

HYPERCONNECTED CITY LOGISTICS: SMART LOCKERS TERMINALS & LAST MILE DELIVERY NETWORKS

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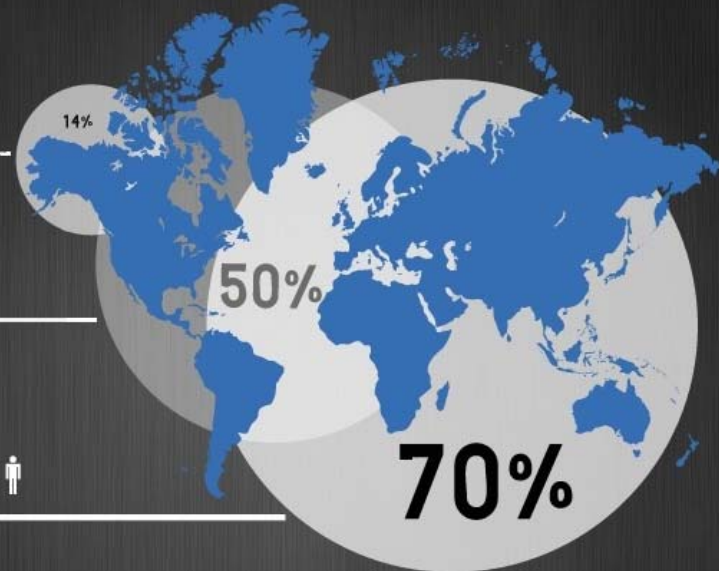
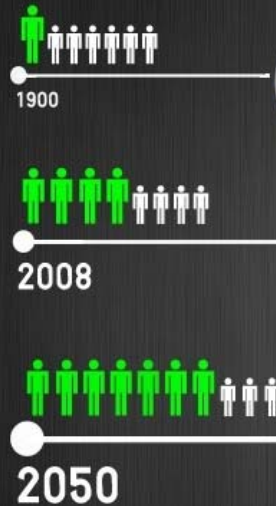
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- What is a Smart Locker Terminal?
- Research Methodology – Industry snapshot
- Best Practices
 - Technology
 - Business Model
 - Network
- Supply Chain Structure aligned with the Physical Internet
- Conclusion



150 Years of Global Urbanization

This shift in demographics raises many important questions and challenges facing the future of our world.



Source: Population Reference Bureau

Food Insight - February 2013

Sources: <http://www.foodinsight.org/blogs/9-billion-reasons-why-we-need-sustainable-agriculture/>; <http://www.wsbradio.com/news/news/study-atlanta-traffic-7th-worst-nation/nWF7c/>



- Consolidated deliveries
- Automated Units
- Secured Parcel Lockers
- Last Mile Delivery
- Consumer Interactive
- Connected

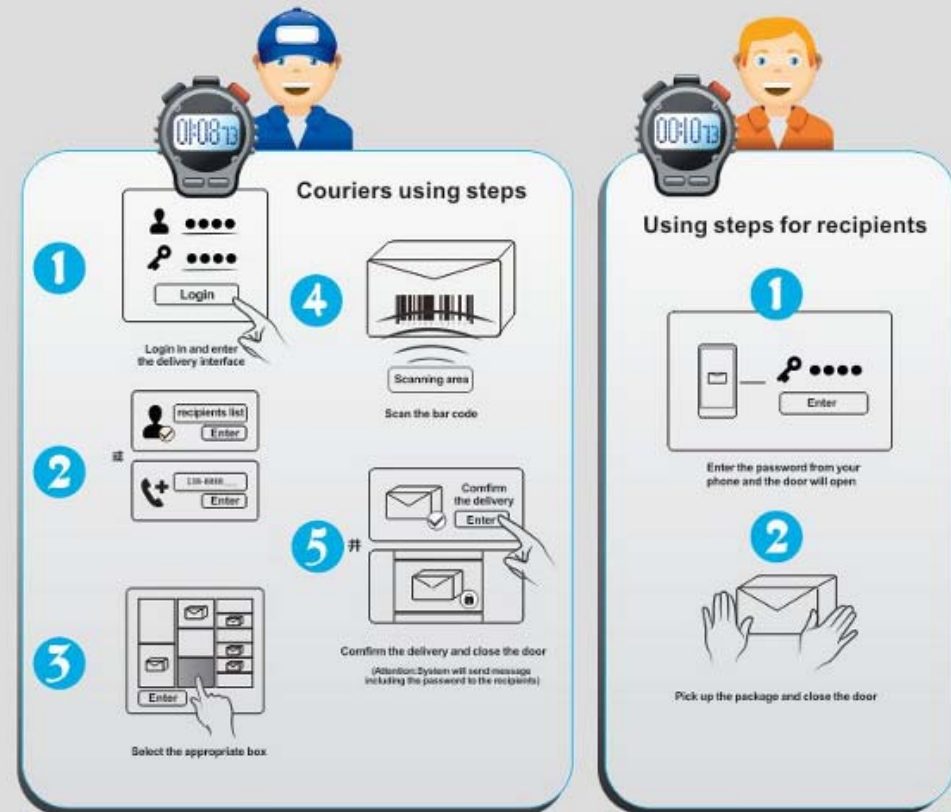
Source: http://portalvendingowy.pl/polska/Odbierz_przesylke_w_paczkomacie

Couriers using steps:

1. Login with company's credentials
2. Access Data and Customer's Information
3. Choose an available compartment
4. Scan the package
5. Put away

Recipients using steps:

1. Login using unique credentials
2. Pick up package from correspondent opened locker



Source: http://www.smartlocker.com/Products/Electronic_locker/20.html

- Data collection based on online press and company's websites and press releases.
- Identification of best practices based on understanding of the data gathered and the similarities between companies.
- Comparison with the literature of the Physical Internet in order to evaluate the solutions.
- Presentation of the business model and network.



Company	Service	Dimensions Capacity	Weight Capacity	Sources
InPost	Paczkomaty	25x16x15 in.	55LB. (25kg)	twoj.inpost.pl
Deutsche Post DHL	Packstation	24x14x14 in.	77LB. (35kg)	www.dhl.de
Norway Post - Bring	MyQuickBox	24x14x14 in.	77LB. (35kg)	www.posten.no ; www.bring.com
Osterreichische Post AG	Post 24	40x24x24 in.	66LB. (30kg)	www.post.at
Bpost	Packstation	27x16x12 in.	66LB. (30kg)	www.bpost.be
Itella	SmartPOST	24x24x14 in.	77LB. (35kg)	uus.smartpost.ee
Post Danmark	Dognposten	24x14x14 in.	22LB. (10kg)	www.postdanmark.dk
Groupe La Poste	Cityssimo	24x17x14 in.	44LB. (20kg)	www.colissimo.fr
DPD Groupe	PickUp	24x17x14 in.	44LB. (20kg)	www.dpd.com
UPS	UPS My Choice	32x10x10 in.	44LB. (20kg)	www.ups.com
Amazon	Amazon Locker	16.5x13.8x12.6 in.	10LB. (5kg)	www.amazon.com
Zhilai	Webox	20x19x18 in.	44LB. (20kg)	www.smartelocker.com



- Login by unique credentials
- Payment terminals
- Label printers
- Security
- Connectivity
- Modularity



Source: <http://www.dpdhl.com/>; www.wired.com/; www.pcworld.com

BEST PRACTICES – BUSINESS MODEL

IPIIC 2016

Company	Service	Area of Operations	Business Model		
			B2C	C2C	Private
InPost	Paczkomaty	Worldwide			
Deutsche Post DHL	Packstation	Germany			
Norway Post - Bring	MyQuickBox	Norway			
Osterreichische Post AG	Post 24	Austria			
Bpost	Packstation	Belgium			
Itella	SmartPOST	Finland			
Post Danmark	Dognposten	Denmark			
Groupe La Poste	Cityssimo	France			
DPD Groupe	PickUp	Europe			
UPS	UPS My Choice	United States - Europe			
Amazon	Amazon Locker	United States			
Zhilai	Webox	China			

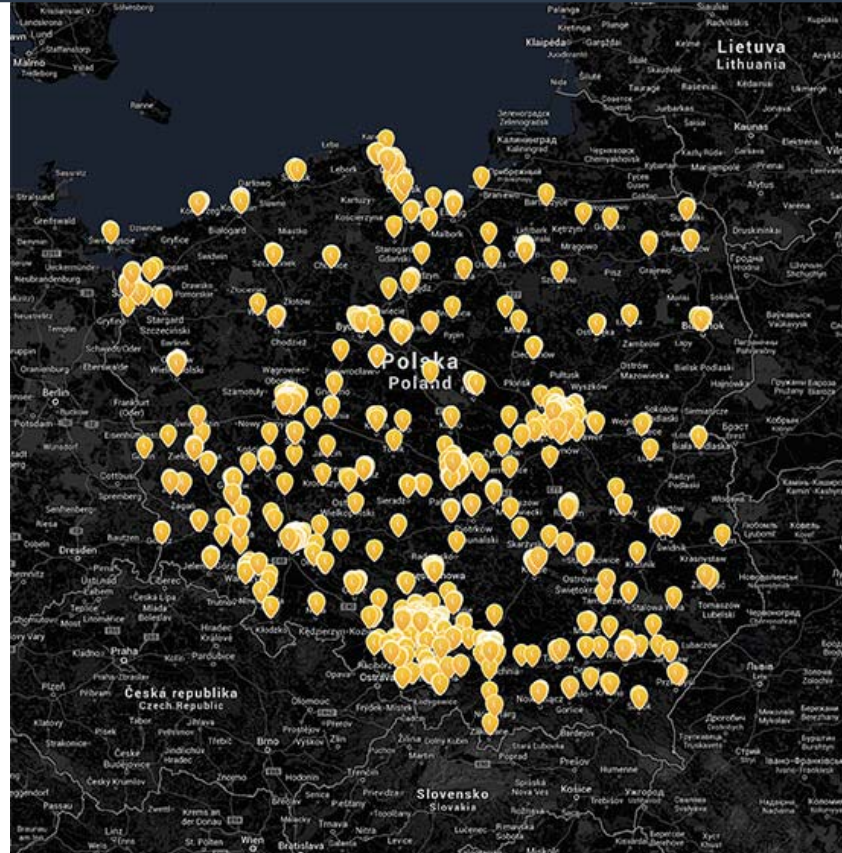
BEST PRACTICES – NETWORK

IPIC 2016

Company	Service	Network		Membership	Restrictions
		SL Terminals	Access Point		
InPost	Paczkomaty	3,500	-		6500+ Retailers
Deutsche Post DHL	Packstation	2,650	20,000	Required	-
Norway Post - Bring	MyQuickBox	42	-		-
Osterreichische Post AG	Post 24	24	-		-
Bpost	Packstation	125	680		-
Itella	SmartPOST	480	-		-
Post Danmark	Dognposten	300	-	Required	-
Groupe La Poste	Cityssimo	31	-		-
DPD Groupe	PickUp	200	22,000		6600+ Retailers
UPS	UPS My Choice	300	12,000		-
Amazon	Amazon Locker	200	-	Required	Amazon
Zhilai	Webox	3,000	-		-

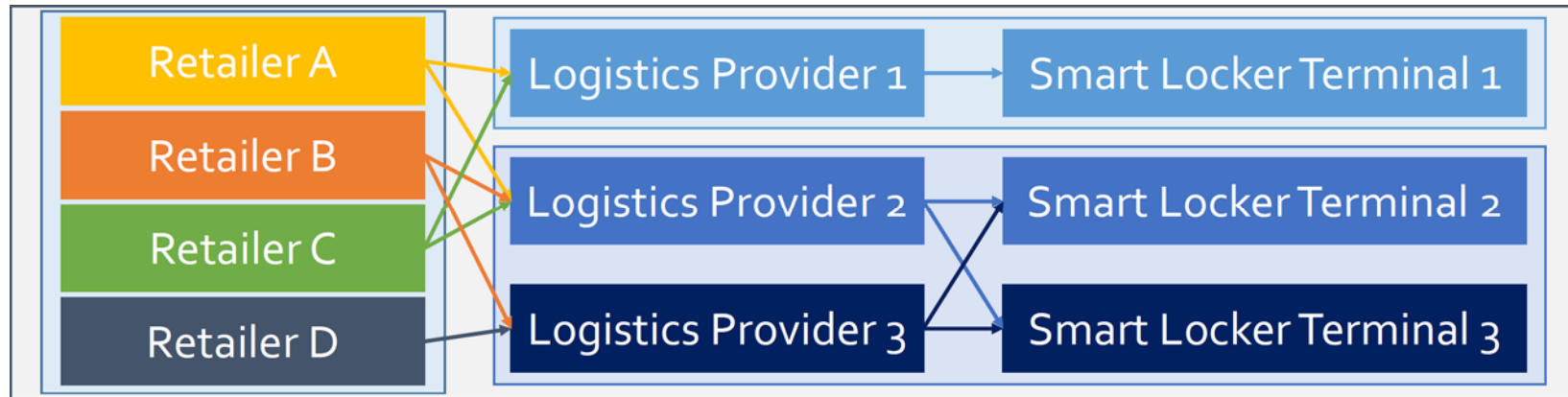


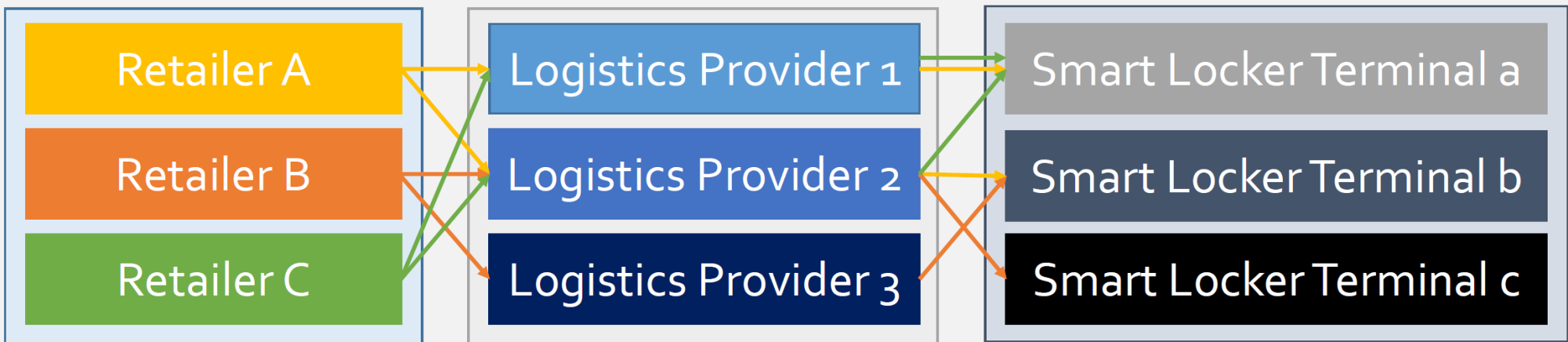
- 1,300 Smart Locker Terminals
- 260 Cities



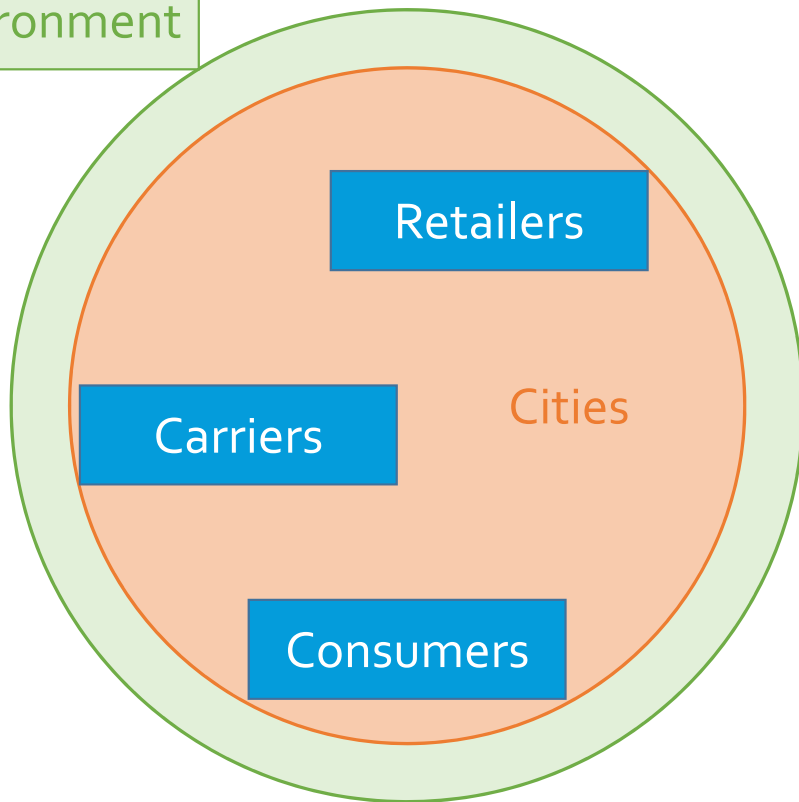
- Tesco, Carrefour and Auchan megastores
- Supermarkets
- Gas Stations
- Railway Stations
- Shopping Malls
- Office buildings
- other frequently visited locations.

Source: <https://b2b.paczkomaty.pl/en/get-to-know-paczkomaty/service-coverage>





Environment



Research Opportunities:

- Integration in Physical Internet
Hyperconnected distribution systems
- Dynamic Capacity Allocation
- PI Containers Applications
- Pricing Strategies
- ...

THANK YOU !

Q & A