

SOLYNEWS

FRONT PAGE

Close your eyes and imagine the future / p.1

SERVICES

bpost - SOLYSTIC: a long-lasting partnership / p.2

INFORMATION SYSTEM

Roissy Hub: the Information System at the heart of La Poste's international sorting centre / p.3

E-COMMERCE

DPD* welcomes Soly™ / p.3

TECHNOLOGY

Norway Post chooses SOLYSTIC for assisted manual sorting / p.4

EVENT

Report back on the Hong Kong Post Expo 2016 - The parcel show / p.4

Editorial



Maurizio Puppo
Marketing and Communication
Director

Nearly a year ago, on 11 November 2015, one store had more than 13 billion dollars in sales in a single day. That store was Alibaba, a Chinese online retailer. While Europeans commemorate the 1918 armistice on 11 November, in China it's "Singles' Day". It was invented by university students in 2009, but Alibaba turned Singles' Day into a major sales event, modelled after Black Friday and Cyber Monday in the United States, with promotions for online shoppers. The emergence of China's middle class and the spread of affordable smartphones did the rest. Cainiao Logistics, created by Alibaba in 2013, distributed several hundred million parcels in 24 hours.

The story of "double 11" perfectly exemplifies the way in which the Internet is once again changing the landscape of logistics flows: "e-commerce" now generates an unprecedented level of worldwide circulation of physical objects.

The Internet and the "digital revolution" didn't spell the end of the world for logistics operators after all. Even better, "What the caterpillar calls the end of the world, the master calls a butterfly". In these pages, we'll share some stories about this changing world, and show how SOLYSTIC people are part of this major change.

Close your eyes and imagine the future

By Jérôme Charlez, Managing Director, Terragnita

It's 25 years from now, yesterday you took the last yoghourt out from your fridge and this morning, before you woke up, your car automatically drove back from the supermarket with the missing yoghourt in its trunk.



Whilst having your breakfast, your personal bot reminded you that it was your marriage anniversary and proposed you a nice designer item, five minutes after, the precious item was produced by your home printing factory and ready to be offered. On the way to the office whilst watching a movie on your VR headset you saw a very nice scarf on the main character. Just looking at it, you confirmed the purchase and the item met you an hour and a half later on your way to a meeting you were having downtown. Tonight you will be surprising your significant one with a drone delivering at dinner time your both favorite fish soup prepared 1 hour ago 1 000 km away from your home in a little coastal restaurant you got engaged.

Seems like science fiction, think again:

- a connected fridge has been launched by Samsung in 2016,
- Orange and Sigfox are fighting over the best way to interconnect devices without human intervention,
- Tesla has implemented a Summon function that enable a driverless activity of its car,
- Drive in Supermarket now represents 12% of the supermarket market share,
- Kiva technology or SOLYSTIC Soly™ already enables a 24/7 order preparation and parcel sorting without a human intervention,
- Magic, a messenger bot company raised 12 M USD in 2015 from Sequoia and Facebook bot store should easily break the records of the App Store,
- HP will soon launch a revolutionary 3D printer that actually can use any kind of materials and thus potentially printing electronic board,

- Oculus will be one of the VR headset launching in 2016,
- Waze enables you to trigger an alarm about when to leave to reach a destination at a certain time,
- Geolocation delivery already enables you to reroute a parcel being delivered during the last mile delivery,
- Hyperloop should link SF to LA (560 km) in less than 30 minutes with a train every 5 minutes,
- Drones are already being soft tested by almost every single postal operator.

All these technologies are just scratching the surface of this new logistic environment completely reshuffling a market which accounts for more than 12% of the world GDP. So how can we meet with a demand and an offer which totally shifts away from this very rigid industrial B2B driven activity logistic used to be.

It requires three new behaviors.

1 - Focus on Solving consumer issues

- People don't buy a technology, they buy a service that solve a problem they have. Businesses wanted security and certainty, Consumer want convenience and adaptability. It's crucial to understand that technology is adopted when

it's the best way to solve an unresolved need. Order preparing Robots are not interesting except when people start to express an interest for a 24/7 immediate service such as 3G mobile network was not interesting for anyone before Apple launched the App Store and Itunes for Mobile.

2 - Simplicity - You can not assume to transfer complexity to an end user, everything from shipping to tracking, from paying to returning, from complaining to ordering, must be made simple. If you can order in China using wechat, you should be able to do any action using the same platform - It's not acceptable that in 2016, tracking a parcel still requires 16 characters, it's not acceptable that claiming for a missing parcel has the same chances of success than winning the lottery.

3 - Agility - Technologic changes will continue to accelerate and will enable the entry of players completely disrupting the market as we know it. It's difficult to guess which technologies will prevail so the best as usual is to focus on expressed needs and pivot as quickly as possible.

THIS WAY YOU WILL BE ABLE TO "CONTROL YOUR OWN DESTINY OR SOMEONE ELSE WILL". Jack Welch, no date

Samsung: <http://www.engadget.com/2016/01/08/samsung-family-hub-smart-fridge-hands-on/>
Orange: <http://www.orange.com/en/Responsibility/Environment/COP21/LoRa>
Tesla: <https://www.teslamotors.com/blog/summon-your-tesla-your-phone>
Drive: <http://www.dailymail.co.uk/science/tech/article-3399825/Do-shopping-WITHOUT-getting-car-Plans-drive-supermarket-revealed.html>
Kiva: <https://www.youtube.com/watch?v=3UxZDJ1HiPE>
Soly: <http://soly.eu/innovation-2/>
Magic: <https://getmagicnow.com/>
Facebook bot store: <http://techcrunch.com/2016/03/17/facebook-messenger-in-a-bot-store/>
HP: <https://3dprint.com/113630/hp-multi-jet-fusion-plans-info/>
Oculus: <http://www.cnet.com/special-reports/oculus-rift-review/>
Vive: <http://www.roadtovr.com/htc-vive-review-room-scale-vr-mesmerising-vr-especially-if-you-have-the-space-steamvr/>
Waze: <http://bgr.com/2016/03/16/waze-iphone-update-predict-future/>
Geolocation and ibeacon: <http://networkedglobe.com/2014/05/15/beacons-and-the-new-business-model/>
Hyperloop: <http://www.wsj.com/articles/hyperloop-one-accelerates-towards-future-with-high-speed-test-1462960803>
Drone: <https://www.flexport.com/blog/drone-delivery-economics/>

bpost - SOLYSTIC: a long-lasting partnership

Interview with Jean-Michel Legros, National Maintenance Manager, bpost



From left to right: Steve Collie and Paul Dens, new and former directors of SOLYSTIC Belgium Branch and Jean-Michel Legros, national maintenance manager, bpost.

SOLYSTIC: Could you tell us what are bpost's main current challenges regarding maintenance?

Jean-Michel Legros: bpost's operations strategic plan (Vision 2020) involves considerable changes in its machine stock:

- an increase in mail preparation mechanisation,
- the development of new functionalities in such machines as Postabo* addressing,
- expanding machine stock,
- increased working time for some equipment (MSM).

As part of this strategic plan, the project which aims at centralising package sorting at the new Brussels X facility also represents a key challenge to overcome regarding the availability and reliability of the equipment.

In a bid to ensure reliability throughout the machine stock, we focused our concerns on setting up an optimal maintenance policy. It is our intent to apply this policy through smaller engineering teams at bpost (one manager and one expert for every sorting facility), whose primary assignment is to monitor sorting equipment performance for letters and packages, working closely with SOLYSTIC.

S.: What do you expect from the new SLA?

J-M.L.: The new SLA will help us to achieve full availability of all equipment, performing at top level at all times and for the best cost.

Given how crucial the machines are in the sorting process, bpost has no alternative but to conduct a "customer-supplier" relationship with its maintenance subcontractor.

- On the one hand, as a result of his increased understanding of the equipment's capacities and limitations, the maintenance provider can help bpost to be more efficient by taking part in training and coaching operators in how to make better use of the machines.
- On the other hand, through their observations while working, machine operators can provide vital information in spotting the causes of malfunctions and poor quality.

In its recent call for tenders, bpost has included a determination to build a solid partnership with a maintenance provider.

S.: In what way is it different from the previous one?

J-M.L.: First, higher expectations in performance levels.

These are expressed through the most

suitable KPIs** for handling operational realities inside sorting facilities. Expectations in equipment availability levels are higher, especially during periods that are known as critical. Moreover, the duration and frequency of downtime is taken into account: a succession of short downtime periods is more harmful than a single downtime period that lasts longer.

Equipment performance will also be checked periodically, and at first this will be done by bpost agents, with help from SOLYSTIC if required. The purpose of the tests is to:

- verify, at any time and with no special conditions, that the equipment is functioning correctly,
- only call on SOLYSTIC in the event that some tests are inconclusive, thus letting our partner mainly focus on maintenance.

Secondly, increased and improved reporting.

The amount of reports expected from the maintenance partner has changed significantly in order to be in a position to monitor:

- the daily performance and availability of all the equipment,
- the rate of satisfactory, on-time completion of maintenance plans,
- the comparative performance of sorting facilities (availability - costs),
- the comparative performance of machines (availability - costs),
- the use of spare parts,
- etc.

Those reports have different, complementary purposes.

For the ordering party:

- monitoring the correct maintenance of the equipment,
- ensuring that the maintenance provider is doing his utmost to achieve the expected objectives,

For the maintenance provider:

- enjoying an overall, accurate perspective on the work of his teams and on the results achieved.

For both partners:

having a shared documentary database so as to better understand one another and to seek avenues of improvement together that will benefit both parties. The process also brings about greater transparency through the availability of a computer-aided maintenance management tool, owned by bpost and fuelled by the maintenance provider.

Then, a flexible pricing principle.

Unlike the previous SLA, where the price of maintenance was an annual flat rate, the new SLA applies a variable price according to processed volume. For every type of equipment, a cost is determined for spare parts, consumables and labour on the basis of a set budget. This could be compared to a price per thousand letters.

Accordingly, the cost of maintenance will be in keeping with the volume that is actually processed.

"THE NEW SLA APPLIES A VARIABLE PRICE ACCORDING TO PROCESSED VOLUME."

In addition, the offer includes the possibility of adding or removing equipment at pre-set rates.

As a result, the cost of equipment maintenance has no negative impact on the processing cost according to volume.

S.: Why did bpost choose SOLYSTIC for this project?

J-M.L.: SOLYSTIC answered the call for tenders and was competing with other providers. There were three points underlying the final decision:

- the overall price of the contract,
- the issues of quality and methodology,
- the agreement regarding bpost legal demands.

Following the negotiation process, SOLYSTIC was positioned with the best overall ratings.

Since the contract was signed, SOLYSTIC has initiated a preparation phase which appears promising with regards to providing maintenance and achieving the expected results.

This is demonstrated by the setting up and deployment of professional computer-aided maintenance management. ■

from Vincent Moulin and Corinne Saulnier-Eude

* Destination addresses printed by the sorting equipment

** Key Performance Indicators



BETWEEN US

BELGIQUE

Service Level Agreement: SOLYSTIC will continue to provide full maintenance service (SLA) for bpost

After a 9 months RFP process, the national postal operator of Belgium, bpost, has renewed the service contract (SLA, "Service Level Agreement") with SOLYSTIC. SOLYSTIC will continue to ensure, every single day, availability and performances of the national network for mail, press and parcel; a network of 7 sorting centers, handling more than 9 millions of objects per day, and including more than 150 pieces of industrial equipment and various IT applications. The service contract relies on the proven competences of SOLYSTIC Belgium Branch as well as on innovative tools and approaches. For example, monitoring Key Performance Indicators (KPI) in real-time, a new Computer-aided Maintenance Management System, adaptability to volumes variations. A continuous improvement story that continues to be written each and every day.



Roissy Hub: the Information System at the heart of La Poste's international sorting centre

La Poste's international sorting centre is the largest multimodal platform in Europe.

Roissy Hub is directly connected to Roissy Charles de Gaulle airport and processes 100% of mail flows between France's inward and outward offices of exchange¹, both by road and by air. It also sorts more than 12% of all domestic priority (one-day) mail that is distributed by the Aviation Postale Intérieure (API - domestic airmail service).

Roissy Hub covers 60,000m² on two levels and has 1,000 postal employees working 24 hours a day to receive, sort, and secure more than 1.5 million objects per day (2.5 million including the entire international hub²).

SOLYSTIC co-built and manages Roissy Hub's Information System (IS), which serves as the site's management, planning, and strategic decision-making centre.

SOLYSTIC has integrated different types of sorting machines into the IS, which defines the organisation and sort plans of parcels, container, letter, and flat mail sorters.

The IS also integrates the 3.2 km of computer-integrated material handling that dispatches all the containers and packages towards different workshops, scanners, and computer terminals spread throughout the site. The IS makes it possible to:

- manage reference documents and produce sort plans,
- manually scan containers,
- print weight labels for ULDs (Unit Load Device),
- supervise equipment and operations,
- manually secure items,
- create airline workload plans,
- produce digital invoices called (EDI).

The IS also organises aircraft containers according to the type of plane and

manages agreements with the 70 airlines (particularly regarding price) as well as stopovers, flights, and loading plans. It can also print ULD barcodes. Lastly, an essential function of the IS involves monitoring operations (the operations plan) and each package and parcel (track & trace), as well as scanning, storing, and searching for all the documents that are processed (DMS).

The IS is the central and strategic component of Roissy Hub. It must function 24 hours a day to ensure that La Poste can provide the expected level of service both nationally and internationally, in a demanding aviation environment in terms of security and respect for break times.

Following La Poste's call for tenders in 2011, SOLYSTIC was selected to keep the Information System operational and make the necessary changes to ensure optimal performance, as part of a TPAM contract (Third Party Application Maintenance - see *Solynews Nos. 13 & 14*).

SOLYSTIC has a team of engineers that analyses and resolves all incidents thanks to their complete mastery of 70 applications that provide remote access for real time control.

SOLYSTIC ensures that its employees are always fully proficient in all the IS' technologies - even those that are obsolete. It responds to La Poste's requests and also makes changes to applications such as:

- improving mixed sorting on the TCA sorter to process both export and import packages in the same session,
- adapting to changes in UPU or air transport standards,
- migrating to a new, more modern web environment. ■

from Benoît Arribe

E-COMMERCE

DPD® welcomes Soly™

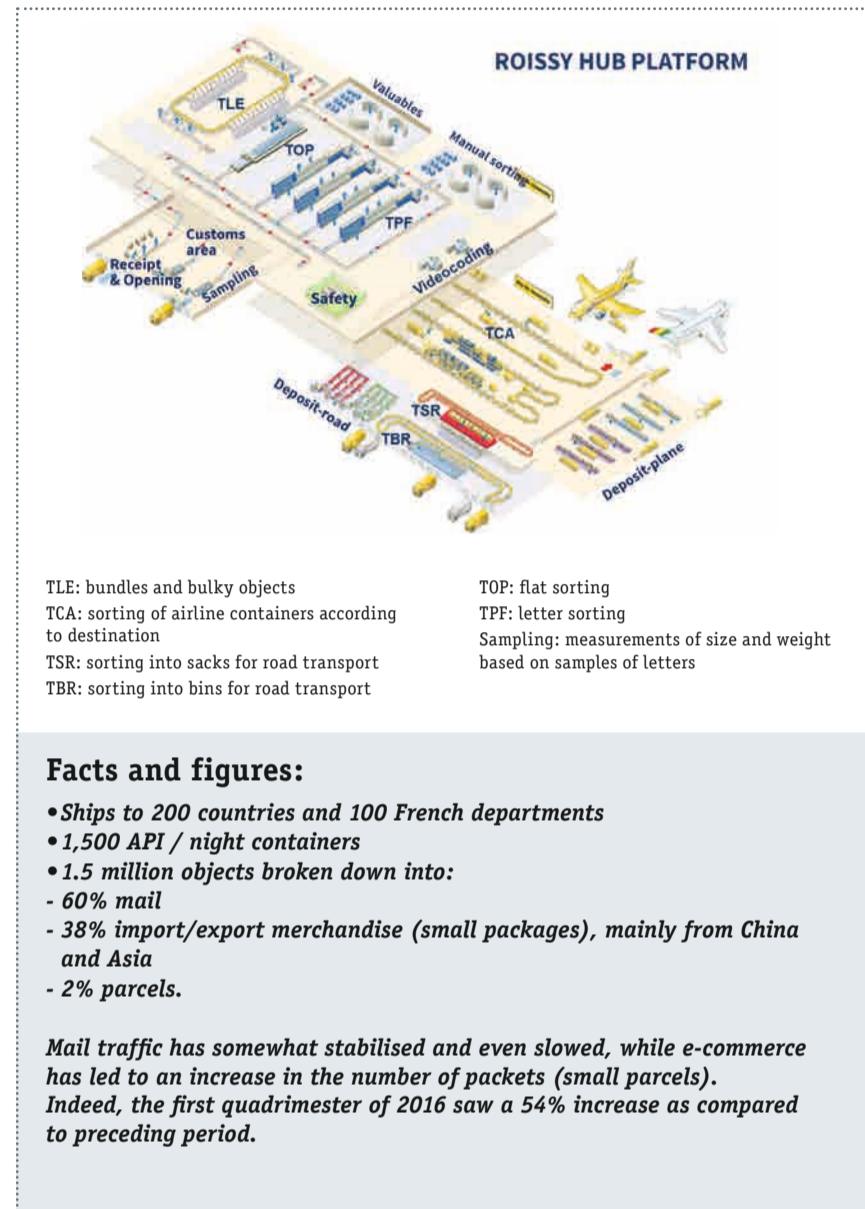
After using Soly™ for a parcel sorting application last summer, DPD has opened its doors to SOLYSTIC for an experiment preparing a driver's round.

Soly™ the SOLYSTIC's logistics solution for parcels has settled into a DPD France platform in Vémars (close to Paris Charles De Gaulle airport). The new testing phase (Proof Of Concept - POC) for this innovative solution started in mid-April 2016.

Soly™ is a mobile robotics system that automates sorting and parcel delivery preparation. This solution is particularly well-adapted to the challenges of e-commerce, doesn't require any specific adaptations to the working environment, is simple and quick to install and can be scaled to peaks in activity (Christmas, sales, etc.). Soly™ improves working conditions for operators and drastically

reduces manual handling operations. Furthermore, the simultaneous presence of all drivers isn't necessary during the package organising phase.

The system comprises a fleet of robotic shuttles along with trolleys at different heights that are designed to be moved around by the shuttles. A real-time information system manages the shuttles and can locate trolleys and parcels. Soly™ can also acquire images and processes bar codes and destination addresses. Lastly, a touchscreen tablet features an application allowing the driver to make changes to their itinerary. The delivery round being tested handles 90 to 120 parcels per day, some of which



Facts and figures:

- Ships to 200 countries and 100 French departments
- 1,500 API / night containers
- 1.5 million objects broken down into:
 - 60% mail
 - 38% import/export merchandise (small packages), mainly from China and Asia
 - 2% parcels.

Mail traffic has somewhat stabilised and even slowed, while e-commerce has led to an increase in the number of packets (small parcels). Indeed, the first quadrimester of 2016 saw a 54% increase as compared to preceding period.

1 Sorting centres that process international flows
2 Roissy Hub - Roissy International - PIAC Roissy



* DPD France is part of DPD Group, the second largest parcel delivery network in Europe.

Norway Post chooses SOLYSTIC for assisted manual sorting

Last March, Norway Post approved the ergonomics of SOLYSTIC's prototype for a manual sorting frame featuring a CAMS system.*

Stemming from a partnership between SOLYSTIC and TRECO, the system maintains the existing ergonomics used for manual bay-sorting without affecting the ground layout within the frame-sorting facility.

Following a 9-month experimental period in 2014 to test the CAMS system at the Robsrud sorting centre, Norway Post has asked SOLYSTIC to equip its manual sorting frames with OCR assistance.

The initial phase of the project, which aims at centralising the postman rounds preparation process, consists in fitting 50 CAMS system on frames in 6 sorting facilities. In addition to standard CAMS features (reading the address from an image and displaying the corresponding sorting slot), there are extra functionalities like automatic label printing (whenever a mail forwarding contract is detected or if the address is incomplete), the transfer of OCR rejects towards a web-coding platform, and the recycling of video-coded rejects using virtual identification (e-matching), etc.

Frames equipped with CAMS make the manual sorting process more flexible, especially on account of the dynamic, synchronised changes to sorting plans and address databases that are already available on the sorting machines. Statistics stemming from manual sorting can pave the way to substantial feedback regarding how to optimise this sorting method.



The efficiency of manual sorting operations is highly dependent on workstation ergonomics. CAMS is compact enough to be fitted either on separate furniture from the sorting frame or on the sorting frame itself, according to the specific constraints of each operator. Supplied by Danish manufacturer TRECO, the sorting frames at Norway Post feature 640 vertical slots large enough to accept all letter formats. The ergonomics of those workstations was already

once optimised in the past. In order to promote an efficient throughput without affecting the existing layout, SOLYSTIC and TRECO worked together to integrate the CAMS system into the sorting frames without changing the ground layout, or the ergonomics supporting the operators' work.

Following an assessment conducted in March by Norway Post ergonomists and operators together with the project managers, the position of various ele-



ments was optimised, such as the CAMS device, the touch screen and the sorting slots, so as to fully meet the needs of all concerned. These OCR-assisted sorting frames, resulting from the collaborative efforts of two key players in the postal sorting sector, is onsite since last June. ■

from Céline Guignard

*Computer Aided Manual Sorting

EVENT

Report back on the Hong Kong Post Expo 2016 - The parcel show

"The next 5 years will see an explosion of cross-border flows".

Asia, and China in particular, will be at the epicentre of this explosion of cross-border flows driven by "B2C e-commerce", direct "business-to-consumer" online sales. This was one of the main lessons that emerged from the 2016 Post Expo, the leading event for the postal, courier, and express industry held in Hong Kong last May.

"ASIA, AND CHINA IN PARTICULAR, WILL BE AT THE EPICENTRE OF THIS EXPLOSION."

Hong Kong was the perfect place to examine changes in global logistics. Though it has a small "domestic" market (7 million people), its location makes it an

ideal logistics "hub" (especially for Southern China), and has contributed to its position as one of the top ten global trading entities. Hong Kong therefore provides an example of how logistics flows are increasingly going beyond national borders and becoming more and more "globalised", thanks to the spread of the Internet and e-commerce platforms. China massively exports to Europe and the United States because its products are so competitive. Even though China's global export activity slowed in 2015, parcel shipping towards the rest of the world increased by 70% from 2014, with 1.2 billion shipments. However, China also bought more and more foreign products during that same time period, for two main reasons. The first is the emergence of a middle class: according to Credit Suisse's Global

Wealth Report, there are now 110 million people in China's middle class, the largest in the world (as compared to 90 million in the United States, using the same economic classification criteria). The second is the proliferation of smartphones, which provide people in even the most remote areas with access to the Internet and foreign products that would be otherwise unavailable or very expensive. This results in unprecedented cross-border flows of parcels between East and West. What do these flows look like? The first aspect is persistence over time, since these flows occur 24 hours a day, 7 days a week, even 365 days a year, though with a high level of variability, for example, on 11 November in China, or Black Friday in the United States. Another aspect is the pressure on delivery times and price.

The countdown to delivery starts as soon as the purchase is made, far upstream of the logistics chain. As for price, "e-tailers" (online retailers) would ideally like to offer free shipping. Lastly, there is the category of products that are purchased online, especially shoes, clothes, and electronic devices. Given their small size, these objects are often shipped through the "mail" networks of postal operators, providing them with a new growth driver and opportunity - as long as they can adapt to this flow of objects. In order to address these challenges SOLYSTIC has developed several new solutions: Soly™, which uses mobile robotics technology for greater flexibility; and systems specially designed to process "small objects in a "hub", like the CPS (Coding & Printing System) machine. ■

from Maurizio Puppo



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