

The Rules are Easy, The Game is Hard: The Development of Successful DAC Technologies
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Direct Air Capture (DAC) is a fast moving field. From growing academic research to the first deployment of industrial scale plants, the exponential interest in the industry and its potential to reverse climate change is generating a lot of hopes for acceleration in technology development. Beyond the proven maturity of some of the current technical solutions, major development steps are required to bring DAC technologies and their implementation in the real world to the communicated future long term Carbon Dioxide Removal costs. Successfully delivering on these promises require profound understanding of how today's technological and engineering development provides the appropriate answers and platforms on which to build and deliver tomorrow's low cost global scale industry.

This relies on three main strategical development pillars: Advanced testing and modelling capabilities that can enable the selection of sorbent technologies that are adapted to real world conditions; Long term field experience and accelerated life tests proving the suitability of the unique technological features of DAC systems for reliable long term operation; Designing plants that both suit tomorrow's energy and carbon sequestration landscapes and generate a competitive stimulation of the entire industry. In this presentation, we'll show the importance of these three pillars in the development of successful DAC technologies through Climeworks own development history.