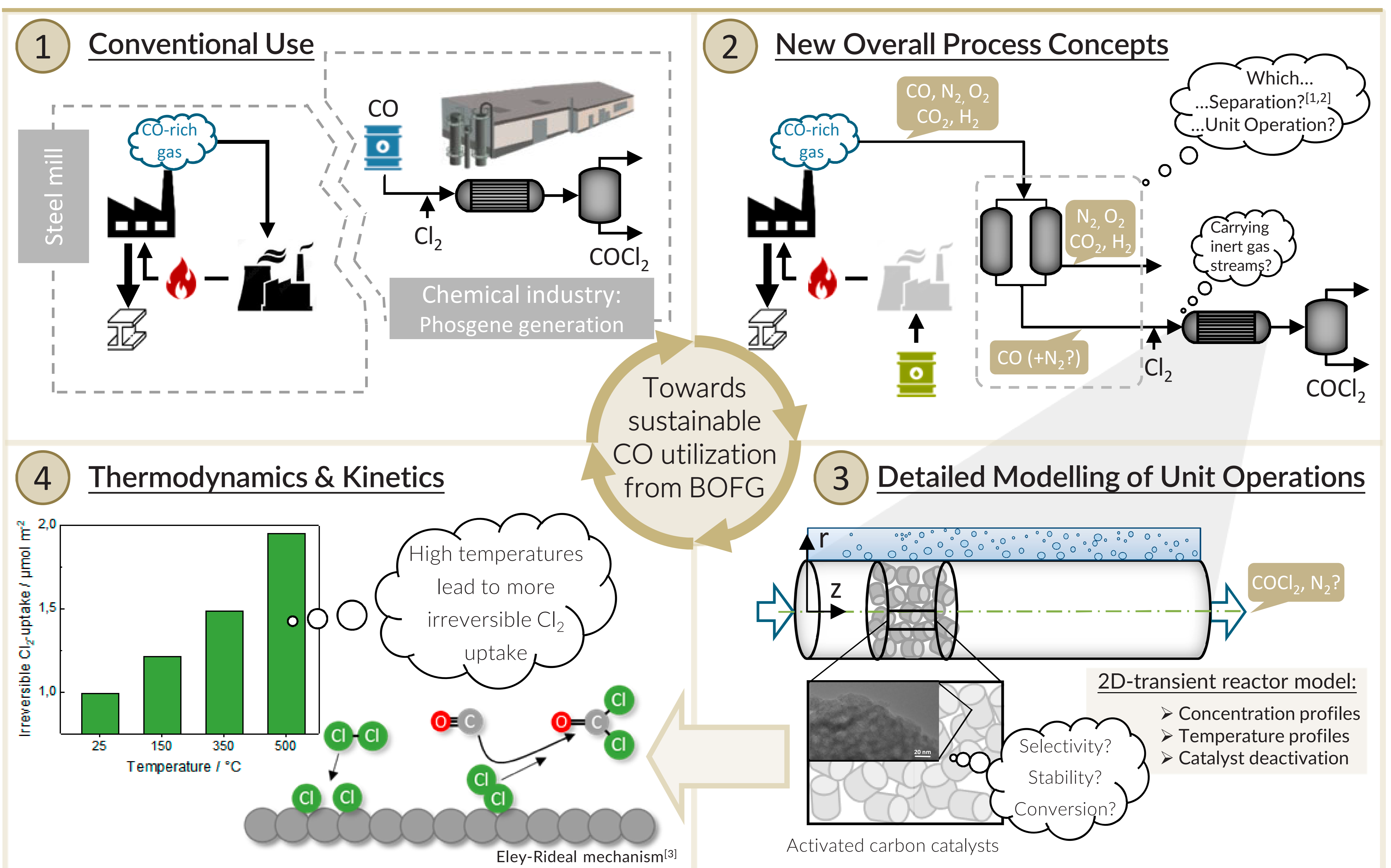


L-V | Utilization of CO from steel mills for sustainable production of polycarbonates

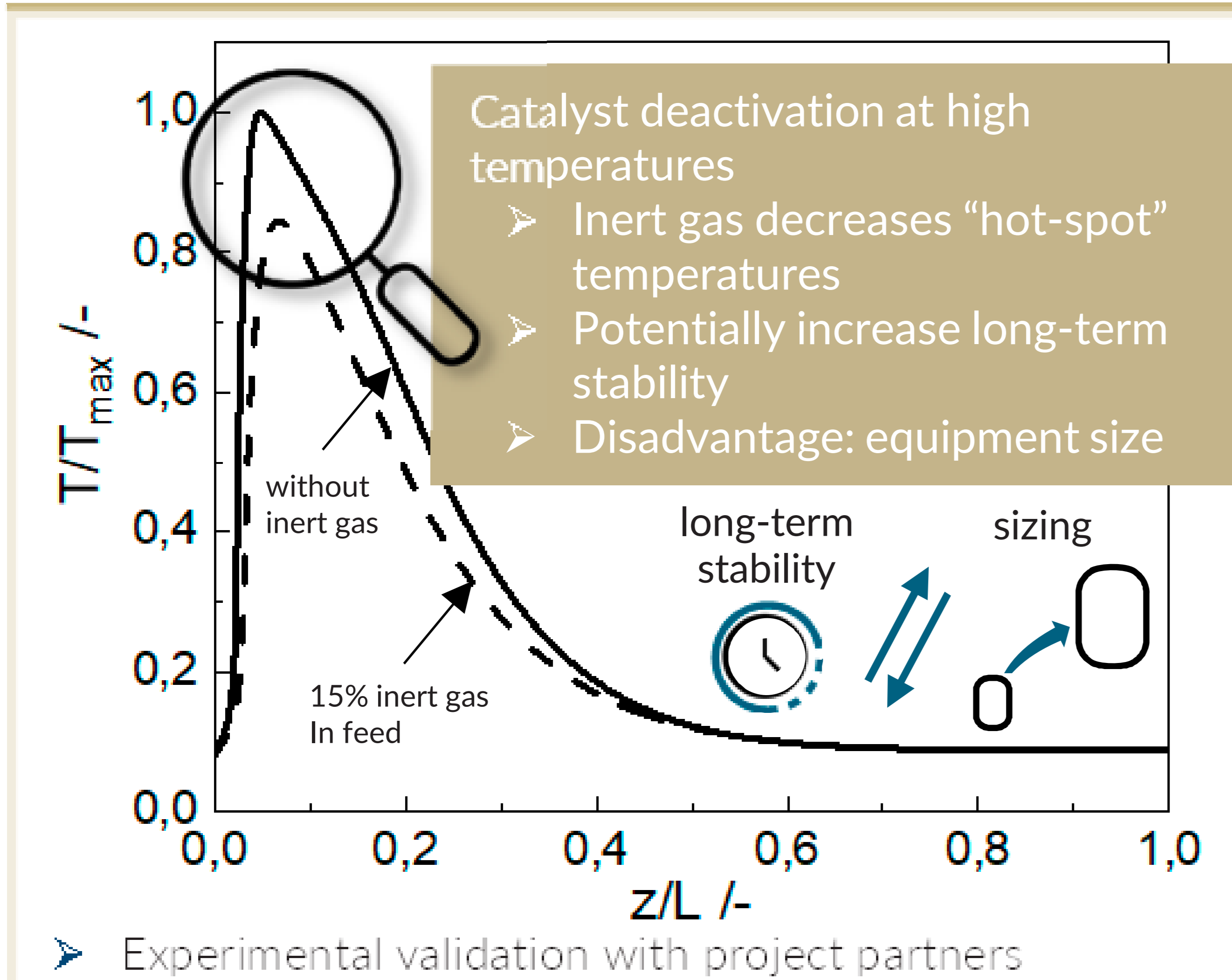
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Basic oxygen furnace gas (BOFG) is the by-product gas generated during steel production with the highest CO content and is conventionally combusted to CO₂ for heat generation in the steel mill. In project L-V, it is aimed to chemically convert the CO with chlorine to phosgene, which is a valuable intermediate for polycarbonate production. Further, the overall process for polycarbonate production with CO from BOFG is economically and ecologically evaluated.

IDENTIFICATION OF PROCESS CONCEPTS FOR CHEMICAL USAGE OF CO FROM BOFG



SIMULATION RESULTS



SUMMARY & OUTLOOK

- Temperature profile in reactor affects conversion and stability of catalyst
- Gas composition in reactor is crucial for overall process design with CO from BOFG
 - Identifying position and choice of separation units
 - Evaluation of process concepts in terms of economics and Life Cycle Assessment^[4]
 - Investigation of further accompanying substances (CO₂, O₂, H₂)

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