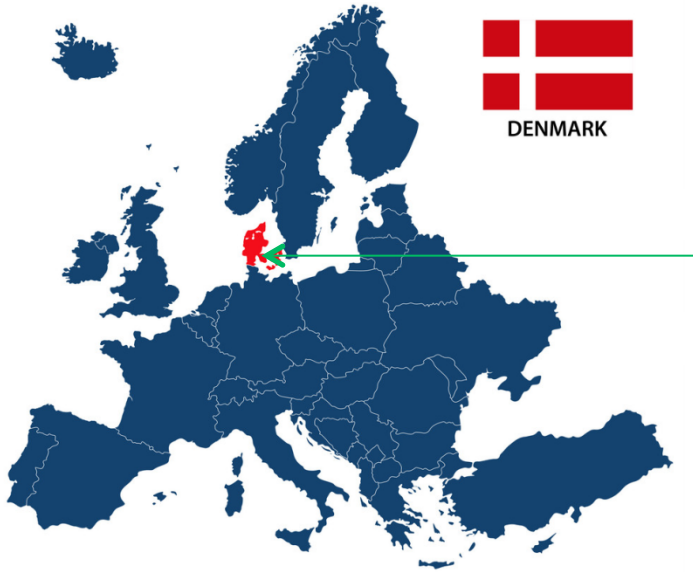


An aerial photograph of the Aarhus University Hospital complex, showing a large cluster of multi-story buildings with a mix of brick and white facades. The hospital is situated in a green, landscaped area with parking lots and roads. In the background, a residential city area is visible, followed by a coastline with a harbor and industrial structures under a clear sky.

Public Procurement in Healthcare:

Plastic packaging and tender requirements

Aarhus Universityhospital in Central Denmark Region



Key facts

Clinical departments: 44

Number of beds: 1,150

Annual activities:

803,100 out-patients visits

40,749 emergency visits

94,329 discharges

83,202 surgeries

44,600 endoscopies

4,876 births

Staff:

10,200 employees

(9,400 full-time positions)

Denmark's best hospital 2017



The Department Managements for the 11 treatment areas who won an award for being number one in their field (photo: Michael Harder, Aarhus University Hospital).

For the tenth year running, Aarhus University Hospital is Denmark's best hospital. The independent specialist newspaper on healthcare sector news "Dagens Medicin" has appointed Aarhus University Hospital as the best in their competition to become Denmark's best hospital.

2017:

3.200 t solid waste/y

- 16% Recycled
- 83% Waste to energy
- 1% Landfill

2030:

xx t solid waste/y – ?

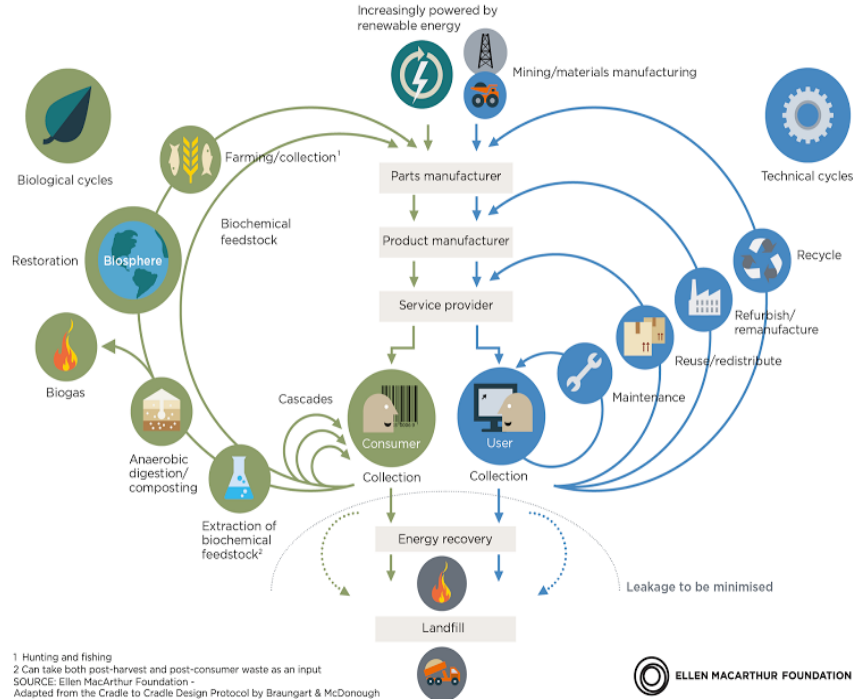
- 50% Recycled
- 49% Waste to energy
- 1% Landfill



COSTS PR. TON INCREASING

What is Circular Economy (CE) ?

CIRCULAR ECONOMY - an industrial system that is restorative by design



500 kgs of solid waste contains

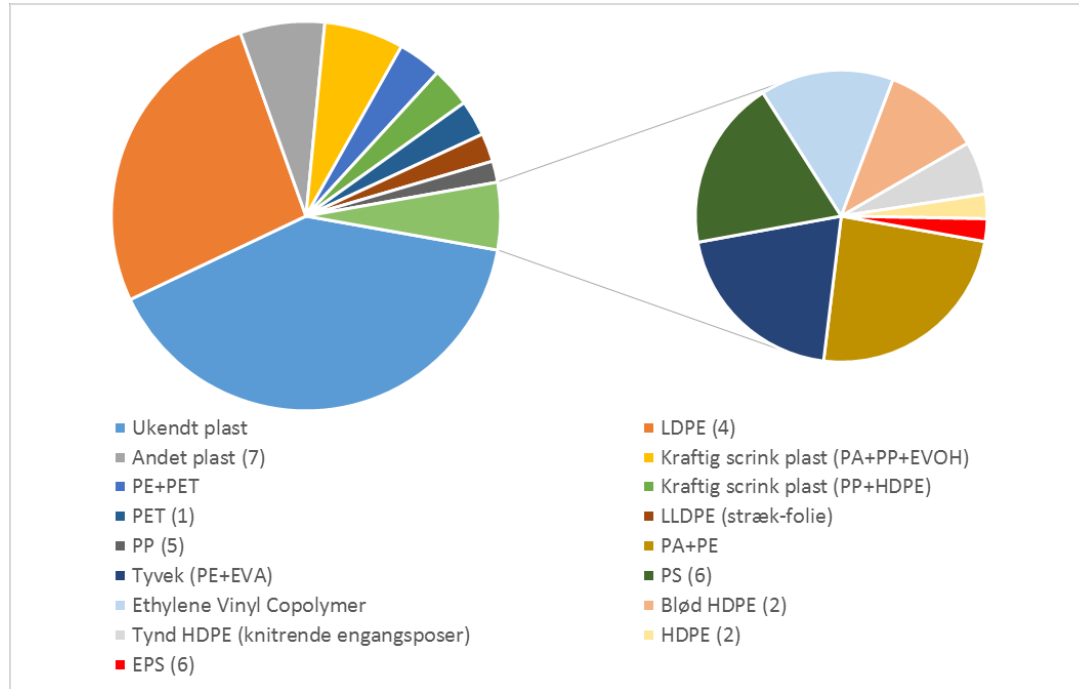
90 kgs of plastic packaging

=

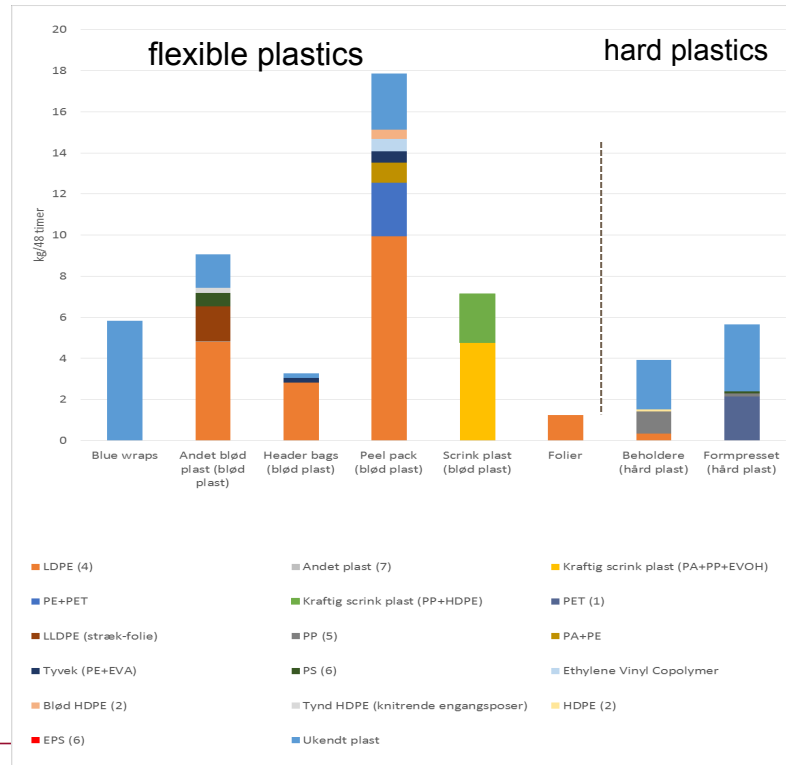
**18% of solid waste in
Aarhus Universityhospital is
clean plastic packaging**



Plastic packaging – a complex fraction



Majority is flexible plastics



The PP Pilot Case – Bottles for irrigation



Pilot case – tender requirements



PP Natural Containers

	YES Full compatibility Materials that passed the testing protocols with no negative impact OR materials that have not been tested (yet), but are known to be acceptable in PP recycling	CONDITIONAL Limited compatibility Materials that passed the testing protocols if certain conditions are met OR materials that have not been tested (yet), but pose a low risk of interfering with PP recycling	NO Low compatibility Materials that failed the testing protocols OR materials that have not been tested (yet), but pose a high risk of interfering with PP recycling
Container	PP		multilayers PP + (PLA; PVC; PS; PET; PETG)
Colours	natural; colourless	light colours	black inner layer; black
Barrier			EVOH; PA; PVDC
Additives			additives changing the material density > 1g/cm ³
Closure Systems	PP	PE-HD; PE-LD; PE-LLD; PE-MD PET; PETG; PS; PVC; PLA	foams with density < 1 g/cm ³ ; aluminium
Liners, Seals & Valves	PP	PE-HD; PE-LD; PE-LLD; PE-MD PET; PETG; PS; PVC; PLA removable aluminium fasteners	aluminium
Sleeves	PP	PE-HD; PE-LD; PE-LLD; PE-MD PET; PETG; PS; PVC; PLA	aluminium; foams with density < 1 g/cm ³
Labels & Adhesives	PP labels; water soluble releasable adhesive (less than 40°C)	PE-HD; PE-LD; PE-LLD; PE-MD PET; PETG; PS; PVC; PLA	aluminium; foams with density < 1 g/cm ³ ; labels with non water soluble PET; PE; PS; PVC; PLA; self adhesive labels; aluminium; organised materials
Inks	non toxic - follow EUPIA Guidelines		inks that bleed; toxic or hazardous inks
Direct Printing	laser marked; product		any other direct printing
Other components		PE-HD; PE-LD; PE-LLD; PE-MD PET; PETG; PS; PVC; PLA	aluminium; foams with density < 1 g/cm ³

Last updated December 2017

Competitive parameters

- The label consists of PP, HDPE, LDPE or PP
- 95% of the bottle body printing consists of one polymer
- The bottle body consists of HDPE, LDPE or PP
- The bottle liners, seal or valve in cap/capsule consist of HDPE, LDPE, PP or PE+EVA
- Tamper-ring consists of PP, PE, EPS or OPP and has a density of less than 1 g/cm³
- Glue is soluble in water at less than 80 degrees Celsius
- Printing ink is non-toxic based on EUPIA guidelines
- Direct print is laser-based
- The competitive parameter is weighted with 5%

None of the bidders gained more than 50 % of the given points!

Minimum requirements

It is a minimum requirement that the bottles offered have a clear marking on how the polymers used can be recycled, using the 7 international recycling symbols. The orderer prefers marking that follows the CEN Recommendation WI 261 070, but accepts marking following the EU Commission Decision 97/129/EC.

Is this requirement met?

Three tenders

Tender	Tender sum app.	Criteria
Irrigations fluids (2018)	7,5 mio USD	Minimum criteria + Competitive parameters 5% Weight
Non-clinical-single-use utensils	7,5 mio USD	Minimum criteria + Non-wanted chemicals + Ecolabels
Stomiproducs	22.7 mio USD	Minimum criteria + Competitive parameters



Tender Criteria I: Reduce

- Reduction of packaging
- Include recycled material in secondary and tertiary packaging



Tender Criteria II: Re-use

-Develop take-back systems where ever relevant/possible



Tender Criteria III

Recycle

Do:

- Monopolymer packaging.
- PP, PE and PET.
- Mark for recycling.

Dont:

- PVC.
- Laminates (?)
- Combinations of paper and plastic.



Thank you for listening!

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