</b>	<b>-383.22</b>	<b>-988.73</b>	<b>-1,975.76</b>	<b>27,056.98</b>	<b>57,619.77</b>	<b>67,605.00</b>	<b>99,368.00</b>
Taxes	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Income	0	0	-383.22	-988.73	-1,975.76	27,056.98	57,619.77	67,605.00	99,368.00

Once the necessary integrations with different eCommerce platforms, marketplaces, eShops, post offices, multi carrier & crowd courier networks, and EU customs offices are completed, Shipit pro will be ready for simultaneous market entry in multiple countries. The lack of direct competition offering the same functionalities, affordable costs for the users, and strong market demand and market size will result in a strong and profitable position within the first year after the start of sales.

## Key Performance Indicators

Shipit pro's targeted key performance indicators (KPIs) are shown in Table 6:

**TABLE 6. KEY PERFORMANCE INDICATORS FOR Shipit pro**

No	Area	KPI indicator	Current	Target	Date achieved
1	Technological	Technology readiness level (TRL)	6	8	31.12.2022
2	Technological	Software localized for no. of markets	1	6	31.12.2022
3	Practical	FTE personnel	6	100	31.12.2023
4	Economic	Revenue	-	45 000 000	31.12.2023
5	Economic	Break-even point	-	-	31.12.2023
6	Market	No. of 3rd countries cross-border shipments handled	-	80 000 000	31.12.2026
7	Market	No. of EU cross-border shipments handled	-	200 000 000	31.12.2026

## Broader impact

When successfully commercialized, Shipit pro's software will help with the following initiatives:

- Support the fulfilment of EU Green Deal<sup>35</sup> policy and other climate and energy policies. For the first time, Shipit pro will allow customers of eCommerce companies to see the CO2 emissions cost of their delivery and allowing the customers to choose carbon-free delivery options at product checkout. The route optimization function will reduce the number of empty run kilometres to 10% and the automatic eDeclaration composer function will eliminate the need for paper declarations.
- EU Member States will gain from the increase in VAT revenues as Shipit pro will help cross-border eCommerce companies to correctly collect and deliver VAT to the country of delivery due to the secured blockchain timestamp middleware. In 2017, the unpaid VAT due from all economic sectors in the EU was calculated to be worth €137 billion;
- Support the functioning of the Digital Single Market. The Digital Single Market aims to achieve the free movement of persons, services and capital where the individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of

consumer and personal data protection, irrespective of their nationality or place of residence. The completion of the Digital Single Market is one of the political priorities of the European Commission. The Digital Single Market was built on three pillars: promoting better access for consumers and businesses to digital goods and services across Europe; creating the right conditions and a level playing field for digital networks and innovative services to flourish; maximising the growth potential of the digital economy.<sup>36</sup>

## Green impact

Shipit pro will contribute to the EU Green Deal's objective "Mobilising industry for a clean and circular economy" by forwarding CO2 emissions data together with the product and transaction data to EU authorities and ensuring that CO2-heavy products are not imported into the EU. Shipit pro will also contribute to the EU Green Deal's objective "Accelerating the shift to sustainable and smart mobility" by reducing pollution in transport. More specifically, Shipit pro will contribute to the Green Deal with the Green module by facilitating the usage of electric vehicles and other environmentally-friendly delivery options, with the route optimization function by reducing the empty run kilometres and reducing the carbon emission factor of delivery trucks and by eliminating the need for paper CMRs.

<sup>35</sup> European Commission, A European Green Deal, retrieved 09.04.2020. [<link>](#)

<sup>36</sup> European Commission, Shaping the Digital Single Market, retrieved 09.04.2020. [<link>](#)

<sup>37</sup> Statista, Size of the road freight market in Europe from 2010 to 2019, retrieved 12.05.2020. [<link>](#)

## IMPACT

### Green module

In 2018, freight was transported across 1 870 billion kilometres (km) of European roads.<sup>37</sup> Shipit pro aims to serve 5% of the market in the EU, which means that the clients of Shipit pro will complete approximately 374 million km of freight transport in a year. With a fuel consumption of 30l per 100km, the total fuel consumption for Shipit pro's clients in a year would be approximately 112.2 million litres.

Shipit pro's green module includes a novel tokenized bonus system that facilitates the usage of electric vehicles, bicycles and other environmentally-friendly last-mile delivery options.

As a result of the green module:

- Shipit pro will decrease the overall fuel consumption of Shipit pro's clients by 10% or 11.2 million litres of fuel.
- Assuming that one litre of diesel equals 2.640 kg of CO<sub>2</sub>, the total CO<sub>2</sub> savings are 29 620.8 t of CO<sub>2</sub>

### Route optimization function

The route optimization functions of Shipit pro help to eliminate empty kilometres where the trucks are driving without a payload. In 2018, 20% of the total vehicle kilometres covered by road freight transport was run empty in the EU.<sup>38</sup> This could be a result of many factors, including poor route or load planning. When 20% of the total truck kilometres are run empty for a 40-tonne truck (truck + trailer + load = 40 tonnes) with a maximum payload of 25 tonnes, then the carbon emission factor for that truck is 49.3 grams of CO<sub>2</sub> per tonne-km.<sup>39</sup> Based on the data obtained from initial demos of Shipit pro's software, the innovative route optimisation function of Shipit pro reduced the total amount of truck kilometres run empty to 10%. This means that the carbon emission factor for a 40-tonne truck with a payload of 25 tonnes is reduced to 45.4 grams of CO<sub>2</sub> per tonne-km, which is an 7.9% decrease in the carbon emission factor. These figures show that when the amount of empty running is decreased, the carbon emissions per one tonne-km of freight transported is decreased as well.

In summary, if a regular 40-tonne truck (truck + trailer + load = 40 tonnes) with a maximum payload of 25 tonnes typically performs 20% of the kilometres empty, then Shipit pro's platform will help to reduce empty run kilometres to 10% and achieve:

- At least an 7.9% decrease in the carbon emission factor per unit of cargo transported (for a 40-tonne truck (truck + trailer + load) with a payload of 25 tonnes)

### Automatic eDeclaration composer function

Using Shipit pro full-scale shipping software will help to save CO<sub>2</sub> emissions by replacing the need for paper declarations and paper CMR's (waybills) with eDeclarations and eCMR's (e-waybills).

In 2016, the average vehicle loads were 13,5 tonnes in the EU<sup>40</sup> and in 2018, 13.4 billions of freight were transported on the roads in the EU.<sup>41</sup>

Taking into account the latest available statistics, Shipit pro aims to serve 10% of the total serviceable market, which means that the clients of Shipit pro will transport approximately 1.34 billion t of freight transport in a year. Assuming that the average vehicle loads are the same as the EU average in 2016, Shipit pro's clients will complete 99 259 259 shipments in a year. Based on Shipit pro's previous experience, each shipment is usually accompanied by a paper CMR in 3 copies (one copy for the shipper, one for the carrier and one for the sender). This means that Shipit pro's clients use 297 777 778 paper CMR's in a year.

Assuming the CO<sub>2</sub> emissions of one sheet of paper is 0.005 kg of CO<sub>2</sub><sup>42</sup>, Shipit pro's automatic eDeclaration composer function helps to save:

- 297 777 778 paper CMR's or approximately 1 489 t of CO<sub>2</sub> per year as the platform generates eCMR's (e-waybills)

<sup>38</sup> <https://bit.ly/3dvpH5R>

<sup>39</sup> Cefic, Guidelines for Measuring and Managing CO<sub>2</sub> Emission from Freight Transport Operations, 2011. [<link>](#)

<sup>40</sup> Eurostat, Road freight transport by journey characteristics, retrieved 12.05.2020. [<link>](#)

<sup>41</sup> Eurostat, Summary of annual road freight transport by type of operation and type of transport, retrieved 12.05.2020. [<link>](#)

<sup>42</sup> Fujixerox. com, Case 1: Comparison of CO<sub>2</sub> Emissions from an Environmental Perspective, retrieved 12.05.2020. [<link>](#)

# SECTION 3 - IMPLEMENTATION



## Team and capabilities

Shipit pro's core team consists of high-level experts with complementary and balancing skill sets. The core team has extensive background in logistics, software development, technology commercialisation and business development.

The current project will be the main focus of Shipit pro's team in 2021–2022. Thus, the company founder and leading personnel, who are experienced in successfully managing and commercialising innovation projects are fully committed to its tasks and will carry out the project.



TEAM MEMBER	POSITION	DEPARTMENT	FUNCTION/KEY COMPETENCES	COMMITMENT
<b>Jürgen Järvik</b>	CEO & Founder	Management	Over 19 years of experience as an entrepreneur, managing teams, developing business, as well as gaining valuable connections and industry insights working in eCommerce and logistics companies.	100%
<b>Ervin Voit</b>	COO	Logistics & Post	more than 7 years of experience in various postal service companies, incl. developing trust and relations with key partners, developing a supply chain, high quality business strategies.	100%
<b>Andri Piik</b>	CTO	IT	More than 17 years of experience in IT. Worked as a freelance developer, system administration for Playtech Estonia, architect and senior developer for Finestmedia AS, PLogic/Almic OÜ and Plogic/OpenNode/Bytelife.	100%
<b>Kuido Kondike</b>	IT programmer	IT	More than 10 years of experience as a software developer.	100%
<b>Sid Hart</b>	Advisor	IT & Delivery	Extensive experience from start-up to scale of strategic and operational software, multichannel, fulfilment, logistics, supply chain, change leadership and corporate development in a range of organisations within the UK and overseas. Currently, Sid serves as the Interim CEO of Aurora OÜ and Sid is a Member of Consultative Committee of the Universal Postal Union, Member of the International Organization for Standardization, Member of the European Conference of Postal and Telecommunications Administrations (ETSI) and a Member of Ecommerce Europe.	50%
<b>René Schilder</b>	Advisor	Customs (VAT & Duties)	more than 22 years of experience in the field of customs and taxes. Previously worked as a tax consultant, major in fiscal law.	50%



# TOKEN ALLOCATION

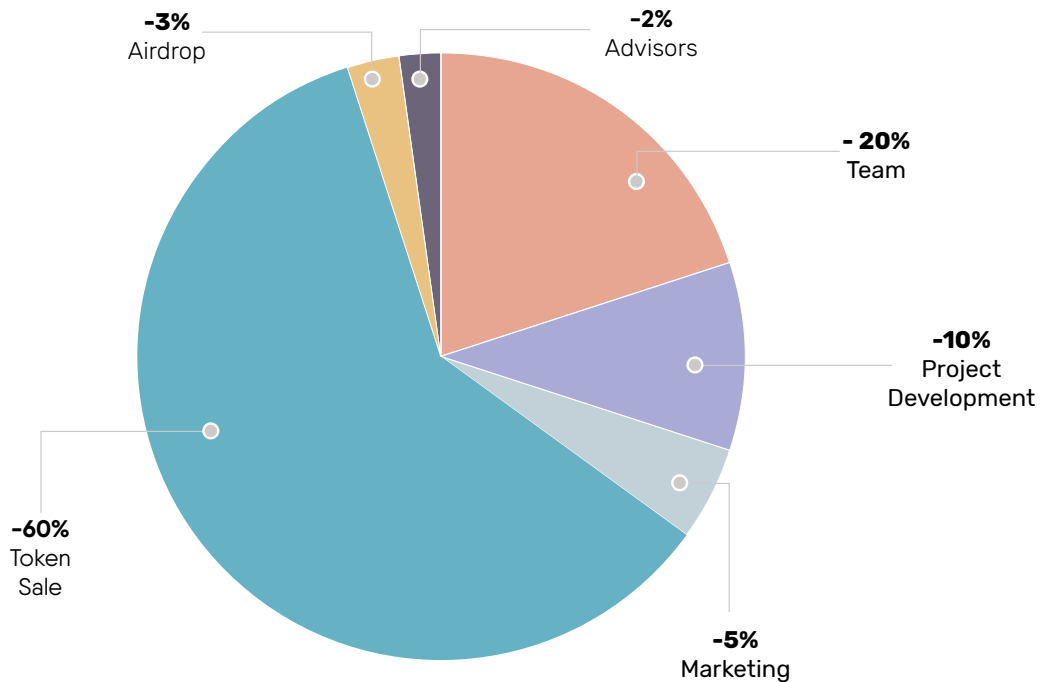
**Project Name:** Shipit pro

**Total Supply:** 200,000,000 SHPP

**Token Price:** 0.10 USD

**Softcap:** \$ 2 Million

**Hardcap:** \$ 12 Million



■ **-20% Team:** (40,000,000 SHPP)

■ **-10% Project Development:** (20,000,000 SHPP)

■ **-5% Marketing:** (10,000,000 SHPP)

■ **-60% Token Sale:** (120,000,000 SHPP)

■ **-3% Airdrop:** (60,000,000 SHPP)

■ **-2% Advisors:** (40,000,000 SHPP)



SHPP is the fuel of Shipit pro ecosystem. It allows Ethereum – based Smart Contracts to be used for automated contracts, shipping & customs procedures, and international payments. Token can be used as a value based utility (as cash), or to pay for Shipit pro services.



Token holders will be automatically enrolled in our VIP service offering meaning that goods transacted through Shipit pro will have the highest level of guarantee both in terms of speed and security of delivery.



In essence, SHPP tokens power the necessary components to optimize global eCommerce.



Also all token holders will get a **25% discount** on Shipit pro services paying using SHPP tokens.

## Need for funding

Shipit pro is growing from a small-scale eCommerce technology company to a sales and growth-oriented global cross-border eCommerce software company. The funding will cover the funding need for the final development phase needed to help Shipit pro's software reach market-readiness. Shipit pro will have quality guarantee by 3<sup>rd</sup> parties to build trust among logistics providers and eCommerce companies, customs authorities and other related parties. Shipit pro has received letters of intent (see Document 2 for the LOIs) from 3v

express LLP, ESTE IT GmbH, McNallys Business Consulting, Shenzhen TakeSend Logistics Co. Ltd., SendFromChina Co. Ltd. and National Distance Selling Association (eCommerce Russia Association), who support Shipit pro's solution that will be developed and are ready to contribute to the development project.

This financial contribution will eventually serve as a risk reduction for contributors as the high degree of innovation, high customer acquisition costs and the long period of trust building among eCommerce platforms, marketplaces and eShops contribute to the limited investment interest by private contributors.

## Risks

Shipit pro has identified main commercial and technical risk factors for the funding project, and defined suitable risk mitigation strategies:

Description of risk	Risk/Impact	Proposed risk-mitigation measures and WPs addressing the risks
Commercial: Market acceptance and adoption is slow from eCommerce companies, who are poorly informed about available solutions benefiting cross-border sales.	Mid/High	During the project, Shipit pro's technology and the benefits will be demonstrated on a larger scale and user feedback will be gathered to improve the technology. In order to overcome this risk, the technology will be demonstrated in a real environment to guarantee that the users' needs and expectations are met and exceeded WP-s addressing these risks: WP5
Technology: Unsatisfactory CO2 tax management, VAT & import duty calculation and HS code classification by the platform	Low/Mid	Shipit pro is testing and validating all technology and performance related aspects in several stages. Shipit pro will adjust the software development work processes as needed by gathering the relevant feedback from their piloting users. WPs addressing the risk: WP5
Technology: Shipit pro's platform requires substantially more effort for the successful localisation across all initial target markets	Low/Mid	Due to the similarities of the main initial target markets, the roll-out to these countries require only some technical alterations which are covered by this innovation project. WPs addressing these risks: WP2
Regulatory: The EU legislation changes drastically, requiring Shipit pro to change its' business practices and the platform's functions	Low/Mid	Shipit pro's team consists of advisors who are a part of the eCommerce work groups on an EU level. This guarantees that Shipit pro has the latest updates about current and future EU legislation changes and can rapidly adapt to the changes if needed. WPs addressing these risks: WP2

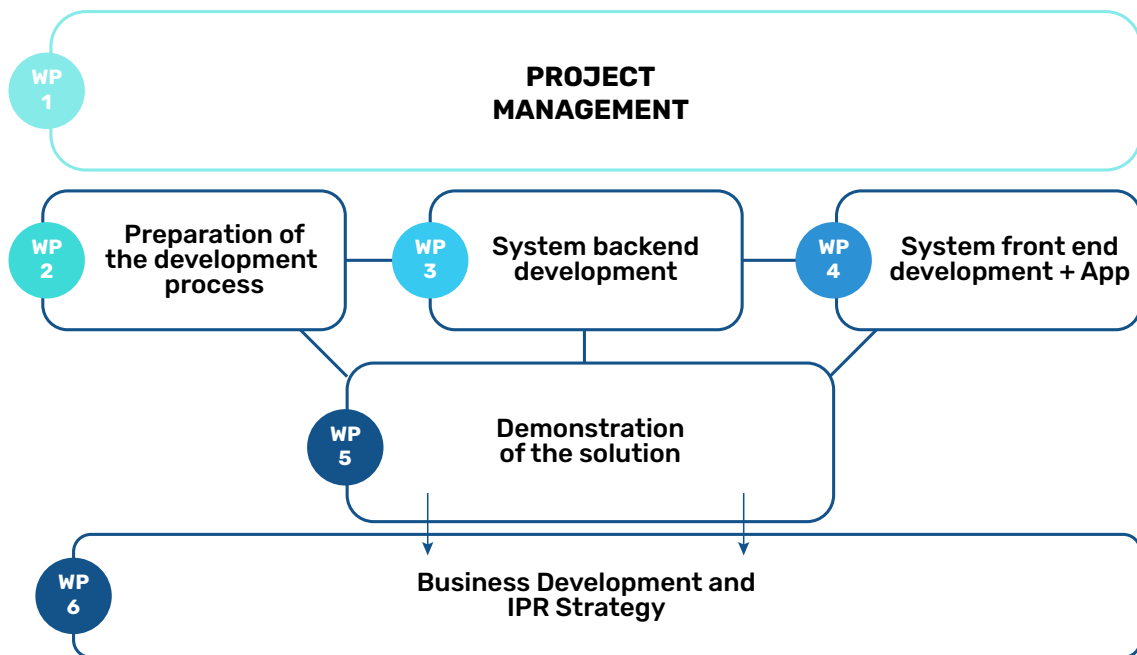
## Approach

The Shipit pro project is divided into 6 work packages. The first work package is project management, which will take place during the whole duration of the project. WP1 is followed by the preparation for the development process (WP2), where a business requirements document is completed; system back end development (WP3), where the system and its' main functions are developed; system front end development together with the app development (WP4), where the UI and app will be developed; demonstration of the solution (WP5), where piloting feedback will be gathered and necessary improvements will be made; the business development and IPR strategy work package (WP6)

In summary, the project will verify Shipit pro 's platform and business strategy in a real-world environment.

Shipit pro has written commitments from strategic partners, who will be ready to contribute with the testing and validation activities and the whole work plan is designed in close cooperation with these strategic partners. As a result, the task descriptions are complete and the time and budget needed are planned accurately. The project's timeline has been designed to reduce overlapping between tasks and to ensure the availability of the main internal resources. The work plan takes into account possible delays for each work package to ensure that all tasks will be finished within the project's 24 months.

**FIGURE 10. WORK PLAN COMPONENTS AND INTERDEPENDENCIES**



## Project timeframe

**TABLE 7. WORK PLAN COMPONENTS AND THEIR COMPLETION TIMELINE**

WORK PACKAGES AND ACTIVITIES		MONTHS																										
WP	Description/Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
<b>1</b>	<b>Project Management</b>																											
<i>Executors:</i>																												
1.1.	Project administration, financial management and reporting																											
1.2.	Project internal communication																											
1.3.	Risk management and quality control																											
<b>WP</b>	<b>Description/Month</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>			
<b>2</b>	<b>Preparation of development process</b>																											
<i>Executors:</i>																												
2.1.	Market research, legislative and eCommerce requirements analysis																											
2.2.	Specification of the core service and system requirements																											
2.3.	Specification of functional and non-functional requirements																											
<b>WP</b>	<b>Description/Month</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>			
<b>3</b>	<b>System back end development</b>																											
<i>Executors:</i>																												
3.1.	Customs module database design, management interface and AI design for HS classification module																											
3.2.	Automated eDeclaration composer																											
3.3.	Timestamp-based event and transaction verification integration																											
3.4.	Payment and insurance module																											
3.5.	Green module																											
3.6.	Crowd courier network module																											
<b>WP</b>	<b>Description/Month</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>			
<b>4</b>	<b>System front end development + APP</b>																											
<i>Executors:</i>																												
4.1.	Design																											
4.2.	Web based user interface																											
4.3.	Mobile APP design and development (Android & IOS)																											
<b>WP</b>	<b>Description/Month</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>			
<b>5</b>	<b>Demonstration of the solution</b>																											
<i>Executors:</i>																												
5.1.	Preparation for testing																											
5.2.	Testing in operational environment																											
5.3.	Performance evaluation and system improvements																											
<b>WP</b>	<b>Description/Month</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>			
<b>6</b>	<b>Business development and IPR strategy</b>																											
<i>Executors:</i>																												
6.1.	Business model and value proposition development																											
6.2.	Regulatory compliance and possible IP protection analysis																											
6.3.	Customer database generation and lead generation																											
6.4.	Communication material development																											
6.5.	Participation in conferences and industry fairs																											

## Work packages

Work package number		1
Work package title		Project management
<b>WP description:</b> WP1 seeks to conduct risk management, quality control and internal communication activities and implement project management.		
<b>Task 1.1. Project administration, financial management and reporting</b>		
The aim of this task is to ensure the administration and strategic oversight of the project. The project management will be carried out by the Project Manager, who will ensure the fulfilment of the goals of the project on a day-to-day management. This includes all strategic, technical and administrative (including financial) management and communication with the Commission. The financial management of the project will be carried out by the CFO. The Project Manager will also be responsible for the overall quality control of the project deliverables		
<b>Task 1.2. Project internal communication</b>		
The project internal communication is focused on maintaining a high level of communication within the project team to ensure that the project is realized coherently. This task includes monthly meeting reviews.		
<b>Task 1.3. Risk management and quality Control</b>		
The probability of potential risks and their expected impact will be documented and assessed for technical, organisational and financial risks. Relevant contingency actions and mitigation measures are planned.		

Work package number		2
Work package title		Preparation of development process
<b>WP description:</b> WP2 will identify and analyse regional variations in legislative requirements in order to achieve international market readiness. As a result of this WP, a business requirements document (BRD) will be composed that will contain information about Shipit pro's system, modules and functionalities.		
<b>Task 2.1. Market research, legislative and eCommerce requirements analysis</b>		
<p>The aim of this task is to identify the standards that need to be fulfilled for the initial target markets and for the entire EU and global market. Shipit pro's team will specify the global legislative requirements and the requirements of the initial target countries and identify the relevant eCommerce requirements regarding the 2021 EU VAT changes. The gathered information will be used as input for Shipit pro's commercialization strategy.</p>		
<b>Task 2.2. Specification of the core service and system requirements</b>		
<p>The aim of the task is to define the core service of Shipit pro and specify the system requirements for the software platform. During the task, feedback from piloting partners will be gathered and the final modules of Shipit pro's platform will be specified.</p>		
<b>Task 2.3. Specification of functional and non-functional requirements</b>		
<p>The aim of this task is to specify the non-functional and functional requirements of Shipit pro's platform. The non-functional requirements are essential to ensure the usability and effectiveness of the entire software solution and the functional requirements will be specified to describe the different modules of the platform. Feedback from piloting partners will be gathered during this task.</p>		

Work package number		3
Work package title		System back end development
<b>WP description:</b> The aim of this work package is to develop the digital infrastructure of Shipit pro's platform that is fully compliant with the EU 2021 VAT regulations. Key elements of Shipit pro's platform are developed and integrated into a fully operational solution.		
<b>Task 3.1. Customs module database design, management interface and AI design for HS classification module</b>		
<p>The task involves the development of the data architecture allowing interactions between data systems of eCommerce and other cross-border trade stakeholders. Design process involves harmonization and collection on data models needed to synchronize data from eCommerce platforms, marketplaces, eShops and other eSellers or manufactures to collect VAT &amp; import duties declaration requirements for EU customs authorities. Design process also requires mapping multiple business processes to a unified data model. Outcome of the process is an UML diagram of processes together with data structures needed to implement for real world solution.</p>		
<p>In addition, a visually easy to understand user interface will be developed that has interfaces with TARIC, AEO, EORI and REX for customs decisions. The product suite is developed and maintained in accordance with the European Commission's Electronic Customs Multi-Annual Strategic Plan (MASP) and European Union legislation. The interface provides all required data for calculating VAT &amp; import duties in all EU destination countries (landed costs, DDP).</p>		
<p>Furthermore, an adaptable HS code classification system will be developed for continuously changing HS codes as the goods descriptions provide the most cost effective and reliable way to detect classification errors and associated regulatory violations – both for declarants and customs authorities alike.</p>		
<p>The HS classification module is using machine learning for the products' classifications. In addition, HS code ontology-based similarity models assessing HS code correctness and adds additional data (e.g. GTIN, inventory links) and documents to the declaration process to simplify and accelerate processing by customs authorities. The customs module AI is designed creating a statistical model for known eCommerce articles and manufacturer's information for verification or assignment of HS code classification for electronic VAT &amp; import duty declarations.</p>		
<b>Task 3.2. Automated eDeclaration composer</b>		
<p>The aim of this task is to develop an eDeclaration composer that matches information from various sources (eCommerce platforms, EU authorities etc.) and provides declarations with pre-calculated country specific VAT ready to be submitted to tax authorities. The module takes care of the customs clearance workflow in the customs area of destination and the module is fully compliant to the new EU customs regime and to all UPU / CEN / ETSI standards. It allows clearing &amp; payment of all VAT &amp; import duty and the module is fully compliant to the new EU VAT eCommerce Package and is prepared to use the new EU VAT one-stop-solution to pay all local VAT rates &amp; amounts using a single VAT ID and a single VAT account.</p>		
<b>Task 3.3. Timestamp-based event and transaction verification integration</b>		



The aim of this task is to develop a timestamp-based event and transaction verification solution that uses blockchain technology. Blockchain is used in order to guarantee data integrity and tampering protection by gathering data about all events, including the time and place of purchase. As a result of this software, all steps of process flow and data composition can be backtracked and verified to be correct. All data exchange events can be stamped and provided as proof of successful or unsuccessful data forwarding log. Timestamp guarantees the data exchange compliancy with EU eIDAS regulations.

#### **Task 3.4. Payments and insurance module**

The aim of this task is to integrate existing payment and insurance solutions with Shipit pro's platform. Partnership agreements with leading fintech and insurtech companies will be made during the project. The payment module will make onboarding, moving funds and user payout easier with fully compliant, global and flexible payment solution for any eCommerce platform or eSeller. The module will be fully compliant and PSD2 ready, meets all PCI obligation with tokenization, regulatory licenses around the world and approved by leading European regulators. It is designed to execute large money transfers (B2C/C2B and B2B transactions) internationally, using the newest and fastest technology together with an invoice management functionality. The insurance module will allow online shoppers to insure their parcels to the total value of the goods by paying 1% of the total price of the goods at product checkout. The insurance module will be fully compliant with the global and EU regulations.

#### **Task 3.5. Green module**

The aim of this task is to develop a CO2 tax management solution, a green logistics system and a tokenized bonus system for electric vehicle couriers or other carbon free delivery methods that will incentivize the usage of green transport solutions in the last mile delivery. A partnership agreement with Tallinn University of Applied Sciences has been made and they will develop the module and the green logistics system that includes green transport options, eco-friendly packing, sustainable warehousing, waste management and data collection and management.

As a result, the platform will include function for load optimization to reduce the empty run kilometres of the logistics providers and a route optimization function that finds the best routes for delivery. In addition, the algorithm includes the commitment time for package deliveries and pick-up time for easier tracking. A partnership agreement with South Pole or other carbon finance organization will be made during the project to offset emissions from traditional delivery methods.

#### **Task 3.6. Crowd courier network module**

The aim of this task is to develop a crowd courier network module for Shipit pro's platform. This module will offer an affordable last-mile delivery of goods for online shoppers through a local network of crowdsourced delivery providers. The module will dynamically assign orders to couriers enabling last-mile deliveries within a couple of hours.

Work package number		4
Work package title	System front end development + APP	
<b>WP description:</b> The goal of this WP is to have a unified design for Shipit pro's platform in both the web and in the mobile apps allowing the users easy navigation in a fast and efficient way.		
<b>Task 4.1. Design</b>		
Aim of this task is to design the UX and UI of the platform that will be similar in both the web and in the mobile apps. The design of the platform will focus on user-friendliness by decreasing search time and increasing user satisfaction and making sure that fast and efficient navigation is guaranteed on the platform.		
<b>Task 4.2. Web based user interface</b>		
The aim of this task is to design and develop the web-based user interface for Shipit pro's platform. Improvements to the UI based on user feedback will be made during this task.		
<b>Task 4.3. Mobile APP design and development (Android &amp; iOS)</b>		
The aim of this task is to design and develop the mobile APP for both Android and iOS. The mobile app user feedback will be collected during this task and relevant improvements to the design will be made.		

Work package number		5
Work package title	Demonstration of the solution	
<b>WP description:</b> Technical developments created in this project are tested in operational environments to ensure full market validation and guarantee market uptake after the project ends. Testing with many strategic partners will be conducted in order to validate international market-readiness of the software.		
<b>Task 5.1. Preparation for testing</b>		
The aim of this task is to prepare for software testing by composing a list of potential piloting partners. Initial piloting partners include: ProLox OÜ, EQT Logistics Ltd. and Shenzhen Takesend Logistics Co. Ltd. Shipit pro will sign a partnership agreement with 20 piloting partners and integrate Shipit pro's platform with the partners' software solutions.		
<b>Task 5.2. Testing in operational environment</b>		
The aim of this task is to test Shipit pro's platform in an operational environment and collect feedback from piloting partners. User feedback will be analysed to suggest improvements to the system.		
<b>Task 5.3. Performance evaluation and system improvements</b>		
Based on the feedback from piloting partners, the performance of the software will be evaluated and system improvements will be carried out to meet the needs of the users.		

Work package number		6
Work package title		Business development and IPR strategy
<b>WP description:</b> The business model and value proposition are updated based on pilot partners' feedback. Shipit pro's platform is legally eligible and all the specific regulatory and legislative requirements on the target markets are met. An appropriate IP protection solution is developed and applied.		
<b>Task 6.1. Business model and value proposition development</b>		
The aim of this task is to further develop the business model and value proposition of Shipit pro. The business model and value proposition will be updated based on trials and client feedback collected during WP 5. Both the business model and value proposition will be the basis for the further development of the commercialization strategy.		
<b>Task 6.2. Regulatory compliance and possible IP protection analysis</b>		
Shipit pro will develop an IP protection strategy in order to protect the technology in all target markets. If necessary, patent applications, trademarks or other IP-protection measures will be implemented. Shipit pro will seek opportunities to submit international patent applications (PCT) for inventions that arise from the project.		

## Deliverables

NO.	DELIVERABLE NAME	TYPE	DISSEM. LEVEL	DELIVERY DATE
D1.1.	Overview of project months 1-24 and the overall project	R	CO	M24
D2.1.	A business requirements document is composed	R	CO	M10
D3.1.	The platform's main modules are developed and ready for testing	OTHER	CO	M24
D4.1.	User interfaces for web and mobile apps are operational	OTHER	CO	M21
D5.1.	Fully operational platform	DEM	PU	M24
D6.1.	Business model and IPR strategy are updated	R	CO	M24