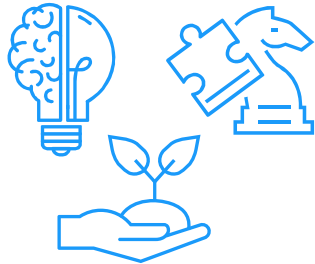


# HYDROCIM : Hydrogen Carbon Intensity measurement tool



# HYDROCIM

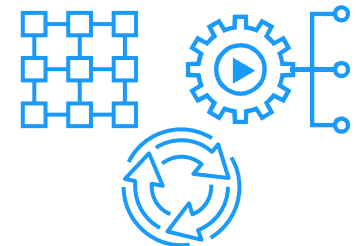
HYDROgen Carbon Intensity Measurement Tool



**Emission databases**  
Emission factors for various considerations (2024 onwards)



**Pre-filled values**  
Sufficient for estimating carbon intensity even at concept stage



**STANDARDS**  
Definitions for green and low carbon hydrogen/derivatives

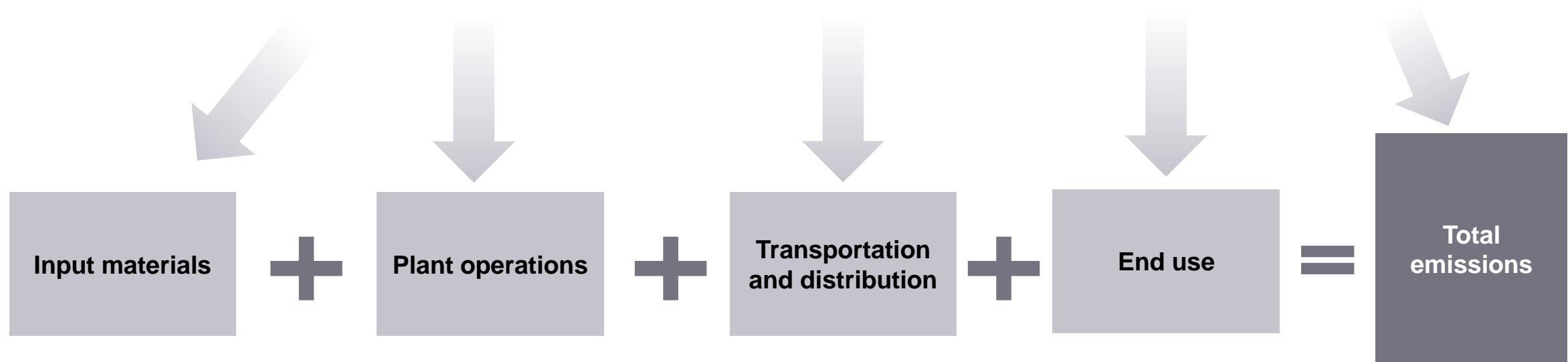
Our proprietary tools would allow us to quickly estimate the carbon intensity of green ammonia even at the concept stage

# We will be mapping **emissions across the value chain** for lifecycle assessment (LCA) as per the RFNBO regulations as set out in Article 28(5) RED

ILLUSTRATIVE

$$E = e_i + e_p + e_{td} + e_u - e_{ccs}$$

Activity	Value Chain GHG Emissions Mapping						Total Emissions across Value Chain (E) (1)+(2)+(3)+(4)
	1. Input materials (ei)	2. Plant Operations (ep)	3. Transportation & Distribution (etd)			4. Emissions from Combustion in End Use (eu)	
	Consumables	Electricity for Production + Storage at Plant	3.1 Plant to Destination Port (xx Port)	3.2 Shipping (Paradeep to xx Port)	3.3 Storage at xx Port	Emissions while using ammonia as fuel	
Emissions in KgCO2e/Kg ammonia for each segment	xx	xx	xx	xx	xx	xx	xx
Emissions in gCO2e/MJ of ammonia for each segment	xx	xx	xx	xx	xx	xx	xx
	xx	xx	xxx			xx	xx



Note: RED II guidelines have been considered for the purpose of this exercise.