

1. Facts and figures

Supplement on the data supplied in the COST-excel sheet.

1. DEMOGRAPHY

Population per age group and gender (1947 - 2005)

Statistics:

Number
of
persons

age groups	1947		1961		1970		1981	
	male	female	male	female	male	female	male	female
0 - 4	326876	314281	391798	372996	363945	347490	312166	297798
5 - 9	267675	261916	370714	354902	403254	385561	330073	314157
10 - 14	293876	287869	356664	343342	394508	378001	367568	350721
15 - 19	327661	322894	308168	297300	371025	356728	405541	388975
20 - 24	347830	331752	276681	274763	369148	353797	404061	387492
25 - 29	308108	295977	301371	301028	293822	282582	382193	365251
30 - 34	266378	260204	327286	326266	298698	292935	372256	355561
35 - 39	324841	321999	333572	333835	316130	313572	294464	285087
40 - 44	329780	330556	259836	263454	323775	325277	288462	286969
45 - 49	313145	322033	273708	279184	324392	330538	302871	305514
50 - 54	265038	290649	294798	308618	221470	230305	304570	314341
55 - 59	221168	249040	284050	306746	261068	281784	293917	313875
60 - 64	197830	222930	243201	282316	249036	286395	192411	217060
65 - 69	165916	190535	181758	234246	213799	268236	200314	248856
70 - 74	126054	149597	132160	178553	152515	217373	163844	235577
75 - 79	73274	92656	90712	127065	91625	148335	110871	188076
80 - 84	33096	47300	48899	71638	48696	83589	57254	116380
85 +	11182	20279	21484	36629	24960	46580	27513	66608
total	4199728	4312467	4496860	4692881	4721866	4929078	4810349	5038298

Source: N.I.S. (see attachment ...)

Collection method:

The demographic figures of the years 1947, 1961, 1970 and 1981 are obtained from the national population surveys.

Quality of the data:

reliable.

Statistics:

Number
of
persons

age groups	1990		1995		2000		2005	
	male	female	male	female	male	female	male	female

0 - 4	303778	288095	314635	300415	294737	282480	294007	280852
5 - 9	308964	294533	308913	293561	317666	303443	300733	288381
10 - 14	310020	295770	311827	297479	310885	295574	322751	308134
15 - 19	342484	327459	312857	300040	313851	301328	316197	302986
20 - 24	378061	363368	348907	337554	317805	310936	322980	318785
25 - 29	411075	395406	386282	370940	353412	344823	330174	325588
30 - 34	397581	384215	414298	400062	386574	374332	363568	355929
35 - 39	370347	356104	397160	386005	411345	400595	392326	381393
40 - 44	352954	340795	367471	356056	391774	384843	411790	403202
45 - 49	271720	267656	347966	338887	360506	353118	388331	384131
50 - 54	280222	285548	265778	264825	339112	334404	353204	350288
55 - 59	287394	302005	270123	280337	255179	259531	327606	328880
60 - 64	264704	293465	269061	292590	254031	271708	241411	252725
65 - 69	236239	285254	236224	278928	242498	278918	232943	261048
70 - 74	122398	168296	196996	262286	199636	258179	210618	261133
75 - 79	119153	197241	91126	144727	150721	228643	157636	228470
80 - 84	66892	140983	73999	149519	58361	111732	101291	180782
85 +	36113	101490	41048	121692	47921	138484	43759	121820
totaal	4860099	5087683	4954671	5175903	5006014	5233071	5111325	5334527

Source: Algemene Directie Statistiek en Economische Informatie, FOD Economie, KMO, Middenstand en Energie (internet link: <http://ecodata.mineco.fgov.be/mdn/bevolking.jsp>)

Collection method:

The demographic figures of the years 1990, 1995, 2000 and 2005 are obtained from the data of the national register of natural persons.

Quality of the data: (to be translated?)

De kwaliteit van het uiteindelijke resultaat is afhankelijk van die van elke schakel in de ketting : de gemeenteregisters, de verzending naar het Rijksregister, het beheer bij het Register en de verwerking bij het NIS. De gemeenteregisters vormen de theoretische informatiebasis en moeten dus worden beschouwd als de beste bron, ook al zijn ze niet perfect. In dit stadium kan er een overschatting van de bevolking ontstaan, doordat personen die naar het buitenland zijn verhuisd nog in de registers voorkomen. De gemeenten gaan immers niet altijd na of alle personen die zijn ingeschreven, wel degelijk op hun grondgebied verblijven. Als de gemeente geen weet heeft van die afwezigheden, zal haar aangifte over de loop van de bevolking aan het NIS natuurlijk in dezelfde mate fout zijn. Aan de andere kant - en dit komt meer bepaald voor in bepaalde steden en in verstedelijkt gebied - verblijven er ook niet-aangegeven personen, hetgeen tot een onderschatting leidt. Het verzenden naar het Rijksregister kan enige vertraging veroorzaken, maar het is weinig waarschijnlijk dat fouten in de strikte betekens van het woord daar hun oorzaak vinden, behalve dan misschien in die gevallen waar men die bewerkingen (en het informaticabeheer van de gemeente) in "onderaanneming" heeft gegeven. Over het algemeen blijkt de toestand bevredigend te zijn, na een aanlooperperiode die door iedereen blijkbaar goed werd verteerd. Bij de verwerking op het Rijksregister kunnen correcties worden aangebracht door informatie uit de verschillende gemeenten onderling te vergelijken. Zodoende kunnen dubbeltellingen als gevolg van gelijktijdige inschrijving in twee gemeenten worden uitgeschakeld, en kunnen personen die ambtshalve door hun gemeente van oorsprong werden geschrapd, in een andere gemeente worden teruggevonden. De laatste jaren werden de registers degelijk gezuiverd, vooral dankzij de vernieuwing van de identiteitskaarten. Daardoor is het risico voor dubbele inschrijvingen bijna volledig verdwenen, behalve dan bij bepaalde buitenlanders die bij twee

opeenvolgende inschrijvingen telkens een andere naam en geboortedatum hebben opgegeven. Een belangrijke kwaliteitsfactor van de gegevens uit het Rijksregister en daardoor ook van de statistiektabellen die wij opstellen, is hun transparantie : verbeteringen aan het bestand kunnen onmiddellijk op het niveau van de individuele inlichtingen worden aangebracht, waardoor ze duidelijk identificeerbaar zijn, hetgeen niet het geval is bij de geglobaliseerde aangiften van de gemeenten.

Population prognoses (2010 - 2040)

Statistics:

Number of persons

age groups	2010		2020		2030		2040	
	male	female	male	female	male	female	male	female
0 - 4	283001	268179	287344	272346	282061	267125	277405	262653
5 - 9	292286	277074	288176	273225	291614	276290	283335	268433
10 - 14	303697	289815	291306	276061	295873	280413	290768	275330
15 - 19	321504	308584	299987	286167	296228	282584	299664	285682
20 - 24	330793	322450	317620	310942	305766	297657	310417	302140
25 - 29	333367	324892	343362	335601	323152	314114	319869	310868
30 - 34	341728	333967	349585	340155	337652	329492	326614	317008
35 - 39	351944	343785	340860	332236	351001	343114	331886	322482
40 - 44	377656	368842	339786	333565	348269	340200	337205	330133
45 - 49	401513	395210	344819	338846	335711	328572	346467	339716
50 - 54	382339	379535	366350	360229	332613	327474	342270	334966
55 - 59	346074	347561	383950	383479	333634	330692	327374	322169
60 - 64	320503	328527	357463	365170	347437	348417	319130	318703
65 - 69	231285	250278	311068	328887	352210	365899	311273	317748
70 - 74	201668	241476	267887	301622	309595	340327	309002	328384
75 - 79	164131	227296	170660	216465	239988	290915	283117	330079
80 - 84	108386	185818	116750	181390	166045	236544	204272	277141
85 +	70412	174114	94871	215598	114186	231424	176293	324636
 totaal	5162287	5367403	5271844	5451984	5363035	5531253	5396361	5568271

Source: N.I.S. (internet link: http://statbel.fgov.be/pub/d2/p231y2000-2050_nl.pdf)

Collection method: (to be translated?)

Voor de bevolkingsvooruitzichten van het Nationaal Instituut voor de Statistiek (NIS) en het Federaal Planbureau (FP), hierna afgekort als NIS-projecties, zijn volgende elementen vermeldenswaard:

"De vier grote factoren die de evolutie van de bevolking beïnvloeden – overlijdens, geboorten, externe en interne migratie – worden achtereenvolgens in aanmerking genomen. De bewegingen worden doorgaans berekend door aan de woonbevolking die aan het 'risico' onderworpen is, een probabiteit toe te kennen dat de gebeurtenis zich ook werkelijk voordoet."

Werkwijze: iteratief, jaar na jaar, berekenen van de voorspelde toestand op 31 december van het jaar t als resultaat van de toepassing van de verschillende bewegingen gedurende kalenderjaar t op de bevolking van 31 december van het jaar t-1.

Wordt achtereenvolgens in aanmerking genomen:

1. Veroudering van de bevolking op basis van sterftetekansen Qx (basis sterfte 1988-1997) => aantal sterfgevallen in jaar t.
2. Vruchtbaarheid (gedefinieerd als het percentage vrouwen dat op een bepaalde leeftijd een kind krijgt binnen het jaar; basis geboorten 1989-1994). Deze vruchtbaarheidscijfers worden vervolgens toegepast op de overeenkomstige vrouwelijke bevolking, wat het aantal geboorten levert in jaar t, na aftrek van de sterfgevallen bij geboorte.
3. Interne migraties (berekend op basis van de kans te emigreren naar een andere arrondissement, per arrondissement en per leeftijdsgroep).
4. Externe migraties met het buitenland (emigratiekans per arrondissement, samen met hypothetische waarden aangaande immigratie naar geslacht, leeftijd en arrondissement van aankomst op basis van een historische trendanalyse).
5. Kans tot naturalisatie op de in België woonachtige vreemde bevolking, waarbij ook rekening werd gehouden met de regularisatiecampagne in 2000.

Quality of the data:

De wetenschappelijke omkadering staat wel borg voor een gedegen aanpak. Op initiatief van het Federaal Planbureau en het NIS werd een multidisciplinaire ploeg samengesteld om het project te begeleiden met vertegenwoordigers of afgevaardigden van de universiteiten, de federale en regionale openbare statistiekinstellingen, het Federaal Planbureau en Eurostat.

2. TRANSPORT AND TRAVEL DATA

Statistics of vehicles

FOD Economie - Algemene Directie Statistiek en FOD Mobiliteit en Vervoer (DIV).
Federal public service Economy – Directorate General of Statistics and Federal public service of Mobility and Transport (DIV)

Collection method

Nog niet opgezocht

Quality of the data

Reliable

Data:

Statistics were added in excel-sheet

Statistics on general travel data in Belgium:

Nationale enquête naar de mobiliteit van de huishoudens (1998-1999), gefinancierd door de POD Wetenschapsbeleid, het Brussels Hoofdstedelijk Gewest en het Waals Gewest, gerealiseerd door de Groupe de Recherche sur les Transports des Facultés Universitaires Notre-Dame de la Paix (coördinator), Langzaam Verkeer, het Institut Wallon, de Universitaire Instelling Antwerpen en de Algemene Directie Statistiek.

National households survey on mobility (1998-1999), financed by the Belgian Federal Science Policy, Brussels Capital Region, Walloon Region, realised by Groupe de Recherche sur les Transports des Facultés Universitaires Notre-Dame de la Paix (Transport Research Group, coordinator), Langzaam Verkeer, Institut Wallon (Walloon Institute), Universitaire Instelling Antwerpen (University of Antwerp) and the Directorate General of Statistics.



Collection method

The first national household survey on mobility took place from December 1998 to November 1999. Regarding the carrying out of the survey, the retained protocol was composite. It has combined a questionnaire, sent by the post, to be filled by the surveyed and some telephone contacts to heighten the surveyed, to help him to fill the questionnaire and to validate the answers once the questionnaire was sent back. The persons who did not answer the first invoice were contacted once more by telephone, this method allowed to raise the answer rate from 32 % to 45 %. The results of the survey were then balanced by the INS to take into account the initial stratification of a sample by province on one hand and, on the other hand, the slightly changes into the demographic and temporal distributions of the sample induced during conducting the survey.

Quality of the data

reliable

Data

Available statistics from http://www.statbel.fgov.be/port/mob_nl.asp were added in excel-sheet

Additional data:

“Physical difficulties for travelling

Up to 70, only 10 % of the people declare to have difficulties to get on and off the cars or different public transportation but also to reach the trains, bus stops... Beyond this age, public transportation seem leading to more difficulties than the car. After 80, the majority of people do not use the car. It is interesting to underline that bicycle and walking remains mostly used transportation modes for people under 70.”

Source: “NATIONAL HOUSEHOLD SURVEY ON MOBILITY, Realization and results Summary of final report, April 2001”. The Prime Minister’s Services Federal Services for Scientific, Technical and Cultural Affairs. Available on http://www.belspo.be/belspo/home/publ/pub_ostc/mobil/rapp18syn_en.pdf

Pedestrian statistics in Flemish region

www.thuisindestad.be

Questionnaire of a representative sample of inhabitants of 13 main cities in Flanders in 2004.

Percentage of inhabitants per city usually walking for leisure or work/education.



Aandeel (%) van de inwoners dat zich meestal te voet verplaatst		
	Tijdens vrije tijd	Naar en van het werk / de school
Aalst	13,01	4,53
Antwerpen	14,84	8,13
Brugge	11,45	3,82
Genk	8,04	3,05
Gent	13,70	5,97
Hasselt	9,66	5,71
Kortrijk	12,32	6,40
Leuven	16,31	9,26
Mechelen	12,57	5,61
Oostende	22,14	7,53
Roeselare	12,02	7,37
St.-Niklaas	6,82	4,73
Turnhout	17,03	3,91

Source: stadsmonitor

<http://www.thuisindestad.be/scripts/stadsmonitor/overview.asp>

Collection method:

Questionnaire by telephone, 7899 people questioned in 2004

Scale: city level

Quality of the data:

Reliable

Flemish travel surveys

% of trips on foot per city region and in Flanders

Aandeel van de verplaatsingen (%) te voet	
Aalst	13,7
Antwerpen	17,3
Gent	13,7
Hasselt-Genk	9,2
Leuven	18,6
Mechelen	13,8

Collection method:

Questionnaire of 2500 people per city region by telephone and mail or solely by mail.

Survey held for the Flemish region (in 1994/1995 and in 2000/2001), in city-regions Antwerpen (april 1999 - april 2000), Hasselt-Genk (april 1999 - april 2000), Gent (jan. 2000 and jan. 2001), Aalst (december 2000 - december 2001), Leuven (december 2000 - december 2001) and Mechelen (december 2000 - december 2001).



Quality of the data:
reliable

Pedestrian countings

<http://www.fastigon.com>

Fastigon executes on a regular basis pedestrian countings within city centers since 1995. Fastigon does also tailormade countings on request. Thanks to technological evolution, Fastigon collaborates with third parties to install counting systems in shops or traffic points.

In the following table is listed a glimpse of the latest countings of october 2002 for 23 city centers. The results are ranked per city center's population within a 15 minutes drive time area. The prime catchment ratio gives a performance rating. By clicking on one of the 23 cities listed below, you will get the most referential shopping streets (maximum five) of that city center together with the number of visitors on a weekly basis.

City	Street	Population 15 min drive time	Visitors*	Ratio**
ELSENE	Elsenesteeweg-Chee d'Ixelles	650000	110000	0,17
BRUSSEL / BRUXELLES	Nieuwstraat-Rue Neuve	510000	220000	0,43
LIEGE 1	Vinàve d'Ile	270000	190000	0,70
ANTWERPEN 1	Meir	250000	240000	0,96
CHARLEROI	Rue de la Montagne	240000	90000	0,38
GENT	Veldstraat	230000	150000	0,65
LA LOUVIERE	Rue Albert Ier	160000	80000	0,50
KORTRIJK	Lange Steenstraat	140000	50000	0,36
LEUVEN	Diestsestraat	130000	110000	0,85
BRUGGE	Steenstraat	120000	170000	1,42
MECHELEN	Bruul	120000	90000	0,75
AALST	Nieuwstraat	120000	110000	0,92
GENK	Rootenstraat	110000	60000	0,55
SINT-NIKLAAS	Stationsstraat	110000	70000	0,64
VERVIERS	Place Verte	100000	60000	0,60
HASSELT	Hoogstraat	90000	140000	1,56
NAMUR	Rue de Fer	90000	150000	1,67
MONS	Grand Rue	90000	110000	1,22
OOSTENDE	Kapellestraat	80000	140000	1,75
ROESELARE	Ooststraat	80000	70000	0,88
TURNHOUT	Gasthuisstraat	70000	130000	1,86
TOURNAI	Grand Place	60000	60000	1,00
KNOCKE	Lippenslaan	40000	50000	1,25

*total week

**prime catchment ratio

3. (URBAN) LAND USE

Homes

Statistics:

Vehicles	1947	1961	1970	1981	1991	2001
Homes (number)	2816000	3016000	3223000	3600000	3748000	4249000

Source: FOD Economie - Algemene Directie Statistiek en Economische Informatie, Volkstellingen en Algemene socio-economische enquête 2001
(internet link: http://www.statbel.fgov.be/figures/d132_nl.asp) + see attachment...

Collection method:

The figures of the years 1947, 1961, 1970, 1981 and 1991 are obtained from the national population surveys. The figure of the year 2001 is obtained from the General Socio-Economic Survey 2001.

Definition:

Homes can be described as follows: private non-mobile houses which are inhabited as main residence.

Quality of the data: reliable.

Shops

No data found.

Shopping centres

Statistics:

Vehicles	1950	1960	1970	1980	1990	1995	2000	2003
Shopping centres (number)	1	1	7	18	21	27	31	34

Source: Koninklijk Belgisch Comité voor de Distributie (see attachment...)

Collection method:

The number of shopping centres for each year is derived from a table which contains all shopping centres in 2003 with year of opening.



Definition:

A shopping centre is a cluster of points of retail sale, conceived, realized and exploited as a unit of sale. Only shopping centres with a surface of at least 10.000 m² are taken into account.

Quality of the data:

reliable.

We assume that shopping centres seldom disappear.

Schools

Data available, will be completed.

Hypermarkets**Statistics:**

Vehicles	1971	1980	1990	1995	2000	2002
Hypermarkets (number)	46	77	92	81	78	76

Source: Koninklijk Belgisch Comité voor de Distributie en FEDIS (see attachment...)

Collection method:**Definition:**

A hypermarket is an establishment of detail whose surface of sale is higher than 2500 m², which offers a wide assortment of food and non-food, which practices an aggressive pricing policy and which has a vast car-park for its customers.

Quality of the data:

reliable.

Enterprises

Data available, will be completed.

Kilometres roads (all)**Statistics:**

Vehicles	1971	1981	1991	1995	2000	2005
Kilometres roads (all)	94218	124589	140241	143175	147121	151372

Collection method:**Definition:**

'Kilometres roads' is the total length in kilometres of the following type of roads: regional, provincial and urban roads.

Kilometres urban roads**Statistics:**

Vehicles	1971	1981	1991	1995	2000	2005
Kilometres urban roads	82109	110258	124100	127600	131520	135745

Collection method:**Definition:**

'Kilometres urban roads' is the total length in kilometres of all urban roads in Belgium.

Crossroads/intersections

No data found.

Pedestrian crossings

No data found.

KM2 parks + gardens

Data available, will be completed.

KM2 urban area

Data available, will be completed.



4. HEALTH DATA

Health interview survey (HIS)

By the Scientific Institute of Health, part of the FPS (Federal Public Service, FOD) Health, Food chain security and Environment in collaboration with NIS (National Institute of Statistics).

In 1997, 2001, 2004.

Method:

- Sample of all inhabitants of Belgium, stratified per region, province and community, and constructed on the basis of the National Register using the household as sample unit
- Sample of more than 10.000 respondents (with the possibility of an oversampling of provinces and/or specific groups)
- Instruments : three sorts of questionnaires :
 - o Oral questionnaire to be filled out by the household
 - o Face to face questionnaire to be filled out by each selected person (with a maximum of 4 persons per household), this could also be filled out by a proxy)
 - o Written questionnaire to be filled out by each selected person over 15 years (this could not be filled out by a proxy)

<http://www.iph.fgov.be/epidemiologie/epien/PROG4.HTM>

Quality of the data:

Reliable

Data

Available statistics from http://www.statbel.fgov.be/port/hea_nl.asp were added in excel-sheet

Sick Leave

Data on sick leave is supplied by a survey made by SD works. Sick leave percentage, frequency of sick leave and average length of sick leave were determined.

Survey was held in 2001-2002-2003-2004 and 2005. Data of over 400.000 workers and employees and over 12.000 employers in private enterprises was taken. (2005 : 13.217 employers of private enterprises; in 2004: 12.404; in 2003: 11.598; in 2002: 10.652; in 2001: 9.751 in 2001) and 445.463 employees in 2005 (426.935 in 2004, 390.120 in 2003, 346.538 in 2002 and 335.106 in 2001).

No one-man business, and no employees with special employments contracts were included.

Quality of the data:

Reliable

Data

Available statistics from http://www.statbel.fgov.be/port/hea_nl.asp were added in excel-sheet



About permanent disorders

European Community Household Panel (ECHP), Eurostat.

Quality of the data:

Reliable

Data

Available statistics from http://www.statbel.fgov.be/port/hea_nl.asp were added in excel-sheet

5. TIME SPENDING

Time budget research in 1999 and 2004. Research center TOR (VUBrussel) for Federal public service of Economy – Directorate General of Statistics.

Method:

1999: The data for the Belgian time use survey were collected by the NIS from 3 December 1998 to 6 February 2000. Complete data were collected from 8,382 respondents, aged 12 to 95 years, living in 4,275 household units. These data were collected by means of a diary and an individual questionnaire.

A new survey was held in 2004.

Quality of the data

reliable

Data

Available statistics from <http://www.statbel.fgov.be/surveys/tus.asp> were added in excel-sheet

6. SAFETY

Accident statistics Source:

Federal Public Service Economy, SMEs, Self-employed and Energy (FOD Economie, KMO's,

Method:

Based on information on the "Analysis form for traffic accidents with fatalities or casualties", collected by the police at the scene of traffic accidents involving dead or injured persons.

Quality:

Under-registration of severely injured persons in traffic accidents statistics was documented by Lamar, P. (2006). In two regions, only 43% to 60 % of the severely injured persons was registered in official traffic statistics.



Source: Lamar, P. (2006). Casestudies onderregistratie van ernstig gewonde verkeersslachtoffers. RA-2006-83 Steunpuntverkeersveiligheid, Diepenbeek. (Available on www.steunpuntverkeersveiligheid.be, in Dutch with English summary).

Under-registration of pedestrians in accident statistics was researched by CDO (De Mol, 1999). 2864 students on the Ghent university filled out a questionnaire about their traffic accident history.

This questionnaire revealed that in 75.9% of all reported accidents, no police came to the scene. For accidents involving pedestrians, 87% had no police on the scene. 80% (35 out of 44) of accidents with pedestrians getting injured, did not have police on the scene.

Source: De Mol, J. (1999). *Impact van de verkeersonveiligheid en –onleefbaarheid*. Centrum voor Duurzame ontwikkeling, Universiteit Gent. (Available on <http://cdonet.ugent.be/mobiliteit/publicaties/IVOrapport.pdf> (in Dutch)

Data

Available statistics from http://www.statbel.fgov.be/port/mob_nl.asp were added in excel-sheet



2. Recent publications on pedestrian issues.

- 1) Author(s): Buyle, David
Title: Time for the Pedestrian. A research on the crossing quality of traffic-lights in Flanders.
Short abstract: Research on the crossing quality of traffic-lights was carried out because a lot of pedestrians experience problems by crossing at traffic-lights. Volunteers timed traffic-lights in whole Flanders to obtain an image on the situation. More particularly, they measured the length of green time, the 'walk out' time and the waiting time. Furthermore, the state of infrastructure of traffic-lights (slopes, facilities for blind people and people who have a bad eye-sight,...) and extra facilities (detection) were inspected. Perceptions were also registered (negation of red light, other road users,...). Conclusions of the research are written down in this report.
Kind of publication: report (2004)
Where it is available: The Voetgangersbeweging (Pedestrian Association)
 Kasteelstraat 26 c
 2570 Duffel
- 2) Author(s): De Bent, Veerle
Title: The realisation of a speed limit zone 30 for a livable neighbourhood.
Short abstract: The brochure contains a step-by-step plan for realising a speed limit zone 30. A zone 30 must reduce accidents whereby vulnerable road users like pedestrians are involved.
Kind of publication: brochure: manual (2003)
Where it is available: library: Mobiel 21 vzw
 Vital Decosterstraat 67A/0101
 3000 Leuven
- 3) Author(s): Administratie Wegen en Verkeer (AWV), Afdeling Verkeerskunde, Ministerie Vlaamse Gemeenschap
Title: Vade mecum facilities for pedestrians.
Short abstract: Pedestrians are vulnerable road users. For this reason, they deserve safety and comfort when regulating traffic and planning roads. This handbook includes technical rules for qualitative pedestrian facilities. For example you can find information about how a subway must be lighted, how a pedestrian crossing must be regulated,... The vade mecum 'facilities for pedestrians' was drawn up by a group of experts and road administrators from inside and outside the Flemish government, with the collaboration of the daily users.
Kind of publication: vade mecum (2003)
Where it is available:
<http://www.mobielvlaanderen.be/vademecums/vademecumvoetganger01.php>



- 4) Author(s): Lammar, Pascal
Title: Injuries, exposure and risk factors for children as vulnerable road user (bicyclist or pedestrian).
Short abstract: The report discusses the most important risk factors for children from 5 to 14 years old who take part in the traffic circulation as vulnerable road user, as well as the injuries which these children can receive. Moreover the relation is laid with the exposure of children to the traffic circulation.
Kind of publication: report (2005)
Where it is available: <http://www.steunpuntverkeersveiligheid.be>
- 5) Author(s): Lammar, Pascal
Title: Overview of preventive measures for protecting children as vulnerable road user (bicyclist or pedestrian).
Short abstract: This report gives an overview of the existing preventive measures for child pedestrians and child bicyclists. The Flemish situation is the core of the report.
The framework used to classify the preventive measures is that of the 3 E's for prevention (Education, Engineering and Enforcement). All educational initiatives are categorized under 'Education', all initiatives concerning the traffic environment and technology under 'Engineering' and all initiatives concerning enforcement and legislation under 'Enforcement'. Some policy measures and instruments, useful for preventing child injuries, are also briefly discussed. The collection of Flemish preventive measures is then analysed. The report ends with a conclusion, summarizing the main findings, followed by policy recommendations and recommendations for further research.
Kind of publication: report (2005)
Where it is available: <http://www.steunpuntverkeersveiligheid.be>
- 6) Author(s): Mobiel 21
Title: Space asked! for pedestrians and bicyclists.
Short abstract: In many municipalities, there are places where pedestrians and/or bicyclists have too little or no space, which results in more danger for them.
For example there is no pedestrian crossing, the pavement is too narrow, ...
Local groups, schools and associations can visually emphasise these bottlenecks with comic characters in the shape of pedestrians and bicyclists.
In that way, every road user will be sensitised to take responsibility and to adapt his/her behaviour in the traffic. Especially motorized traffic will be encouraged to adapt driving behaviour in the advantage of the vulnerable road user.
The responsible road administrator will also be sensitised with humour to research how those bottlenecks can be solved.
'Space asked! For pedestrians and bicyclists' is a manual to put the above-mentioned project into practice.



- Kind of publication: brochure: manual (2005)
Where it is available: library: Mobiel 21 vzw
 Vital Decosterstraat 67A/0101
 3000 Leuven
- 7) Author(s): Buyle, David; Dhollander, Tom
Title: Eight steps to safer school routes.
Short abstract: After the successful 'Octopus Campaign' of 2005, which focused on the school environment, the Pedestrian Association of Flanders introduced an Octopus Plan in 2006. With this plan, Belgian primary schools can work (in a clear, structured way) through eight steps on safer and child friendly school routes. The results of the actions which the school undertakes, will be put on a new, easily accessible website by 'an Octopus leader' in the school. In that way, everyone can consult the improvements in the plan. The road administrator also receives a specific task: the municipality can play a coordination role for the 'Octopus plans' on its territory. More explanation about the eight steps is provided in this article.
Kind of publication: article (2006)
Where it is available: in: Verkeersspecialist 127, april 2006, pp. 23-26
- 8) Author(s): Auwerx, Patrick; Canters, Raf
Title: Safe school routes mapped out.
 Workbook for municipalities.
Short abstract: 'Safe school routes mapped out' is a practical and accessible workbook of references. The target group of this workbook is the local authority. It must be an instrument to help the local authorities map out the 'recommended routes' (focused on pedestrians, bicyclists and users of public transport) in a for the users readable and 'easy in operation' end product. Except an exhaustive step-by-step plan, the workbook also contains background information and ideas to work significantly with maps. 'Work on safe and sustainable school displacements' is the message of this workbook!
Kind of publication: brochure (2006)
Where it is available: <http://www.mobielvlaanderen.be/docs/snelnieuws/srk-brochure.pdf>
- 9) Author(s): De Preter, Freddy; De Bent, Veerle
Title: Foot-Pool. Safe, able-bodied and environment-friendly to school.
Short abstract: What is Foot-Pool? Foot-Pool is walking with a small, clearly recognizable group of children, accompanied by an adult, from home to school and reversely. The target group is toddlers and children of the first years of primary school. This brochure gives information how to organise 'Foot-Pool'.
Kind of publication: brochure (2002)



Where it is available: library: Mobiel 21 vzw
Vital Decosterstraat 67A/0101
3000 Leuven

- 10) Author(s): Vilain, Jan; Dhollander, Tom; Buyle, David
Title: Senior citizens on the street. Dialogue between associations representing the interests of senior citizens and municipalities.
Short abstract: The Pedestrian Association of Flanders wants to stimulate the increasing group of senior citizens to think together about the street infrastructure and the use of public space. There are more and more older people in Flanders. Because the average life expectancy also continues to increase, there are also more and more senior citizens who stay longer active and mobile. Senior citizens like taking a walk, they want to go to the playground with the grandchildren,... In that way, they keep moving, which is good for their health. But at the same time, the streets, the squares and other public areas do not always meet the needs of the elderly. On many places where a lot of senior citizens come, the infrastructure of streets and squares could be better. With this brochure, The Pedestrian Association of Flanders wants to provoke a dialogue between the senior citizens and municipalities.
Kind of publication: brochure (2006)
Where it is available: <http://komopstraat.be/illustraties/brochure%20SoS.pdf>



3. Current research projects

To be completed

Which projects are currently carried out? Please indicate per project, if known:

- Research topics or title of project
- Expected results and products, when?
- Names of institutes
- Name(s) of researcher(s)
- Contact details (organisation, name, address, telephone, e-mail)
- Research context (part of larger project?)
- Amount of money, time and staff involved

4. Policy statements

1. LAND USE PLANS

Land Use Plan Flanders (Ruimtelijk Structuurplan Vlaanderen)

'Ruimtelijk Structuurplan Vlaanderen' determines the objectives at Flemish level to obtain a sustainable spatial policy. This means that quality requirements, which refer indirectly to pedestrians, are formulated: a modification of modal-split, an increase of road safety and amelioration of the traffic livability must improve the quality of the living environment in general, and thus also for the pedestrians (Source: <http://www.mobielvlaanderen.be>).

Specific policy statements regarding pedestrians and walking are not mentioned in the 'Land Use Plan Flanders'.

Land Use Plan at provincial level (Provinciaal Ruimtelijk Structuurplan)

In a land use plan at provincial level, urban areas, main villages and core areas are selected. In combination with the selected networks for the different modes of transport, there is determined in which areas specific attention must be paid to pedestrians. Livability in the core areas and the villages and more road safety – also for the vulnerable road user – are the most important issues that are treated in a Land Use Plan at provincial level (Source: <http://www.mobielvlaanderen.be>).

Some policy statements concerning pedestrians and walking are given below:

- **a shopping area as a walking park**: Nowadays, people are often obliged to take the car or walk along the main road to visit the next shop. A pedestrian path, which must connect the different shops, can be the solution. A roofed pedestrian path can be considered. An alternative is the realisation of passages through and between the different shops (areas where the idea could be put into practice are mentioned). (Source: <http://www.provant.be>)
- **limited number but safe pedestrian crossings** (refers to above): Pedestrian crossings are necessary on regular distances. A number of pedestrian crossings must be developed visibly and safely. In that way, the shopping area is divided in walking blocks. Depending on the hierarchy and the road rush, there can be thought of pedestrian bridges (Source: <http://www.provant.be>).
- **expansion of bicycle route network to network for 'slow roads'**: On long term, there can be worked on a 'network for slow roads'. Besides routes for cyclists, this network for 'slow roads' can also indicate routes for pedestrians and/or horse riders (Source: <http://www.oost-vlaanderen.be>).
- **'Demer' network of routes for bicyclists and pedestrians**: In the northeast situated 'Demer' network, they want to use the present landscape qualities to promote the region as a touristic-recreational product. The touristic-recreational activities can generate additional impulses in the region, as far as they take the landscape qualities into account. Old farms, panoramic views, relicts and the wide-open landscape are the basic elements to extend a network of routes for bicyclists and pedestrians (Source: <http://www.vlaamsbrabant.be>)

Land Use Plan at local level (Gemeentelijk Ruimtelijk Structuurplan)



In a land use plan at local level, the desirable functional and recreational networks are worked out and the desirable development of living areas is outlined. There can also be checked which topics in the land use plan are relevant to the infrastructure of for example a street, a square or a pedestrian connection. In the municipal land use plan, principles which indicate how a living area spatially and infrastructurally must be designed can also be determined. A municipal land use plan offers not only a concrete spatial framework, but also prepares projects: the realisation of an important pedestrian road can be written down in strict regulations, the description of a number of spatial edge conditions, a first beginning to urban development programme, etcetera (Source: <http://www.mobielvlaanderen.be>).

Some policy statements concerning pedestrians and walking are given below:

- The railway channel between the 'Martelarenlaan' and the 'Central Werkplaatsen' will be developed as a pedestrian/cycle connection (Source: <http://www.leuven.be>).
- The street infrastructure in (parts of) the student neighbourhood is not provided for a large number of pedestrians and cycling students. Because of the lack of space for 'slow traffic', city 'Ghent' (in cooperation with the university) works out a design of public area for the student neighbourhood (Source: <http://www.gent.be>).

Conclusion

In conclusion, we can say that more policy statements concerning bicycle route networks are formulated in land use plans than policy statements concerning pedestrian route networks.



5. Legal position of pedestrians

To be completed

A short review of regulations regarding walking, the pedestrian and handicapped persons in:

- Land Use Planning Acts
- Traffic rules and traffic signs with regard to pedestrians and the handicapped
- Rules regarding behaviour towards the handicapped
- Transportation rules & pedestrians
- Guidelines and legislation for road authorities with regard to pedestrians and facilities for the handicapped (traffic management, management, maintenance, design, traffic lights guidelines etc.)
- Health & Safety regulations
- Education rules and legislation
- Jurisprudence
- Liability rules
- Enforcement practise.



6. Best Practises

To be completed

Which Best Practises examples do you know of in your country?

Please indicate per example:

- the issue (i.e. pedestrian policy, safe crossing, Design for All, supportive authorities, Walk to School,...)
- what is the quality?
- who is responsible / initiator / owner?
- where is it?
- available documentation
- contact information.



7. Innovations

To be completed

What innovations can be spotted in your country with regard to

- Education and communication
- 'traditional' technical innovations
 - Pedestrian safety and vehicles
 - New forms of transport
 - Outdoor gadgets
 - Infrastructural innovations
 - public space design innovations
- Intelligent technical innovations
- Organisation & implementation methods
- Research methods

8. General Atmosphere

Perception of the living environment and the quality of public space

To describe the general atmosphere, we start giving the results of the survey “What annoys the pedestrian?”, set up by Uitweg¹ at the end of last year. Almost 1.500 readers of this magazine participated. This is their top ten:

1)	detached tiles and puddles if it has rained	13,1%
2)	refuse or dog droppings on the pavement	12,9%
3)	too narrow pavements or pavements which are too narrow due to parked cars or bicycles	12,2%
4)	car drivers who do not stop at pedestrian crossings	11,7%
5)	cars which stand still or park on a pedestrian crossing	8,8%
6)	teared up pavements without alternatives of safety	8,1%
7)	traffic-lights for pedestrians do not stay long enough green	7,2%
8)	car drivers who drive too fast	7,2%
9)	lack of benches and orderly-bins	4,0%
10)	other pedestrians who ignore the red traffic-light	4,0%

(Source: <http://www.uitweg.be>)

The attitude towards pedestrians by other road users

Parental involvement in their child's traffic education has positive consequences on their own behaviour as automobilist. By actions on road safety where the parents were involved, appeared that a lot of parents noticed a change in their own attitude towards the vulnerable road users. They understood better the difficulties of the pedestrians and more specifically those of children (Source: <http://www.bivv.be>).

Spotted behaviour of pedestrians and others towards pedestrians

- 1) “Friday evening around 23.40h, a pedestrian was knocked down by a car in the Edmond Parmentierlaan in Sint-Pieters-Woluwe. The car driver took off. The pedestrian died.” (Source: <http://www.standaard.be>, December 25, 2006)
- 2) “Friday night around 4h, a pedestrian was knocked down by a car in Brussels, when crossing a zebra path. The car driver took off after the accident.” (Source: <http://www.standaard.be>, December 02, 2006)
- 3) “Very ugly! They look like tank stations! The glazed roofs on the ‘Grote Markt’ – the crossings for pedestrians – will never be recognized as world heritage. They

¹ It is a free magazine for better mobility which is published by the administration Roads and Traffic of the ministry of the Flemish Community.



symbolise how the vulnerable road user has summoned his/her place in the city, at the cost of the aesthetics. Long live zone 30, the parents of Sint-Niklaas shouted, who always drop their children off by car at the school gates.” (Source: <http://www.standaard.be>, September 15, 2006)

Associations representing the interests of pedestrians and disabled persons

To tackle some of the above-mentioned annoyances, there are a number of Belgian organisations representing the interests of pedestrians and disabled persons. Some of which are listed below.

The **Voetgangersbeweging** (www.voetgangersbeweging.be) is a Flemish pedestrian association, which has been started up by volunteers in 1988. From that year till 2000, it was just an action group. From the year 2000, the Voetgangersbeweging received a statute of non-profit making association and became a more professional organisation with her own secretariat. Nowadays they can put more pressure on the Flemish and federal government because of this change. The Pedestrian Association conducts a supportive policy to local and non-local authorities and organises campaigns/projects in cooperation with the citizen and other associations. For example, the Voetgangersbeweging has been very active in raising awareness about the new Zone 30 legislation by means of the Octopus campaign.

To help local and non-local authorities with the policy ‘public space’, the Voetgangersbeweging develops, under the denominator ‘Steunpunt Straten’ (www.steunpuntstraten.be), a number of initiatives which must support this policy. The idea of Steunpunt Straten can be described as follows: To stimulate people to walk more, public areas must be more inviting in their several facets. A lot of criteria are determinative for the quality and the identity of public space: road safety, image quality, accessibility, social security, material choice, maintenance and maintaining.

In contrast to Flanders, Wallonia has no pedestrian association, but has, however, an organisation (called ‘Gamma’), which aims to improve the accessibility and usability of living, (public) transport, street infrastructure, public buildings and service for everyone but in particular for the elderly and persons with a handicap. Flanders and Brussels have a similar organisation (Source: Dhollander, Tom; Buyle, David, interview on February 06, 2007).

Beside the above-mentioned associations, Belgian also counts the following organisations:

The **Belgian Road Safety Institute BIVV/IBSR** (www.bivv.be/www.ibsr.be) is supported by the Ministry of Transport and organises awareness campaigns, often in conjunction with other local organisations, and disseminates information related to road safety. The Institute also manages the website jesuispour.be/ikbenvoor.be, which is a forum for citizens and organisations that advocate increased road safety.

Langzaam Verkeer has been divided into **Mobiel 21** (www.mobiel21.be) which is responsible for two well-known campaigns for primary schools: *Voet-/Fietspoolen* (Foot Pool/Bicycle Pool) and *Milieu en vriendelijk naar school* (Safe and environment friendly to school) and **Vectris** (www.vectris.be) which is more research-driven.

The **Belgian Disability Forum** (BDF) promotes the rights of disabled persons and acts as a bridge between Belgian associations and the European institutions (Source: <http://www.etsc.be>).

The **Vlaamse Stichting voor Verkeerskunde** (www.verkeerskunde.be) has the following objectives and tasks:



- to organise and to coordinate training, re-education and permanent education concerning traffic science;
- to recommend traffic science teachers;
- to stimulate scientific research and university education concerning traffic science;
- to search for financial governmental partners at all administrative levels and for partners in the private sector, for the realisation of above-mentioned objectives and tasks;
- to give advice to the Flemish parliament and the Flemish government concerning traffic science (Source: <http://start.vlaanderen.be>).

SWOT analysis of the Belgian pedestrian situation

Finally, a SWOT analysis of the pedestrian situation in Belgium is given below.

Table...: SWOT-analysis of the Belgian pedestrian situation

Positive factors	Strengths	Opportunities
	<ul style="list-style-type: none"> - the pedestrian has priority over vehicles (e.g. zebra crossings, accidents,...) - approach of road safety around schools (zone 30, initiatives for safe routes to schools combined with road safety education,...) - some centre areas are well equipped for pedestrians (e.g. Antwerp and Ghent) - speed cameras and high fines - car-free initiatives in most cities: shopping centres,... 	<ul style="list-style-type: none"> - there is a lot of attention to public space from the citizen - the Pedestrian Association can put more pressure on the Flemish and federal government because of the growing professional approach of this association - there is a rising demand from the Flemish and federal government to the Pedestrian Association concerning pedestrian issues, owing to the more professional approach
Negative factors	Weaknesses	Threats
	<ul style="list-style-type: none"> - bad equipped and dirty pavements in many areas → home owners are responsible for maintenance of sidewalks - no user-friendlier urban infrastructure design - speed reduction measures - the environment sends out too little how the road user must behave himself - high fatality rate of pedestrians - people are still very dependent on the car → number of vehicle kilometres still increases annually - the number of fixed speed radars in Wallonia is considerably lower than in 	<ul style="list-style-type: none"> - the ageing population, combined with not enough adapted street infrastructure

	<p>Flanders</p> <ul style="list-style-type: none"> - great disparity of road networks in terms of infrastructure, safety, equipments,... between municipalities (also concerning facilities for disabled persons: only supply when local demand) - the lack of unity amongst the different actors within the road safety system slows down the implementation of policies - too little research projects - lack of statistical information (especially accident data) → the most recent figures on road casualties or fatalities involving vulnerable road users dates back to 2002 - there is no Pedestrian Association in Wallonia - delays in justice when handling offences - disparity between jurisdictions in sanctioning offences 	
--	--	--

Sources: <http://www.etsc.be>

Dhollander, Tom; Buyle, David (Voetgangersbeweging), interview on February 06, 2007