Transform CO rich off-gases into raw materials for the chemical industry.

Reduce fossil dependency by valorising CO emissions in the chemical industry.

CLOSING CO LOOPS

KEY INSIGHTS
- value CO streams
- reduce primary resources
- reduce CO₂ emissions
- integrate sites & clusters

CROSS-SECTOR COLLABORATION

Steel industry has a high potential to supply CO to the chemicals industry. Industries have a growing demand for valorising carbon emissions.

Steel off gases
- blast furnace: CO (Nm³/ton steel) 263-320
- blast oxygen furnace: H₂ (Nm³/ton steel) 26-32
- coke oven: 25-30

production potential of base chemicals
- methanol
- ethanol
- other hydrocarbons

SUSTAINABILITY IMPACT

Wins for industry
- for suppliers: 50-150 €/1000 Nm³ CO
- for industry: 150-300 €/ton product

Environmental gains
- CO₂ emissions reduction:
  - 20-40% CO₂ saved/ton crude steel produced

Wins for society
- public health benefits due to emissions reduction
- job creation and new skills development

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REFERENCES

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