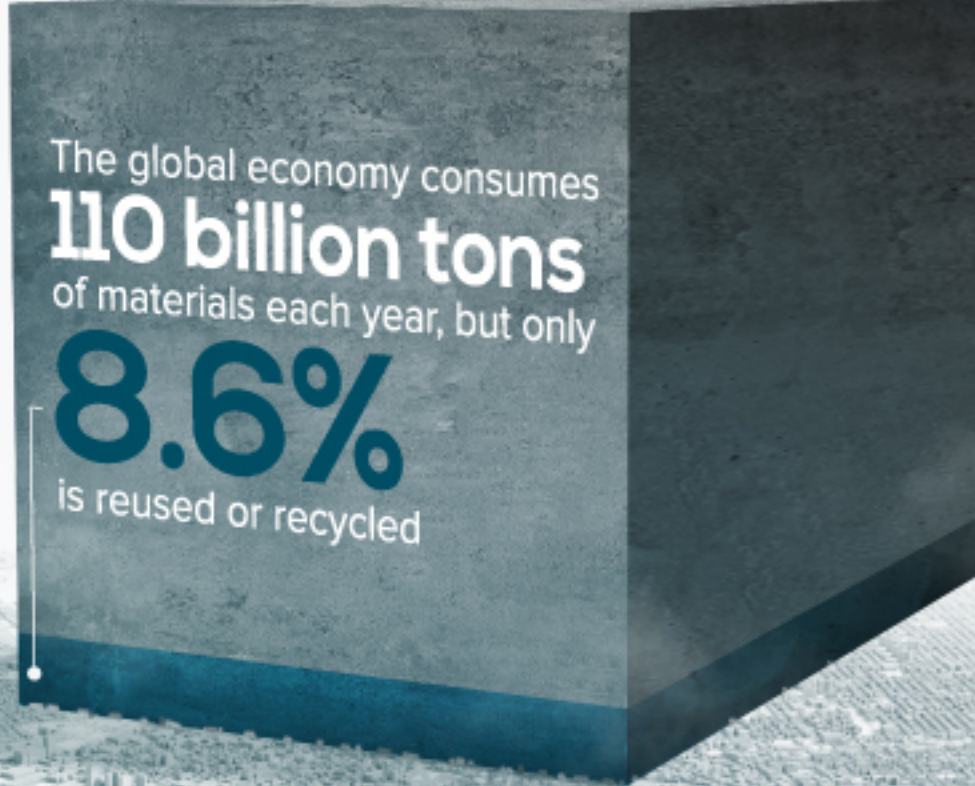


## THE CIRCULAR ECONOMY

# Tackling Climate Change

Waste generation is a major concern as landfills around the world near capacity.

Source: Circle Economy



## Today's Take, Make and Waste Approach

In today's economy, we extract resources to manufacture and use products for a short time, before disposing of them as waste. This is called the **linear economy**.



The linear economy is considered unsustainable as it fuels:

**RESOURCE DEPLETION** | **ECOSYSTEM DEGRADATION** | **BAD CONSUMER HABITS**

### DISPOSAL



Source: World Bank

## Landfill Crisis



Construction waste is the major source of unsustainable landfill dumping.

Every year, for example, **~12 MILLION TONS** of used asphalt shingles are dumped into landfills across the United States.

Source: Northstar Clean Technologies



= Enough gasoline to drive a sedan to the moon and back **24,250 TIMES**



**BUT EFFORTS FOR A TRANSITION TO A MORE SUSTAINABLE ECONOMY ARE ALREADY UNDER WAY.**



Northstar Clean Technologies repurposes the component parts from asphalt shingles that would otherwise be discarded in landfill.

These repurposed materials are:



**LIQUID ASPHALT**



**FIBER**

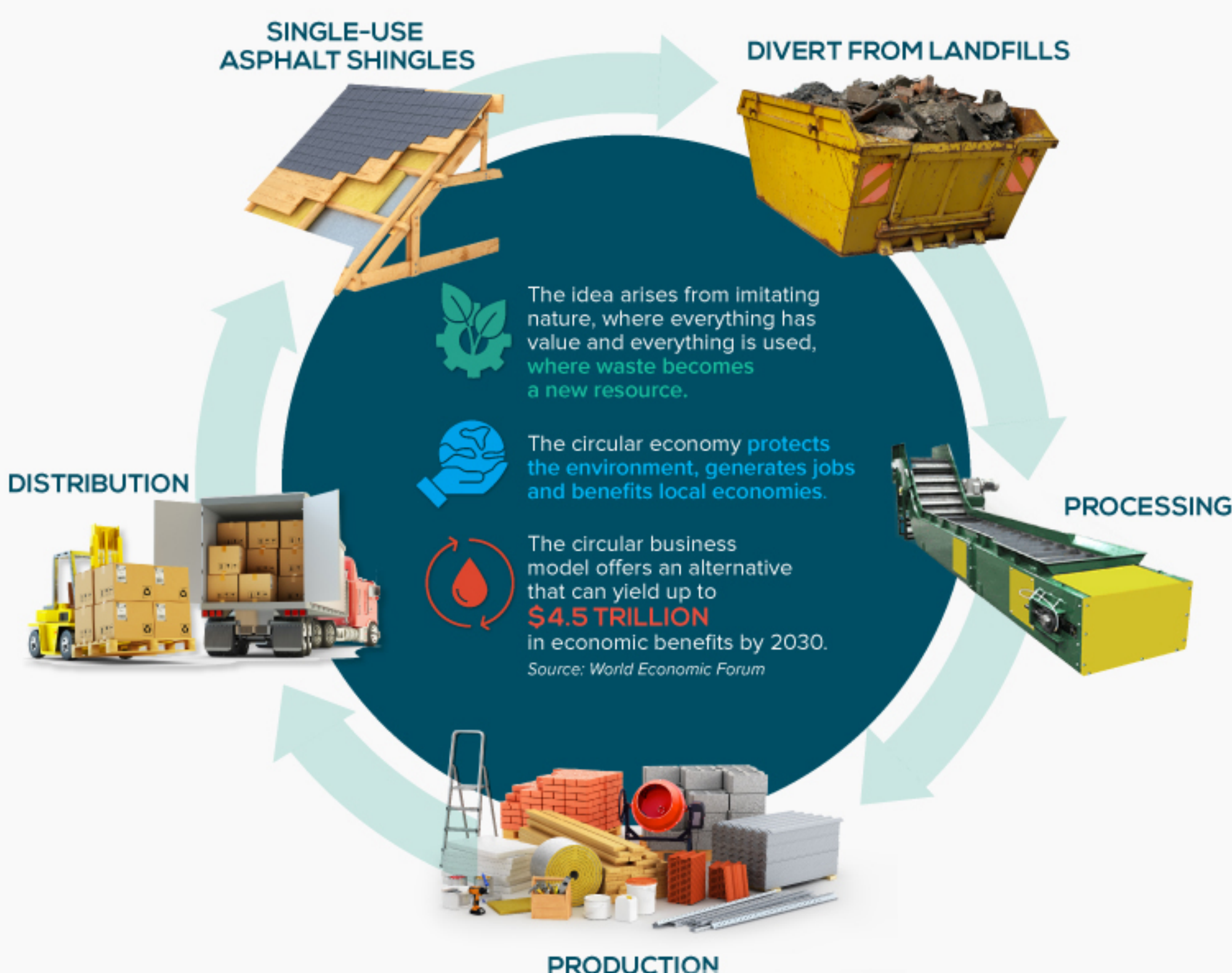


**AGGREGATE**

## The Circular Economy

Northstar's solution is based on the concept of the **circular economy**.

Different from the traditional linear economy, the circular economy employs reuse, remanufacturing and recycling to create a closed-loop system, minimizing pollution and harmful carbon dioxide emissions.



84% of homes in the U.S. are roofed with asphalt shingles. Only 14% of the asphalt shingle waste in the U.S. are being directed to "next use".

Northstar's mission is to be the leader in the recovery and reprocessing of asphalt shingles in North America.