POSTEUROP

INNO
VATION
BOOKLET

Let's get inspired!

PostEurop
Innovation
Award
2022

Entries from the
2022 PostEurop
Innovation Award

Content

Editorial

Launched in 2017, the Innovation Award focuses on the most innovative projects of PostEurop members. This Award recognises each year the remarkable achievements of a PostEurop member, highlighting its absolutely new developments with distinctive qualitative and quantitative benefits.

Overall, 45 postal operators submitted 64 innovative projects since the creation of the award, which largely contributes to sharing best practices. Thus, the Innovation Award fosters innovation among European postal operators in a consistent and continuous way.

For the 6th edition of the Innovation Award, PostEurop received applications from 10 postal operators. This Innovation Brochure presents these innovations, providing a description of their concrete benefits and impacts. The wide range of conducted projects underlines the leadership of posts in innovation, from new services to new products, elaborated in a new approach, often more open and participative.

This Brochure aims to inspire other postal operators but also to highlight the innovative nature of posts, which remain agile and flexible. In a challenging context, marked with growing uncertainties, innovation is key to seize opportunities, transform postal business models and continue to meet customers' needs and expectations.

2023 is the 7th edition of the Innovation Award. However, considering innovation can be quite relative – what one post might have implemented a while ago, still means a huge innovative leap forward for another post. Therefore, the Innovation team of PostEurop decided to create in 2023 a second Award, namely the JPF Rising Star Award, which will be granted to the biggest innovative achievement compared to the status quo for the respective applicant.

Celebrating in 2023 its 30th anniversary, PostEurop is confident that its members will continue to share innovative ideas and projects to strengthen the postal sector as a whole. The Innovation team has launched for this occasion a new series of jump starting webinars on innovation, in which all interested stakeholders can take part.

We propose to the postal employees to join these sessions to get inspired about the latest initiatives around open innovation.

TOGETHER, LET INNOVATION DELIVER THE FUTURE!

Sophie Desier-Biehler

Vice-Chair of the Innovation team of PostEurop

Carlos Fernandes Bhatt

Chair of the Innovation team of PostEurop

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Vice-Chair of the Innovation team of PostEurop

Projects

Operations

Digital Experiences

Express & E-Commerce

Data & Cybersecurity

Operations

Lighthouse
bpost (Belgium)

Increasing parcel volumes are forcing bpost not only to expand the capacity of its network by installing new machines, but also to increase the performance of its current capacity. Coupled with the increasing demands from its upstream clients and end customers, bpost is moving towards data-driven production. With a smart factory in mind, where early and insightful data is key, the Belgian postal operator developed the "Future Parcelsorting Concept" as a framework to find new key technologies. The "Lighthouse" a strong foundation for this data-driven decision-making.

"By implementing "Lighthouse" on the parcel sorter in bpost's Brussels' sorting center, bpost and Covariant successfully pioneered an AI based double detection solution that is actually able to perform at the highest target levels. Although the most important hurdle was successfully taken, there still is a lot of work ongoing to make the solution robust and industrially reliable in a day to day production environment. There is some complexity to do this because of the high number of parties involved. We have been focussing on this for the time being but expect to be further exploring additional, already identified use cases that leverage the data captured by the Lighthouse AI computer vision system to create additional value for bpost."

Marc Sorgeloos

Manager Industrial Automation
& New Equipment, bpost

THE INNOVATION

"Lighthouse" is a way to functionally give the parcel sorting machine eyes.

It is a stereo camera vision system that analyses every parcel going on the machine and can detect parcel characteristics that were previously invisible for classic sensor systems (such as packaging material and type, state and relative position). The system is fully integrated with all bpost's current sorting systems, allowing the postal operator to optimise in real-time the sorting decisions and to analyse and use this enhanced parcel data to support other departments in decisions, where deep and correct knowledge of the product mix is essential.

At its core, the "Lighthouse" solution is a system that generates refined and actionable data using stereo camera capture as its input. The system consists of three parts: a camera setup, a processing server and the integration within bpost systems.

- The camera setup consists of a stereo camera array placed on a fixed distance above the conveyor belt. It simply captures two images whenever it is triggered by the PLC which also controls any other sensor part of the DWS system.

- These images are then over ethernet to a processing server. The server transforms the two images into a point cloud (a 3D representation of the images). Then, this point cloud is run through multiple models, each trained to capture a specific characteristic of the parcel such as material, malleability, amount of, and parcel type.

- This information is sent back to bpost's systems
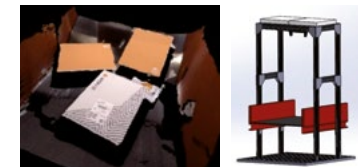
Within bpost's systems, the information of the "Lighthouse" is merged with the data coming from other capturing systems of the postal company, enabling to use one low-level message that contains weight, dimensions, barcode data and "Lighthouse" characteristics. Since the "Lighthouse" insights are added this early in the data flow, they are included in all decisions points of the sorting systems and can be taken into account at any level. This enriched data can be used to divert a parcel while it is still on the sorter to give more insights into the yearly trend data.
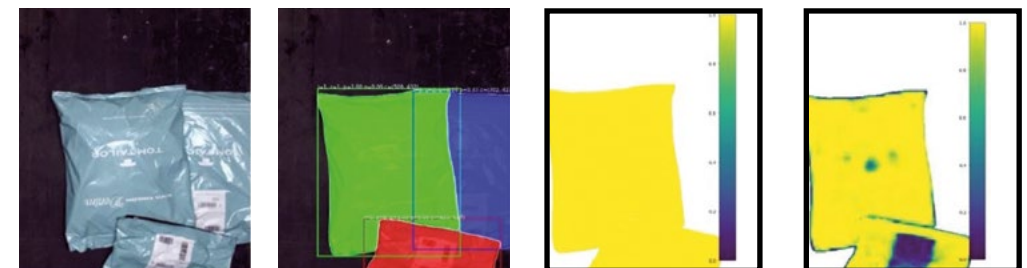
BRINGS YOU BACK
TO PROJECTS LIST

BENEFITS OF THE INNOVATION

The "Lighthouse" provides benefits to bpost on multiple dimensions. It has short-term concrete use cases that solve actual pain points in the sorting process as well as longer-term applications that will provide specific business value.

Short-term applications include a significant increase in the quality and performance of the parcel sorting machine in the Brussels sorting center, which handles up to 25,000 items per hour. The "Lighthouse" is used to improve the quality of sorting by removing virtually all missorts generated by double injections. Avoiding these errors reduces rework once parcels have arrived at one of bpost's 250 distribution centers in Belgium.

By accurately predicting the number of parcels in view of the cameras, the "Lighthouse" system eliminate singulation errors. This innovation thus increases first-time-right sorting, leading to a better customer experience and happier upstream clients. It also decreases bpost's operating costs, by avoiding unnecessary parcel movements. Moreover, the project indirectly reduce CO2 emissions through lower transport needs due to less missorted parcels.

The "Lighthouse" is also used for a second use case where it is intelligently optimising the machine parcel split between direct sorting in a roll container (direct chutes) and manual (indirect) chute, which is mainly based on the size and weight of parcels. Classical sensors led to a sub-optimal split, for instance sorting flexible polywrapped or bag parcels to the manual (indirect) chute. The parcel flexibility was very challenging to observe for a basic DWS (dimensioning, weighing, scanning) system. However, the "Lighthouse" system can detect this difference and supplies it to bpost's sorting systems, allowing the operator to push more parcels to its highly efficient direct chutes.

Long-term applications lie in the further development of more machine vision models which would detect more characteristics, opening up more use cases for automation. With some development, bpost can introduce damage detection in the "Lighthouse" system, which would allow the postal operator to track the damage of the parcels over time, shifts, machines, and even clients. bpost could then have accurate and real-time information on which clients are disproportionately impacting its sorting operations. This data can be used to either incentivise clients to e.g., improve their packaging or optimise contracts to build a better pricing structure.

The Logistics and Digital Transformation Programme
CTT (Portugal)

The regulation changes for inbound mail in European Union forced a transformation in postal operations across Europe. To prevent a massive manual workload on the relation with CTT's clients and customs authorities, a new streamlined and automated process was deployed by CTT. The postal operator implemented an innovative operational model and embarked on a comprehensive digital transformation programme.

"By merging digital and physical logistics, we managed to automate processes, ensuring agility in adapting to evolving business rules with an in-house cloud decision server and deployed as well a state-of-the-art high-performance sorter integrated with custom-developed OCR and a powerful machine learning engine.

These changes levered by the data collected across the postal network contributed to significantly enhanced the overall customer journey, streamlining customs interactions, and established a transparent and efficient international packet handling process, all of which were accomplished despite the challenges posed by the pandemic and uncertainties surrounding EU directives."

Pedro Nabais

Head of Engineering Projects and Maintenance, CTT Portugal Post

THE INNOVATION

Prior to the regulation change, no duty or tax was collected for most of the cross-border e-commerce received by CTT. However, all cross-border packets needed afterwards to pay VAT and customs duties. Therefore, an innovative operation model was developed, with new solutions to enable the collection and massive submission of millions of individual customs declaration in a flexible model shared with clients and customs.

A comprehensive transformation programme was implemented, covering multiple areas across the postal network from automation to logistics, and was instrumental in creating a hybrid system between the physical (transport and delivery of the packet) and digital world (information sharing and process acceleration). It includes:

- **New high-performance sorting machine,** specialised in small packages, with multiple systems for revenue assurance (cameras, volume, scales) and high level of sensors for increased reliability and predictive maintenance;

- **Automated service-based processes** (clients, e-sellers, and customs integration) and OCR (machine learning optical character recognition to complement information) to facilitate a dynamic and customer-oriented workflow. At any given moment, the next step of the workflow is defined according to the physical and digital interactions that take place on the packet (e.g., reception of object data, machine sorting, security protocols received, payment performed…);

- **New internal logistics model** for transport and handling, with an extension of the logistics flexibility until the end of the automatic operation and a unique identification for each packet at any point in the circuit by an automatic link between packets and boxes where they are placed (also includes new transportations units compatible with euro-pallet and wheels for rapid machine replacement, tippers, and automated gated conveyors)

- **Warehouse management system tracking and visibility;**

- **Decision server** developed with CTT's resources to externalise sorter's decisions, enabling business rules' customisation (customs response, payment status, security clearances, type of missing data, client interaction type…) and rapid deployment without the machine's OEM assistance. When a packet is fed onto the sorter, the machine sends in real-time a request to the central server, who, – after analysing the rules applied to the packet's manifest - will reply with the packet's destination chute, and all in less than 200 ms.

This new model, assisted by a more efficient internal logistics (bulk downloading and new storage units foldable and stackable for easy handling and storing), is prepared to automatically process almost 70,000 new packets every day in a fully transparent and customised operation.


The transformation programme took advantage of the new layer of electronic information linked with the packet, increasing the value for its customers through the complete visibility of the packet at all times, even before the package arrives in Portugal. This new layer enables to add value in several areas, like payment anticipation, improving customer data to speed up the cycle, or delivery processes optimisation such as increased convenience by alternative distribution systems.

BENEFITS OF THE INNOVATION

The transformation programme pushed innovation and efficiency to deliver multiple synergies and a better experience and performance to all parties involved in the postal value chain:

- **E-Seller:** Reduces delivery time, fewer refund costs, and potential sales increase due to a more transparent and streamlined process;

- **Customs:** Streamlined process, business rules easy to change (for instance, to raise awareness of a certain country or product type), digital process, data shared;

- **Client:** Focused digital interactions, available payment methods, convenience, transparency, and reduced delivery time;

- **CTT's operations:** process automation and increased throughput, resulting in cost savings and 100% traceability with a full image archive. Decision servers ensure flexibility and speed in sorting business rules deployment and alteration and sharing postal decisions with sorters downstream (ITMATT/PDDP manifest or OCR) helps reduce overall error and manual tasks.

Simplified process
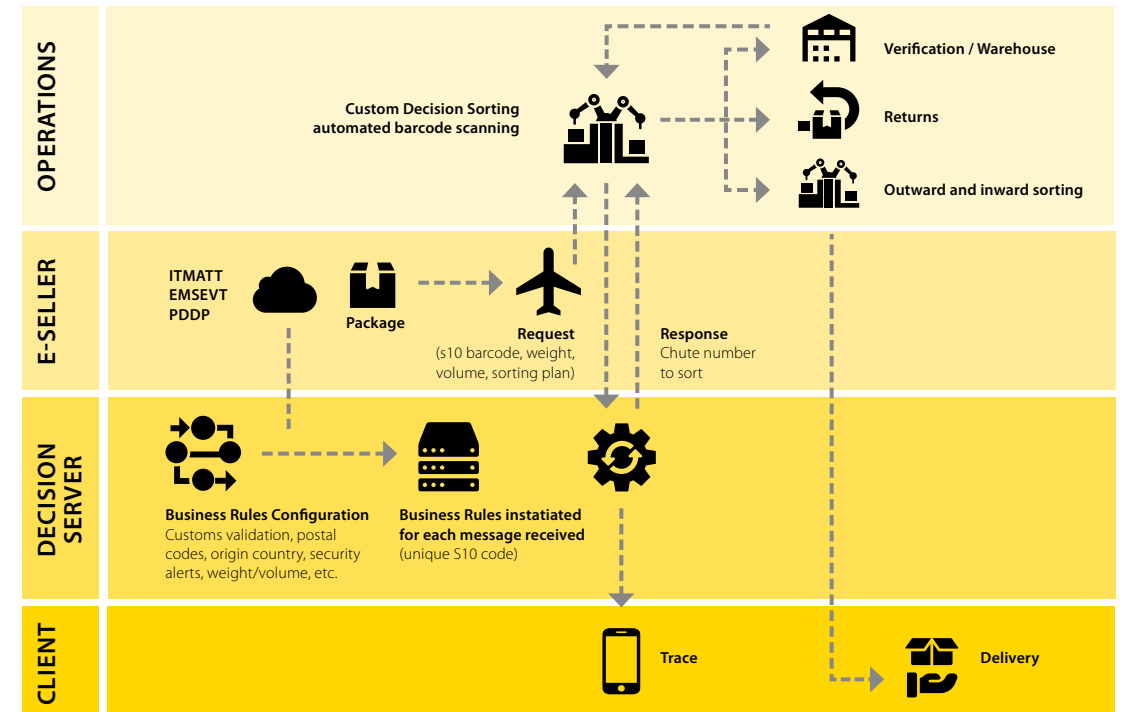
Simplified process with main exchanges involving decision server.
No OCR and intermediary communications with customer were considered.

Express &
E-Commerce

In-Home Delivery Service
Austrian Post

Austrian Post, Nuki Home Solutions and A1 Telekom Austria are working together to establish an in-home-delivery service for e-commerce customers based in Austria. More and more parcels are being ordered, but customers are often not at home to receive them, although home delivery is still preferred. As a result, the goal is to make existing conventional doors in Austrian households retrofit smart in order to make them accessible for Austrian Post's couriers, so that they can detect, open and close the doors of customers when attempting a delivery.

THE INNOVATION

Delivery options have developed greatly in recent years and many new services have been created. On the one hand, the focus is on customer convenience and, on the other, new solutions are to be created so that parcels can be delivered at the first attempt and costs in the last mile can thus be kept low.

As shown in the chart below, in-home delivery represents the next evolutionary step in the delivery innovation strategy of the Austrian Post.

By using new technologies (the smart home or primarily the smart lock), the in-home delivery offers a new solution to receive all parcels even when customers are absent from home. There is no longer a restriction on size or weight.

The in-home delivery service basically involves the delivery of parcels to customers' apartments or houses, even if they are not present at home. The pre-condition for the use of the service is the installation of a smart lock on the customer's front door. Furthermore, customers must give the courier an authorisation to operate the smart lock and thereby to open the entrance door.

Branch Office
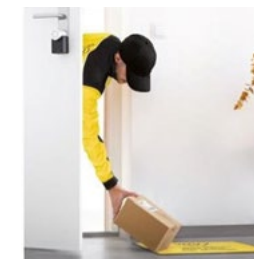Nationwide network with 1800 branches

`a few km`

Parcel Locker
460 lockers with 24/7 access

`a few km & 24/7`

Pick-Up Box
52.000 bockes as drop-off points

`near & 24/7`

In-Home Delivery
100 test users in Vienna & Grazs

`inside & 24/7`

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The delivery process is shown step by step in the following figure:

Preparation
Parcel courier scans parcel at the start of the tour and receives information "Signature realease in entrance area". Customer receives information "Parcel in delivery".

Open door
When the delivery address is reached, the courier rings the doorbell and opens the door via handheld

Watch delivery
Optionally, the delivery can be recorded by a camera for security. Via app it is possible to track the delivery live or afterwards.
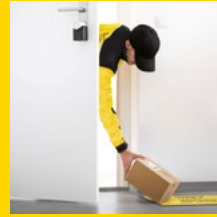
Deliver parcel
The delivery person places the parcel on the parcel mat. Customer finds the package in the appartment at the specified location and does not have to make an extra trip.

The smart lock from Nuki Smart-Home Solutions GmbH lock is mounted on the inside of the existing door lock and is ready to be used within 3 minutes without any further assistance. No screws nor drills are needed.

Apart from the smart lock, customers can optionally use a smart camera with sensor control from A1 Telekom Austria AG that logs the delivery and thus provides a higher sense of security.

Nuki Smart Lock

BENEFITS OF THE INNOVATION

Apart from creating more convenience for the customers, the in-home-delivery service also brings advantages for the Austrian Post in terms of increasing the first attempt delivery rate. Costs can thus be saved in relation to the last mile, while at the same time increasing the quality of service for customers. The carbon footprint of deliveries is reduced, as renewed delivery attempts are minimised and extra rides by customers to pick up parcels are avoid. In addition, the amount of parcels that are delivered into pick-up stations, decreases which results in less operational costs in the whole system.

Austrian Post sees the possibility of using access to customer's homes or apartments to establish further services over time, e.g. in-fridge delivery. In-home delivery is only the first step. Further areas of application and services are to be continuously expanded as the technology advances.

The service contributes to defending market leadership, as Austrian Post creates an additional service which competitors do not offer in this form. In addition to strengthening competitiveness, improvements in the last mile bring greater customer satisfaction.

ZOOM ON REAL LIFE TRIAL

After a brief internal trial period in 2020 that served as a proof-of-concept, the project team did a public open trial period with real customers for their real orders in 2021. During that trial period from July to December, over 100 participants in Vienna, Lower Austria and Graz have been chosen to participate. Over 1 600 parcels have been shipped to these customers and out of the qualified delivery attempts (access was only granted to regular couriers, not to temporary replacements), more than 75% have been successfully delivered inside of the home without the customer interacting in any way. To gain quick insights, the pilot test was carried out with a low level of technical integration and as little training as possible for the operational staff. Therefore, only the participants' regular courier was included, and the participants were able to get to know their courier personally to increase their feeling of safety.

The feedback received from the couriers and participants was also very positive. 98% of test participants said that they would recommend the service to others.

Strategic Focus

1 Defending Market Leadership and Profitability in the Core Business

Sustainability, diversity and customer orientation as guidelines for all activites

2 Profitable Growth in Near Markets

3 Development of Retail and Digital Offerings for Private Customers and SMEs

Digital Signatures For Parcel Lockers
Malta Post

The parcel locker network is a collection point network that offers convenient collection of e- commerce purchased items in the form of packets and parcels. MaltaPost has implemented a customer verification process which enables parcel locker subscribers to collect registered items.

Charles Cilia

Head Commercial, Malta Post

THE INNOVATION

To access this service, the customer must register through the MaltaPost p.l.c portal and provide true, current and updated personal information to MaltaPost, as presented on a valid identification document such as identity card, residence permit or passport.

To be eligible to retrieve registered packages from the parcel locker network, the customer must visit a post office with his/her valid identification document for validation by a MaltaPost p.l.c agent. This validation can be carried out at any post office. A copy of the identification document is taken for administrative reference. The customer verification procedure ensures that the items are collected by the rightful owner.

When a parcel is delivered to a parcel locker and is ready for the customer to collect, the client receives a unique security code, which must be keyed into the parcel locker screen to collect that parcel.

Any customs duty, taxes and/or VAT must be paid before the item is made available for collection. Such payment may be effected via the MaltaPost p.l.c on-line payment gateway. The security code will not be released until all payments have been effected and confirmed.

The entry of a recipient's credentials, unique security code and the signature provided on the parcel locker's touch screen will be evidence of delivery. The client should ensure that the signature is correct and aligned with the signature on the official identification documents used during subscription. All items will be stored in the parcel lockers for a determined period. If the item is not collected within the date and time specified in the SMS notification received by the customer, it will be relocated to the nearest post office.
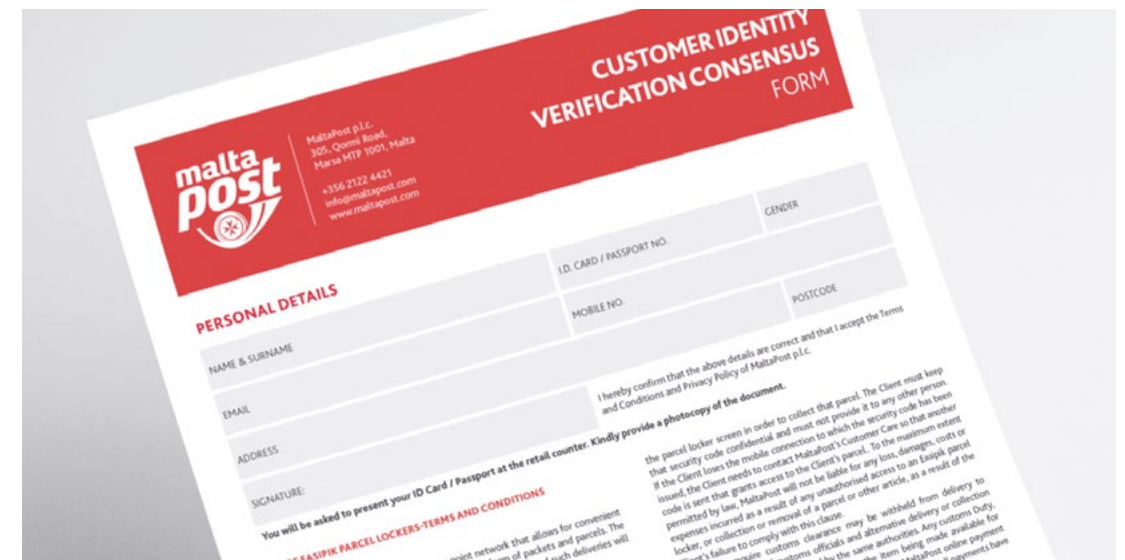
When the parcel lockers were originally introduced in Malta, the digital signature was not part of the initial service. The touch screen facility on the lockers was only used to key in the code to access the locker. Since tracked items require a signature, it was decided to use the touch screen to obtain the customers' signature. It was then decided to enhance the service by adding the customer's signature for every delivery affected through the parcel lockers (even for untracked items).

This 24/7 service enables MaltaPost p.l.c.'s customers to collect tracked items (Registered, Exprés, Parcels and EMS) when it suits them the most. This service is a success story with MaltaPost p.l.c. customers and tracked items delivered through the lockers have increased over time, resulting in reduced the costs.

BENEFITS OF THE INNOVATION

The contribution of this feature in the parcel lockers has driven more customers towards MaltaPost p.l.c. It has also saved time and money to MaltaPost p.l.c, by reducing delivery time and cost. The capture of the Proof of Delivery (POD) in an electronic format has helped MaltaPost p.l.c. in making the delivery of mail via the parcel lockers more trackable. It also enables a simpler storage/retrieval of such data.

The introduction of this service also responds to customer's needs. The time for items to arrive to the customer has diminished as well. It has offered to customers the opportunity to access this service when it best suits them since the service is 24/7.

Since all payments are done online, there is no cash handling by the posts and therefore reduced timeframes even at the Finance Department. It also avoids fraudulent cash notes.

In simpler terms, the introduction of the signature in the parcel locker has been a win-win situation for both customers and MaltaPost. The next phase will see the lockers used for ERS services, which items will be deposited in the lockers and collected by the courier delivering items to the lockers.

SCAN THE CODE
for more information

Correos Frío
Correos (Spain)

In different industries, such as health, pharmacy or grocery's, the transport of products requires an exhaustive monitoring of the cold chain. Aware of this need, Correos has implemented a new service, Correos Frío, offering several logistics solutions to customers, which allow both business and individuals to send items under monitored temperature.

"Correos Frío is our transport and delivery service which monitors the cold chain of medicines and medical products on real-time, by ensuring quality and an arrival at destination in perfect state and conditions."

Daniel Blanco-Martinez

Head of Correos Frío,
Correos

THE INNOVATION

The service is based on the application of different innovations added to the traditional system of Correos parcels. One of them is the use of isothermal boxes for the transport of these parcels. The boxes includes a datalogger with several sensors (temperature, humidity, lightning, accelerometer) to monitor specific parameters from the collection to the delivery.

The customer can choose among 3 temperature categories in the transport:

- - 20 °C (frozen)
- 2 – 8 °C (chilled)
- 15 – 25 °C (room temperature)

The boxes keep the temperature category chosen by the customer above 120 hours. They are reused within the Correos logistics circuits, thus not generating waste when delivering.

By using IoT technology, these boxes communicate with a Correos platform which monitors every single item and can check any possible breakage of the cold chain via an alert system. Thus, in the event of any incidence during the transport, some reactive actions on these parcels can be performed by Correos before delivering. This system ensures for example the efficiency of vaccines or medicines in the health industry and protects the quality of fresh products in the food industry.

Thus, all customers can check online and in real time the temperature of their products and keep the monitoring thanks to an alert system against any variation of the cold chain.

The inclusion of different sensors in a single device (datalogger) allows customers to access to valuable pieces of information on the status of their products. Moreover, as a data card, transmitting GPRS via an IoT bluetooth-linked device connected to datalogger, this piece of information can be checked online and in real time via Correos Frío platform.

This platform includes an alarm system for the temperature monitoring, humidity, blows and lightning which allow both Correos and their customers to monitor all items and, before any possible incidence, to anticipate and act on the item delivery.

Therefore, it is a solution based on isothermal box hyperlinked and ensuring the quality of products from the origin to the delivery, by monitoring the content on real time, and allowing acting in a preventive and anticipated way via an alarm system against any possible incidence.

BENEFITS OF THE INNOVATION

With this new solution, Correos contributes to the following aspects:

- **Innovation:** By offering a "Smart solution" within the transport industry under monitored temperature, ensuring a total monitoring of the cold chain "on real time" and allowing managing proactively any possible incidence in the transport. The fundamental element, additional to the sensors included in the datalogger, is the IoT device which communicates with Correos Frío platform and send all the telemetries.

- **Pharmacy & Health:** By ensuring the safe/security and the monitoring in the transport of vaccines, medicines, biological samples, pharmaceutical products, etc.

- **Food:** By protecting the quality of daily and fresh products from origin to destination.

- **Individual customers:** By offering a door-to-door service for individual customer with specific needs to send items under a monitoring of the cold chain of the product under full guarantee.

- **Sustainablility:** Isothermal boxes for the provision of the service are reused within the Correos logistics circuit. Thus, waste production at the delivery points is avoided against other non-returnable solutions. Both the maintenance of the boxes and the quality/performance of the service are ensured while we bet on a sustainable consumption and management.

- **Transparency and monitoring:** The customer has a back-office tool inside the Correos Frío platform which allows to check and see the logistics events and graphics to monitor the cold chain of items on real time.

IMPACTS AND RESULTS

At the very beginning of BBP, 45 ethical hackers The first logistics center of Correos Frío has been inaugurated in Madrid and the quality control operation of the reusable isothermal boxes is implemented.

In the third quarter of 2022, Correos started working with the first food-industry customers, sending their products at refrigerated and frozen temperatures in reusable isothermal boxes specially designed for this sector.

At the end of 2022, Correos obtained the AENOR GDP Good Practices certificate for the distribution of medicines for human use. This certificate complies with the regulations and quality requirements necessary to start operating in the pharmaceutical sector.

In 2023, several approval processes are in progress with companies from the pharmaceutical sector. The forecast is to start operating with them within this year.

SCAN THE CODE for more information

Digital Experiences

SIMBA App
La Poste Groupe (France)

Since the implementation of European customs regulations in 2021, the customs clearance of goods in the postal flow has encountered many operational and IT difficulties (more restrictive European customs rules in terms of data sets, not precise postal EDI message, ITMATT, to allow exhaustive complian-ce, postal operators unable/unwilling to transmit required data for customs clearance and taxation). The Simplify Importation Mechanism via Blockchain Application tool aims at solving these cross-border issues for La Poste and for French customs.

"Partnered with Christophe Pereira and his customs expertise, we wanted to present a solution that meets expectations in terms of securing and speeding up flows."

Setra Rakotomavo

Head of IT Strategy Department, La Poste Groupe

THE INNOVATION

The postal supply chain is generally divided into three distinct blocks, each operator being responsible for operations and information within its scope of intervention. Specific and standardised electronic messages allow the tracking of goods throughout this chain, but this chain of information is sequential and can work even if one if its links is faulty.

The graph below describes the sequentiality of messages in the postal stream:
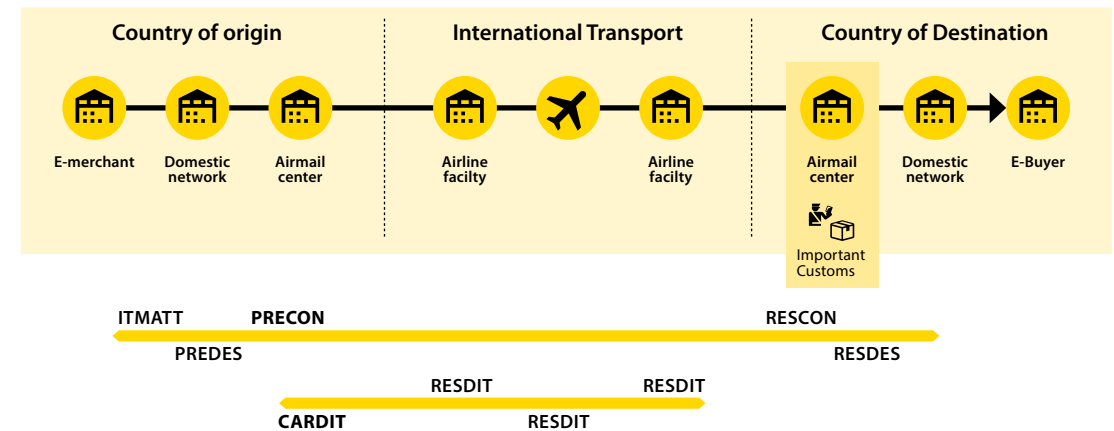
SIMBA could transform the mechanisms of data transmission and validation. The supply chain would be split on the principle of chain blocks, which would be validated sequentially by each party responsible for the block. Thus, data that would be validated there would be deemed at each stage to be irreversible and inviolable due to provided tokens to the miners of each block. SIMBA is an easy tool and very intuitive for the customs officers, which focuses on all data that has been previously validated by the block chain. The decentralisation of responsibilities simplifies customs, security and tax formalities upon arrival of goods, both for the customs declarant and for the customs officer, achieving productivity gains. Blockchain technology would ensure a perfect track and trace system of goods from the manufacturer's warehouses to their delivery to consumers.

- Choice of importation country (France)
- Login for the customs agent
- Overview of items to be controlled
- Selection of items by country and by date
- Browser bar

Following the provided information by each stakeholder of the supply chain, the Blockchain takes 3 types of decisions:

- **Prevalidation of Blockchain information**

- **Prevalidation ongoing because of some additional controls**

- **Non compliant information**

Following Blockchain pre-validation, the customs officer can:

- **Allow mass declarations,**

- **Authorise them partially,**

- **Reject a statement**
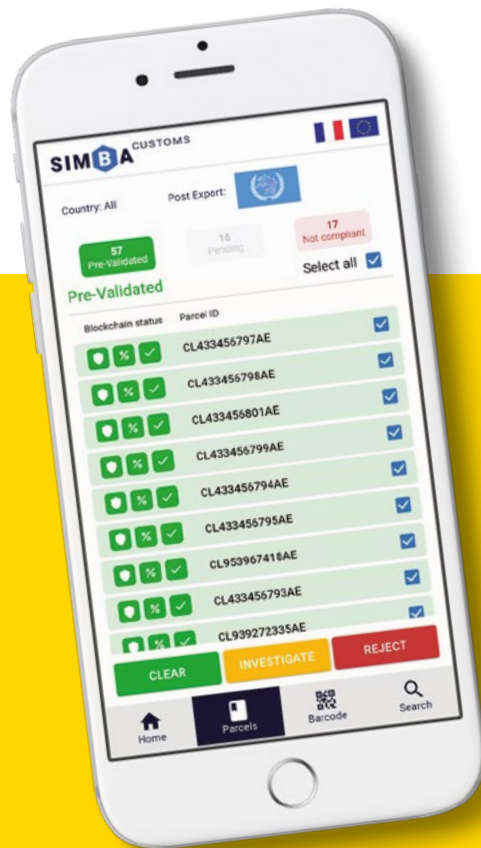
The SIMBA tool aims at:

- **Securing** the **collection of customs duties and VAT** (the dock dues are not included for the moment);

- Assisting the French customs in the **fight against illicit traffic** and tax evasion;

- Making La Poste Group an **European customs clearance hub** for cross-border flows;

- Developing **a one-stop shop for collecting documentary** elements (invoices, licenses, authorisations).

The tool has been defined with the collaboration of four start-ups: Leg2 and Airmail Data act as a project management assistant by providing their postal expertise, Olympe is the developer of the mobile application, and Transiteo provides an engine for calculating customs compliance codes (HS code

BENEFITS OF THE INNOVATION

SIMBA creates added value for both:

- Postal operators, by responding to the securities, customs and tax issues that postal operators face due to the unsuitability of electronic postal messages to the challenges of cross-border e-commerce. It enables the logistic chain to be totally fluid and functional by avoiding that the goods are transported despite the lack of data. VAT and customs duties are invoices more precisely and SIMBA builds a positive and smoother customer relationship with market places and e-commerce sellers. It provides a follow up system in real time of all information shared by the different actors and a better data traceability;

- Customs, by drastically limit the physical and documentary checks on flows and orientating investigations to the most difficult cases. SIMBA enables a better identification in case of fraud and counterfeiting;

- Customer experience, by ensuring an irreproachable quality of services, an assurance of the goods' authenticity and a smooth management of returned good.
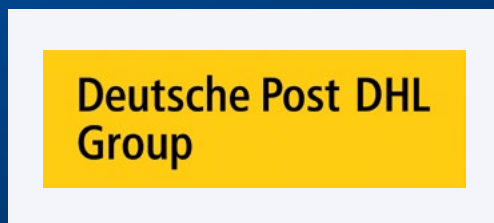

SCAN THE CODE
to see demo video

Mail Tracking
Deutsche Post (Germany)

Deutsche Post's mail tracking system ensures transparency, controllability and digitalisation for every letter. One reason for the great success of this tracking project was the outstanding collaboration between two departments: franking and product management mail.

Deutsche Post DHL Group

"Since 2021, we have gradually made every letter in the Deutsche Post network trackable with our project "Tracking Mail". This has increased the attractiveness of our letter products, improved transparency for our customers and optimised the steering in our postal network. The focus here was on the digital connectivity of letters and thus the future viability of the letter portfolio."

Dr. Alexander Plum

Vice President Product Management
Private Customers Mail, Deutsche Post AG

"In February 2021, the first stamp with an individual matrix code was introduced in Germany. This in another milestone on the way to digitising letter mail. This is because, as well as basic shipment tracking for private and business customers, the matrix code also provides data for quality improvement and for mail volume and complaint management and enables better revenue protection. Since January 1st, 2022, all issued stamps have a matrix code."

Bernd Meyer

Vice President Franking, Deutsche Post AG

THE INNOVATION

Deutsche Post's mail tracking system offers a basic solution focused on only a few relevant tracking events (dispatch, sorting center) for all target groups, including both private and business customers, and all relevant channels, via app, website and API.

Moreover, thanks to this system, Deutsche Post can use the newly acquired tracking event data about every letter as a basis for revenue protection, quality improvement, shipment volume management or complaint management for instance.

Digitilization of P&P across all processes and customer interfaces

|	**Franking** Easy franking via smartphone	**Notifications** So you know which item is coming …	**Track and trace** … and where it is now	**Receiving/sending** Send and receive items around the clock
✉	"Mobile Briefmarke" (mobile stamp)	Notification and copy	Mail item tracking	New automated solution **Post & Parcel 24/7** with basic letter and parcel service
📦	"Mobile Paketmarke" and returns	15-minute notification	Life parcel tracking	**Increase** the number of Packstations to 7,000

BENEFITS OF THE INNOVATION

Deutsche Post's innovation ensures a continuous tracking of EVERY letter,
creating added value for the operations and activities of Deutsche Post.

On one side, this new tracking system offers more transparency and quality for private and
business customers. It guarantees a better customer experience through optimised processes.
Customer promise is fulfilled through improved quality.

On another side, the tracking system enables Deutsche Post to establish a data basis
for shipment volume management, quality improvement and complaint management.
The collection of this data leads to the leveraging of additional efficiency potential
and creates further cost effects. It also improves prospects for tender processes.
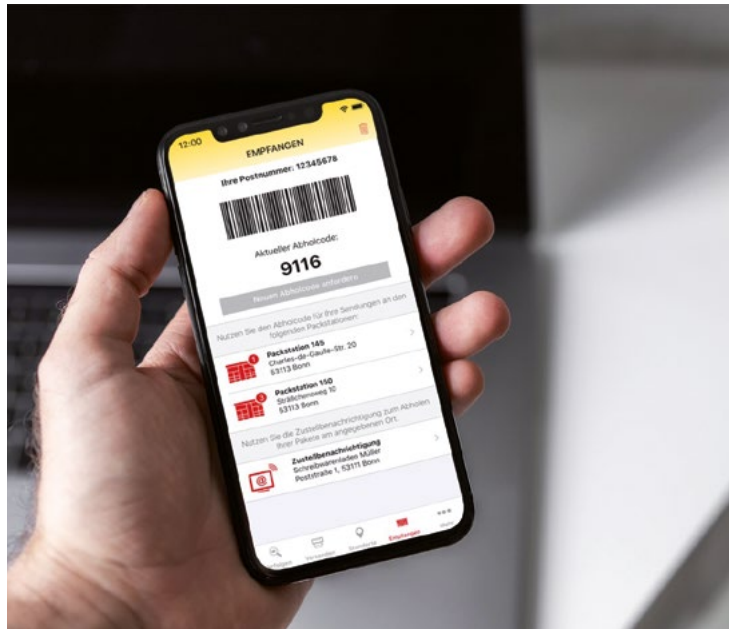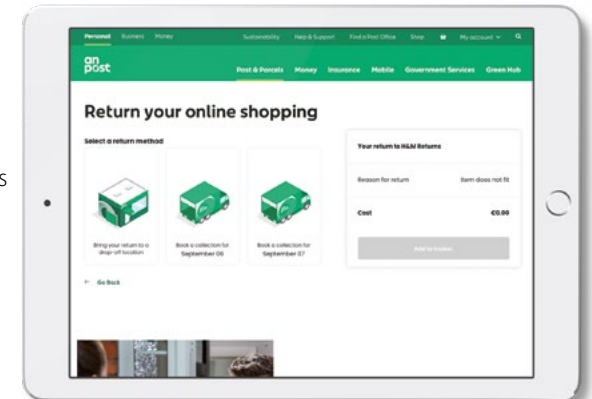
Click & Post
An Post (Ireland)

Click & Post is an online tool that offers a quick and easy way for An Post customers to buy postage labels online. It also provides an online returns solution, which is seamless for customers and provides retailers with flexibility in how they want to integrate the service.

## THE INNOVATION

Sending with Click & Post

An Post customers can calculate the cost of sending a letter, packet or parcel and buy postage labels online. 85% of the revenue from Click & Post is generated from SME's. This product en-ables SME's across Ireland to send to 200+ countries worldwide as it has a built-in customs forms ensuring that items are delivered quickly to their des-tination. Something which has proved crucial to supporting Irish businesses in recent years.

Returns with Click & Post

The product has 2 options for retailers to facilitate returns for their customers.

In a matter of minutes, retailers can be hosted on anpost.com/returns and have an instant returns solution available for their customers. Over 140+ Irish businesses manage their returns via Click & Post.
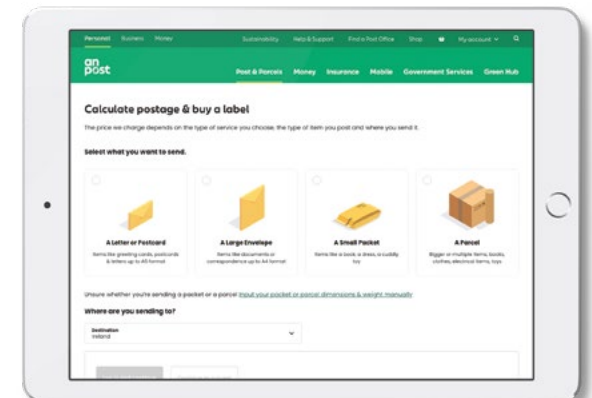
Integrated Returns with Click & Post

This product provides an API alternative for retailers who want to host the re-turns journey on their own website. Us-ing the Click & Post Retailer Returns API, they can generate an Express Post label for their customers, with all the convenient features Click & Post offers (eg. Printing in Post Office or Home Collection options)

Returns volumes

	2019	2000	2021
	3.000	185.000	462.000
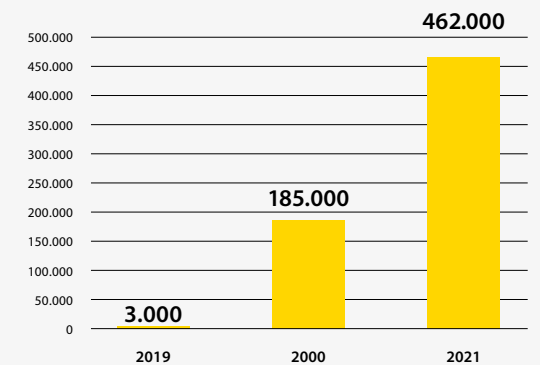
BENEFITS OF THE INNOVATION

Previously, customers were using a manual shipping process. Where labels were purchased in the post office, this often led to frustration due to the time taken up to do this, and it also led to additional queues in the office. Furthermore, the customers had no idea how much the item they were shipping was likely to cost. Click & Collect has answered these problems, giving to customer more flexibility and convenience.

Click & Post supports SME in their business transformation, enabling them to send multiple parcels nationally and internationally easily and quickly, on their terms. Given that 60% of items sent via Click & Post are sent to the USA and GB, and in the context of Brexit, providing a useful and convenient way to but a label that is customs compliant was crucial to An Post.

Some testimonies of customers:

An Post's Click & Post portal has delivered an easy-to-use, super reliable method of shipping orders securely and quickly to customers. In particular, we love the new basket feature as it enables us to enter and buy multiple labels at one time and pay for all of them in a single transaction. Also, the postal labels are immediately emailed to us. With the label is the VAT invoices for the transaction, which can then be emailed straight into our accounting system. Our customers benefit hugely as they can use An Post's Track & Trace facility to track their delivery at all times.

John Ross Jewellers

Click & Post allows us to manage our postage logistics easily and clearly, with the ability to complete customs labels online being of real benefit. The website is easy to use and supported by great customer service, if we ever have any issues that need to be resolved

Wild Atlantic Yarns

Since Click & Post arrived we are using it extensively. Cusoms forms are easily handled (for the UK as well!) and filling in addresses and details of contents is a breeze.

Commodum

IMPACTS AND RESULTS

This product has seen continuous exponential growth since its launch in 2019. In its first full calendar year, it achieved a revenue of €2.5m (2020), and the following year (2021) it grew 232% year on year to €5.9m. It enabled An Post to build customer loyalty, and to gain new customers. In 2021, over 2,000 customers had up to 100 transactions on Click & Post.

Click & Post in numbers

2021 Revenue grew
232%
versus 2021

70k
customers are registered with C&P is growing at a rate of 27% per month!

131
customers spent over €4,000 in 2021

272k
unique customers bougth labels online in 2021

USA
is consistently the top destination

GB labes jumped # 90%
post Brexit

140+
retailers offer returns via C&P

80%
of which are free to customers

Data & Cybersecurity

CBB: An Innovative
Data Platform
PostNL (Netherlands)

To deliver distinctive, frictionless and personalised customer experiences to its digital consumer (base of 7 million+ registered user-accounts), PostNL has developed a customer data platform: CCB. By developing the platform in-house instead of purchasing existing solutions, PostNL has been able to create a truly multi-purpose platform. CCB is utilised to enhance its digital services and orchestrate omni-channel personalised communication, delivering a truly innovative and distinctive digital experience to customers.

"We keep it simple, we make it smart and we do it together. These three values of our orange compass help us on our journey to be your favourite deliverer."

Lex Overmars

Manager Data & Analytics, PostNL

THE INNOVATION

Digital transformation is picking up speed rapidly, and so are increasing customer expectations. For PostNL, it creates a range of opportunities to optimise its operations and re-invent its business model. The CCB customer data-platform is one of PostNL's critical data foundations, which the operator is strengthening to support digital transformation.

Within the CCB, data is pulled from various sources, cleaned and combined to create a unified single customer profile. These customer profiles are then made available to other systems and processes to activate PostNL's consumer data for (real-time) customer engagement (figure 1). In its core lies a Business Rule Engine that is responsible for omni-channel segmentation of consumers.

The CCB platform is an user-centric platform, truly aimed at enhancing customer experiences without compromising on privacy and with great respect for data security regulations

360° Customer Profiles
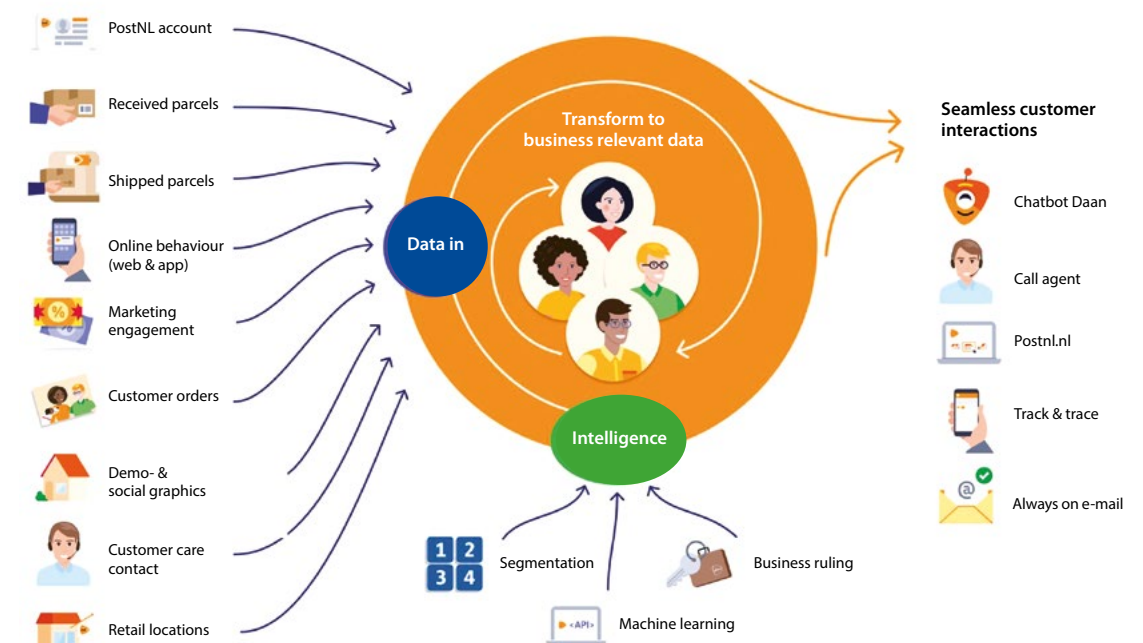
Schematic overview of CCB consumer datahub

Some of the end-to-end applications:

- **Always on email framework:** email journeys are initiated based on CCB segments (which are in turn based on customer characteristics and behaviour);

- **Smart rerouting suggestions:** based on historical data, PostNL gives personalised suggestions to logged-in T&T users for rerouting parcels, enabling to reroute a parcel in a single click. (see figure 3).

- **Personalised Track & Trace:** within the context of the parcel to be received, PostNL suggests relevant logistic services and products that can aid the customer journey (see figure 4)

- **Address check:** PostNL can detect discrepancies between actual deliveries and addresses registered and will ask PostNL app users to check their details if any discrepancies are found.

- **Chatbot:** PostNL's chatbot is connected to the data-platform to retrieve the customer profile when a user logs in. Suggestions by the chatbot can be made using this data.

- **Customer care: i**f recognised PostNL user accounts call, PostNL's call agent may retrieve personalised suggestions to further assist the caller.

- **Postnl.nl:** website is personalised based on the customer profile data.

- **Identity validation of digital accounts:** PostNL can evaluate the history of a registered PostNL user account to unlock access to personal services such Delivery Preferences, My Mail in the PostNL app and rerouting parcels. This eliminates the need for a user to take additional steps to validate with for example a letter with code.

BENEFITS OF THE INNOVATION

PostNL is building valuable customer relations by activating data. Registered PostNL user accounts are able to get notifications for incoming parcels, reroute parcels, set delivery preferences, and to activate My Mail within the PostNL app, providing visual scans of incoming mail.

The personalised approach to activate customers has proven to be very effective. For example, personalised suggestions on track & trace have led to a 33% conversion rate of "Not at home preferences", whereas classical e-mail campaigns performed mediocre. Subsequently, the customer satisfaction is significantly higher.

Using the data-platform, the postal operator:

- **Get to know its customers and their preferences**

- **Activate customers in relevant channels, services and products**

- **Increase engagement**

- **Create distinctive and frictionless customer experiences**

This leads to:

- **Logistic efficiency (e.g. activated delivery preferences)**

- **Optimised processes**

- **Additional commercial revenue**

- **Improved customer satisfaction**

- **Higher customer loyalty**
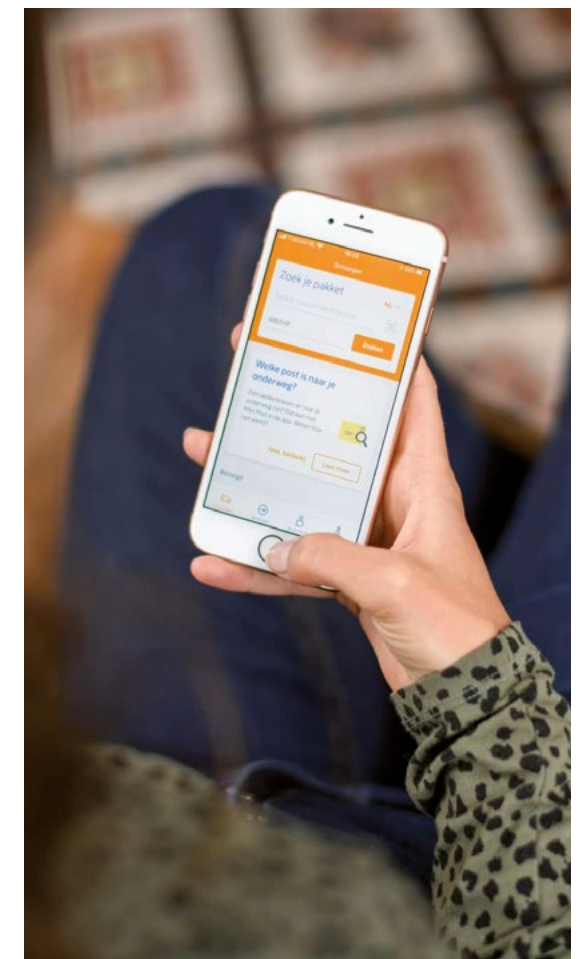
The Security Champions Programme and Bug Bounty Programme Swiss Post

Cybersecurity has evolved. Years ago, it was a specialised discipline in the field of IT, which mainly dealt with the protection of data and systems. Cybersecurity has now become a top priority for all businesses and institutions, while skills in cybersecurity are more and more limited on the market. Morevover, customers now critically ask whether they can trust a given digital service.

That are the reasons why Swiss Post decided to take an innovative step forward, with the Security Champions Programme (SCP) and Bug Bounty Programme (BBP).

"The complementarity of both initiatives (SCP & BBP) converged in a whole result (in terms of enhanced security awareness and transparency) which is greater than the sum of its parts. This was possible through a close collaboration, at a human and processual level, through a community of motivated/engaged people, through automation and a strong management commitment. SCP & BBP are helping to foster our motto: Security is everyone's job at Swiss Post!"

Paolo Casella

Enterprise Cloud Security Architect,
Swiss Post

THE INNOVATION

The Security Champions Programme (SCP) provides a structure where motivated people from all internal departments interact. Teams can exchange with each other, stimulating the sharing of experiences on mitigating security vulnerabilities. At the end, people take the learnings back with them in their field of activity so that security becomes a shared value within Swiss Post culture. Reducing the gaps between the teams enables the early involvement of security experts, bringing security awareness to the beginning of the software development process, to promptly respond to cybersecurity risks and effectively reduce vulnerabilities resolution-time and costs. By doing so, it became possible to move faster from development to production (time to market). The same is also supported through the safety tests performed with the AST tools. By sharing the vulnerability-reports the Security Champions can fine-tune and improve the existing testing tools, create focused workshops, and best practices guides for the development teams.

As traditional testing processes are not sufficient anymore, the Bug Bounty Programme (BBP) takes advantage of an open approach in which Swiss Post does not only rely on its internal human capital and skills, but also trusting and challenging external ethical attackers, who are engaged to provide additional competencies and human resources. Swiss Post decided to invite hackers to put its online services through their paces and attack them. Those who could find a loophole were rewarded. Using a participative security approach, this programme is accessible for everyone worldwide. This new technique of error detection and elimination at an early stage is used for web services, such as the „Webstamp" digital stamp and the Swiss Post app, but also digital health systems and electronic voting services.

This approach not only makes use of the knowledge of the whole hacker community, through external collaboration, but also enables continuous testing of Swiss Post's products with real life attack scenarios.

These initiatives uses the strength of the network, making "participative security" real, as this matter is no more a niche department. The complementarity of both programmes is the key to success for Swiss Post regarding the steady improvement of its Information Security.

The BBP enables to identify vulnerabilities and potential blind spots. By sharing vulnerability reports, which showcase real attack scenarios, with the SCP, Swiss Post can find solutions for the vulnerabilities faster and Security Champions can also use this information to actively improve security tools and train the developers "on-the-job".

As Swiss Post has a large attack surface (150 Apps & Services) and a ratio of 1 Security Expert every 15 developers, the postal operator has re-thought security at Software-Development stage, scaling-up missing security-skills and resources through an increasing number of Security Champions (currently around approximately 20).

BENEFITS OF THE INNOVATION

The combination of both initiatives has started a mind-shifting process within Swiss Post. It enables Swiss Post to reduce security flaws within its apps, services, and infrastructure, and to influence the internal staff and procedures as a continuous improvement process to provide a more secure digital service offer to all Swiss Post's customers.

Awareness and security know-how among developers has increased and still will, providing them with a common language for security related discussions.

The tools to automate and improve oversight will also be further developed based on the findings from the BBP and the corresponding knowledge on the most common threats be shared among the SCP.

This increase of the intrinsic security, which leads to reduced costs allows to close the feedback loop from development to production, providing continuous suggestions for improvement, with a direct and updated pulse check.
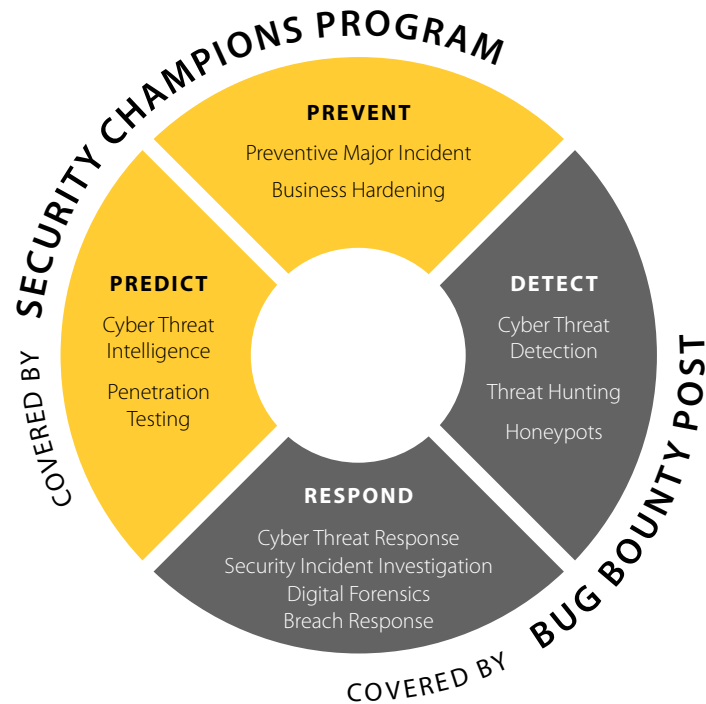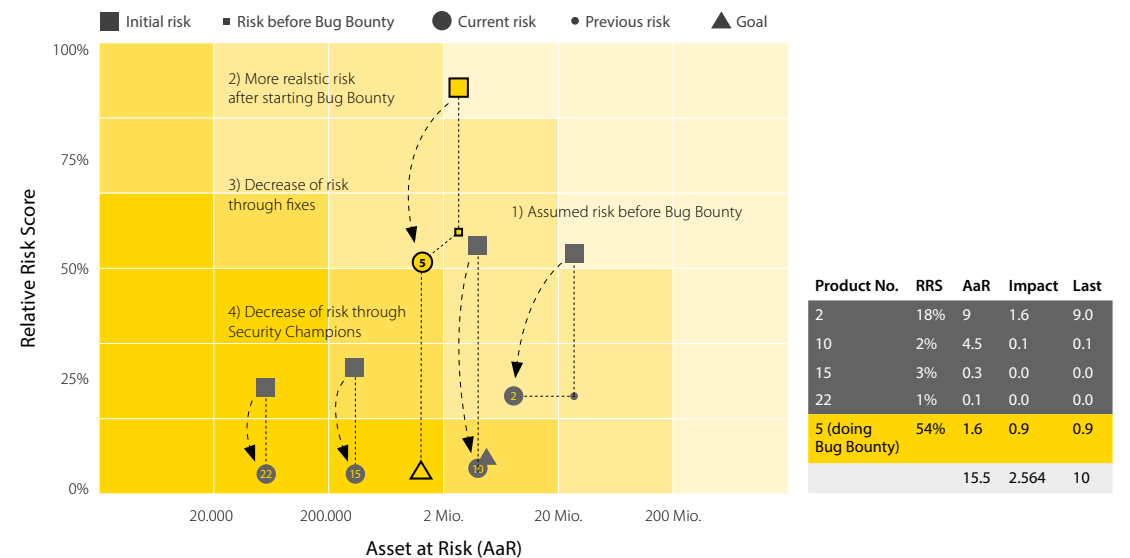
IMPACTS AND RESULTS

At the very beginning of BBP, 45 ethical hackers were invited to test only 8 web services; during the first 10 hours, already 14 vulnerabilities were detected of which 6 were high or even critical. Overall, over 1,100 vulnerabilities have been reported since private BBP initiative started in 2020, of which over 450 have been accepted to fix. These findings not only helped Swiss Post getting a better understanding of its overall security maturity, but it also provides an indicator where the company can improve itself, its security tools and the focus of its trainings and resources for its developers.

All these measures decrease the existing risk of products within a bug bounty programme and minimise the reoccurrence of the same vulnerabilities in other products of Swiss Post (horizontally scaling knowledge over DevTeams). This greatly lowers the cost of all potential future incidents.

In April 2021, an application security guide has been released ("Hitchhiker's Guide to Application Security") as best practice guide to help developers, architects, and system operators to understand how to better protect applications and users from potential attacks. BBP and SCP directly deliver content to further increase the potential and quality of this crucial document, which is a great example of a common/shared concrete result, being written by many contributors across Swiss Post.

In June 2022, the Bug Bounty team organised a live Bug Bounty event LeHack (Paris, July 2022) where all Swiss Post's productive online web services and applications were challenged. During this event, about 150 ethical hackers at the venue tried to find vulnerabilities on all Swiss Post's web services. Even though over 300 online services were available for probing for a whole day, only 22 findings were found vulnerabilities, which highlights major improvement.

Security Risk Map – Products

Product No.	RRS	AaR	Impact	Last
2	18%	9	1.6	9.0
10	2%	4.5	0.1	0.1
15	3%	0.3	0.0	0.0
22	1%	0.1	0.0	0.0
5 (doing Bug Bounty)	54%	1.6	0.9	0.9
		15.5	2.564	10

The best way
to predict the future
is to create it.

Peter Drucker

PostEurop•
Innovation
Award 2022

WHAT IS THE INNOVATION AWARD?

The objective of the Innovation Award is to foster a stronger affinity and engagement in innovation concepts, ideas and findings among our Members in a consistent and continuous manner. Through the Award, PostEurop would like to recognize Members' accomplishments in this area.

IN 2023 AN EXTRA CATEGORY WILL BE LAUNCHED – THE RISING STAR AWARD

The objective is to recognize each year, a PostEurop member that constitutes the biggest innovative achievement compared to the status quo for the respective applicant.

HOW TO APPLY?

Each Member may submit one entry. Simply fill-in the form shared with the invitation letter and follow the official guidelines. Each entry will be reviewed by a panel of expert jurors based on criteria mentioned in the guidelines. The jury will decide which applications will receive the Innovation Award and the Rising Star Award.

WHEN?
Entries must be submitted by 30th of June of each year.
The winner will be announced during the PostEurop General Assembly of that year.

QUESTIONS?

For more information about the Innovation Award and Innovation Forum please contact
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STAY TUNED

and start preparing your application for

the

2024 PostEurop Innovation Award!

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