



Pro-Active City Cleaning: Practice and Experiences from Brussels

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Bruxelles-Proprete´



Special Focus of Brussels

“The 3-Shift Model for
Street Cleaning in Brussels -
7 days a week, 52 weeks a year”

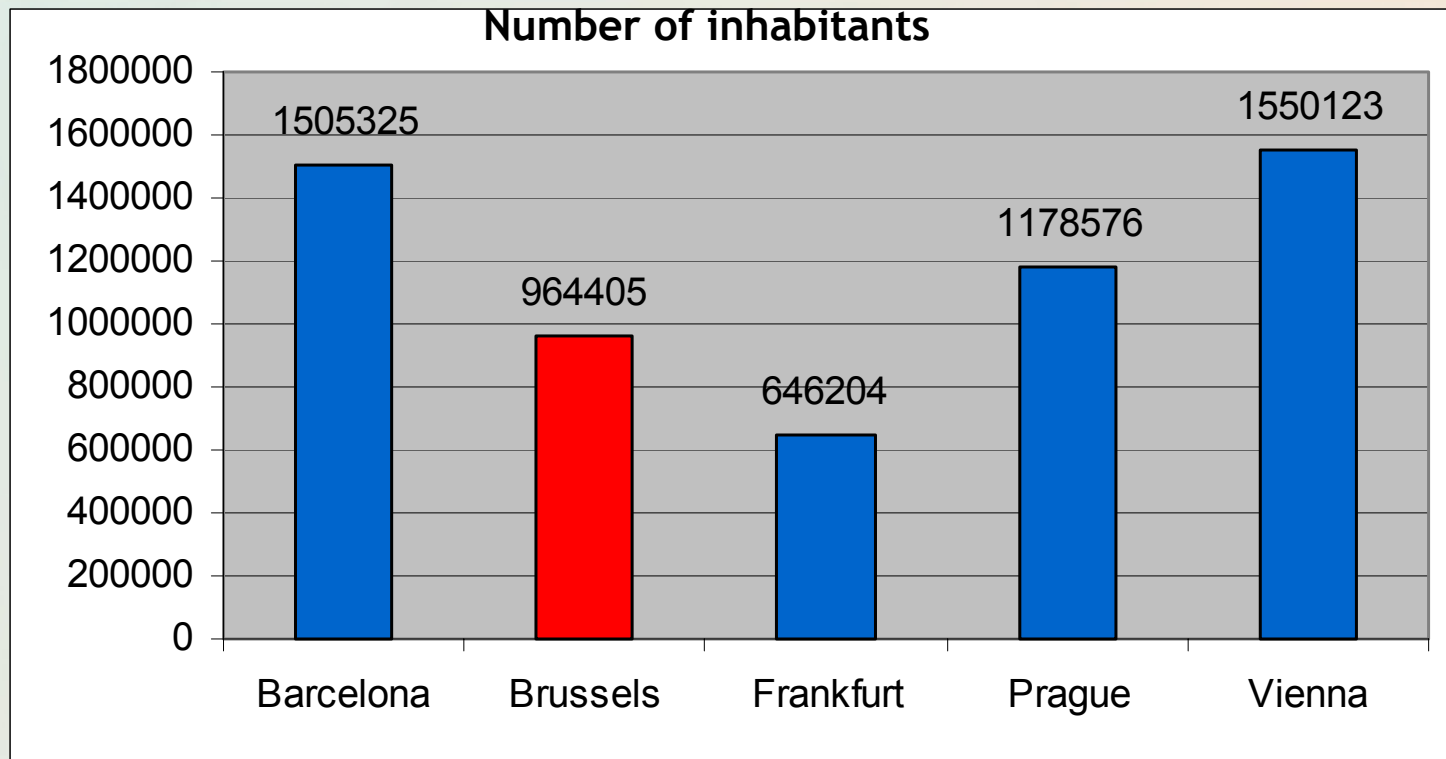


- The municipality is responsible for cleaning municipal roads.
- The Brussels-Capital Region has contracted with "Bruxelles-Propreté", a regional agency, to clean streets and sidewalks in the region.
- In addition, as part of the "Cleanness Plan", "Bruxelles-Propreté" also cleans certain streets and sidewalks which would otherwise have to be cleaned by the municipality.
- "Bruxelles-Propreté" is also in charge of household waste collection in the Brussels-Capital Region.



Brussels - Facts and Figures

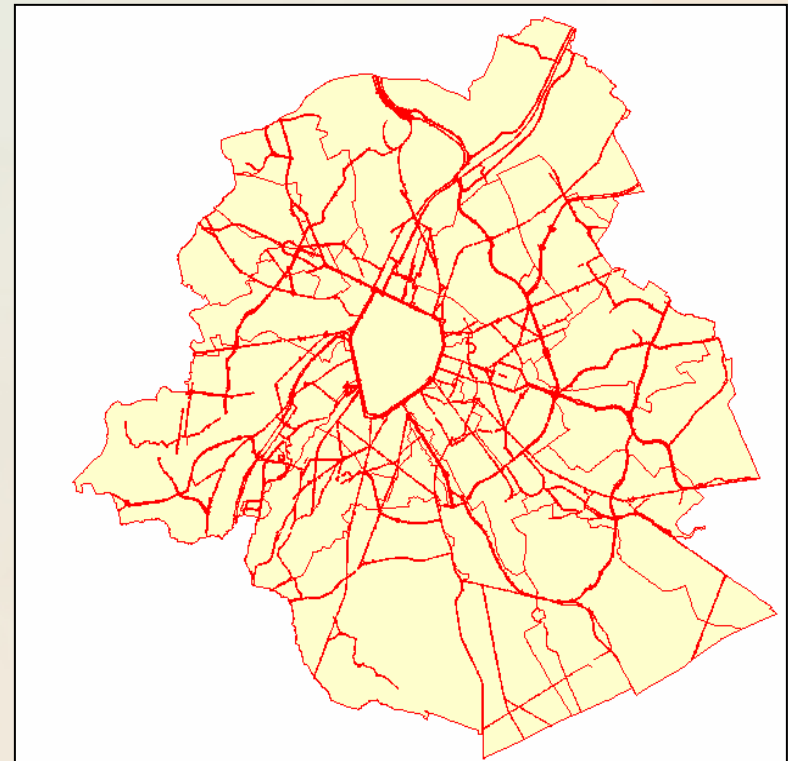
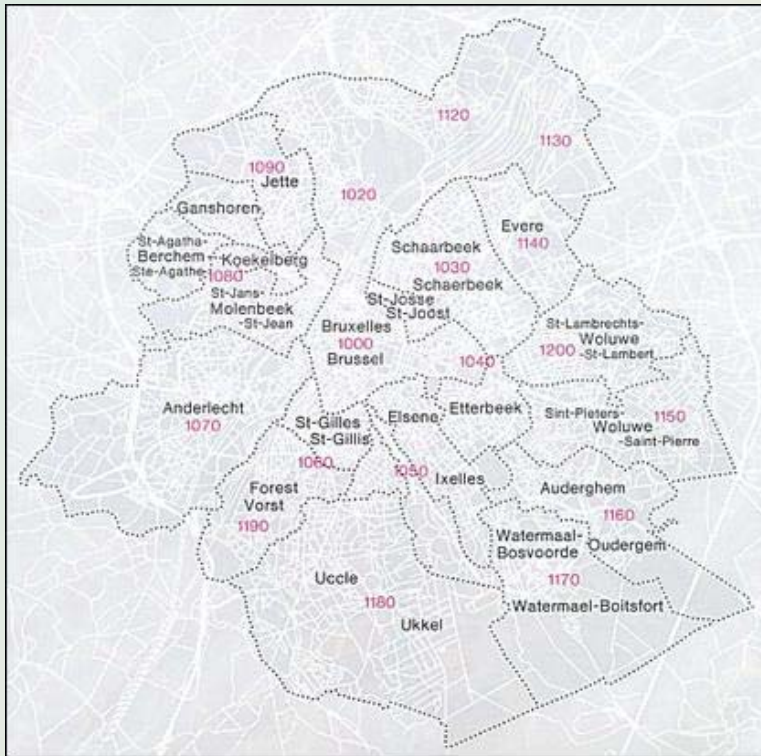
- Brussels-Capital Region: (=12 communities)
- Length of public road network: 1,875,677 km
- Inhabitants: 964,405
- Commuters: 400,000



As of 2001

Subdividing the Municipal Road Network/ Bruxelles-Propreté

- Streets maintained by the 19 municipalities: 1,352 km
- Regional streets and streets taken on from municipalities which are maintained by the agency: 396 km



The Agency: Bruxelles-Propreté

- Staff: 1,907
- Fleet: 548 vehicles
- Infrastructure: 7 units and one head office
- Treatment facility, incinerator, sorting plants (paper, plastics..), composting facility operated by subsidiaries
- Budget : 141,895,000 €



Agents Involved in Cleaning

- Bruxelles-Propreté : collects household waste, treats waste, and cleans streets and sidewalks in the region
- 19 municipalities
- In addition:
 - IBGE (Institute for Environmental Management in Brussels):
 - in charge of cleaning regional greens, parks and the Soignes forest
 - AED (management and equipment of vehicles)
 - in charge of cleaning tunnels and collecting public litter bins



Cleaning Tasks Performed by Bruxelles-Propreté

1. Manual sweeping of gutters and sidewalks



2. Mechanical cleaning of gutters and sidewalks



← Accompanied by human sweeper

Unaccompanied (expressways) →



3. Maintenance of gullies

- Cleaning intervals : 4 times a year on average
More often in case of heavy rainfalls or impending floods
- Number of gullies to take care of per day and unit:
80 to 120 depending on traffic

Bruxelles-Propreté: 15,500 gullies

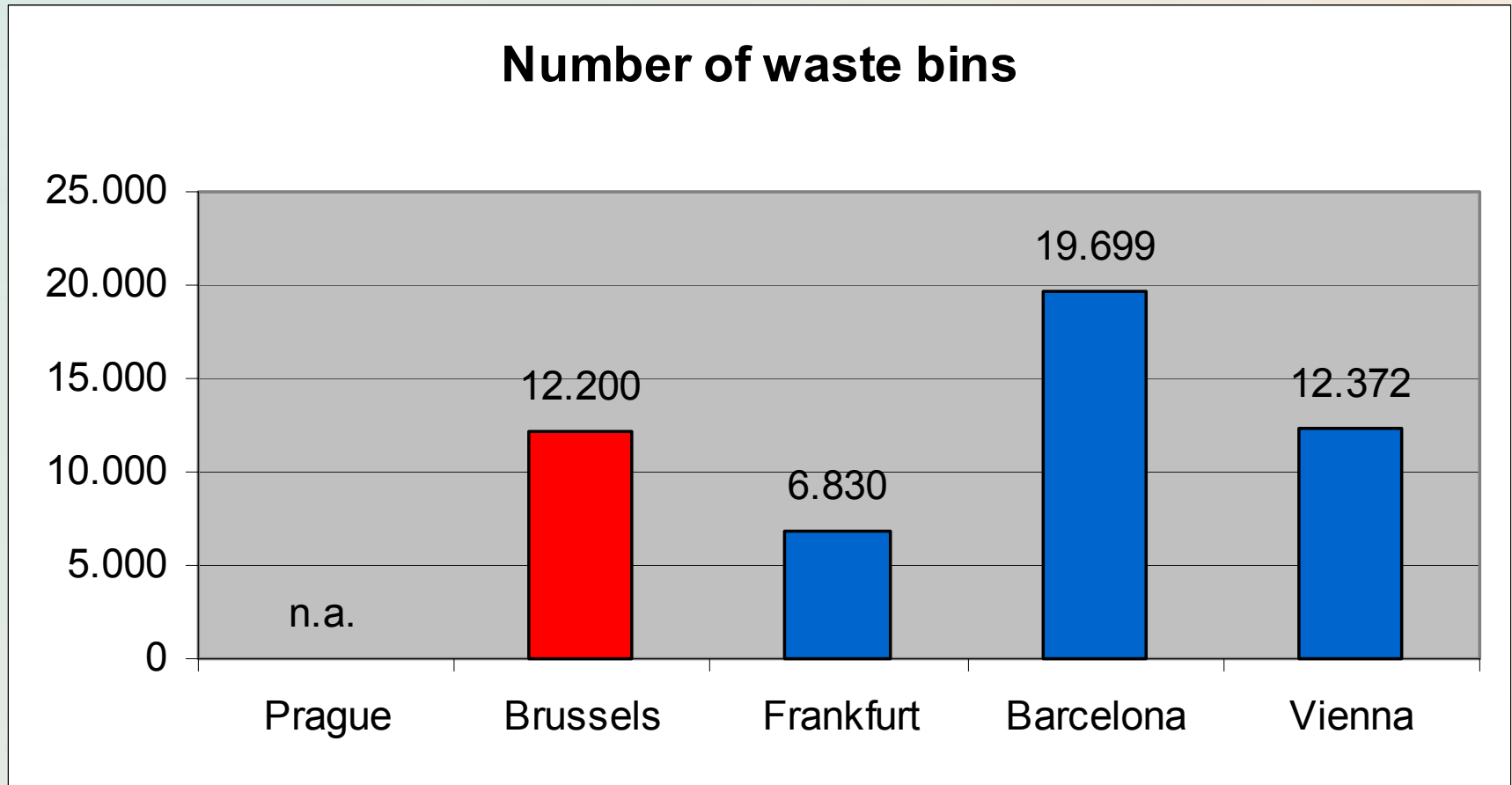


4. Emptying of municipal waste bins

- Total number of waste bins to be emptied by Bruxelles-Propreté: 4,460
- Collection cycle of bins: depends on the (pre-defined) street type:
 - Twice a day
 - Twice a day
 - Every other day



Data on Litter Bins



5. Removal of graffiti and illegal bills on public buildings



Our approach: avoid chains of action and reaction (behavioral study of graffiti sprayers)



6. Collection of fly-tipped waste

Key hubs and important public places are checked daily;
7 trucks with grippers and 3 pick-ups are available.



7. Leaf collection (seasonal)



Cleaning vehicle sucks up leaves



Truck equipped with sucking device for leaves



8. Special tasks

8.1. High-pressure cleaning systems for sidewalks, streets and squares



8.2. Degreasing and disinfection (unpleasant odor) of places or building fronts



8.3. Removing chewing gum



8.4. Extra jobs

- Cleaning at tramway stops, designated dog areas, subway exits
- Cleaning after events : 20km Brussels marathon, national holidays
- Cleaning after markets on Saturdays and Sundays
- Spring cleaning and campaigns together with municipalities



Clean-up after the 20km-Brussels semi-marathon



Overview: Responsibilities

Area:	Yes	No	Sometimes
Public roads			X
Expressways in urban area	X		
Roadside green			X
Sidewalks			X
Pedestrian zones			X
Railway stations		X	
Subway stations			X
Municipal parks			X
Area around recycling containers			X

Methodology

1. Definition of the street type based on the amount of traffic

- A: Busy street with housing estates and popular shops:
 - A1: 13 times/week A2: 12 times/week
- B: Busy street with housing estates and small businesses:
 - B1: 6 times/week B2: 5 times/week
- C: Residential street with housing estates: 3 times a week
- D: Residential street with one-family houses: twice a week
- E: Road with isolated one-family houses: once a week
- F: Street in populated industrial area: twice a week
- G: Street in uninhabited industrial area : twice a week
- H: Expressways (uninhabited) 3 times a week



2. Identifying "showcase" areas

- Streets or places where a high level of cleanness should be maintained

3. Identifying problematic areas

- Streets or places with recurring problems, requiring new solutions.
- Outside help with cleaning (more checks, threat of punishment)
- Narrowing cleaning intervals

4. Analyzing indicators of cleanness and setting performance goals

- Follow-up the complaints voiced via "Hello Cleanness" (toll-free hotline maintained by the agency)
- Inspectors report on activities after on-site checks
- Steering committee for the cleaning services performed by the 19 municipalities



Employees - Street Cleaning

Employees in head office	38
Employees in administration/ supervision in districts	8
Employees in mechanical cleaning	118
Number of full-time street sweepers	311
Total number of employees	475



4 Cleaning Districts

Berchem

Molenbeek

Bempt

Triomphe

Goals: location near cleaning sites, increase in efficiency

Organization and Work Schedule

- On duty : 7 days a week
- 52 weeks a year

Hours of Work

- Monday - Friday:
 - 5 am-11:30 am
 - 6:30 am -1 pm
 - 1:30 pm - 8 pm
 - 6:30 pm - midnight
- Saturday & Sunday:
 - 6:30 am -11:15 pm
 - 1:30 pm - 6 pm
- Holidays
 - regular hours, voluntarily



Staff Roster

- Morning: 5 am - 11:30 am 50 workers
 - Mechanical sweeping
 - Gutter cleaning
 - High-pressure cleaning
 - Disinfection of bins, at train stations ...
- 6:30 am - 1 pm 279 workers
 - Manual and mechanical sweeping
 - Bin emptying
 - Collection of dumped waste and removal of graffiti



Staff Roster

- Afternoon: 1:30 pm - 8 pm 118 workers
 - Manual and mechanical sweeping
 - Emptying, gutter cleaning
 - Bin emptying
 - Collection of dumped waste
- Night: 6:30 pm - midnight 36 workers
 - Mechanical sweeping

N.B. - Mechanical sweeping accompanied by human sweeper (manual pre-sweeping) (exception: expressways)

- Typically, mechanical cleaning by teams of 3-4 workers
- Maintenance & treatment of building fronts



Who Works on Weekends?

The staff roster is posted 3 months in advance

- Obligatory: every 3rd Saturday, but Wednesday off instead
- Contractual: 2 days off (Thursday, Friday), but on duty every third weekend

The staff roster is set up with a view to avoiding overtime. Workers on weekend duty work less than those on weekdays.

This means:

- | | |
|-------------|----------------------------|
| • Wednesday | X= 1/3 of workers off duty |
| • Thursday | Y= 1/3 of workers off duty |
| • Friday | see Thursday |
| • Saturday | X + Y on duty |
| • Sunday | Y on duty |

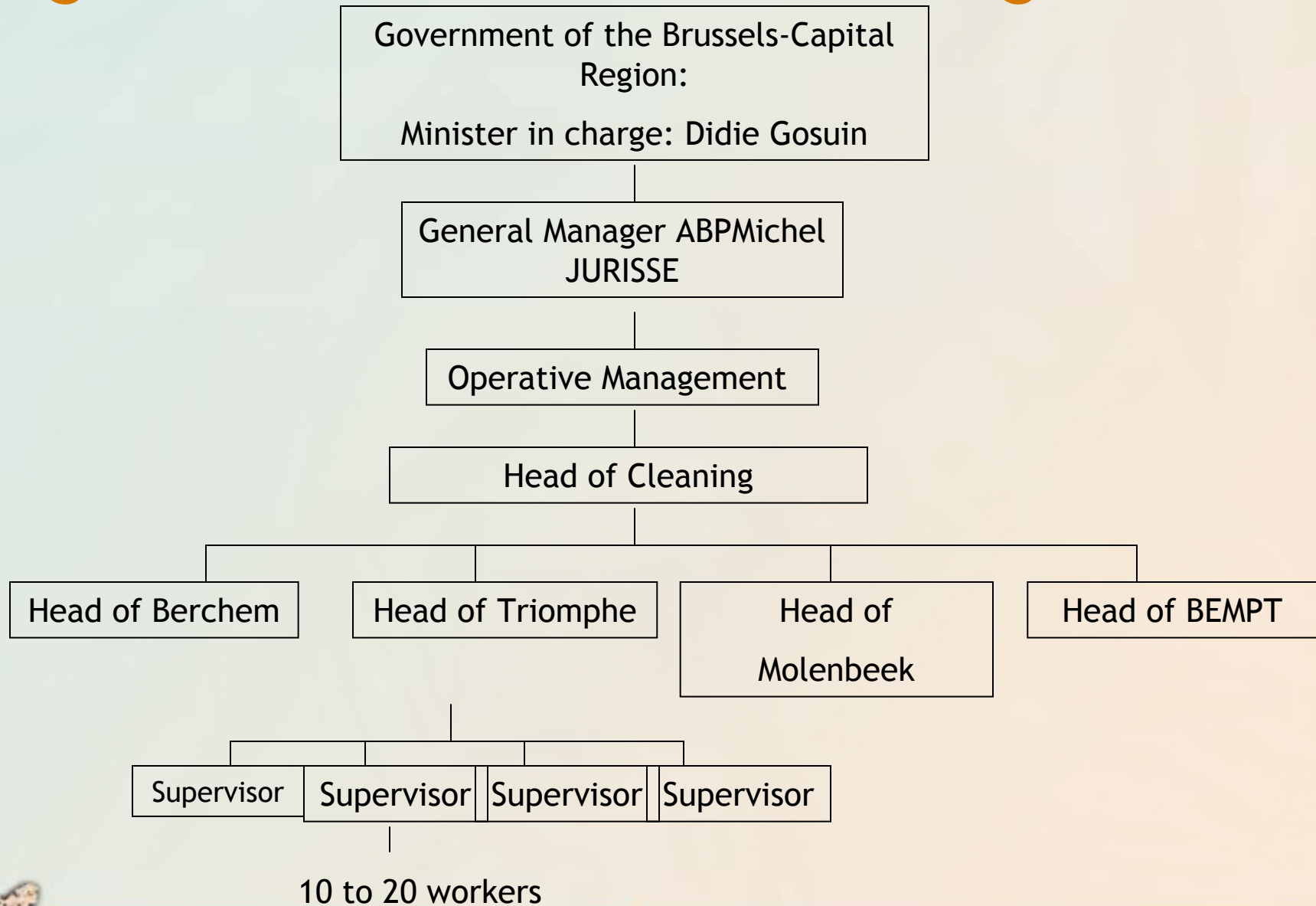


Staffing Considerations

- Priority: transferring older workers (50 years) from collection to cleaning
- Cleaning activities in run-down neighborhoods as part of rehabilitation programs
- Internal training
 - Driver's license for trucks (for those interested)
 - Driving lessons by in-house training staff for all vehicles



Organization Chart of the Cleaning Division



- For every street maintained by the agency, the following information is available:
 - The type of street
 - Which district is responsible for emptying waste bins
 - The days of manual and/of mechanical cleaning as well as the district responsible for it
- When complaints are voiced via the hotline, the district or the team responsible can be identified easily.
- On weekends
 - Cleaning of streets which have to be cleaned 6 or 7 days a week and cleaning of traffic hubs which can be cleaned more easily at that time (less traffic)
 - Cleaning after markets, flea markets, and festivals



					Vidange corbeilles								Balayage manuel								Balayage mécanique								
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C	C1	BXL	ABBAYE (RUE DE L')	du n° 1 au n° 13 et du n° 2 au n° 4									AM	AM	AM	AM	AM				Triomphe								
E	C1	BXL	ABEILLES (AVENUE DES)										PM	PM	PM	PM	PM				Triomphe								
A2	SC	JOS	AERSCHOT (RUE D')		AM	AM	AM	AM	AM			Berchem	AM	AM	AM	AM	AM				Molenbeek	AM	AM	AM	AM	AM			Berchem
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B2	R	FOR	ALBERT (PLACE)		Fait par équipe manuel							Molenbeek	AM		AM		AM				Molenbeek	AM	AM	AM	AM	AM			Berchem
B1	R	AND	ALBERT 1ER (SQUARE)		AM	AM	AM	AM	AM			Berchem	PM	PM	PM	PM	PM	PM			Molenbeek	AM	AM	AM	AM	AM			Berchem
C	R	BXL	ALBERT II (BOULEVARD DU ROI)		AM	AM	AM	AM	AM			Berchem	AM	AM	AM	AM	AM				Berchem	S	S	S	S	S			Berchem
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A1	C1	BXL	ALBERTINE (PLACE DE L')		AM	AM	AM	AM	AM	AM	AM	Berchem	AM	AM	AM	AM	AM	AM	AM	AM	Berchem								
A1	C1	BXL	ALBERTINE (PLACE DE L')										PM	PM	PM	PM	PM	PM			Molenbeek								
D	C1	BXL	ALLARD (RUE ERNEST)		AM	AM	AM	AM	AM	AM	AM	Berchem	AM	AM	AM	AM	AM	AM			Berchem								
A2	SC	SCH	ALLARD (RUE)										S	S	S	S	S				Berchem	S	S	S	S	S			Berchem
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D	R	BXL	ANDERLERCHT (PORTE D')		AM	AM	AM	AM	AM			Berchem	AM		AM		AM				Molenbeek	AM	AM	AM	AM	AM			Berchem
B2	R	BXL	ANVERS (BOULEVARD D')		AM	AM	AM	AM	AM			Berchem	AM	AM	AM	AM	AM				Berchem	AM	AM	AM	AM	AM			Berchem
B2	C1	BXL	ANVERS (CHAUSSEE D')	de Porte	AM	AM	AM	AM	AM			Berchem	AM	AM	AM	AM	AM				Berchem	S	S	S	S	S			Berchem
D	R	BXL	ANVERS (PORTE D')										AM	AM	AM	AM	AM				Berchem	S	S	S	S	S			Berchem
D	C1	BXL	ARBRE (RUE DE L')										AM	AM	AM	AM	AM	AM			Berchem								
E	R	JET	ARBRE BALLON (AVENUE DE L')		AM	AM	AM	AM	AM			Bempt		AM		AM					Molenbeek								
C	C1	BXL	ARBRE BENIT (RUE DE L')										AM	AM	AM	AM	AM				Triomphe								
B2	C1	BXL	ARCHIMEDE (RUE)	de rue S	AM	AM	AM	AM	AM			Triomphe	AM	AM	AM	AM	AM				Triomphe								
C	C1	BXL	ARDENNE (RUE D')										AM	AM	AM	AM	AM				Triomphe								
C	C1	XL	ARDENNE (RUE D')										AM	AM	AM	AM	AM				Triomphe								
B1	C1	BXL	ARENBERG (RUE D')		AM	AM	AM	AM	AM	AM	AM	Berchem	AM	AM	AM	AM	AM	AM	AM	AM	Berchem								

Problems Encountered

A. Vehicles parking along the sidewalks

Solutions:

- a) Manual sweeping or sucking with glutton
- b) Putting up "No Parking" signs by authority

B. Collection of street sweepings

Done in 2 ways:

- The sweepings are collected in bags and disposed of by the collection teams.
- The sweepings are collected in bags and disposed of by the sweeping teams.



Problems Encountered (continued)

C. Fly-tipping

1. Bulky waste

In particular in isolated residential areas and in older housing estates with low-income residents or immigrants

2. People set out waste bags, ignoring the collection cycles

3. Bins overflowing with shopping bags full of waste

4. etc...

Solutions:

- Information campaigns using all media to prevent fly-tipping and raise awareness
- Information bus (fairs, schools, festivals,...)
- Repression (24 inspectors, 7 days a week)



**ET DANS LA RUE,
ÇA VOUS CHOQUE MOINS?**





CLEANER CITIES - CLEANER ENVIRONMENT
From Littering to Producer Responsibility



ARA SYSTEM
Verpackung • Schrott • Baustellen • Deponien

StoDt Wien
Wien ist anders.