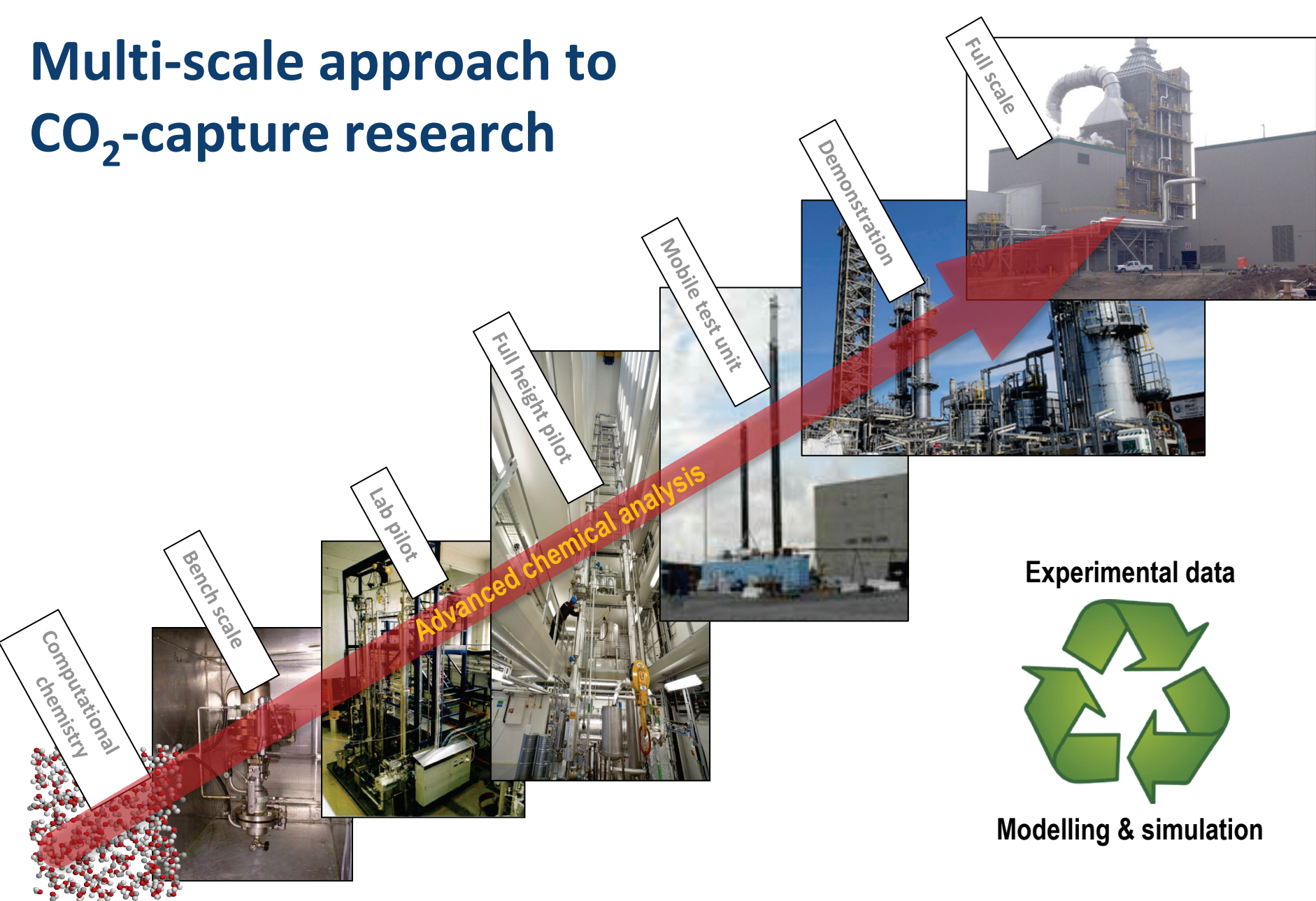


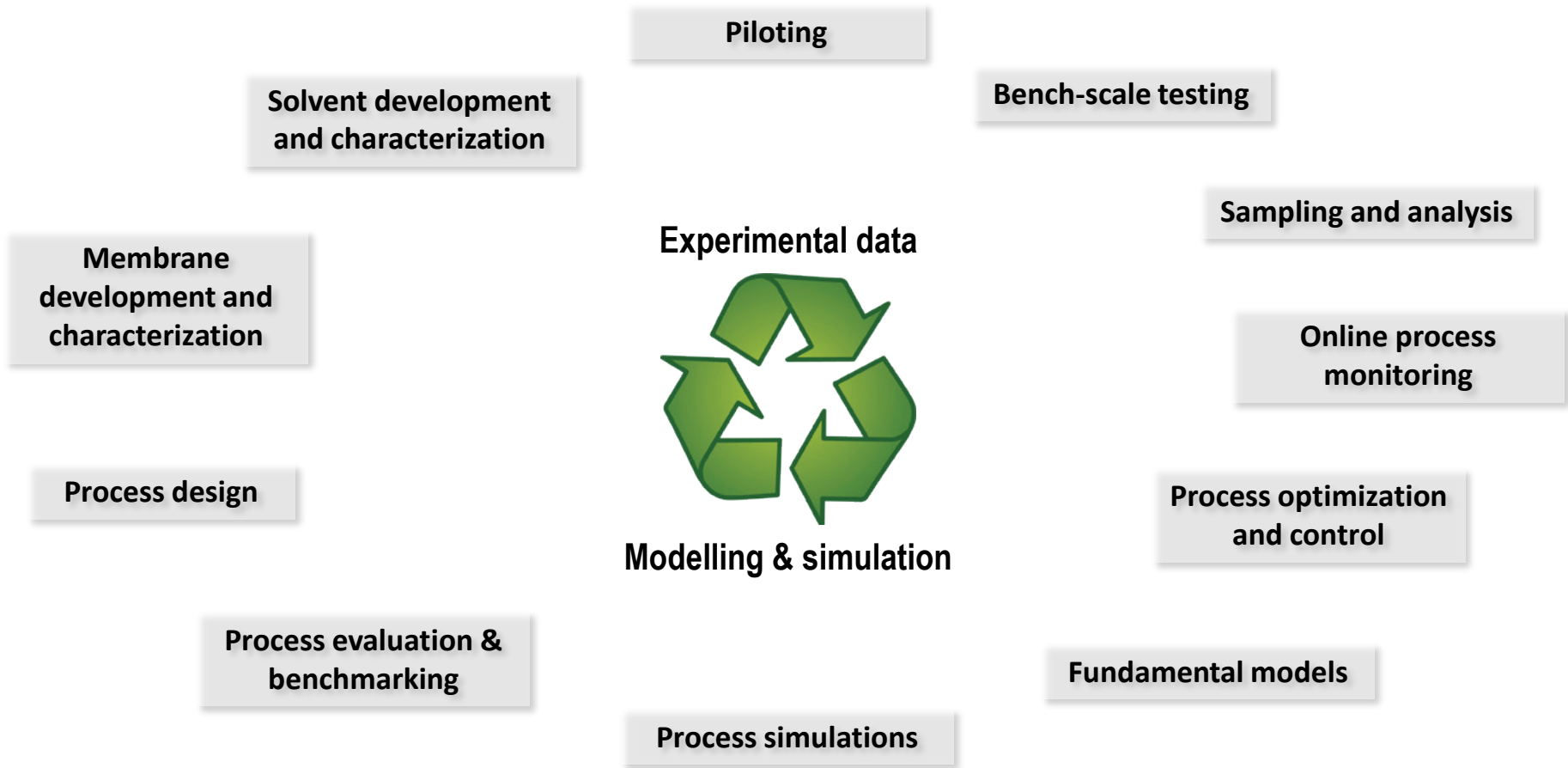


SINTEF

Multi-scale approach to CO₂-capture research



Chemical Engineering Research Activities







Tiller CO₂-Lab

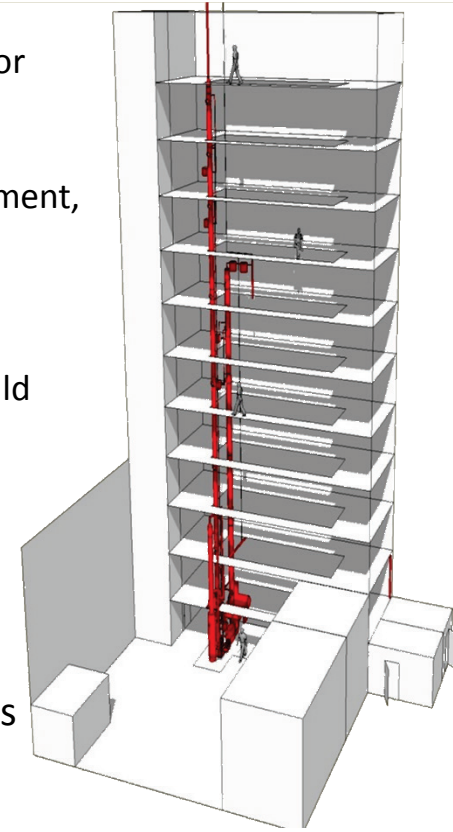


- ❑ Post combustion flue gas piloting
 - Propane burner producing clean flue gas well suited for model experiments (CO₂-concentration 0-30 vol%)
 - Burner for coal and biomass to be established 2016
 - New infrastructure involves flexible flue gas pre-treatment, aerosol/dust dosing and characterization

- ❑ High flexibility due to the relatively small scale
 - Most test campaigns involve pilot modifications/rebuild
 - Small dimensions allow for cost- and time-saving construction & modification
 - Low total solvent inventory needed (~500 l) allows for testing with exotic/expensive chemicals
 - Flue gas flow 5-500Nm³/h

- ❑ Currently ongoing activity with 4 different pilot plants
 - 3. gen CO₂ absorption pilot (picture)
 - SO₂ absorption pilot
 - Wash section test rig
 - CO₂ capture membrane pilot

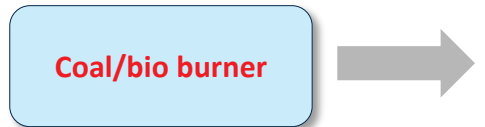
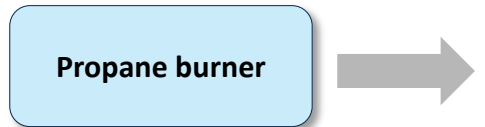
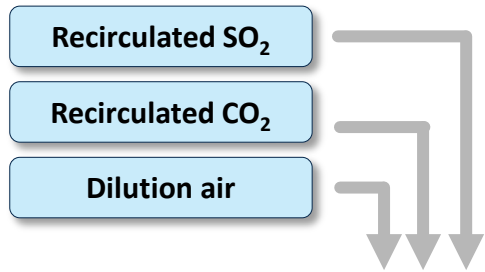
- ❑ 600 m² space with 10m and 30m roof-height
 - Analysis laboratory and control room
 - Indoor location with easy access to columns and good working conditions for quality measurements



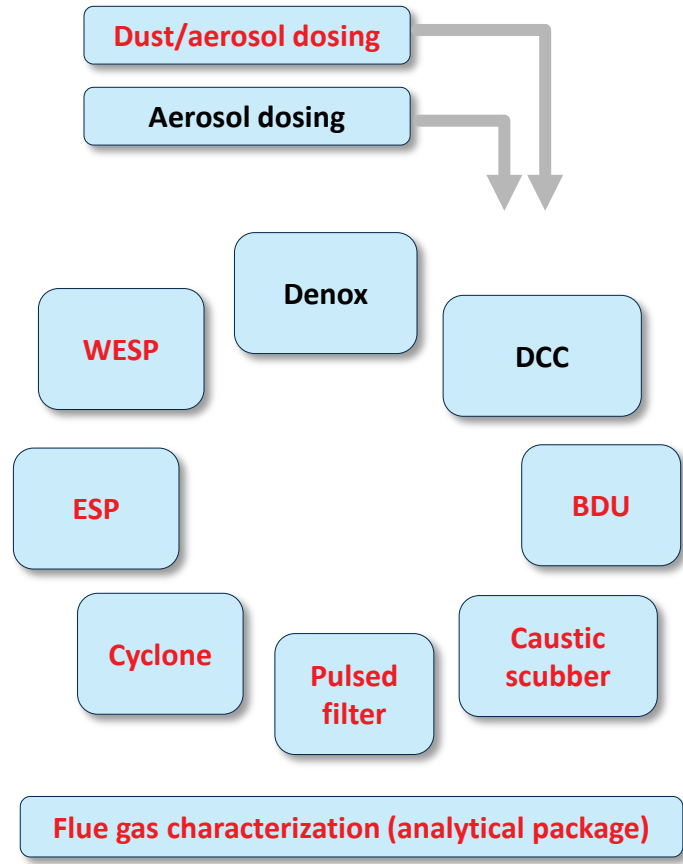
Flexible flue gas source for pilot scale testing of CO₂ capture and flue gas pre-treatment

Current

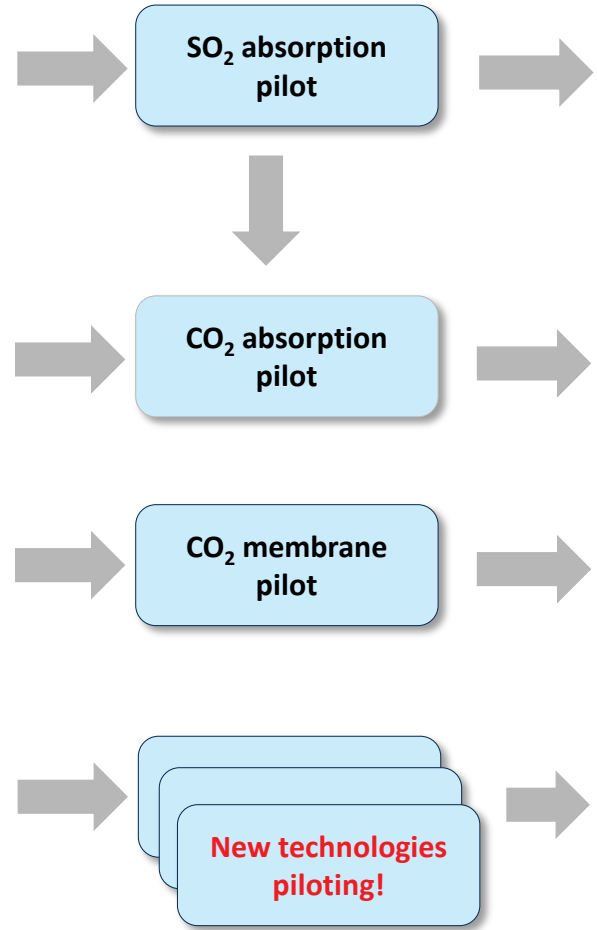
Planned



FLUE GAS SOURCE



FLEXIBLE FLUE GAS PRE-TREATMENT



CAPTURE PILOTS