

Residential **M**onitoring to **D**ecrease **E**nergy Use and **C**arbon Emissions in Europe



Results from Survey Campaign in Belgium

National Workshop September 19th, Brussels
Organised by MINA-Raad



Results from Survey Campaign in Belgium – Household details

The REMODECE Questionnaire was programmed into a Web questionnaire.

During 2006-2007, face-to-face interviews have been made, especially with families without internet connection.

In November and December 2007 E-ster placed the questionnaire at their Web site, www.e-ster.be, where answers were collected.

Other sites, such as the website of the Energy Agency of Flanders (Vlaams Energie Agentschap), www.energiesparen.be (Particulieren) and the Flemish Green Light Information Point and Endorser, GroenLicht Vlaanderen, www.groenlichtvlaanderen.be , did put links to this link.

Results from Survey Campaign in Belgium – Household details

Onder laagspanning; Test uw elektriciteitsverbruik

Bedankt dat u wilt meewerken aan de studie Remodece.

- Het invullen van deze vragenlijst neemt hooguit 10 minuten in beslag.
- Voornamelijk de laatste 3 vragen zijn van belang voor ons.



Aantal pagina's

Contact details

postcode:

email (dat verplicht, enkel in te vullen indien u een verzoeklijst wenst van uw elektriciteitsverbruik met dat van een gelijkaardig gezin. Indien u niet wilt meewerken, kan het indienen van uw gegevens tevens worden geweigerd.)

Hoeveel personen uit uw gezin vallen onder volgende leeftijdscategorie?

jonger dan 12:

12 tot 18 jaar:

19 tot 65 jaar:

65 jaar en ouder:

Wat is het hoogste diploma binnen uw gezin?

Wat is het hoogste diploma binnen uw gezin?

Hoeveel bedroeg uw energiefactuur voor elektriciteit het voorbije jaar?

in euro's:

in kWh (indien gekend):

Selecteer uw type woning:

Selecteer uw type woning:

N° of distributed questionnaires	At Web site
N° of questionnaires received	548
Face to face interviews	56
Online (web-based platform)	492

Results from Survey Campaign in Belgium – Household details

N° of distributed questionnaires	At Web site
N° of questionnaires received	548
Face to face interviews	56
Online (web-based platform)	492

Results from Survey Campaign in Belgium – Household details

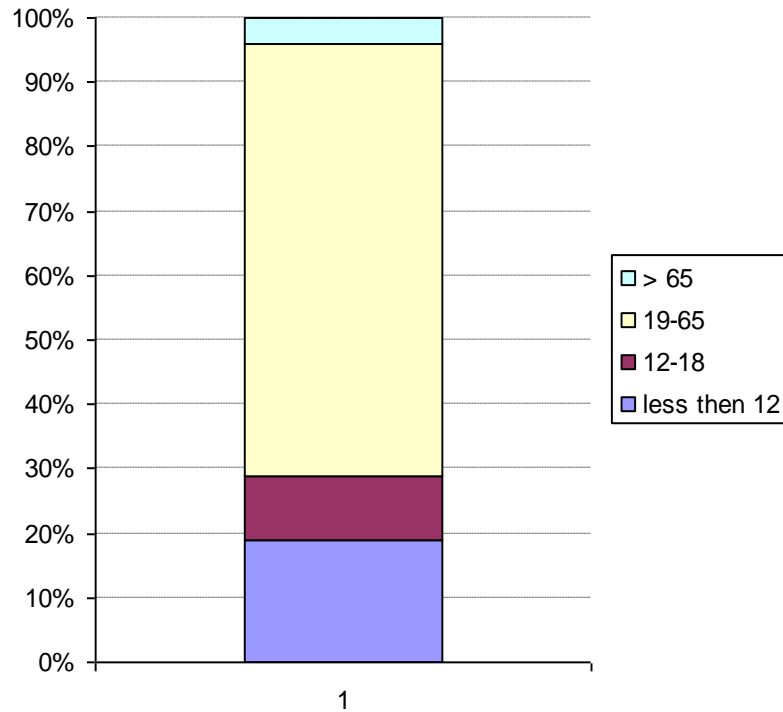
Average electricity consumption per month and household and per person

	per household	per person
In euros/year (N= 257)	1.105	413
In KWh /year (N = 252)	5.602	1874

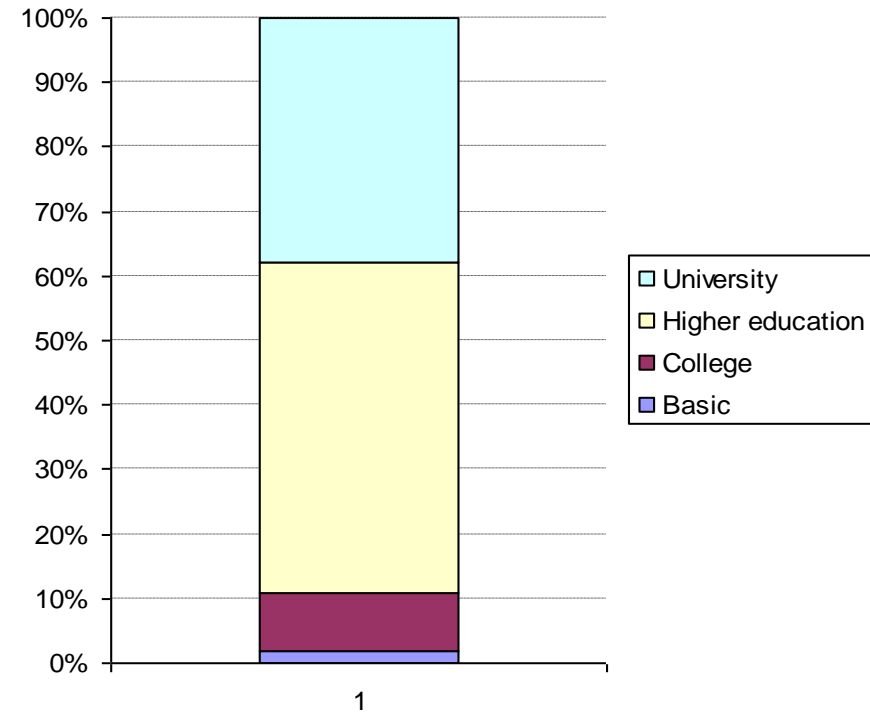
Type of building you live in

	%
Single family house	90
Multi occupancy building	10

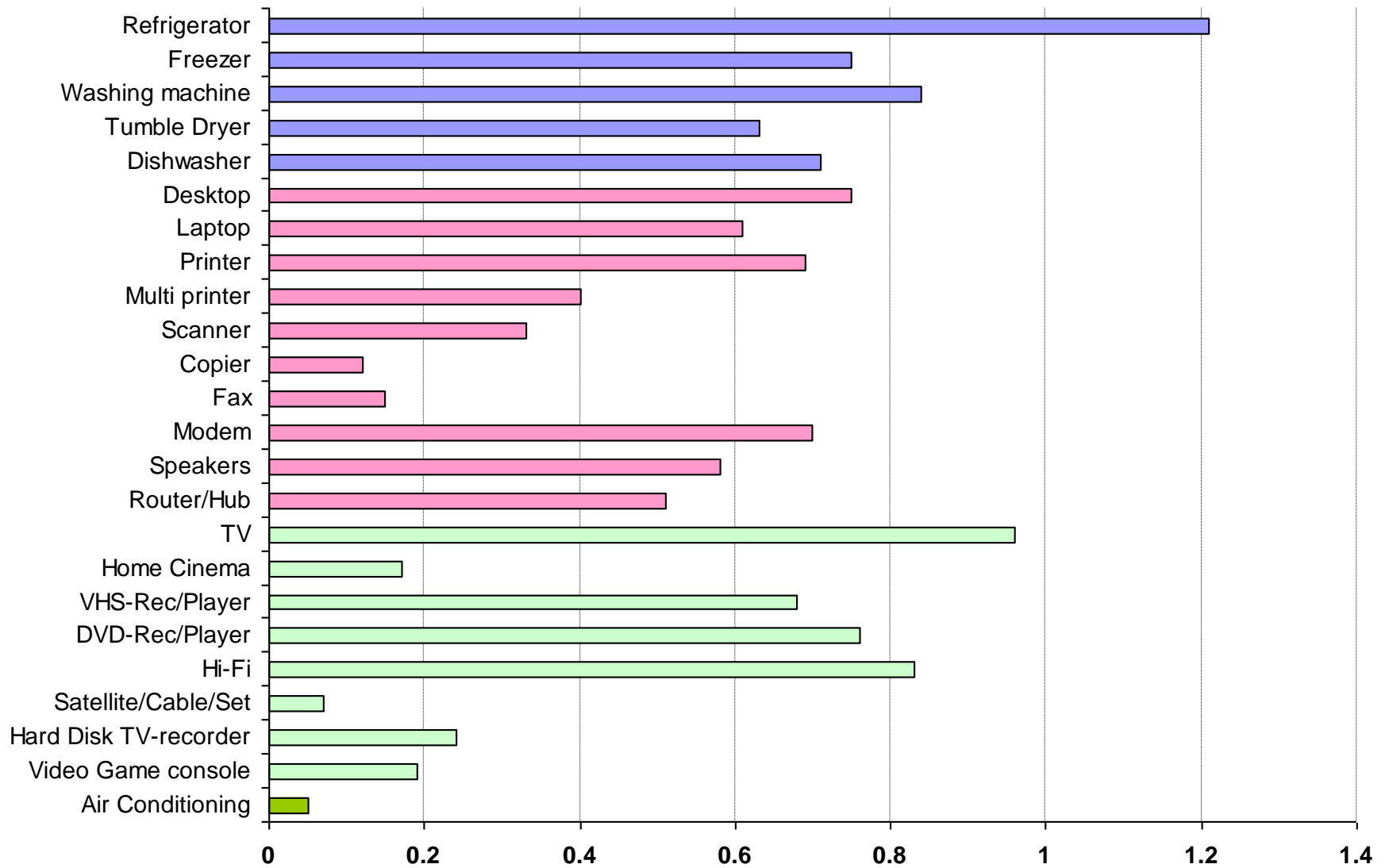
Age structure



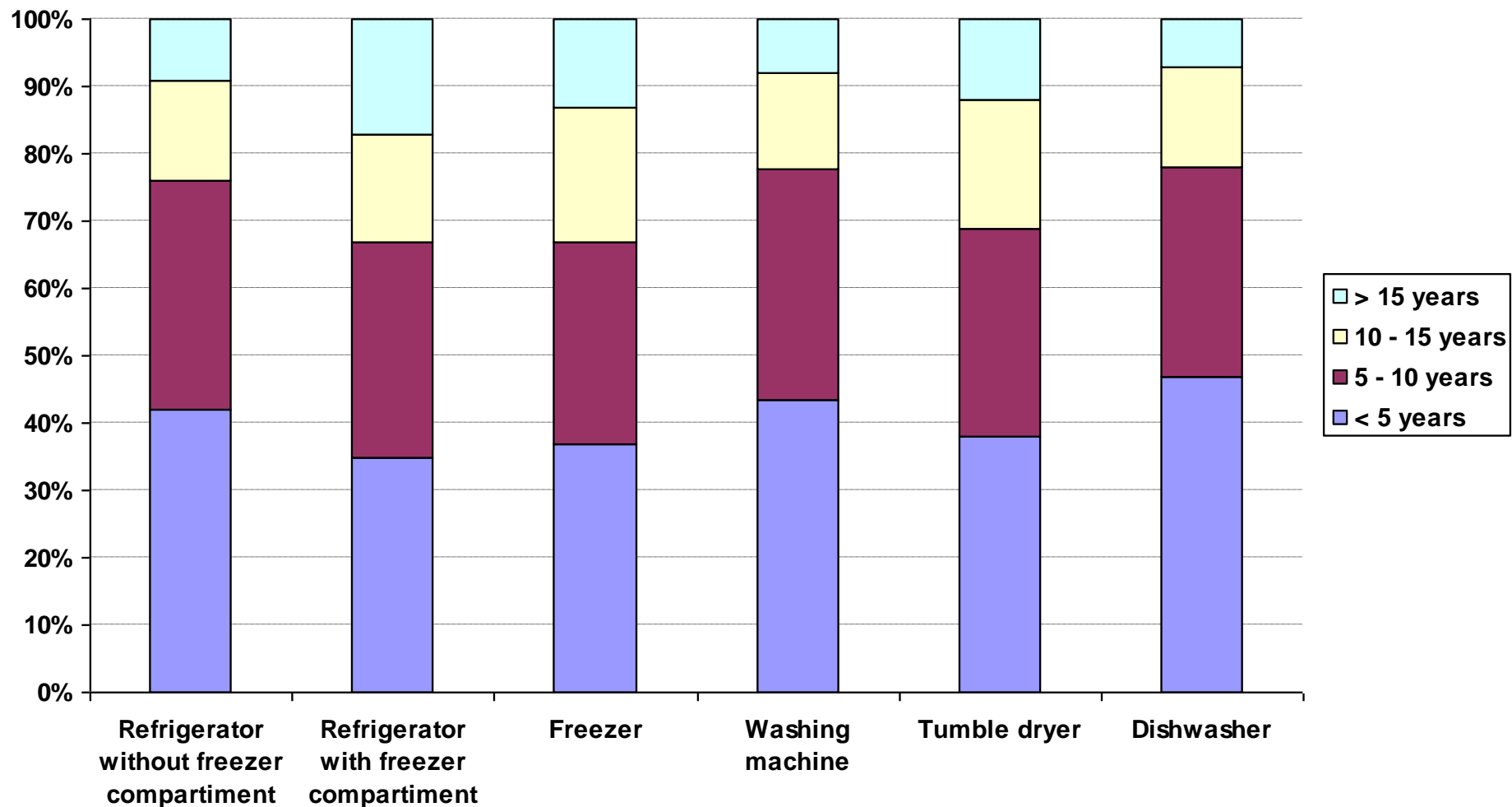
Type of education



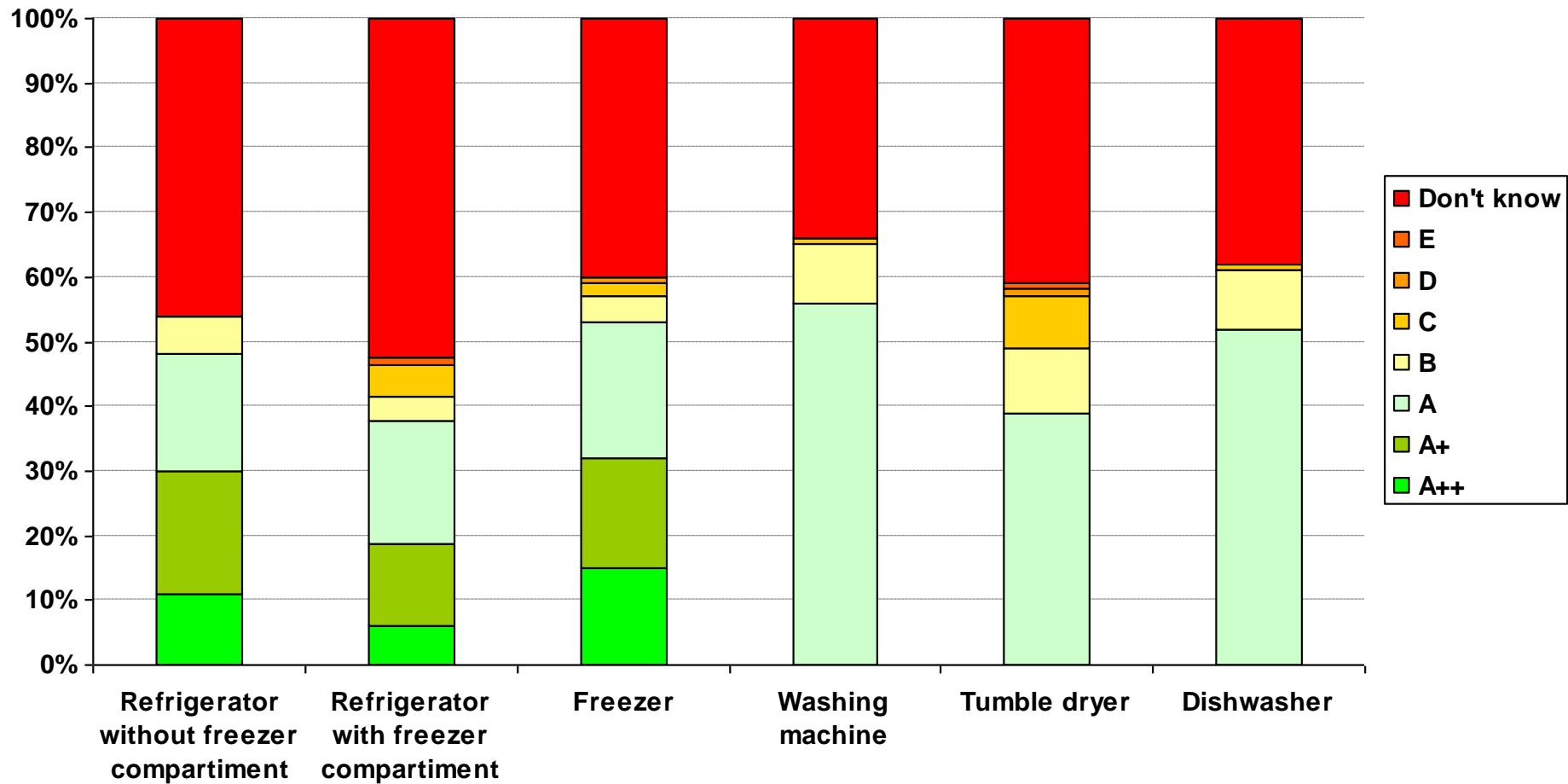
Results from Survey Campaign in Belgium – Ownership rates



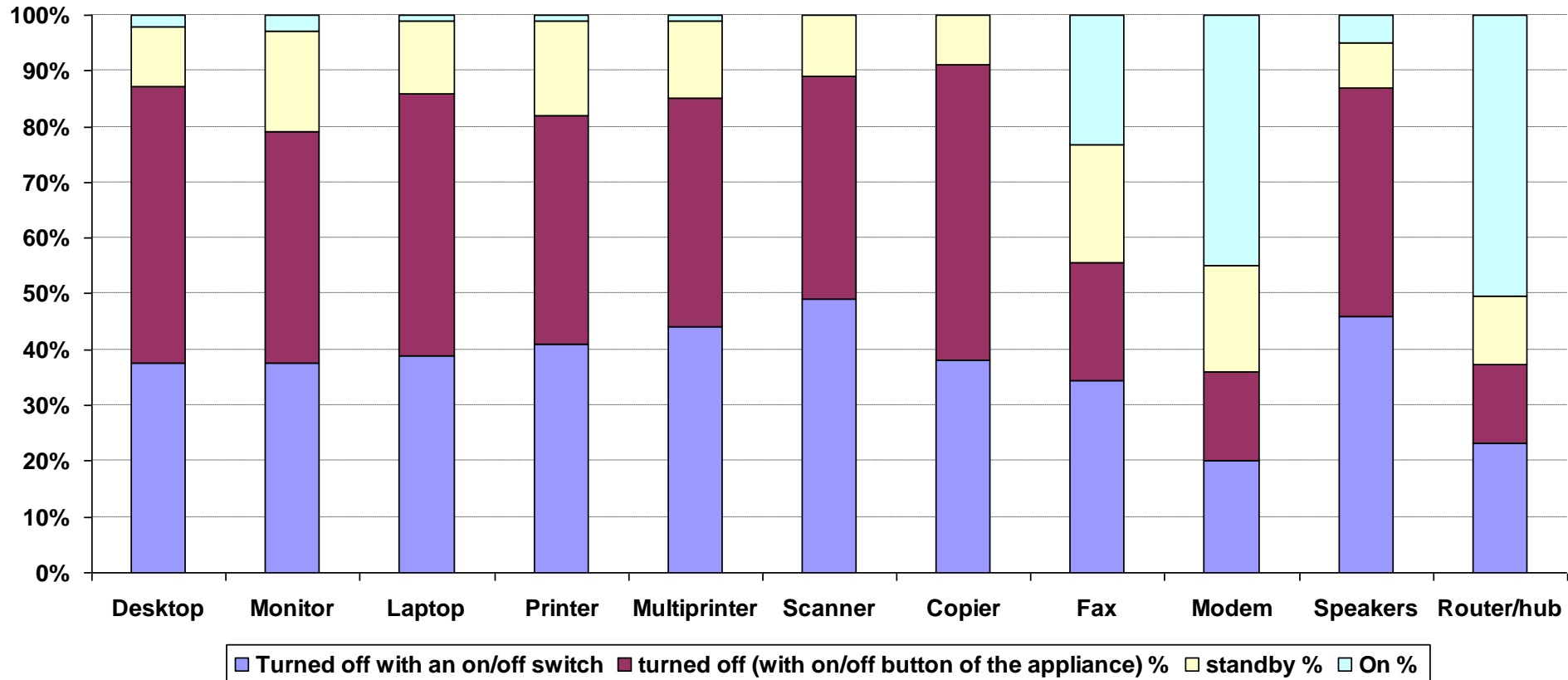
Age of appliances



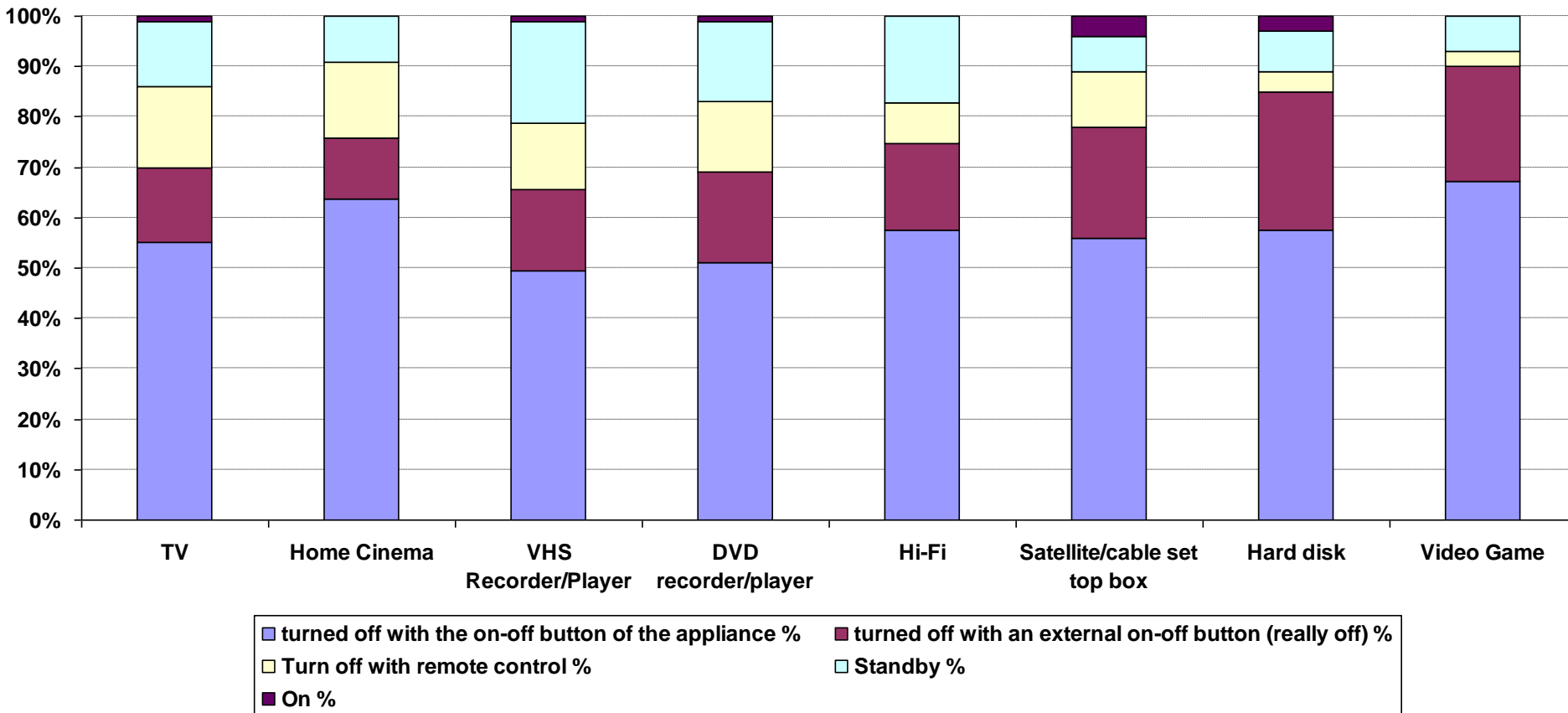
Efficiency Class of appliances



Office appliances - State when device is not used



Entertainment appliances - State when device is not used





Efficiency Class of appliances

When replacing your TV, what type of technology will you prefer?

	%
Plasma	15
LCD	73
Cathode ray Screen	10
Projector	3

What do you think the Energy Star label refers to?

	%
Electromagnetic compatibility	1
Use of recyclable material	0
electricity saving handling	28
low energy consumption	27
don't know	44

When you buy an office appliance, do you choose one with Energy Star?

	%
always	22
sometimes	21
Never	12
don't know	46

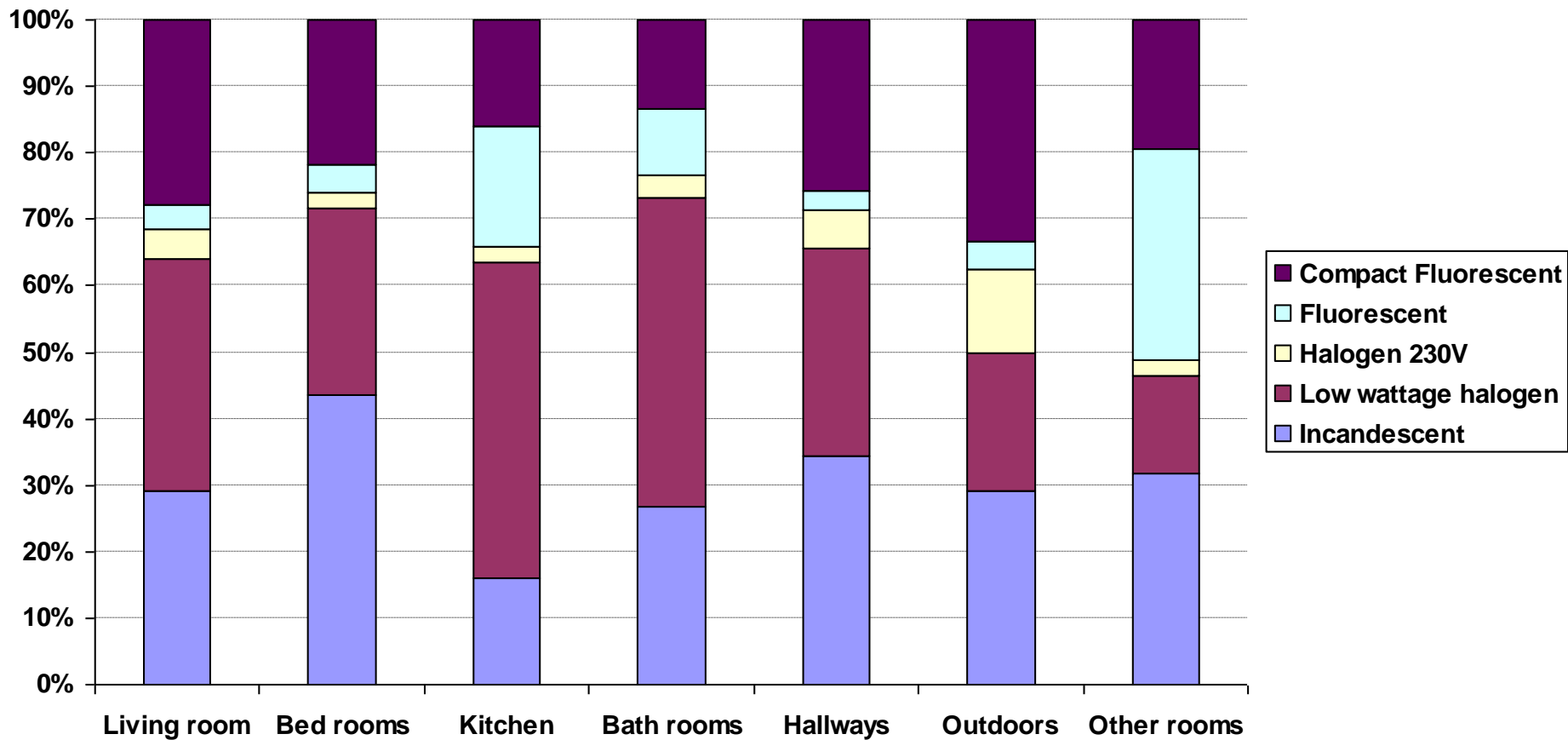
Lighting

Average number of lamps of each type in each room type

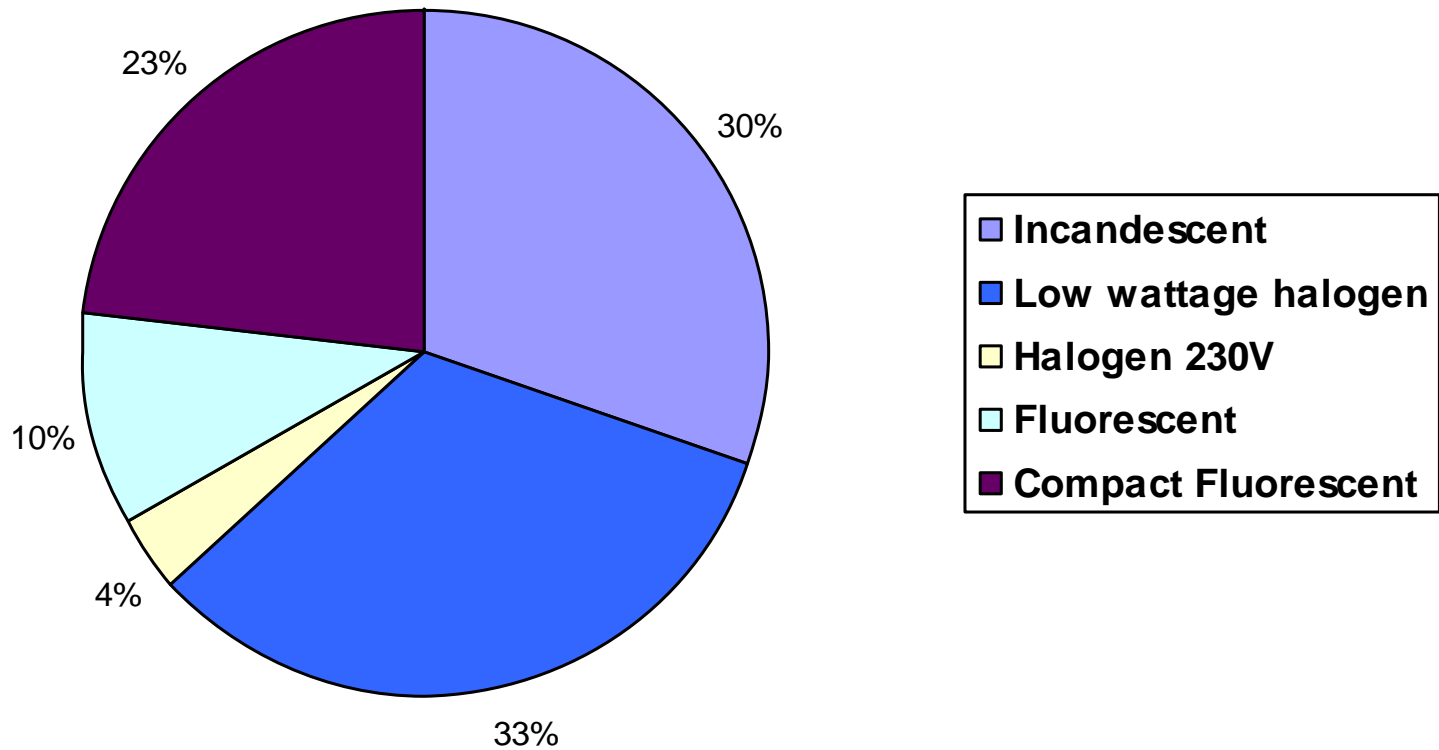
Type	Living room	Bed rooms	Kitchen	Bath rooms	Hallways	Outdoors	Other rooms	Total
Incandescent	2.5	2.0	0.7	0.8	1.2	0.7	1.3	9.3
Low wattage halogen	3.0	1.3	2.1	1.4	1.1	0.5	0.6	10.1
Halogen 230V	0.4	0.1	0.1	0.1	0.2	0.3	0.1	1.1
Fluorescent	0.3	0.2	0.8	0.3	0.1	0.1	1.3	3.0
Compact Fluorescent	2.4	1.0	0.7	0.4	0.9	0.8	0.8	7.2
Total	8.7	4.5	4.5	2.9	3.6	2.5	4.1	30.7

Lighting

Percentage of the type of lamps per room type



Type of lighting per household



Low consumption light bulbs

Do you replace damaged lamps with low consumption light bulbs?

	%
most of the times	52
sometimes	27
Rarely	13
Never	8

Why low consumption light bulbs are not used?

	%
Price	7
Lighting quality	21
Size	19
Appearance	1
Lifespan	15
Other :	37

Low consumption light bulbs

Habits changed due to low consumption light bulbs?

	%
Yes, burn them longer	5
No, no change	95

Criteria for the purchase of a new domestic appliance

	Average priority
Price	1.9
Design/style	3.1
External dimensions	3.0
Capacity	2.5
Electricity consumption	2.2
Ease of use	2.3

Priorities: 1-6

Conclusions

Compared to national statistical figures for type of building, and average consumption and data included in previous surveys, the REMODECE sample is evaluated to be good and representative in most aspects.

Conclusions

Compared to national statistical figures for type of building, and average consumption and data included in previous surveys, the REMODECE sample is evaluated to be good and representative in most aspects.

Some good options for electricity saving :

- Use the Eco program of the dishwashing machine
- Don't rinse the dishes before putting them into the dishwasher
- Use more cloths drying outside instead of tumble dryer
- Use a pressure cooker
- Defrost food in the refrigerator instead of in the microwave or the room

Conclusions

- Switch of modems and router along with switching of the computer
- Switch off Home Entertainment equipment with external (manual or automatic) on/off switches, in order to really switch off these appliances
- Make attention to buying of Energy Star computer equipment as very few have knowledge about this
- Use more multiple sockets with a switch to disconnect all appliances from the mains
- Try to increase the use energy saving bulbs and stop the rapid market transformation from use of incandescent to halogen lamps
- Replace old refrigerators (especially those with freezing cabinet) and freezers by A+ or A++ appliances



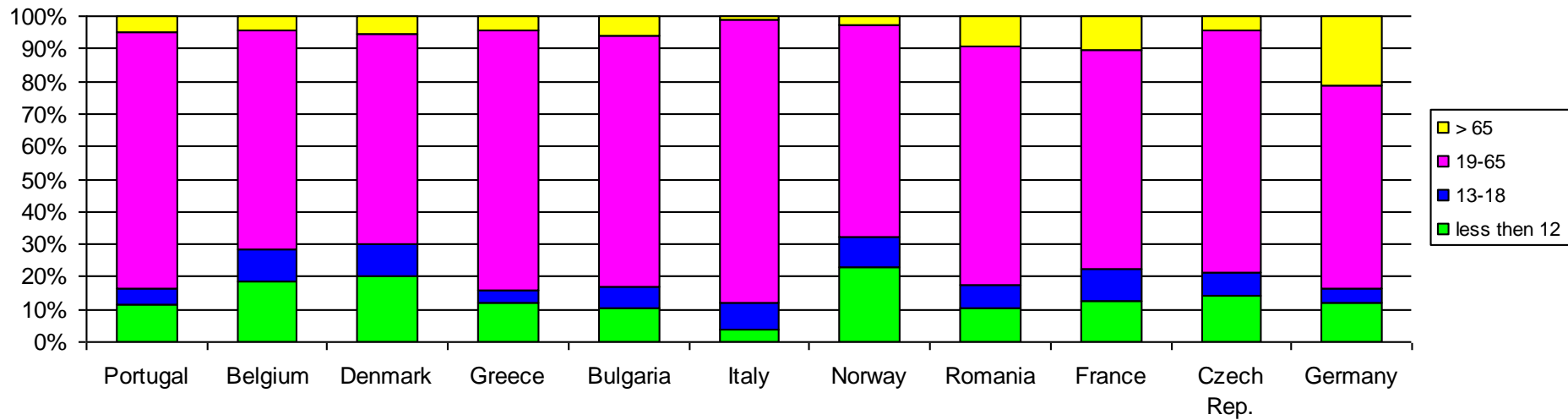
Comparison of Belgium with other European countries



Methods used
for collecting
the
questionnaires

Country	Number of questionnaires received	Number of questionnaires by type of survey
Belgium	548	Face to face interviews : 56 Internet: 492
Bulgaria	504	Face to face interviews : 80 E-mail : 95 Mail : 329
Czech Republic	388	Online (web-based platform) : 388
Denmark	500	Online (web-based platform) : 500
France	102	Face to face interviews : 34 Email : 1 Mail : 28 Distributed at the beginning of the monitoring campaign and collected at dismantling time : 39
Germany	545	Mail : 545
Greece	190	Online (web-based platform) : 52 Email : 138
Hungary	87	Face to face interviews : 87
Italy	500	Face to face interviews : 64 Online (web-based platform) : 436
Norway	197	Internet : 197
Portugal	306	Face to face interviews : 100 Online (web-based platform) : 141 Email : 65
Romania	623	Face to face interviews : 623

How many persons live in the household in the following age groups?

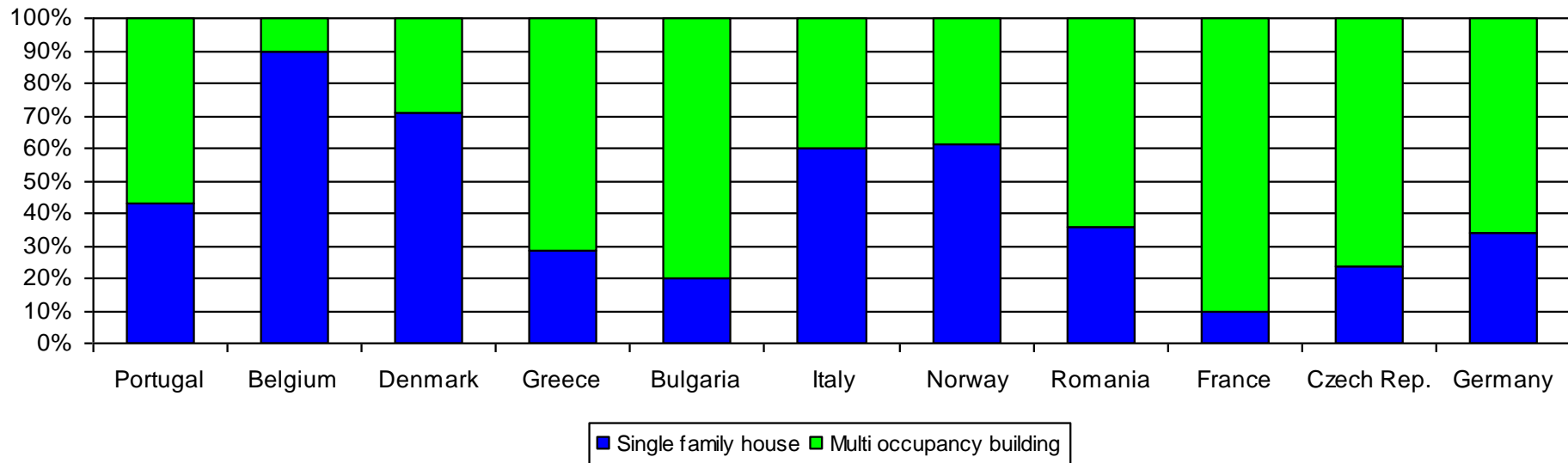




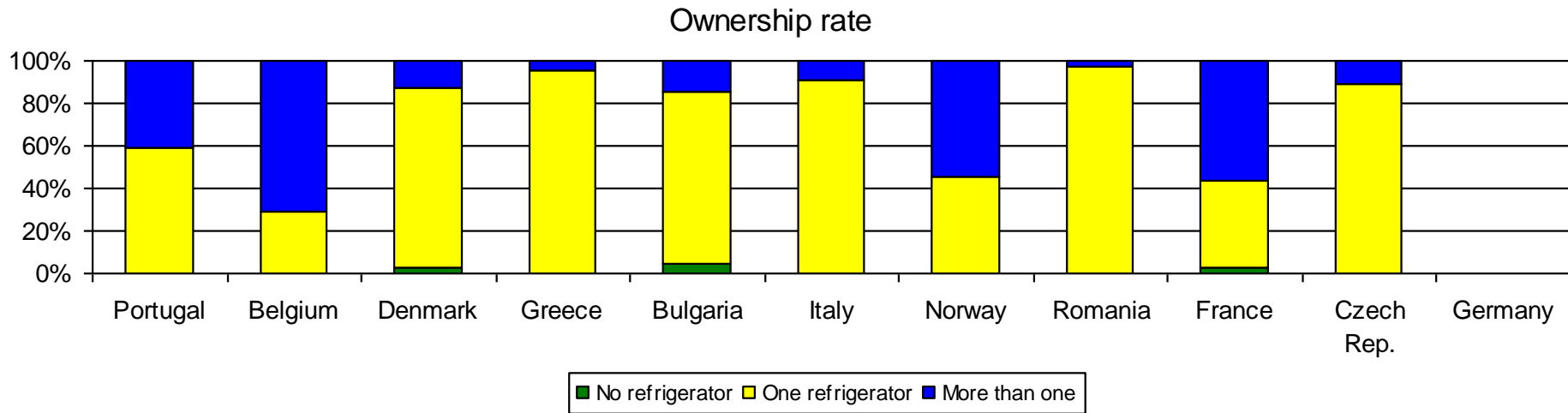
Average electricity consumption per month and household?

Country	Portugal	Belgium	Denmark	Greece	Bulgaria	Italy	Norway	Romania	France	Czech Rep.	Germany
In euros/month	50,0	92,1	78,0	52,3	23,8	54,2	146,9	18,9	87,5	39,1	51,7
In KWh /month (if known)	358,7	466,8	373,0	395,4	321,7	270,0	1692,5	145,2	808,3	354,8	289,5

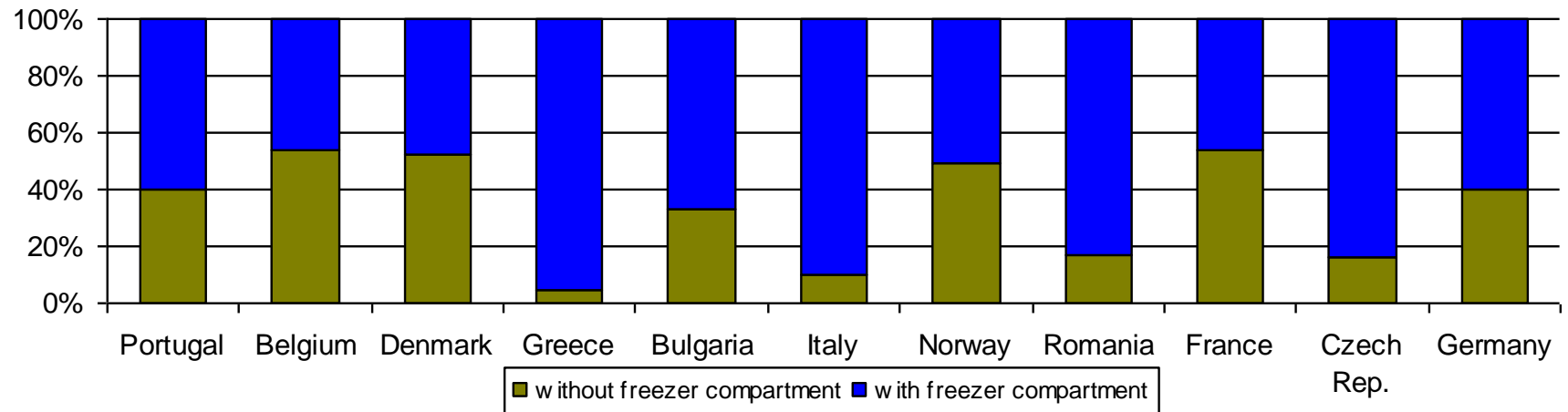
What type of building do you live in?



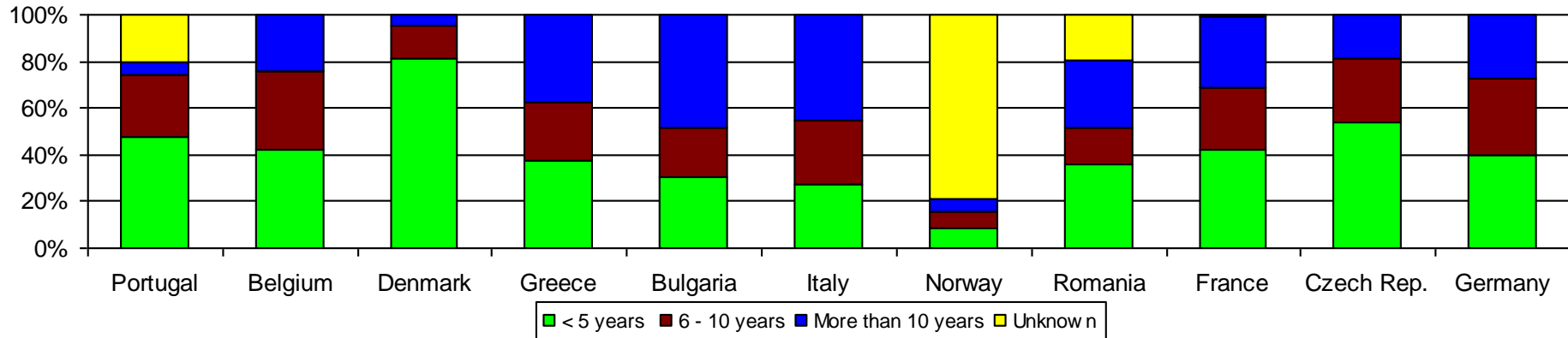
Do you have one or several refrigerators with/without a freezer compartment?



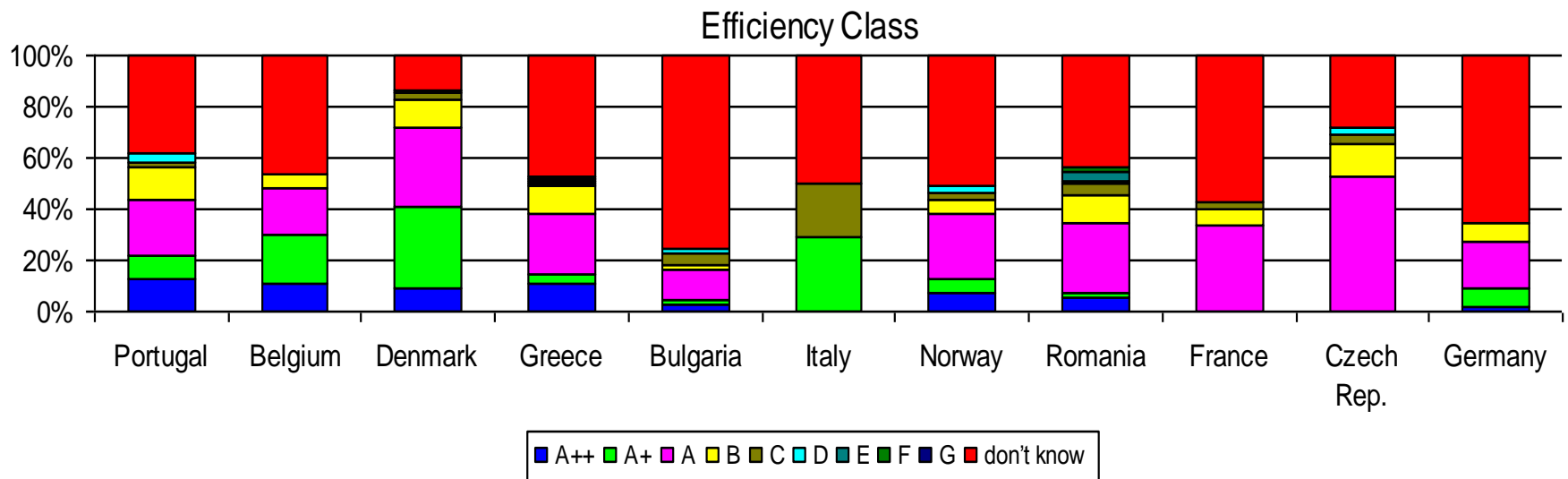
Type of refrigerator



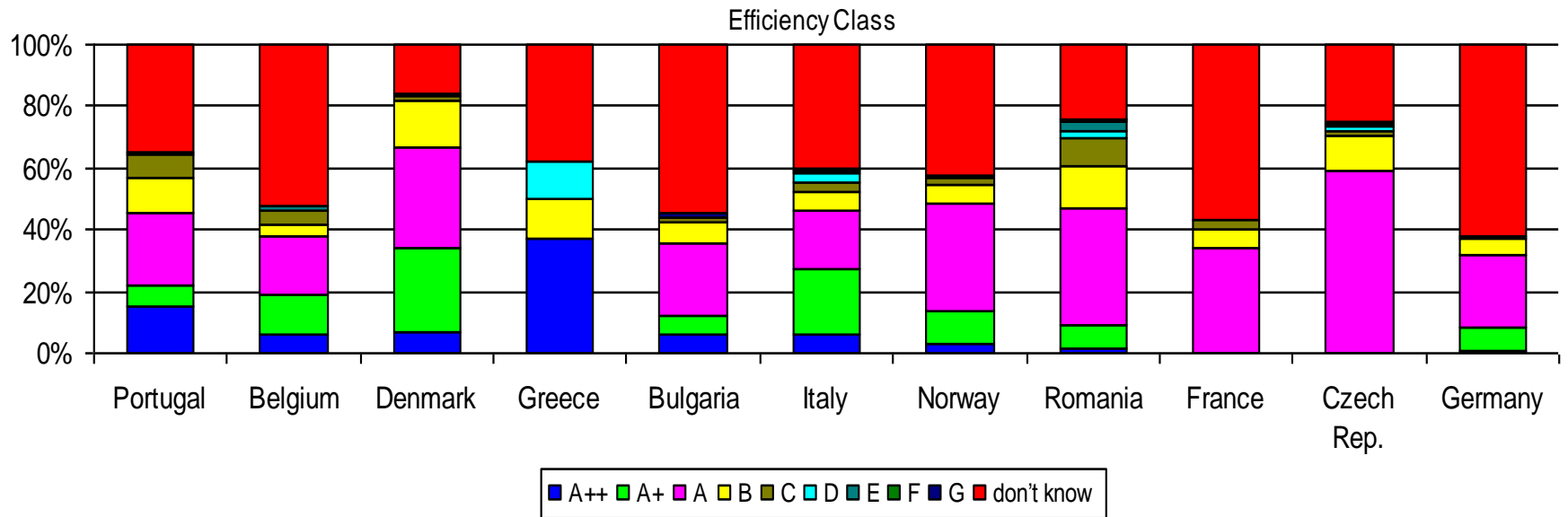
Age structure – Refrigerator without freezer



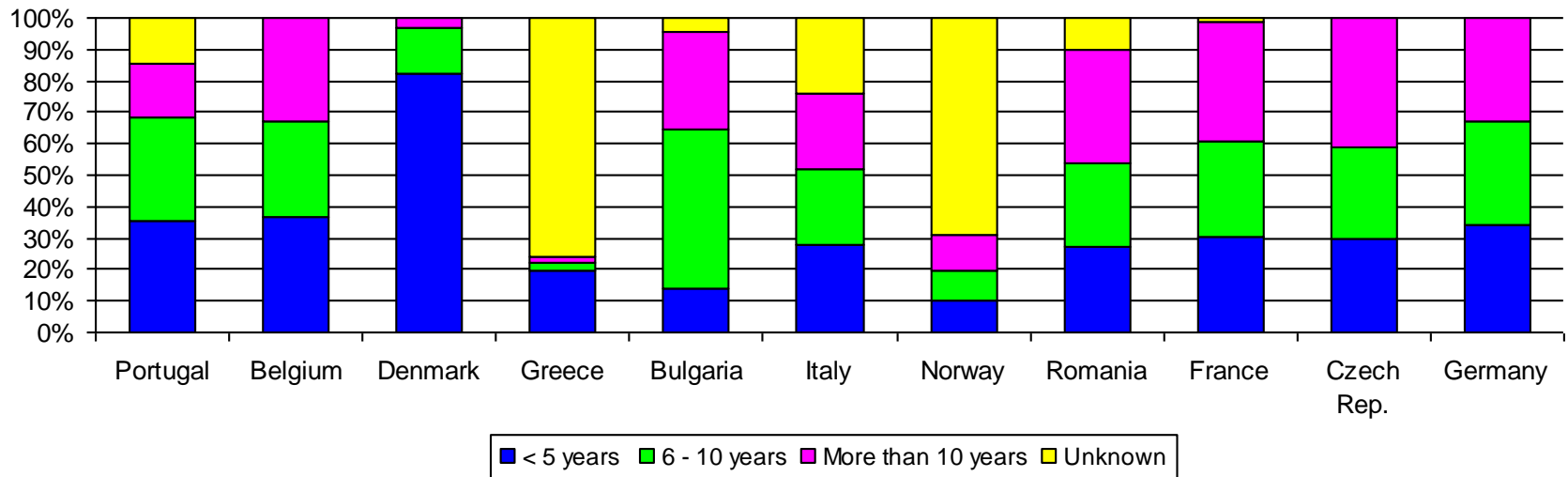
Refrigerators without freezer compartment



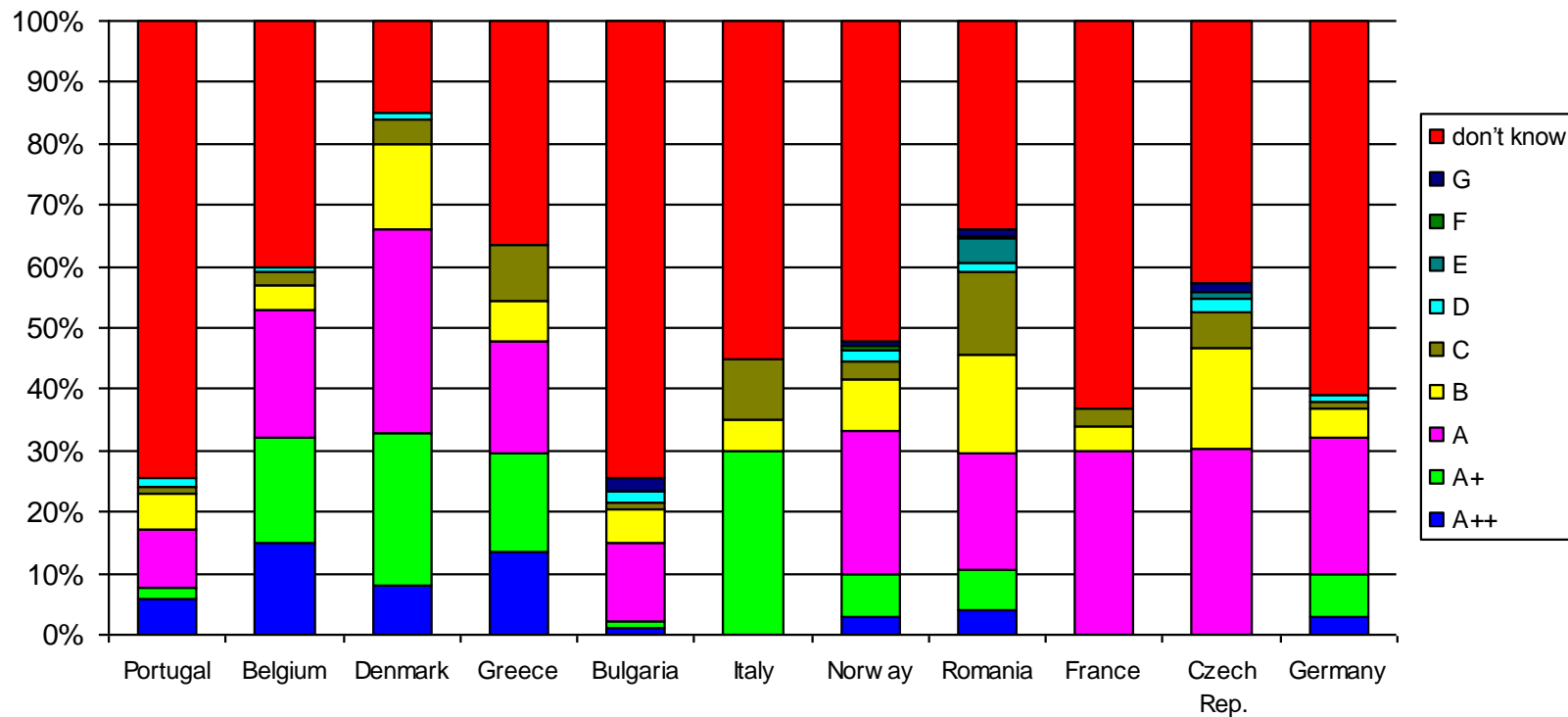
Refrigerators with freezer compartment



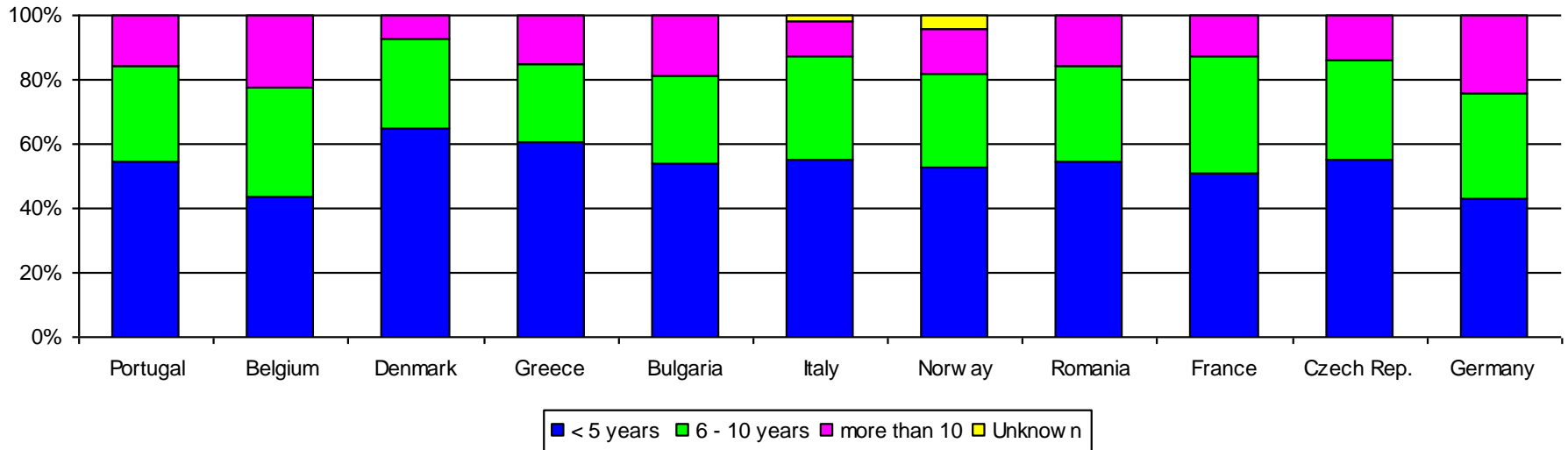
Age structure - Freezer



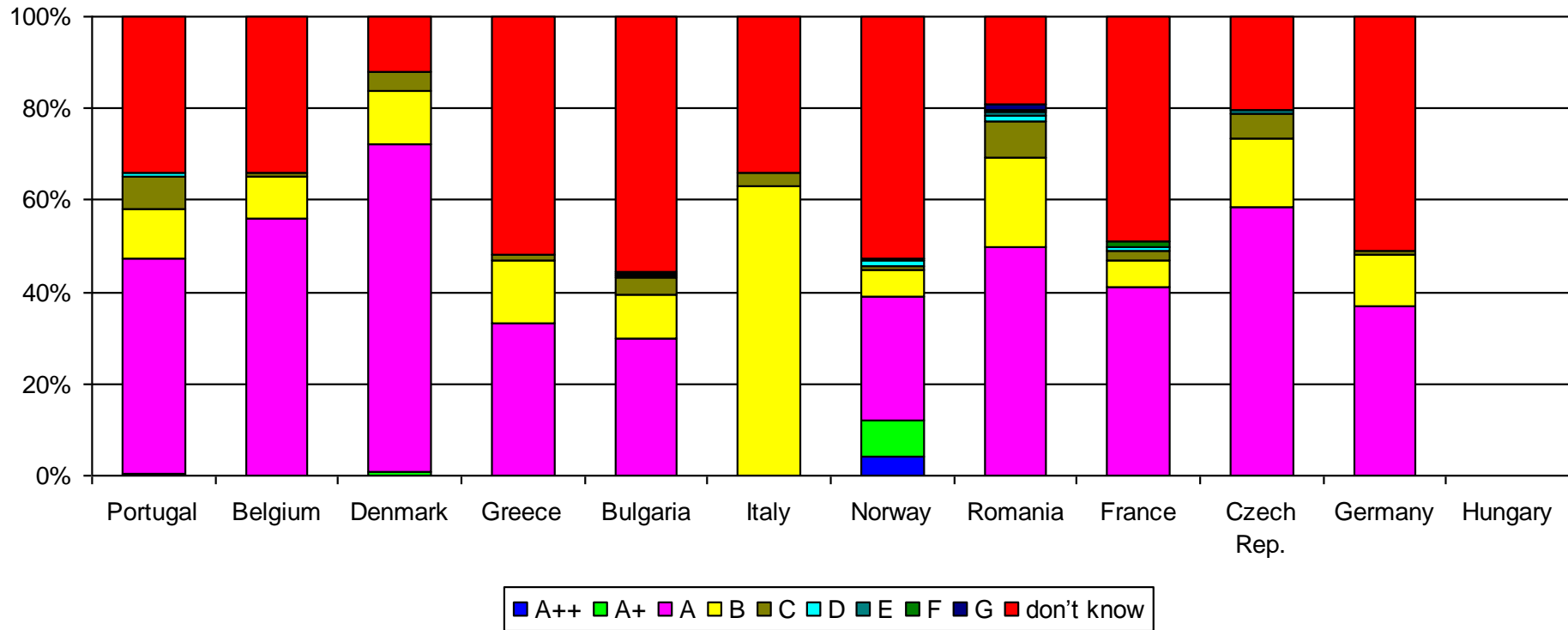
Efficiency Class - Freezer



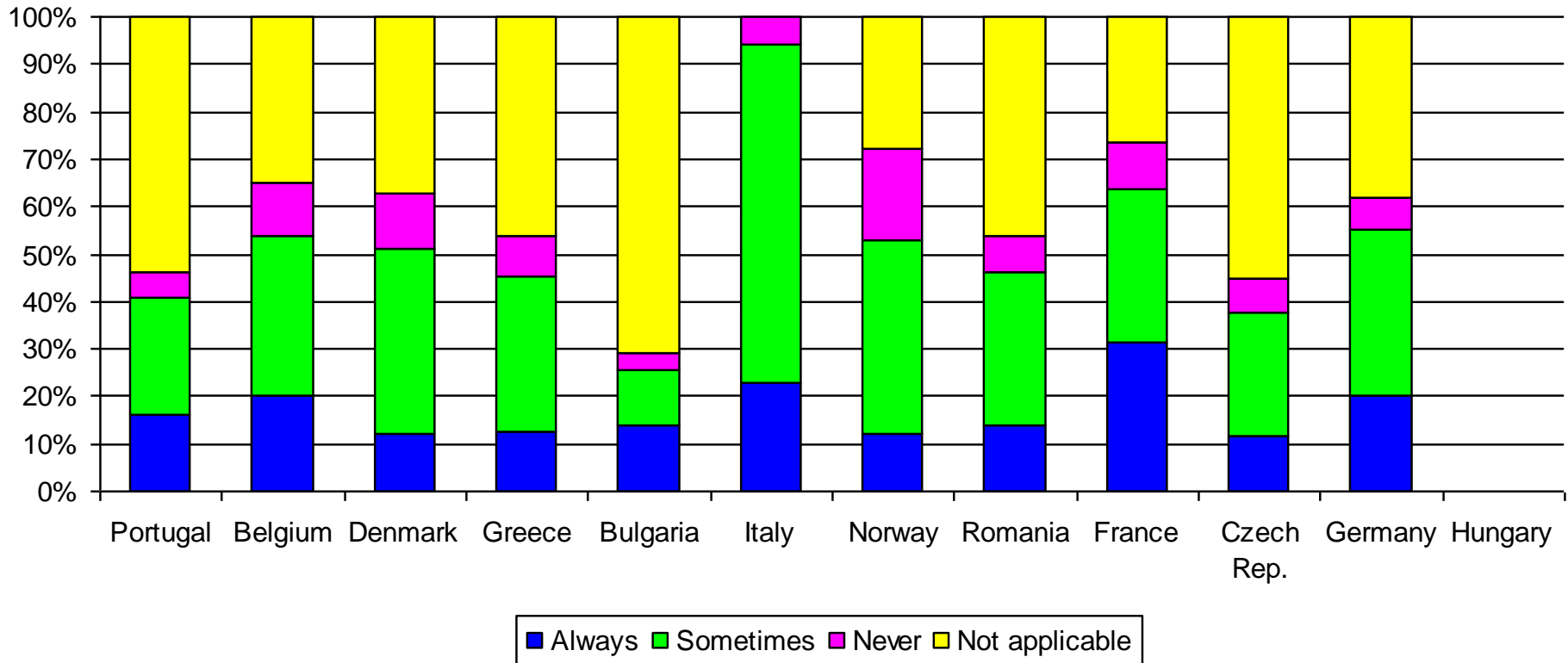
Age structure – Washing machine



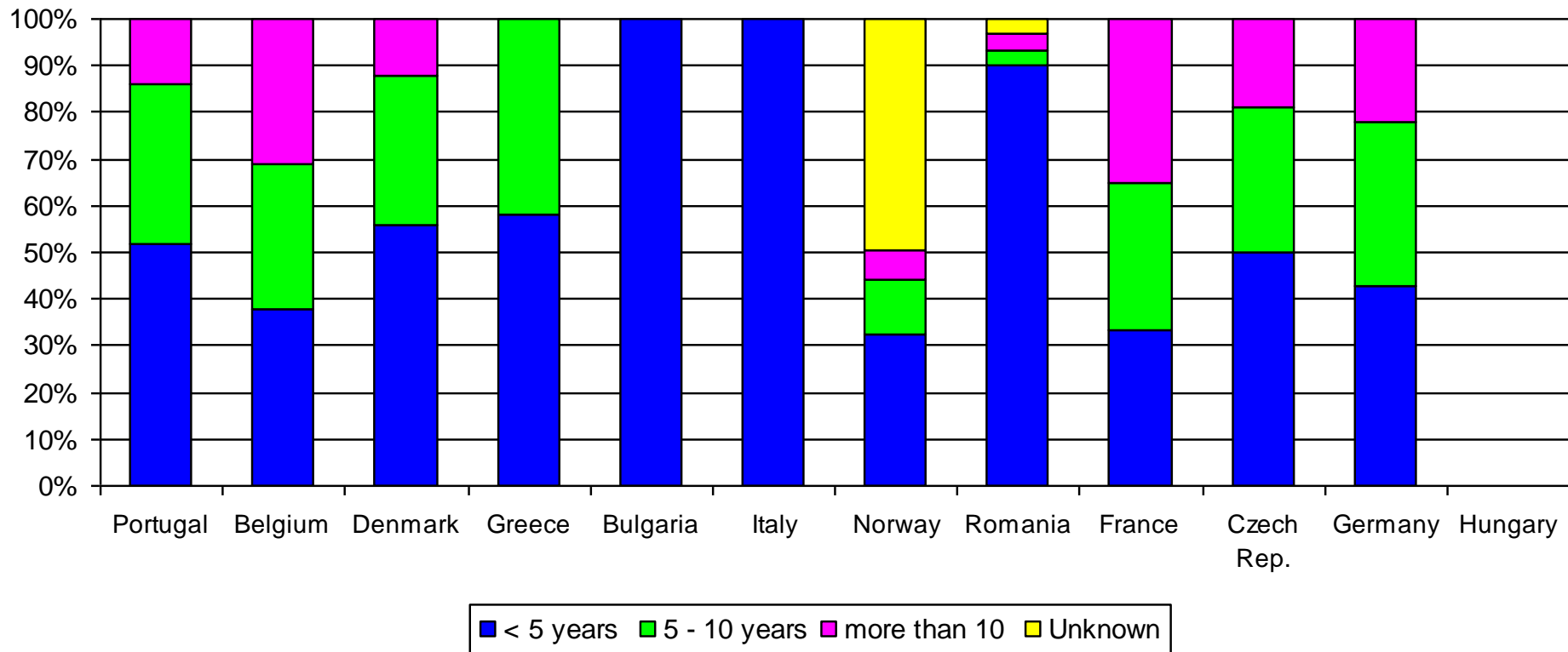
Efficiency Class – Washing machine



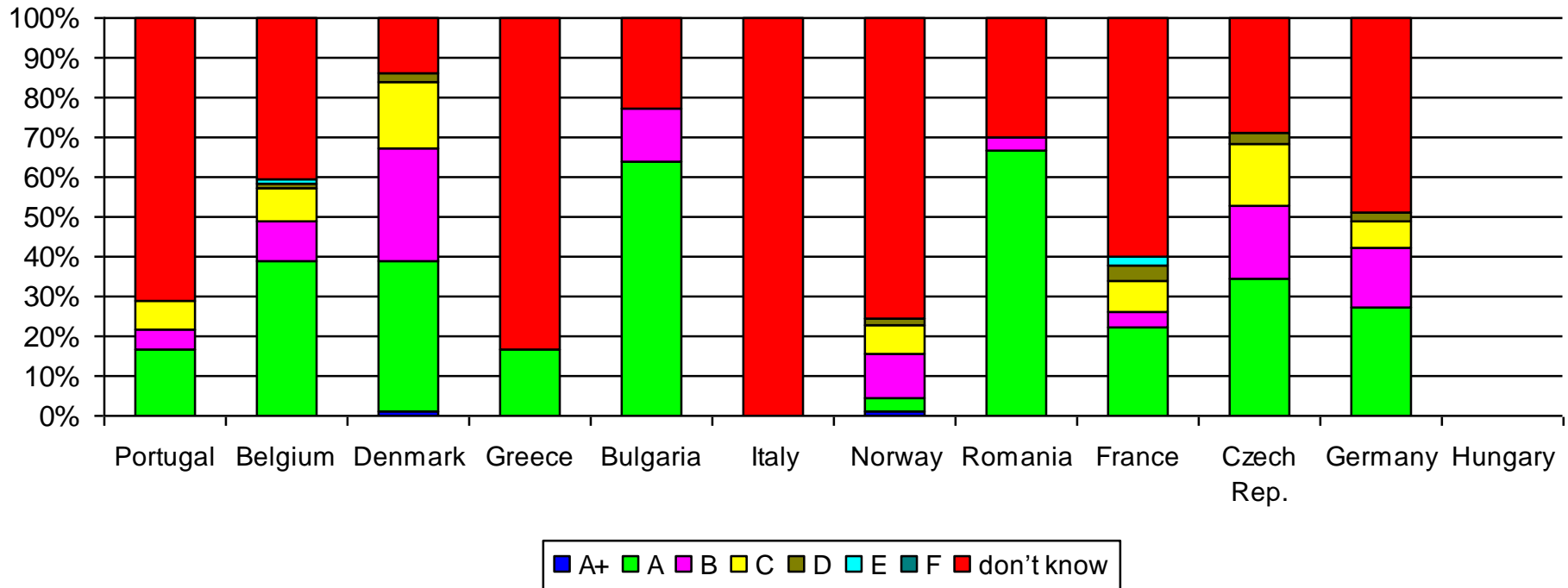
In case of existence of ECO button, when is it used?



Age structure – Tumble dryer

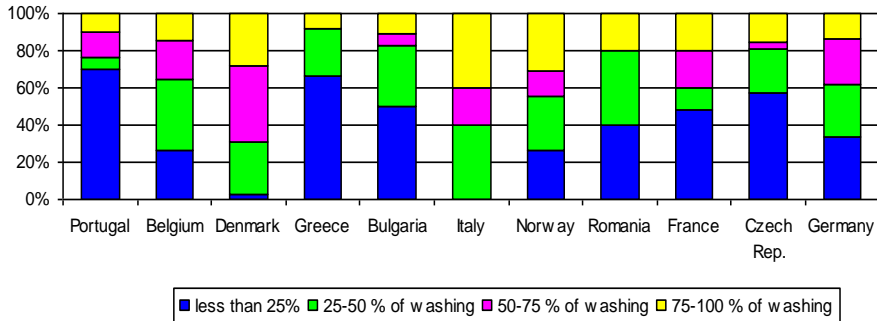


Efficiency Class – Tumble dryer

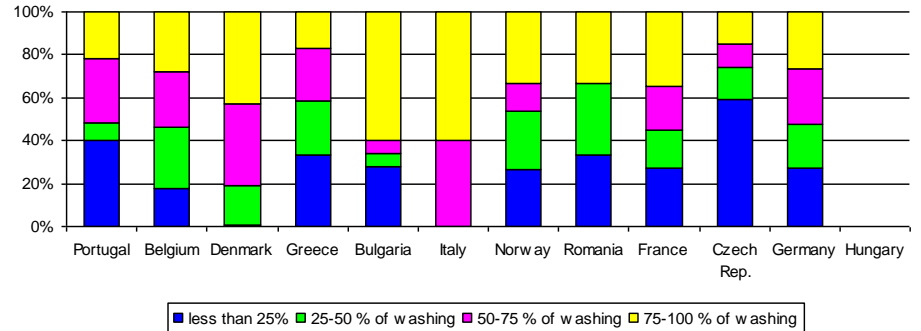


Frequency of use – Tumble dryer

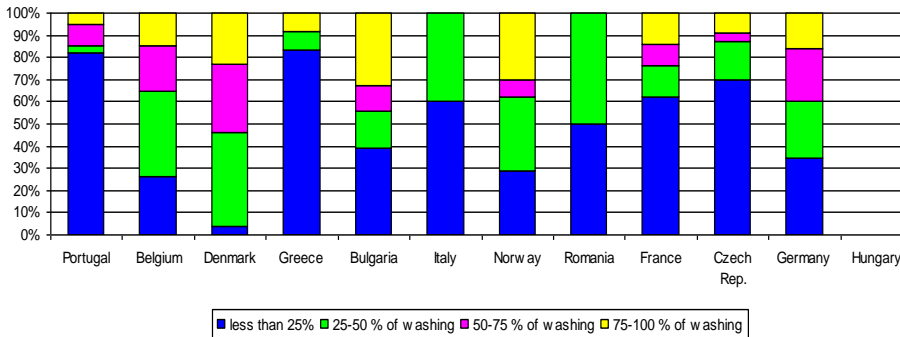
Autumn



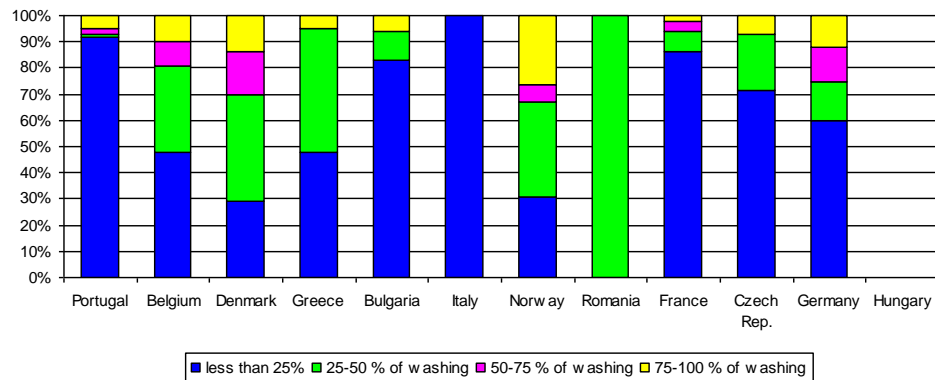
Winter



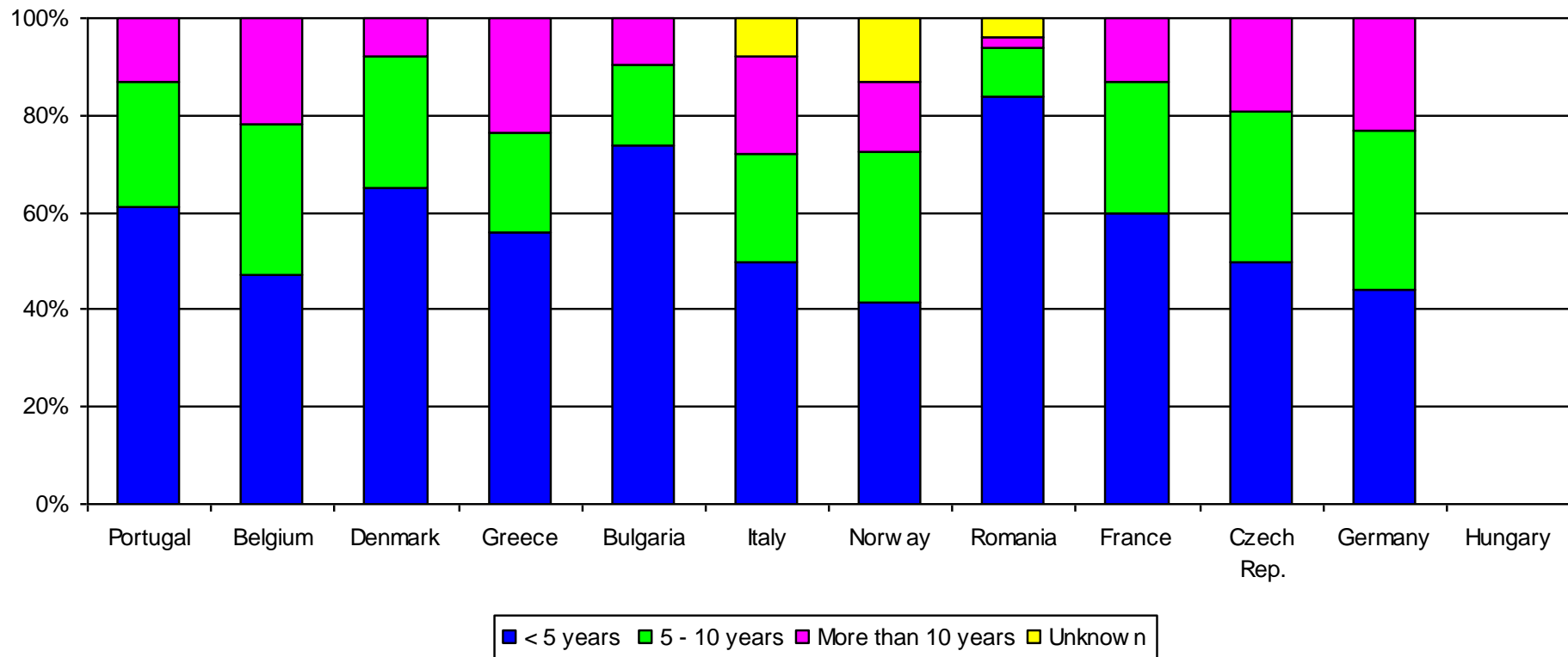
Spring



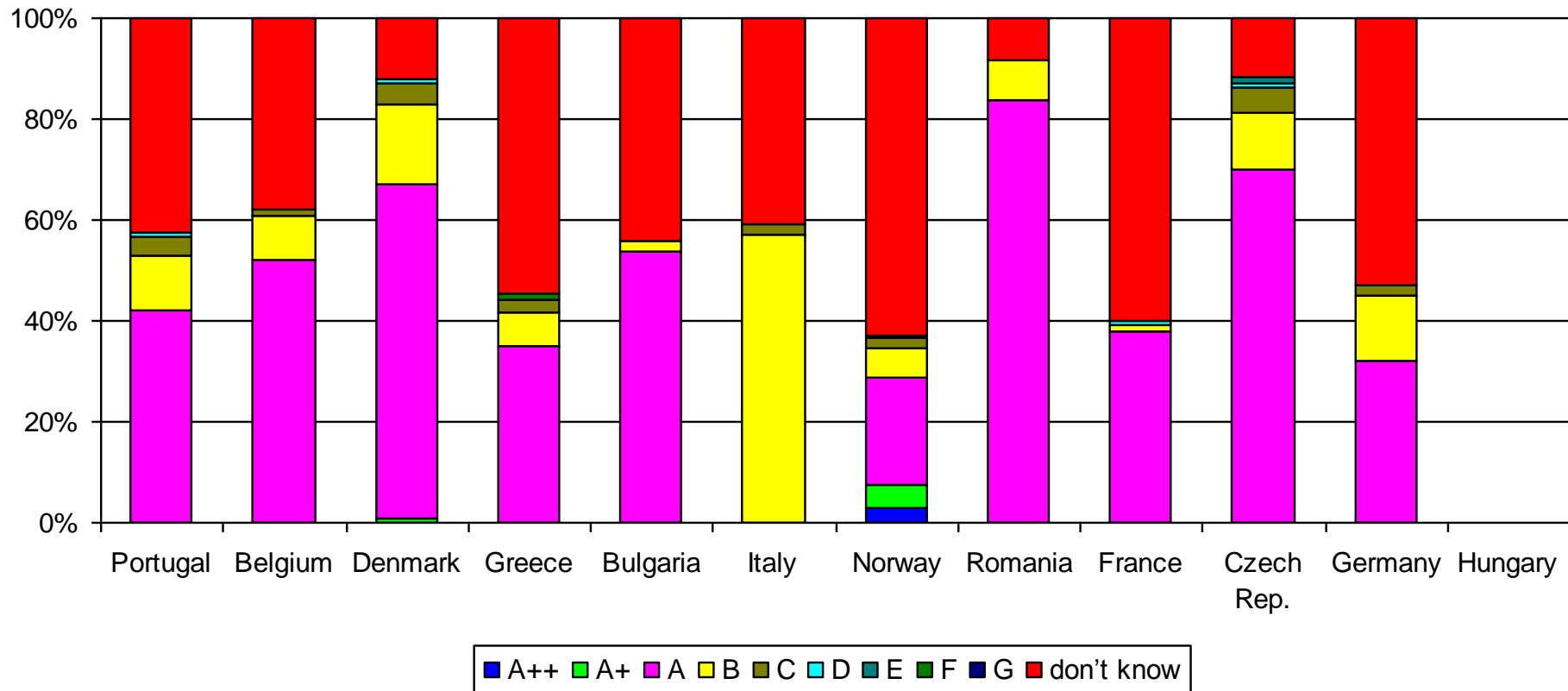
Summer



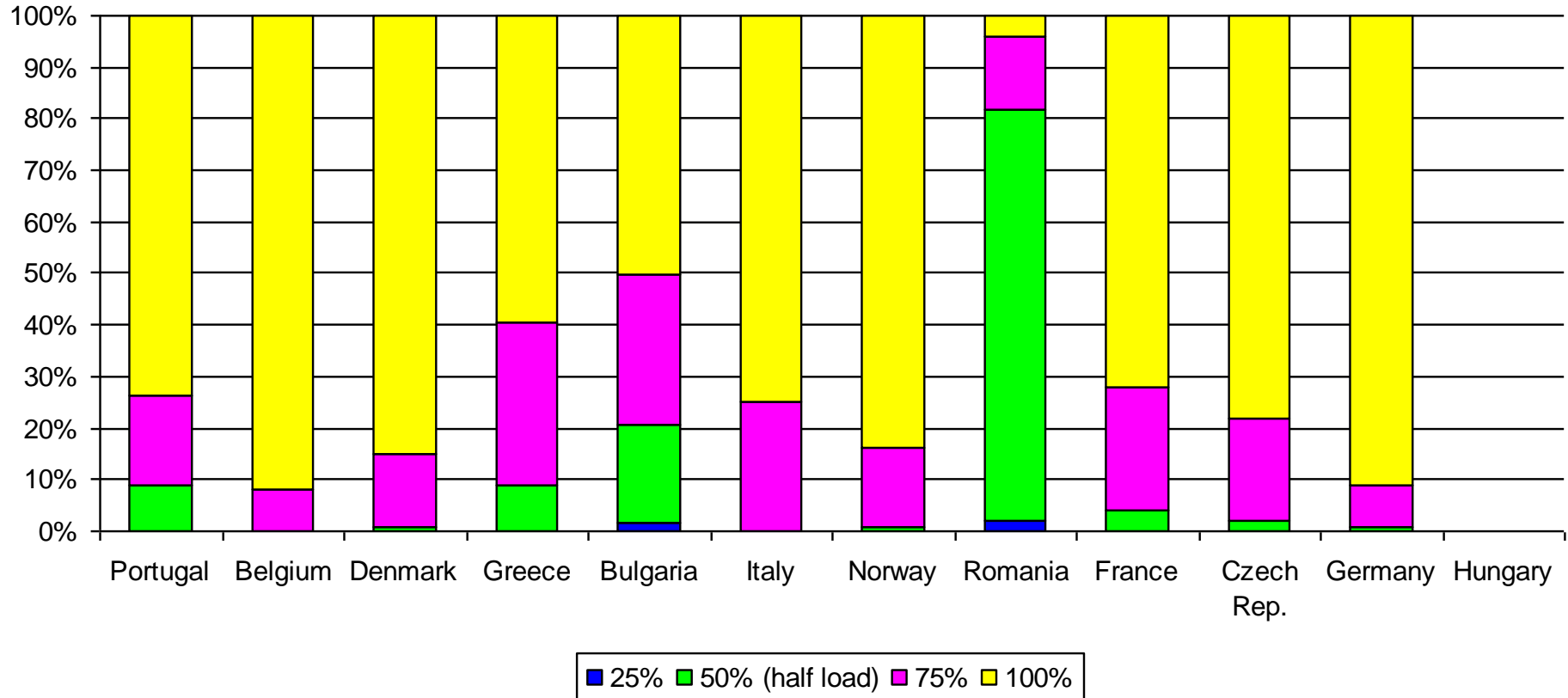
Age structure – Dish washer



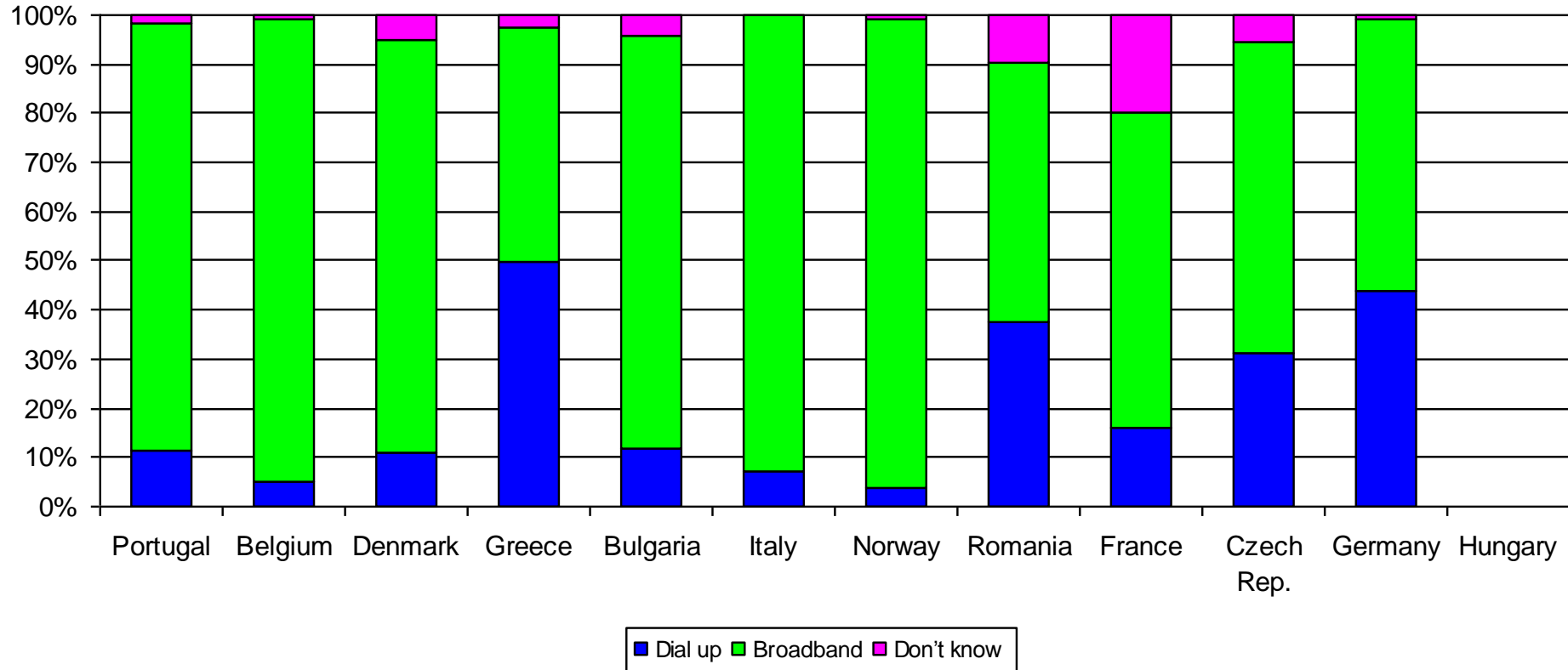
Efficiency Class – Dish washer



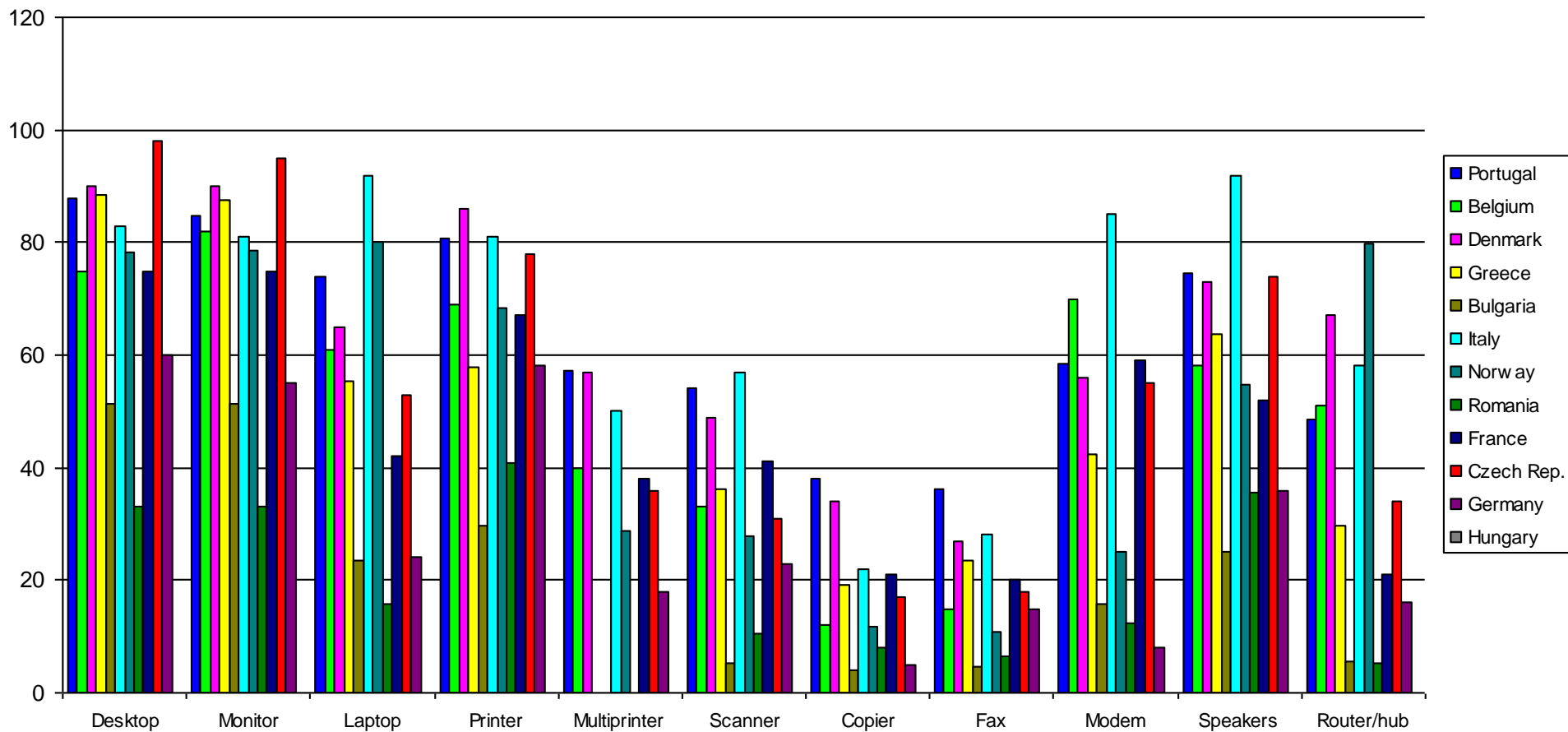
Usual filling of the appliance's capacity – Dish washer



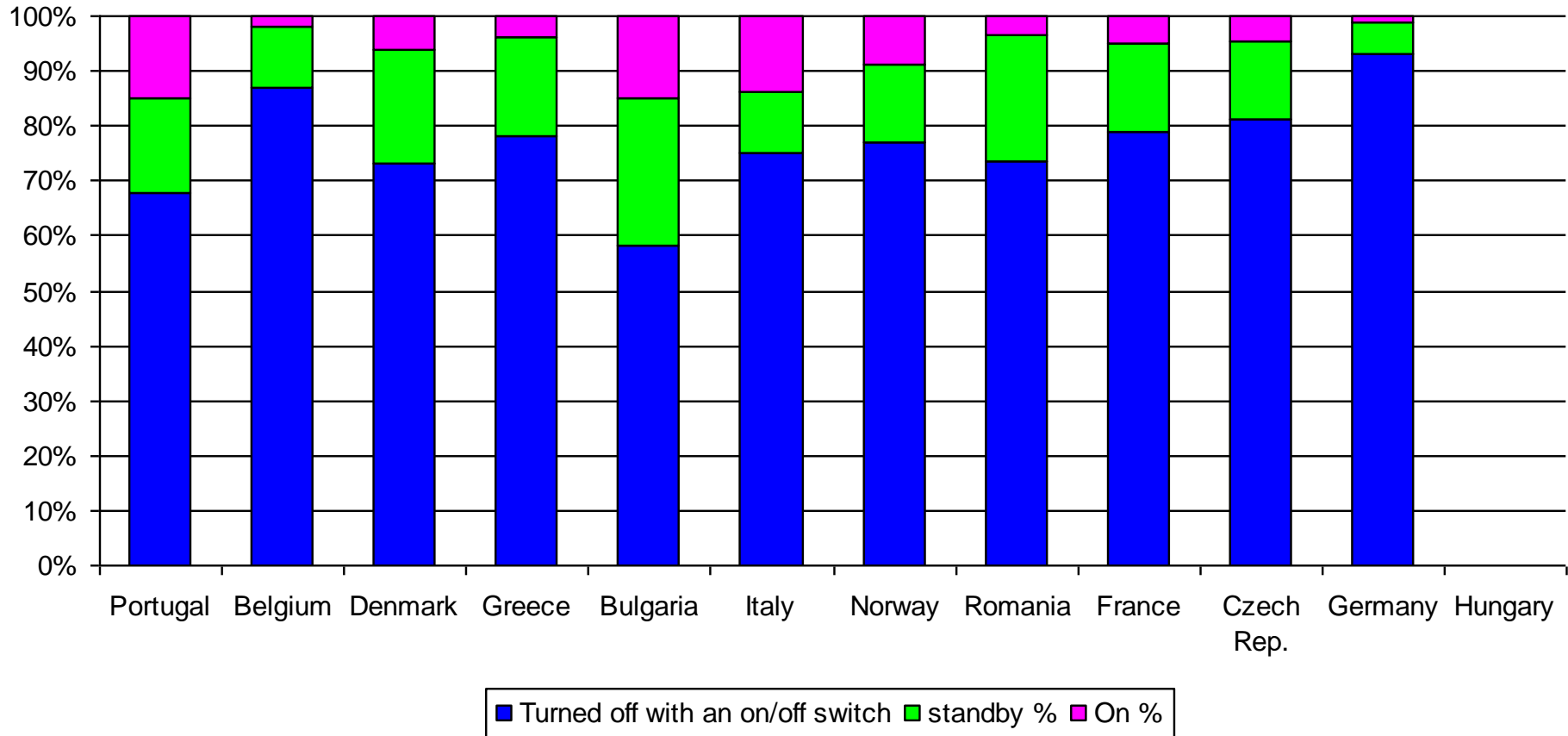
Type of internet connection

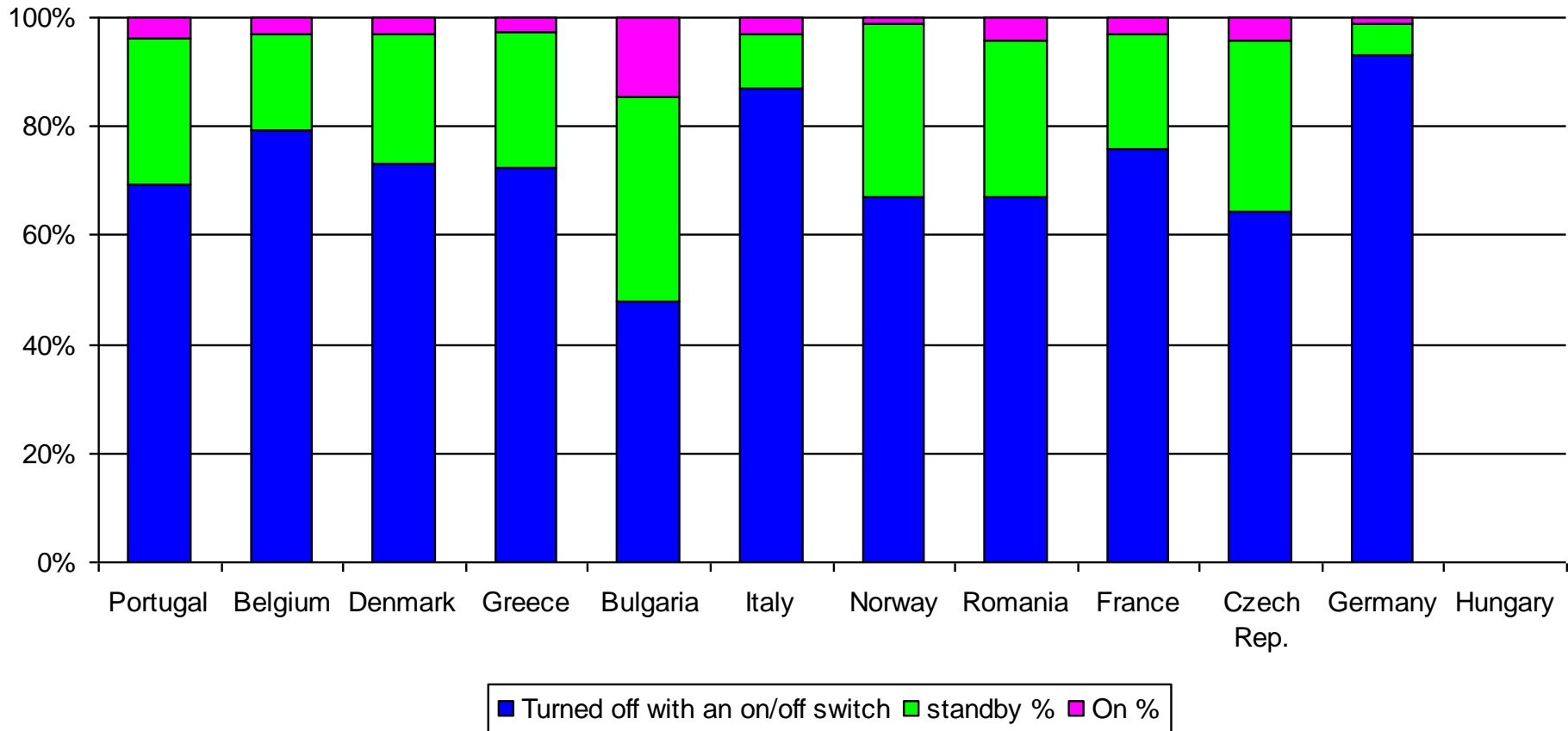


Ownership rate

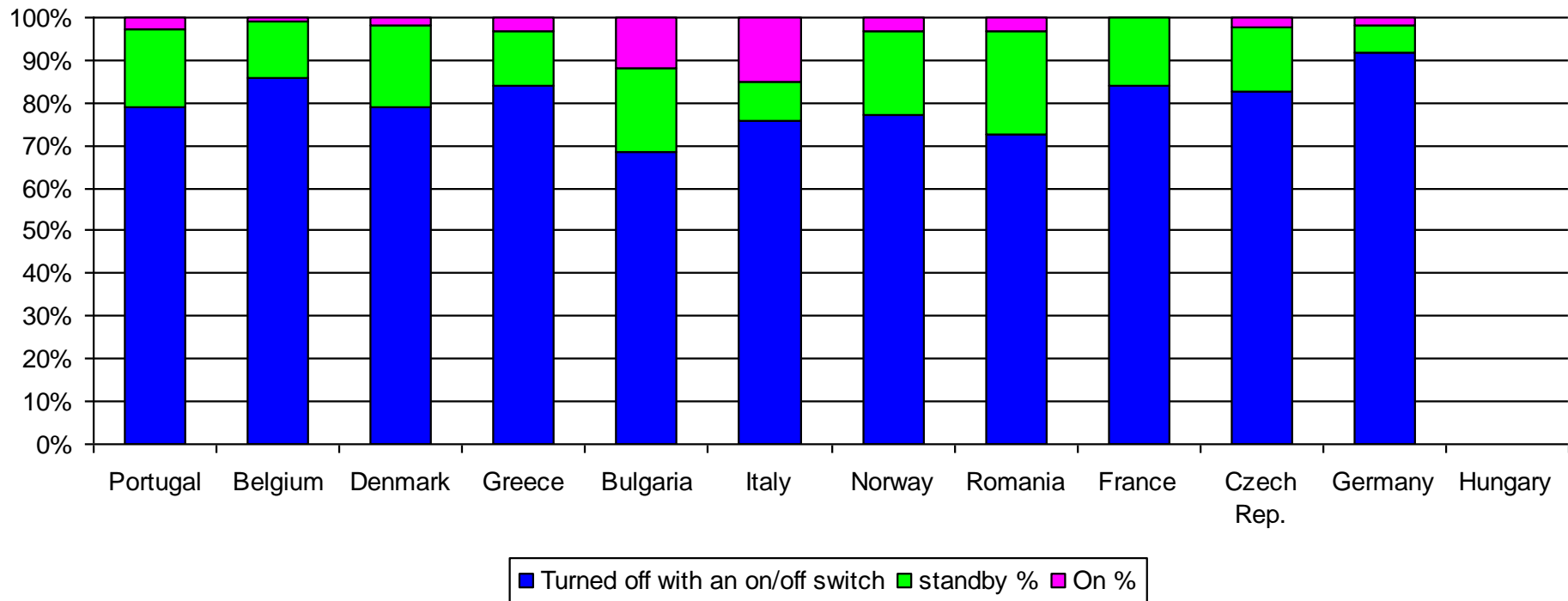


State - Desktop

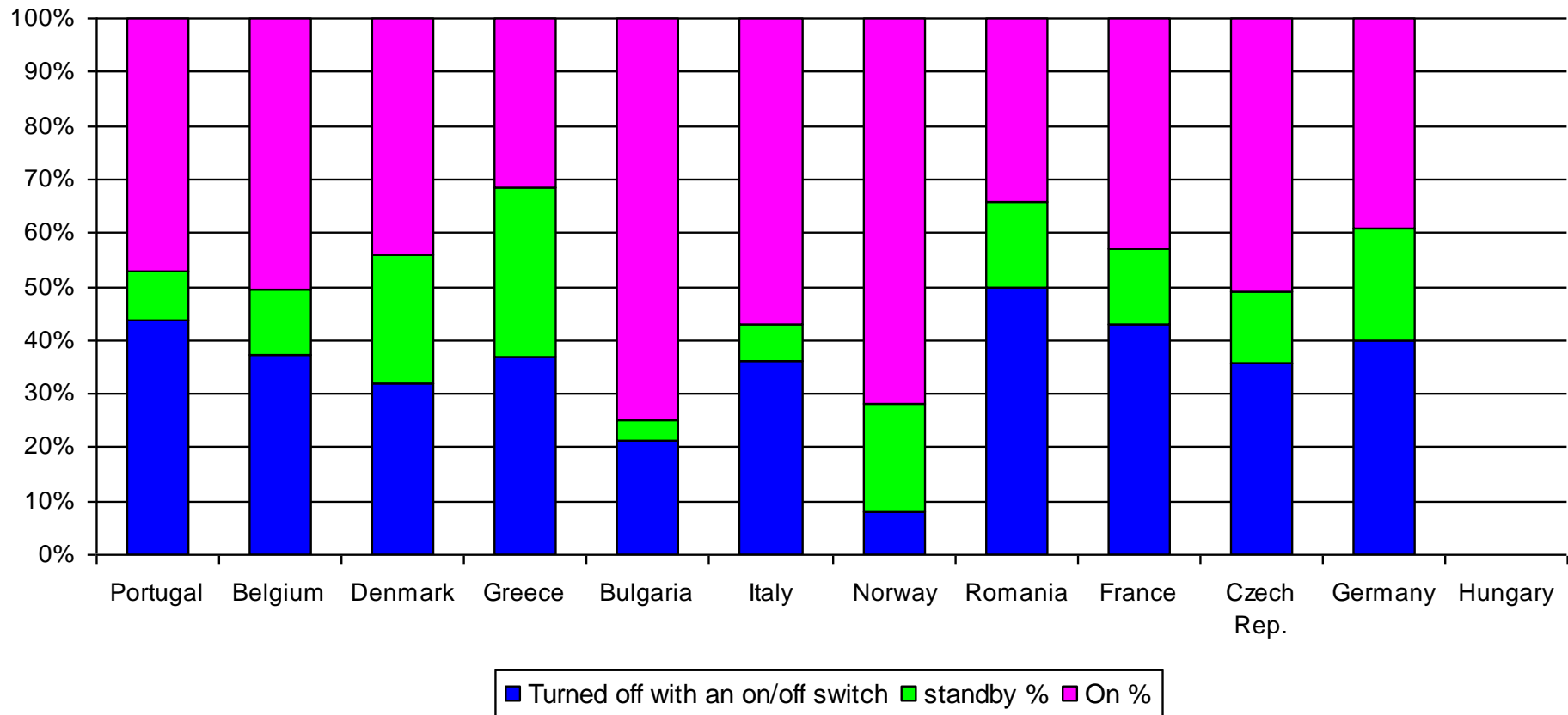




State - Laptop

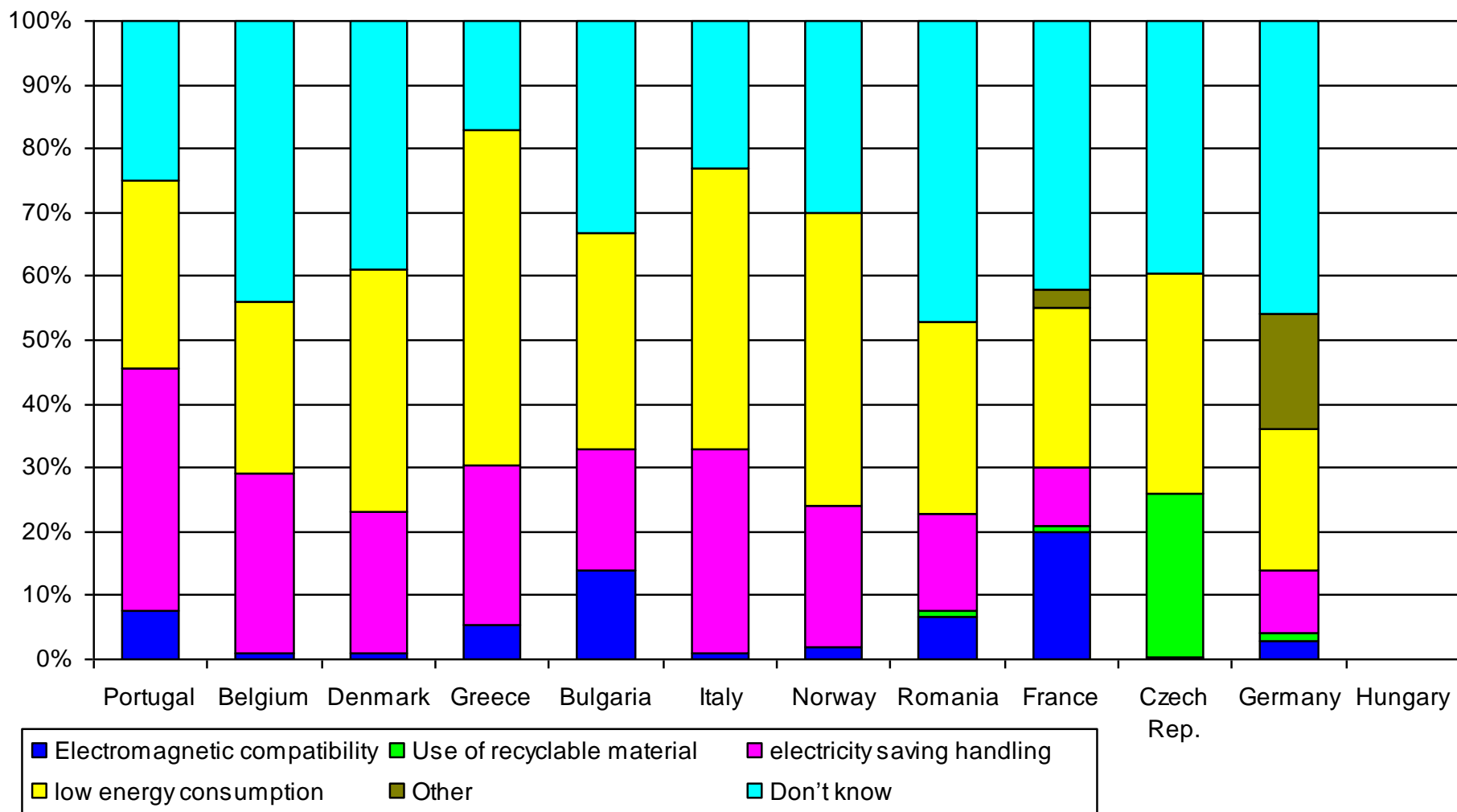


Router/Hub



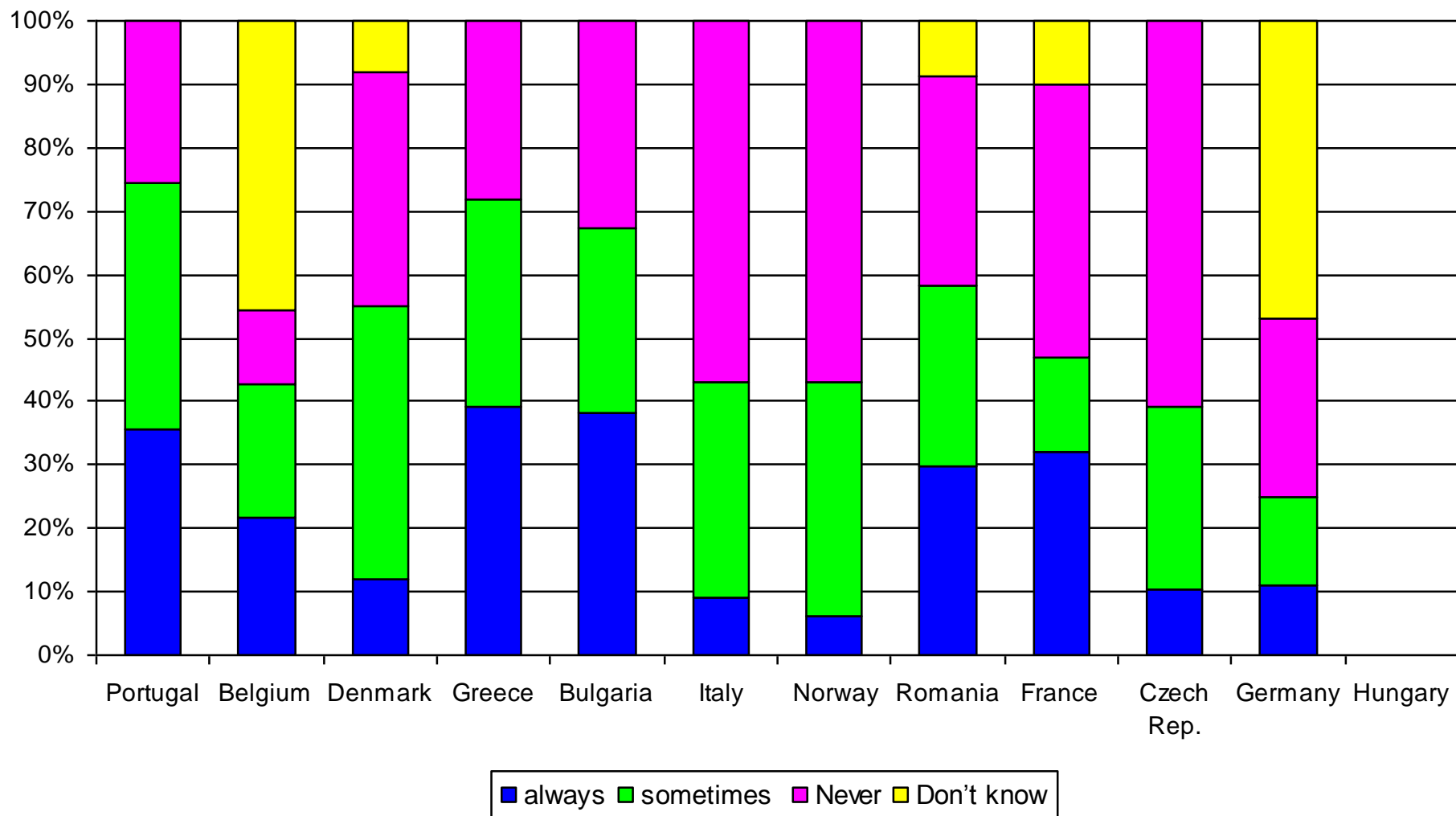


Knowledge: What do you think the energy star label refers to?





When you buy an office appliance, do you choose one with Energy Star?



THANK YOU!