

# Driving sustainability in the pharmaceutical industry



## The global challenge

Pharma is falling behind other sectors' efforts to reach Net Zero

### CO<sub>2</sub> emissions



Healthcare sector

2.4 GtCO<sub>2</sub>

4.4% of global net emissions

source

### Clinical trials

100 MtCO<sub>2</sub>

CO<sub>2</sub>e per year, roughly the emissions of Libya

source

### Packaging

112 KtCO<sub>2</sub>

plastic waste per year by 2025

source



Aviation sector

0.0008 GtCO<sub>2</sub>

2.5% of global net emissions

source

### Share of emissions: Emissions intensity

48.55 t

+55% uplift

Pharma ▲ ▼ Automotive

### Emissions variability between companies

50%

of Top-15 global pharma companies to miss 2025 emissions intensity targets

source

### Solvents

40-50%

total emissions from API manufacturing

source

31.4 t

Tons CO<sub>2</sub>e per \$1m generated

source

### Supply chain

70%

emissions from purchased good and services

source

Companies need to measure and monitor their emissions at all levels

### Scope 1



Emissions from all in-house activity

CPI expertise

### Scope 2



Indirect emissions from energy generation

Use life cycle analysis and carbon footprint mapping

Watch the webinar

### Scope 3



Indirect emissions from across the value chain

CPI partners

## Powering to Net Zero

Approximately 60% of emissions for pharmaceutical companies can be reduced at near-zero cost by 2040 (McKinsey, 2024)



Digital twins

Up to 35% reduction across value chains

Digital twin for powder mixing and granulation

Learn more

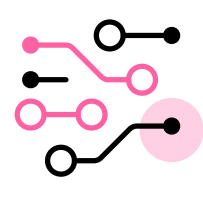


Just in Time manufacturing

50-60% cut in "overage" (excess production)

Automated Just-In-Time Clinical Supply

Learn more

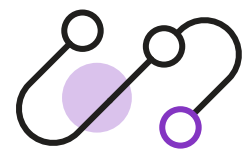


Continuous direct compression

69% lower energy consumption

Continuous direct compression at MMC

Learn more

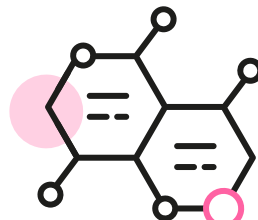


Continuous flow synthesis

Up to 80% less emissions

Indian pharmaceutical industry decarbonisation

Learn more



Biocatalysts

35x lower emissions from biocatalysis or fermentation of APIs

Discover the new Oligonucleotide Manufacturing Innovation Centre of Excellence

Learn more

To find out more about the technologies to support the decarbonisation of the pharma industry go to:

[www.uk-cpi.com/pharma-sustainability](http://www.uk-cpi.com/pharma-sustainability)