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ICAO Environmental
Symposium 2019

DESTINATION GREEN: THE NEXT CHAPTER



Circular Economy

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Schiphol
Group



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KEY FIGURES

Amsterdam
Airport
Schiphol





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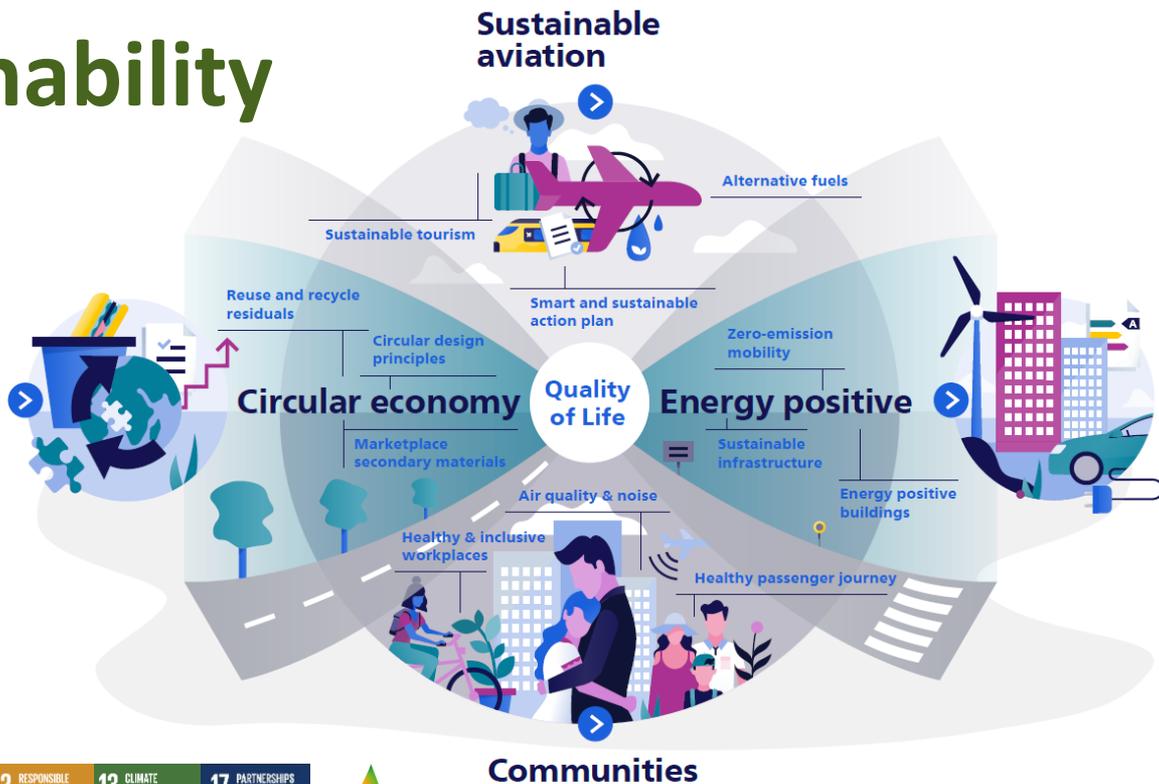
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Sustainability Vision



8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	17 PARTNERSHIPS FOR THE GOALS





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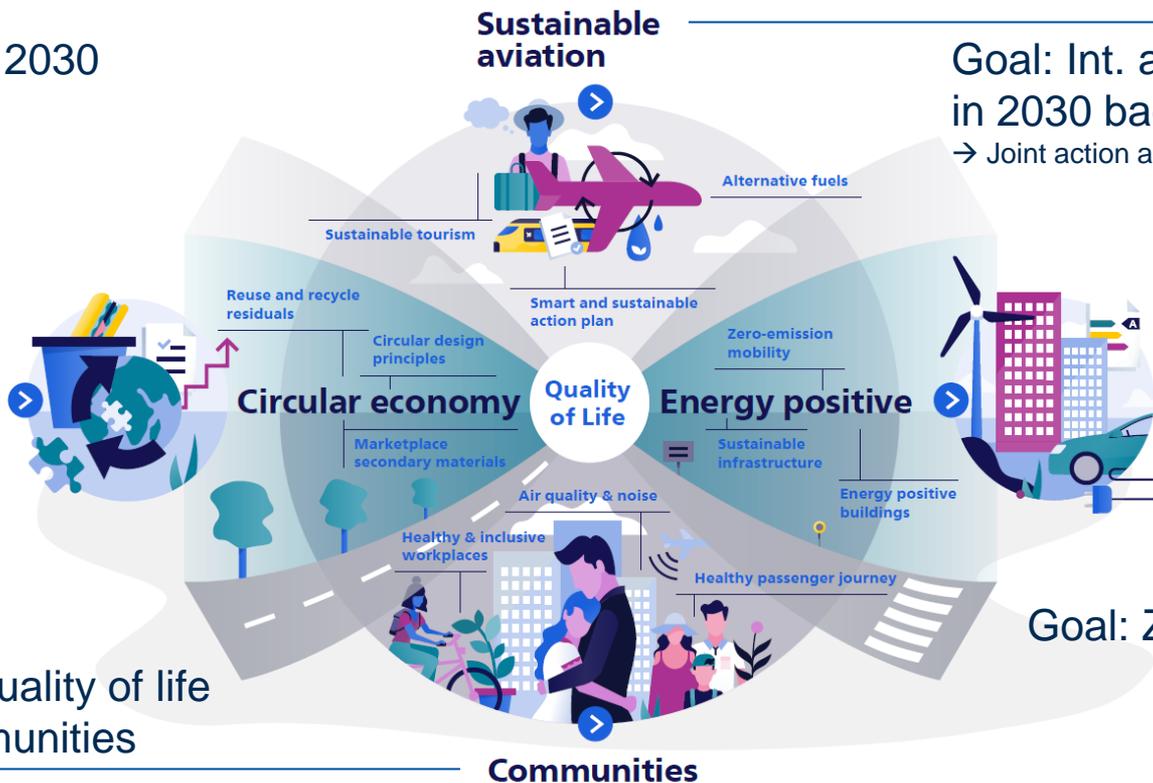
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Goal: Zero Waste 2030

Goal: Int. aviation emissions in 2030 back on 2005 level
→ Joint action agenda Smart & Sustainable

Goal: Improving quality of life surrounding communities

Goal: Zero Emission 2030





Circular economy – what is it?

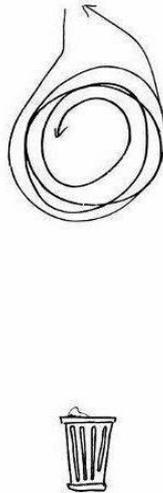
LINEAR ECONOMY



RECYCLING
ECONOMY



CIRCULAR
ECONOMY



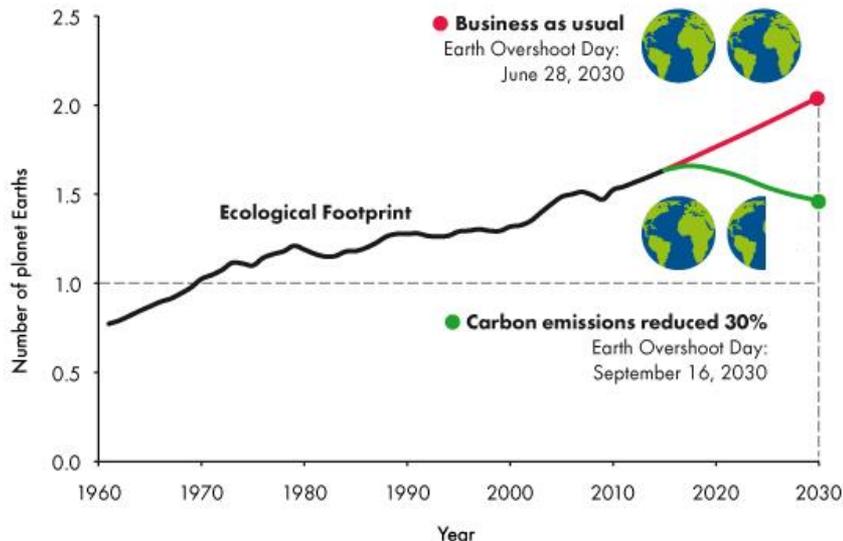
“A circular economy is restorative and regenerative by design, and aims to keep products, components, and materials at their highest utility and value at all times”.

- Ellen MacArthur Foundation



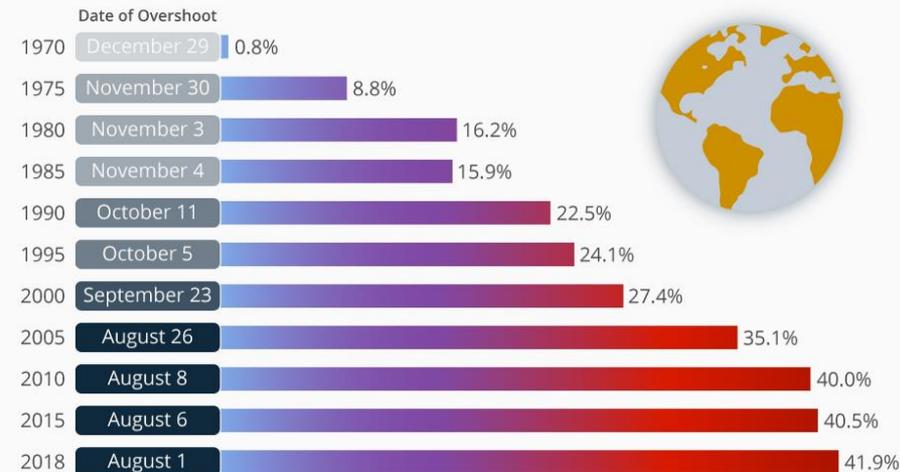
Circular economy – why important?

How many Earths does it take to support humanity?



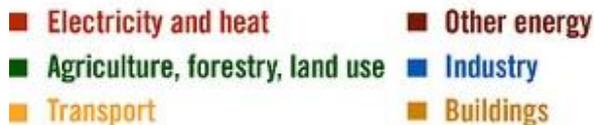
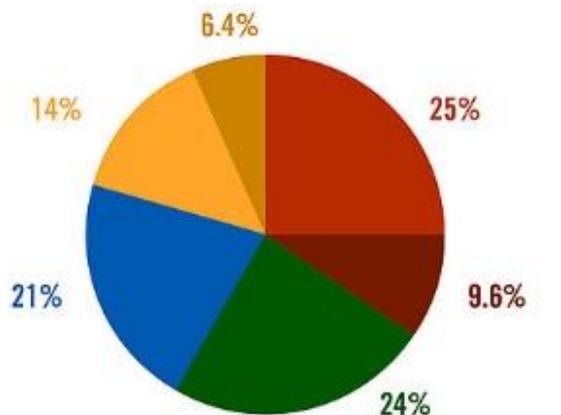
Earth Overshoot Day Comes Sooner Every Year

Share of year remaining after Earth Overshoot Day (1970–2018)





Circular economy – why important?



Source: IPCC (2014)

Water use

Fossil fuels



Land use and deforestation

Use of toxic materials



Resource use and depletion

Impact on natural habitat





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A large background image showing a dense pile of discarded white disposable cups, many with the 'REWE' logo, mixed with brown organic waste like leaves and twigs. A semi-transparent dark blue horizontal band is overlaid across the middle of the image, containing the main text.

**95% OF THE MATERIAL VALUE
IS LOST AFTER USE**



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The background of the slide is a large, detailed photograph of a pile of food waste. It includes various items such as banana peels, apple cores, lettuce leaves, broccoli, and other vegetable scraps, all mixed together. A semi-transparent dark blue horizontal band is overlaid across the middle of the image, containing the main text.

**ONE THIRD OF ALL FOOD PRODUCED
WORLDWIDE IS WASTED**



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11 YEARS LEFT TO STAY BELOW 1.5C GLOBAL WARMING, AVOID CATASTROPHIC ENVIRONMENTAL BREAKDOWN



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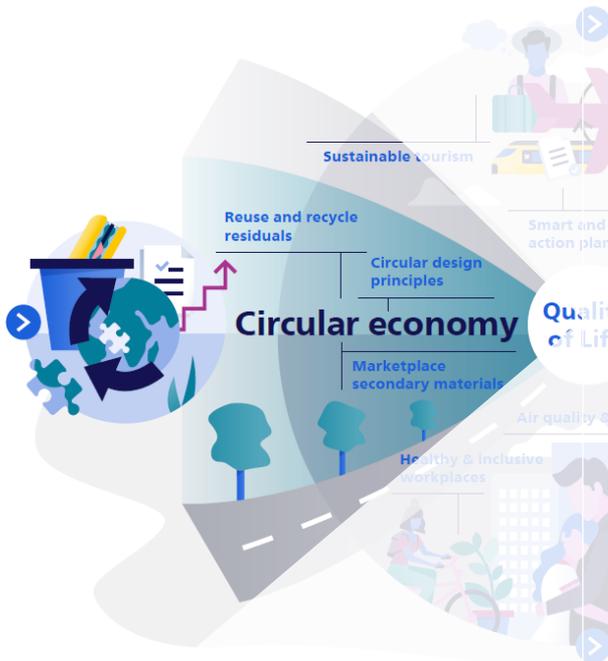
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A large-scale aerial photograph showing a massive number of commercial passenger jets in flight, filling the sky above an airport terminal and a field. The planes are in various stages of flight, some climbing and some descending. The text 'WORLDWIDE, THE DEMAND FOR AVIATION DOUBLES IN FIFTEEN YEAR' is overlaid in large white letters on a dark blue horizontal band across the middle of the image.

**WORLDWIDE, THE DEMAND FOR
AVIATION DOUBLES IN FIFTEEN YEAR**



Sustainable aviation



Our ambition: We want to close the loop and built an ecosystem whereby we keep the value of materials and exchange materials with regional partners. In the long term we strive to operate circular airports in 2050.

Communities



Circular economy		Strategies	
↑ Increasing circularity	Smarter product use and manufacture	R0 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product
		R1 Rethink	Make product use more intensive (e.g. by sharing product)
		R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
	Extend lifespan of product and its parts	R3 Reuse	Reuse by another consumer of discarded product which is still in good condition and fulfils its original function
		R4 Repair	Repair and maintenance of defective product so it can be used with its original function
		R5 Refurbish	Restore an old product and bring it up to date
		R6 Remanufacture	Use parts of discarded product in a new product with the same function
		R7 Repurpose	Use discarded product or its parts in a new product with a different function
	Useful application of materials	R8 Recycle	Process materials to obtain the same (high grade) or lower (low grade) quality
R9 Recover		Incineration of material with energy recovery	
Linear economy			



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Schiphol Circular



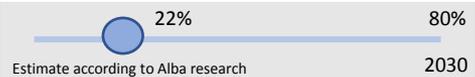
Value reuse operational residuals



Waste separation operational flow



Circularity building index



Material passports





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Thank you

