

SYSTEMS  
CHANGE  
LAB



WORLD  
RESOURCES  
INSTITUTE

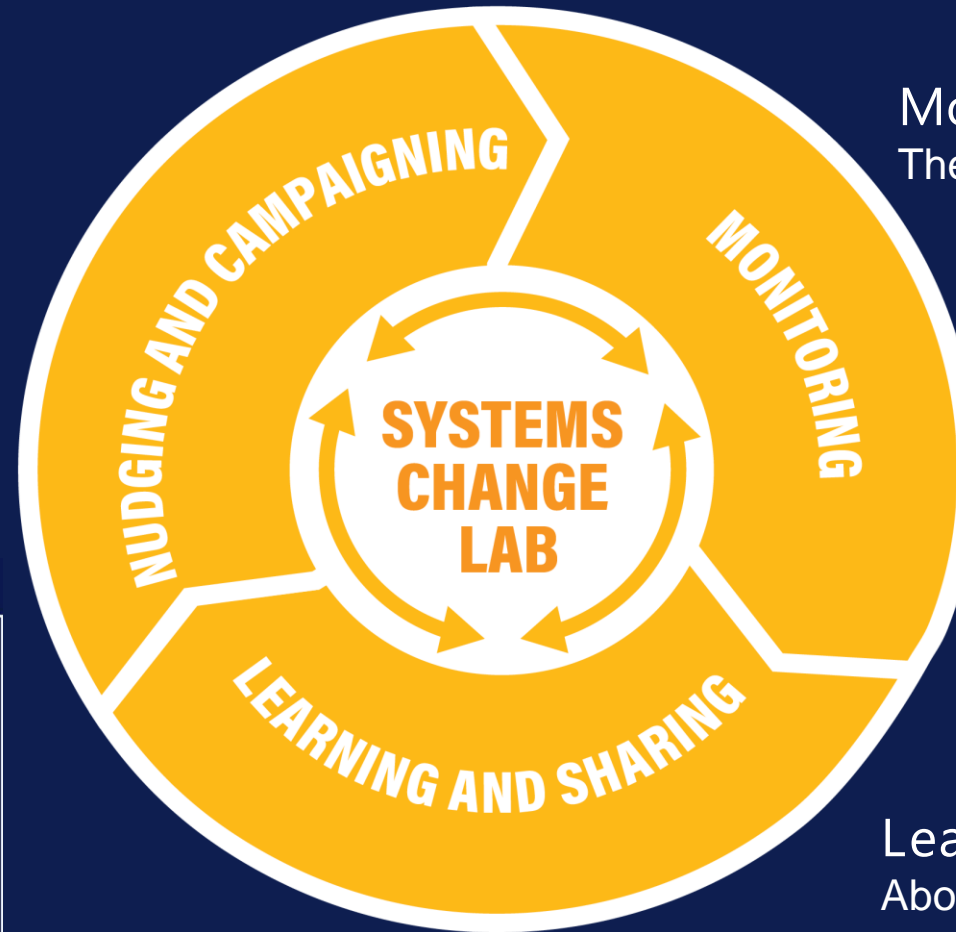
# Systems Change Lab

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# Systems Change Lab

Nudging and Campaigning  
For the Transformations at  
Greatest Risk

Monitoring  
The Required Transformations



Learning and Sharing  
About the Ingredients for Change



# Hierarchy Of The Data

System That Must Be Transformed



**Industry**

Critical Shift

- **Develop new solutions for zero carbon steel, cement & plastics**

Targets

Outcomes

- Benchmark:
  - Indicator: Carbon intensity per ton of steel

Factors of change

Factors enabling or preventing change

- Innovation:
  - Indicator: Cost of producing green hydrogen
  - Indicator: Announced low carbon steel projects





# Industry

[OVERVIEW](#) [SHIFTS](#) [TARGETS](#)

SHIFTS IN THIS SYSTEM



of global emissions come from industry, which have grown more than 70% since 1990

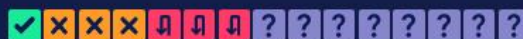


of the fuel used for energy in industry could be electrified today by already commercialized technologies



of industrial emissions come from cement and steel production

Of the 15 targets we've assessed in the industry system, 1 is on track



1 On Track

0 Off Track

3 Well Off Track

3 Wrong Direction

8 Cannot Calculate

Join  
Comm

Enter yo

SIG



On Track



Off Track



Well Off Track



Wrong Direction



Cannot Calculate

### Industry shifts:

1. Reduce demand for steel, cement, and plastics
2. Improve industrial energy efficiency
3. Electrify industry
4. Develop new solutions for zero-carbon steel, cement and plastics

### Topline indicators (Steel only):

- Carbon intensity per ton of steel (kgCO<sub>2</sub>/t)
- CO<sub>2</sub> emissions from steel production (MtCO<sub>2</sub>)
- Production of near-zero-emission steel (Mt or % share) (no data)
- Apparent steel use per country (Mt)

# Driver indicators: Factors of change (steel only)

Some examples:

- Global R&D spending for steel (corporate & public, by country) (no data)
- Cost of producing decarbonized steel (USD) (no data)
- Share of secondary steel (produced using scrap steel) in total steel production (%) (no data)
- Number of low-carbon steel projects planned to become operational (limited data)
- Percentage of global steel manufactured under a supporting policy for green production (%) (no data)
- Share of global steel production covered by national net-zero roadmaps (%) (no data)
- Number of demonstrations/pilots/patents for commercial technology to electrify high-temperature heat in industry (no data)

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<https://systemschangelab.org/>

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