

## Implementation of waste sorting pictograms in Denmark

### Distribution on receptacles

The Nordic pictogram system was originally developed in Denmark and launched in January 2017. Initially the system was voluntary, but from 2021 it has been mandatory by regulation to use the pictograms on waste receptacles for 10 certain waste types from both households, businesses and industry.<sup>1</sup>



However in practice, all waste management operators (public as well as private) are implementing the combined waste pictogram systems of over 100 pictograms across the collection points (households, bring banks, public spaces, airports, train stations, workplaces, construction sites, civic amenity sites etc.), and not just limited to the 10 mandatory pictograms.

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<sup>1</sup> Statutory order on waste in Denmark:

<https://www.retsinformation.dk/eli/ta/2021/2512#iddd691562-7079-400f-a315-5fbea542b174>



Municipalities (there are 98 municipalities in Denmark) are in essence done with the implementation, while private operators are still engaged in implementing the pictograms for commercial and industry waste.

In addition, the pictograms are being implemented in Greenland and the Faroe Islands.

### **Variants**

Colored pictograms are mandatory to use as the primary option, however black/white versions are allowed (they are more resilient to fading from UV-lighting), under the condition that colored versions are found used elsewhere on the bin (eg. under the bin lid) and in digital and printed sorting information.

Tactile signs with braille and raised letters and symbols are available for people with visual impairments. They are predominantly used in black/white for increased contrast.



### **Distribution on packaging**

The pictograms are widely seen on packaging. Several of the largest supermarket chains use them on private label products, including Føtex, Netto, Bilka, Meny and SPAR.

Additionally some of the largest producers and brand owners use the pictograms, including Arla, Orkla and Naturli' – and a wide range of smaller and individual producers.

### Effects

The pictograms are usually implementing alongside improved collection system, making it difficult to isolate the effects of the pictograms from for example introducing curb side collection of a waste fraction instead of bring banks/collections points.

A study from Copenhagen however indicates that when existing signs in sorting areas in apartment buildings were replaced with new pictograms, residual waste dropped with 15 % due to increased sorting.

When interviewed, residents in the apartment buildings where the pictograms were introduced expressed that they used the pictograms more than before, that they liked the uniformity in design and appearance, making it more pleasant to sort waste – and that the pictograms provided them with clear guidance.

In a quantitative survey conducted by the City of Copenhagen, 88 percent agreed fully or mostly, that the pictograms make it easier for them to sort, and that 80 percent agree fully or mostly that they look for the pictograms when searching for the right waste receptacle for a waste item.

In another quantitative experiment conducted by the Ministry for Environment, participants were asked to choose the correct waste fraction to dispose of different waste objects. The participants were randomly divided into three treatment groups to whom the fraction options were presented by either:

- a) the Nordic pictogram alone
- b) the pictogram supplemented by a photo of the fraction waste, or
- c) the pictogram, photo and a short text with relevant waste and recycling information.

The study showed, not surprisingly, that the more information the participants were given, the longer the task would take. The reaction time did not significantly differ



when photos were added to the pictogram, but when text was added, participants on average spent 60 seconds longer deciding where to dispose of the waste item.

This happened even though the quality of the waste sorting did not change significantly. The insignificant difference even showed a lower waste sorting quality when text was added to the symbol, suggesting that the pictograms work well on their own.

*Find all the pictograms on [www.affaldspiktogrammer.dk](http://www.affaldspiktogrammer.dk)*