

Dematerialisation in Brussels offices, Belgium



1. Summary

Country/Geographical Area	Belgium, Brussels Capital Region
Level of implementation	Regional
Scale	Roll-out
Waste fraction / Specific Waste Type	Paper in offices
Target Audience	Employees of offices in Brussels Capital Region: +/- 340 000 employees
Objective	Reduce paper consumption (and waste) in offices
Initiator/coordinator	Brussels Environment (IBGE)
Other key actors involved	Consultants hired for the different project stages : RDC Environment, PSS, Espace Environnement
Duration	2002 - ongoing
Number in Mapping report	23
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2. Context

Global paper consumption increased by 20% every year! In Brussels-Capital Region, approximately 60 000 tonnes of waste paper and cardboard from office activities are collected each year. 75% of this waste consists of paper (printed paper, envelopes, newspapers ...). Some 340 000 people work in the offices in the region, each employee consumes an average 50 kg of printed paper per year. This represents 50 pages per person per day, or 10 000 pages per person per year.

While the use of new office technologies - internet and email - carried the promise of a reduction in paper consumption and the hope of a “paperless office”, quite the opposite happened. The rapid advances in technologies were not accompanied by changes in work attitudes and information and training is therefore needed to make better use of the potential offered by virtual office technologies.

3. Strategy

Objectives

The 2010 Waste Management and Prevention Plan, foresees a reduction in paper use in offices of 12 kg/employee/year by 2013 and of 30 kg/employee/year 2020 (compared to 2005 level).

Preconditions

To set objectives the initial paper usage and habits in offices need to be known. Tools and advice for offices need to be tested and communication campaigns need to be supported by figures that show the potential benefits of taking action.

The combination of stages in this project enabled both the gathering of data and the finetuning of tools.

Procedure

The paper dematerialisation project involved

- Training/coaching of a series of organisations during 3 to 6 months focusing on training & awareness raising, new tools, improved document flow ... to assess the feasibility of specific actions, evaluate the reduction potential overall and in specific sectors/company sizes, and publicise concrete results to convince and mobilise further companies.
- region-wide communication campaigns (mailing and press release), information sessions open to all interested parties, and tools available for free.

Since 2002, three training/coaching phases were implemented during each of which 10 to 25 voluntary companies were accompanied in their efforts to reduce paper consumption.

The accompanied companies could choose among several measures:

1. Awareness raising and training to encourage staff members: e.g. reduce font size, reduce margins, reduce line spacing, printing both sides and 2 sheets per page, the document could be reduced to 4 pages, print only when needed...
2. Organisational choices: e.g. virtual internal procedures, rationalise the distribution of external information and set default parameters such as procedures as memos, minutes, press releases, order forms, invoices, archiving, etc.; Develop home-work; decentralize services, etc.
3. Technological resources (office equipment, software and consumable purchases).

Each accompaniment phase was followed by a communication campaign, an information session accessible to all, and the provision of free tools (such as poster, screen saver, check list, self-assessment tool...).

Instruments

Organisational: offering an training services to organisations

Information instruments: both for the volunteer organizations and the wider public

Communication campaigns

Timeframe

Long term action with punctual training/coaching phases and communication campaigns.

Training/Coaching of organizations: from +/- 2002 to +/- 2009

In 2002-3, the first phase (10 organizations) was used to estimate potential reduction of paper consumption (10% to 30% by weight) and a methodology to achieve it. The methodology developed is the establishment of an integrated approach: education & awareness, introducing new tools, internal organization and management of document flows applied to the whole enterprise. Saving energy and consumables related to office activities were also quantified

In 2004, the second phase (25 organizations) has validated and refined the first large-scale results (average 18%) and methodology. Factors influencing the consumption of paper and the reduction potential have been identified

In 2008-9, the third phase (18 organizations) was to test large-scale usefulness and ease of operation of the tools developed by Brussels Environment (eg e-learning tool too long, not motivating enough) and the relevance of coaching the internal coordinator designated by the accompanied organisation.

At present: only centrally held information sessions and free availability of tools. Organizations are informed and encouraged to take action on their own

4 .Resources

Resources = mainly staff costs

Financial Resources

External cost for the coaching of organizations (data from the second phase):

A training/coaching phase carried out in 2004 (by sub-contractor PSS) in 25 organizations during 6 months cost: 75.000€, i.e. 3000€ per organization.

Savings achieved by the organizations

Estimated annual joint saving by the 25 participating organizations: 775 000€, i.e. (see avoided costs)

For private companies, it is considered that the demonstrated financial gains are a sufficient driver to auto-finance the project. Self-funding of the project is achievable. No need to provide financial support from public authorities. Therefore, a coaching services offered for a fee could be appropriated

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Human Resources

Internal : 0.2 Full Time Equivalentents

External : sub-contracting (see above)

Equipment

Stickers to place on printers “print 2-sided”, example of 2011-version of sticker below.



Communication Tools

Posters: “to print or not to print”, ”2-sided printing challenge, screen saver, check list...

Allocation of resources over time

(see timeframe)

5. Evaluation

Results

- Participation

Up to 25 trained companies per training/coaching action, i.e. about 8 000 employees (data from the second phase carried out in 2004).

- Avoided waste quantities (or toxicity)

Target on quantity reduction:

	Target	Deadline
paper use reduction in offices according to 4th waste management plan	12 kg/employee/year	2010-2013
paper use reduction in offices according to 4th waste management plan	30 kg/employee/year	2010-2020

The second training phase carried out in 2004 (by PSS) coached 25 organizations during 6 months and achieved quantitative results: **15% to 25% reduction in paper consumption (average 18%)**, i.e. a total reduction of annual paper use by a bit more than **75 tonnes of paper or 775 000€**.

Initial paper usage prior to the coaching

2 500 to 62 000 A4 sheets of paper per FTE per year

On average 10 000 A4 sheets of paper per FTE per year, i.e. 54 kg.

Large companies consume the least (36kg/FTE/year)

Small companies are economical by "nature"(66kg/FTE/year)

Medium sized companies have the highest consumption per person (100kf/FTE/year)

Result of the coaching:

Cases with high improvement potential (11/25) achieved an average saving of 21 to 25%, i.e. 5000 A4 sheets or 25 kg or 250€ per FTE per year.

Cases with low consumption and limited improvement potential (10/25) achieved an average of 15%, i.e. 1500 A4 sheets or 7.5 kg or 75€ per FTE per year.

Cases of non-commitment to the project (4/25) witnessed an average increase by 25%

Longer term organizational measures could achieve an additional reduction by an average of 30%, e.g. up to 70% reduction over 5 years.

Impacts

- Avoided Costs

Savings can be expressed in Euro, based on the initial assessment of paper usage and its cost per sheet.

Typically, one printed page = 10 cent, 1 dematerialised page = 5 cent with 10-20% increase in productivity

This financial benefit is achieved by reducing the unnecessary consumption of paper, ink and energy. The cost effectiveness in the office is increased by an optimal exploitation of the potential of these technologies. Space savings and efficiency gains through reorganization of the dissemination of information and by archiving digital information. Taking into account the paper, energy and ink use, printer depreciation, archiving and time wasted searching for documents, a cost estimated at 10 cents per sheet of printed paper is reached. Knowing that a worker uses on average 10 000 sheets of paper, this adds up. Even if an paperless office is not achieved, cost reduction, increased performance and better return on investment are expressed in thousands of Euros. For companies that have the highest potential savings, the numbers speak volumes: a saving of 5000 sheets of paper per year per worker represents 25 kg of paper and ... a saving of 250 Euros.

- Avoided CO₂ equivalent

Savings can be expressed in avoided CO₂ emissions: 500 printed sheets = 7,25 kg CO₂ = the consumption of a computer on standby for 27 days = 42 km by car.

- Social Benefits

Not assessed

Continuation over time

See allocation over time

Difficulties encountered

Management tends to be more interested in energy savings than in paper reduction. Economic benefits related to dematerialisation are difficult to demonstrate as paper costs are included in the purchasing budget, team efficiency and space savings are not measurable.

Monitoring System

Each training phase following individual companies over several months provided data on the effectiveness of specific waste prevention measures (see above)

6. Lesson learnt & recommendations

Opportunities & Challenges

- Win-win opportunity for organisations to reduce paper use (financial savings) and increased efficiency.
- More and more service providers are available to work on organisational and structural aspects of paper dematerialisation in offices.

Key factors of success

- Within the organizations, involvement of all hierarchical levels is needed to allow structural and organizational changes.
- Need to designate a relay person within the organization
- Need to sustain efforts over the long term (over 5 years up to 70% reduction in paper usage)

Recommended improvements/adaptations

- Before offering training/coaching services to an organization a minimum level of commitment is required.
- Focus on priority target - with the largest paper consumption per employee and thus a particularly high reduction potential - are medium-sized organizations.
- Make sure that the initial state is measured for an extended period of time (at least 3 months, preferably 1 year) because consumption can fluctuate considerably over time.
- Repeat training of staff regularly to maintain impact over time
- Self-funding of the project is achievable. No need to provide financial support from public authorities. Therefore, a coaching services offered for a fee could be appropriated

Recommended indicators & monitoring

Progress can be measured by monitoring paper consumption in an organisation over time, before and after awareness raising actions.

Savings can be expressed in

- EURO: based on average costs per page for the company. Typically, 1 printed page = 10 cent, 1 dematerialised page = 5 cent with 10-20% increase in productivity
- avoided CO₂ emissions: 500 printed sheets = 7,25 kg CO₂ = the consumption of a computer on standby for 27 days = 42 km by car.

7. Comparison with similar actions

In different location/context

Wallonia, Belgium:

Campaign on paper wastage prevention in public administrations, private companies and households by Copidec (inter-municipal organisation for waste management) with the support of the Walloon region.

More ideas for less paper, adopt the “cocotte attitude” (www.moinsdepapier.be) It only uses virtual information materials to promote 25 tips: short funny videos for each, a quiz, screen savers, technical factsheets, and radio adverts. Public administrations, companies and individuals can register online to show their commitment.