Delivering letters and parcels in Europe: Trends & challenges in postal operations

Antonia Niederprüm

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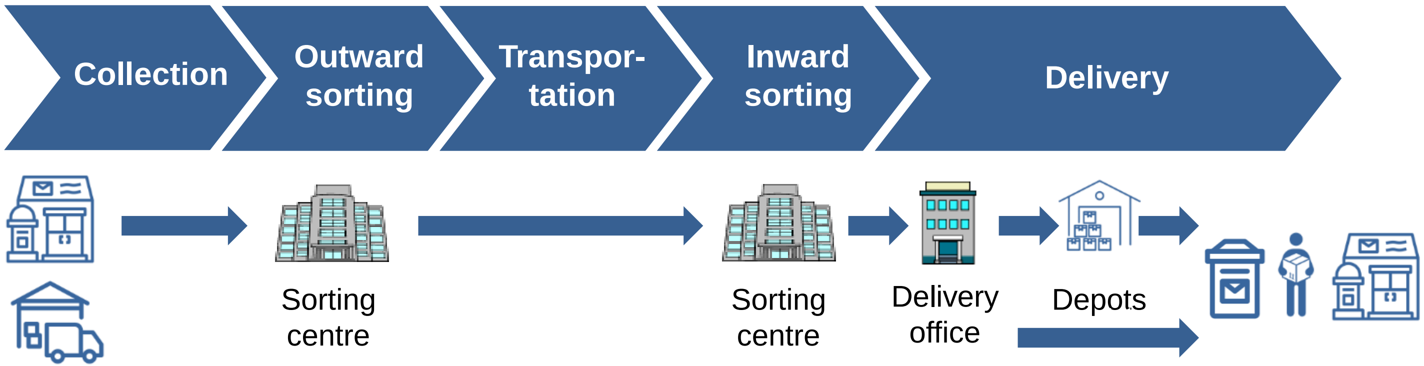
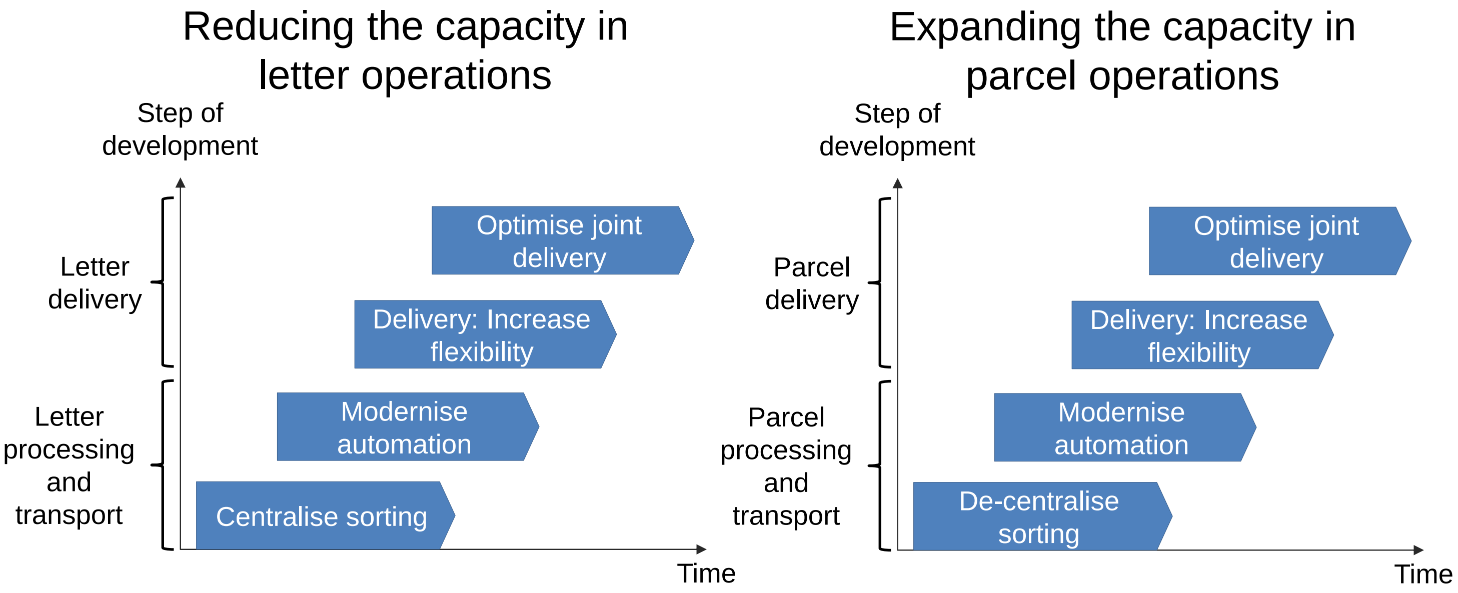
Developments in postal operations before the e-commerce boom



- Emphasis on cost savings / improvements in productivity and efficiency
  - Consolidation of letter volume in sorting centres and maximise automation
  - Sequence sorting of letters by machine
  - Optimize delivery organisation to reduce the number of postmen in the last mile
- Parcel business much smaller than letter business at many postal operators

B2C e-commerce transforms postal operations

Pattern of developments in postal operations



- Postal operators are slowly transforming from postal companies with parcel delivery to parcel companies with letter delivery

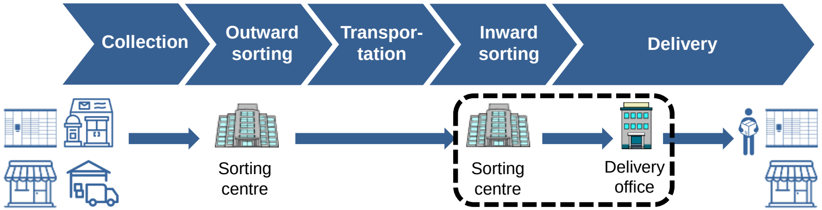
Sorting facilities

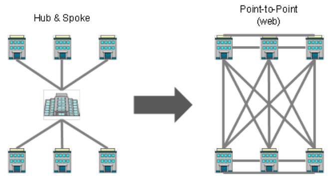
Reducing capacity in letter operations

- Fewer letter sorting centres due to
  - Less letter post volume
  - Declining share of priority letters delivered the next working day
  - Reduced footprint of (modern) sorting machines
- Fewer delivery offices
  - Indoor and outdoor delivery activities are separated and assigned to different employees
  - Delivery depots as starting point for postmen
  - Sequence sorting by machines is centralised in letter sorting centres

Expanding capacity in parcel operations

- More parcel sorting centres and further expansion planned
- Trend to combined sorting centres & delivery offices for parcels and to more direct transports
  - To accelerate delivery (D+1 as standard)
  - To more flexibly increase sorting capacities





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Modernise automation

Reducing capacity in letter operations

- New investments in letter sorting technology despite volume decline
- Improve efficiency in letter sorting and sorting depth (to walk sequence)
- More mixed letter sorters at smaller operators
- Improved sorting depth for small & large letters

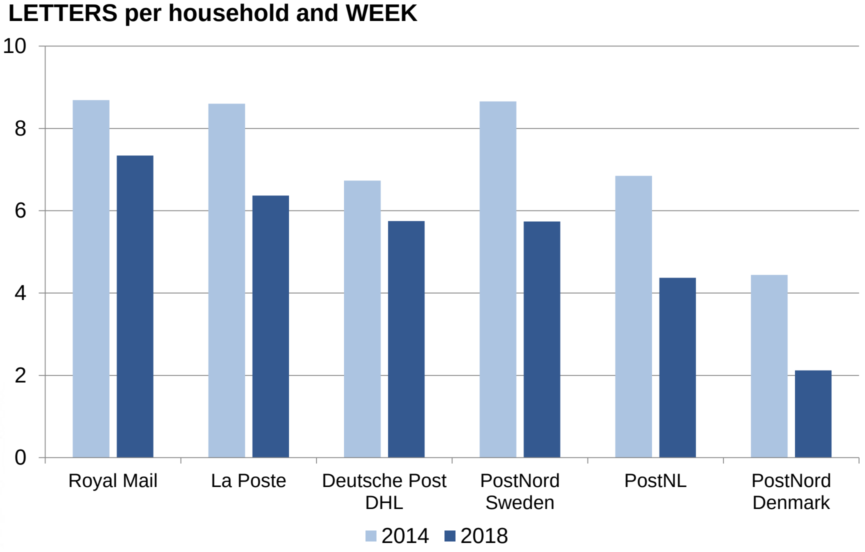
Expanding capacity in parcel operations

- Investments in new parcel sorters and in modernising / expanding existing parcel sorters
- Sorting to parcel drivers‘ round as standard
- Upgrading delivery offices with parcel sorters

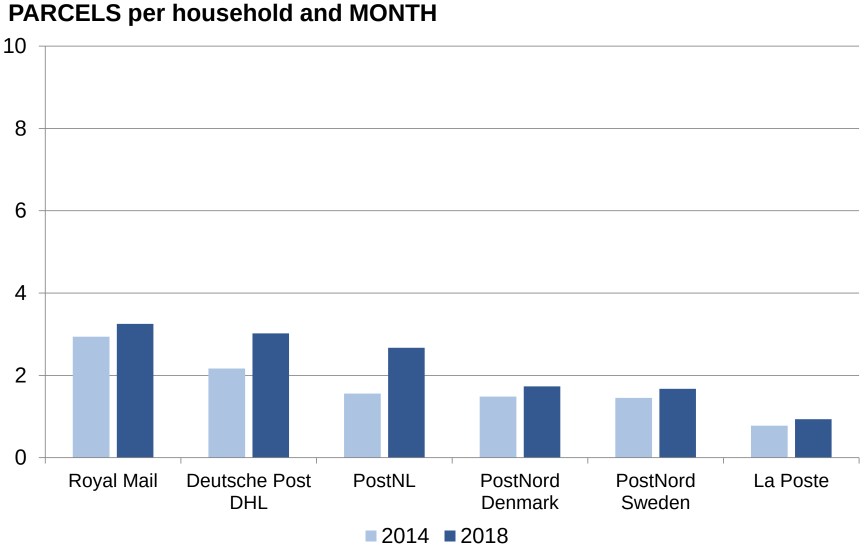
- Small packets are increasing (especially international packets)
  - Investments in small parcel sorters
  - Opportunity to use free space in letter sorting centres for small parcel sorters

Increase flexibility in delivery

Reducing capacity in letter operations



Expanding capacity in parcel operations



- Postal operators are differently affected by letter volume decline
- E-commerce orders also delivered by letter post

- Parcel volume still significantly lower than letter volume
- Postal operators apply different definitions of letter and parcel formats for domestic services

Sources: Annual reports and market reports, Eurostat

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Increase flexibility in delivery (cont'd)

Reducing capacity in letter operations

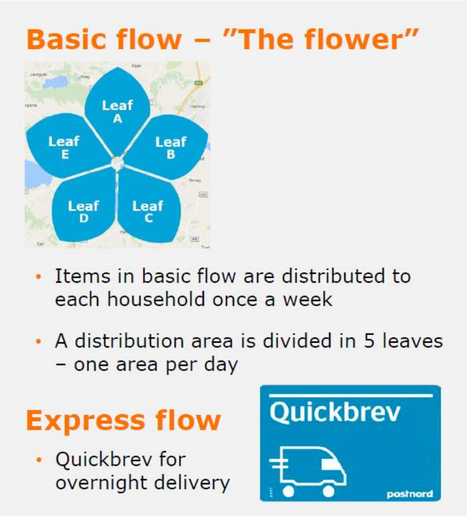
- Letter delivery account for a significant share of total cost in letter operations
  - With declining letter volume the share of delivery cost in total cost is increasing
  - Reason: High share of fixed costs in delivery, driven by number of delivery days per week
- Different models emerged to break the destructive trade-off between letter volume decline and increasing average costs
- Models are usually backed by loosened regulatory constraints

Expanding capacity in parcel operations

- Growing parcel delivery networks (more drivers, more rounds)
- Challenged by increasing range between low and peak demand in e-commerce deliveries
- B2C parcels more costly in delivery than B2B parcels
  - Delivery in residential areas
  - Often one parcel per stop
  - Risk to not deliver the parcel at the first attempt
- Operators offer recipients more options, e.g.
  - Alternative delivery locations and delivery times
  - Apps for re-routing of parcels during delivery

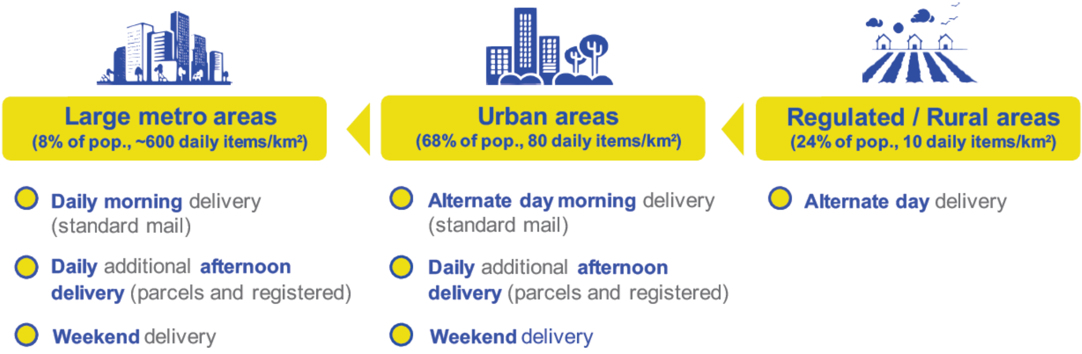
Increase flexibility in delivery: Examples

Separate networks for slow and next-day delivery: **PostNord Denmark**



- Basic flow: Highly flexible approach
  - Delivery takes place if enough volume to deliver
  - Delivery day of each 'leave' can vary from week to week (more likely in rural areas)

Separate delivery rounds in urban areas & alternate-day delivery in rural areas: **Poste Italiane**



Alternate-day delivery in urban areas: NZ Post

- Separate networks for letters and parcels in urban and residential areas (88% of delivery points)
- Delivery of letters on three days a week

Sources: Analyst presentations and Annual Reports

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Optimise joint delivery: Different strategies

Keep the delivery frequency and maximise joint delivery

- Better use of delivery capacities especially in less densely populated areas
- Keeps economies of scope in delivery (if enough free capacity for parcel delivery)
- Preserves competitiveness in e-commerce deliveries, if items are delivered at least five days a week
  - Next-day delivery of e-commerce shipments expected by shippers
  - Grow volume and market position in e-commerce delivery

Reduce the delivery frequency of letters below five days a week

- Increase letter volume per delivery day
- Significant cost savings: Fewer staff in letter delivery
- But: May reduce the service level of parcels if jointly delivered with letters, or reduce economies of scope
- Easier to implement if parcels are not jointly delivered with letters
  - Nordic countries: Delivery to pick-up points (e.g. Posti and Posten Norge)
  - Separate delivery rounds for letters and parcels in densely populated areas (e.g. Poste Italiane)

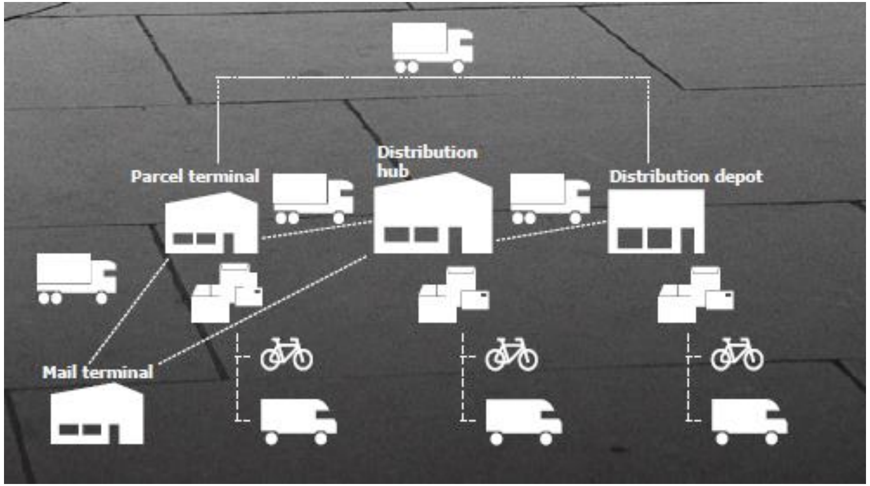
Optimise joint delivery: Examples

Different models for joint delivery

- Postal operators usually deliver letterbox packets jointly with letters
- Mixed practice for parcels

Postal operator	Parcels jointly delivered with letters
Deutsche Post	Outside urban areas
La Poste	Outside urban areas
PostNL	Rarely
PostNord Denmark	Express flow
PostNord Sweden	Rarely
Royal Mail	Nationwide

PostNord: "Integrated" production model (DK)



Source: PostNord, Annual and Sustainability Report 2017

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Summary

Small letters	Large letters	Letterbox packets	Small & medium-sized parcels	Large parcels

Less sorting & delivery capacities | More sorting, transport & delivery capacities

Centralisation of sorting | More sorting facilities that move nearer to recipients

Investments in better automation (and sorting depth)

Development of planning tools and apps for more flexible delivery and to better manage peak demand

Delivery frequency and joint delivery: No one size fits all approach!

Trade-off: Economies of scale vs. competitive pressure in parcels

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Antonia Niederprüm
Senior Economist
WIK Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste GmbH
Postfach 2000
53588 Bad Honnef
Tel.: +49 2224-9225-21
eMail: a.niederpruem@wik.org
www.wik.org