

# CSLF - Closing the Technology Gaps Challenges and opportunities to 2050



**Establishing the Taskforce June 2012**

**Taskforce Leader**

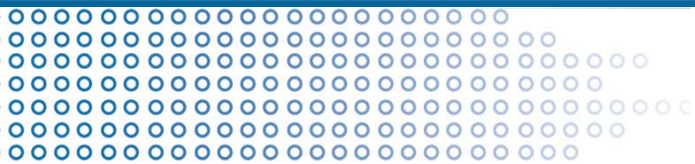
**Dr Richard Aldous (CO2CRC)**

**CSLF - Closing the Technology Gaps**

# Closing the technology gaps- taskforce

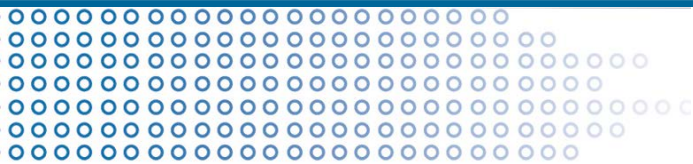
## - CSLF Action plan 2011 -2016

- **The TG will identify and monitor key CCS technology gaps and related issues and recommend any R&D and demonstration activities that address these gaps and issues.**
- **Identification of all key technology gaps/issues and determination of the effectiveness of ongoing CCS RD&D for addressing these gaps**

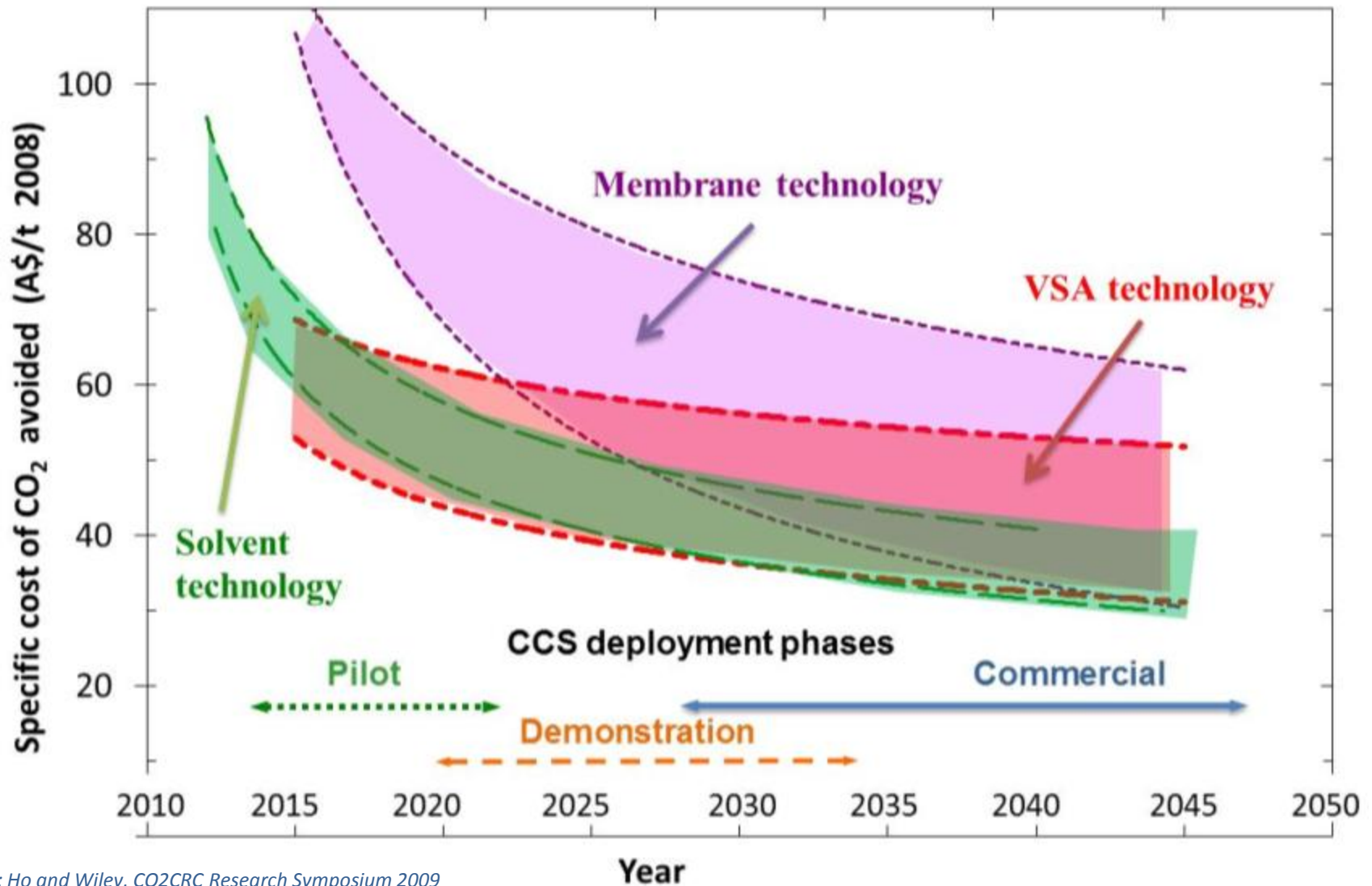


# Objectives of the Taskforce

- **Assess status of technology – gaps and opportunities**
- **Potential going forward - to get to 2050 - what will make a difference**
  - Gaps - the top 10 gaps that can make the biggest difference
  - Opportunities - top 10
  - Challenges for each of the above
- **Closing the gaps ( & capturing the opportunities)**
  - Probability and timing
  - Cost , how much will it cost to capture the opportunity
  - Who will do it ? - who are the main players ( companies / countries)
  - Collaboration recommendations to G8/G20 on how to improve and get better value for the global expenditure
- **Feed into a Technical roadmap , scenarios to 2050**



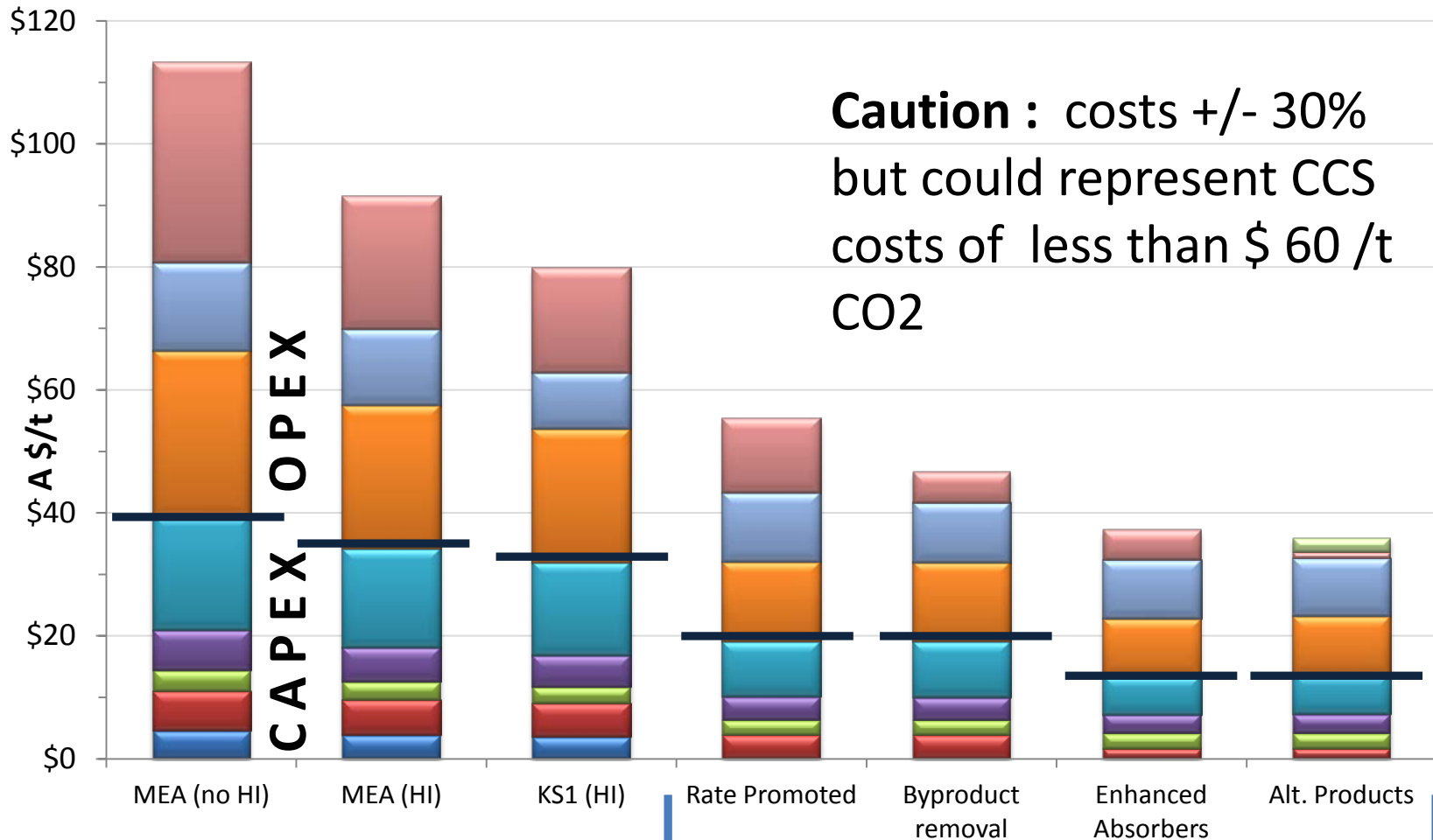
# Capture technology development



Source: Ho and Wiley, CO<sub>2</sub>CRC Research Symposium 2009

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# 70% reduction in capture cost looks possible



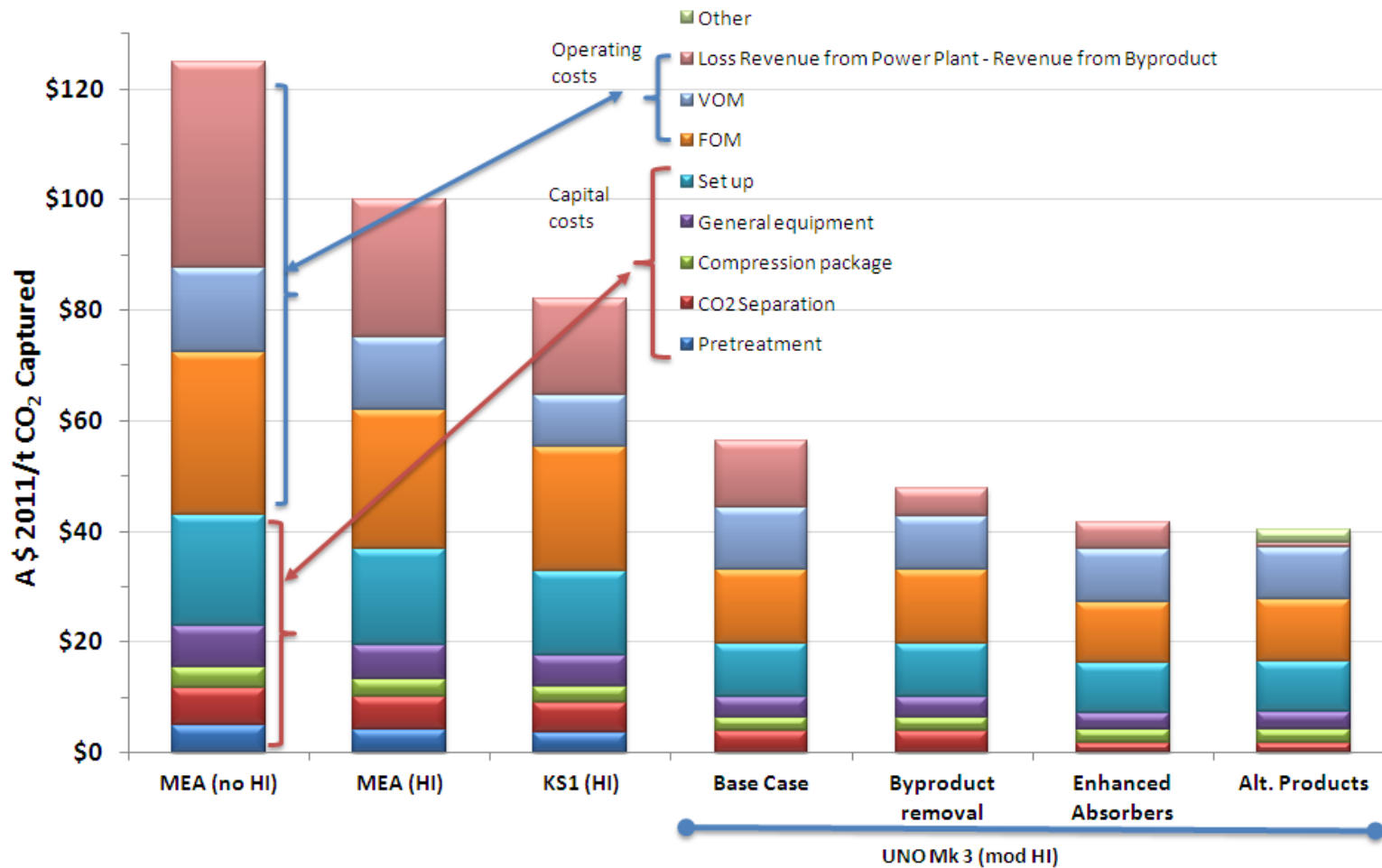
CO<sub>2</sub>CRC' s UNO Mark III

With heat integration

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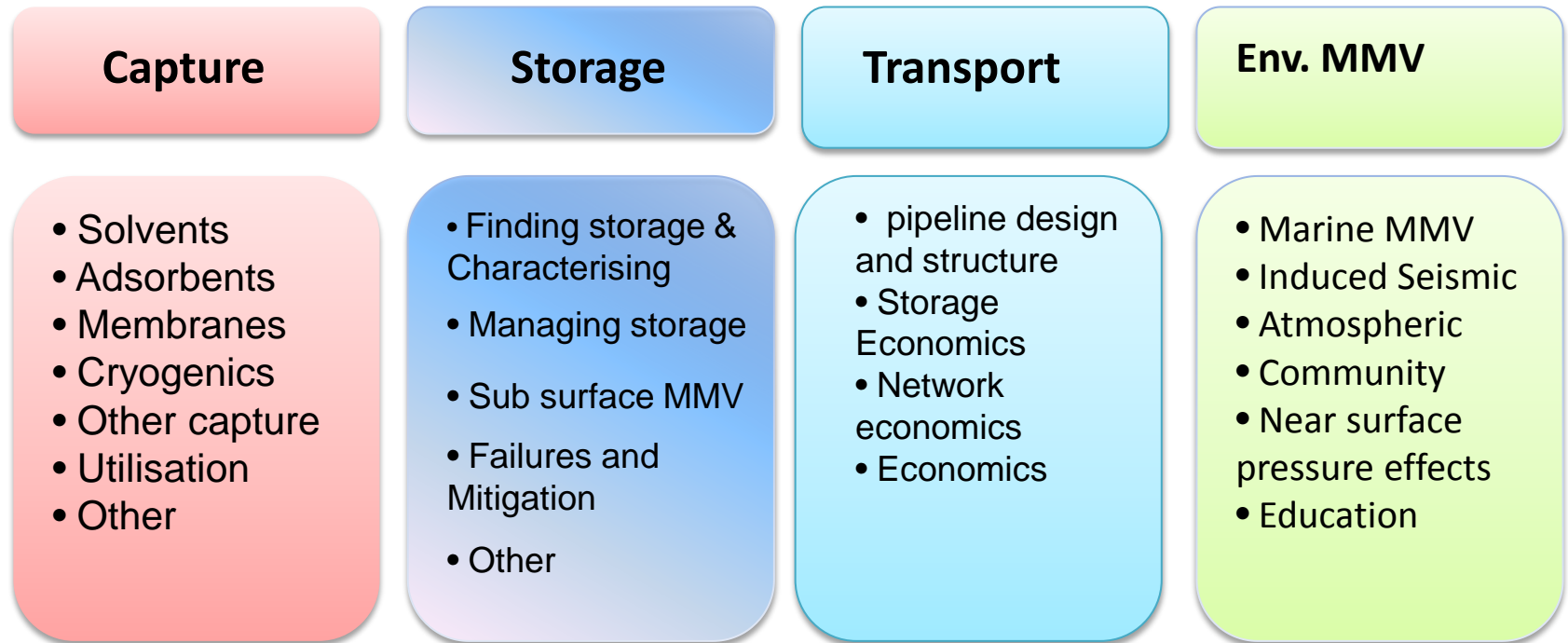
# Large Scale Engineering Development of UNO Mk 3

## Preliminary Cost Results



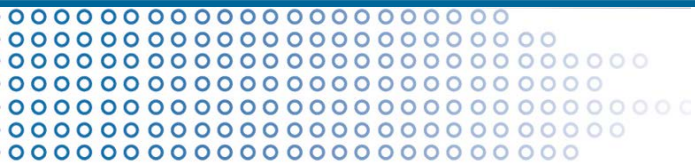
# Define Technology AREAS

- build on the gaps taskforce work already completed
- what are the AREAS of technology
- what are the gaps and opportunities in each area



# Approach to producing document

- **Volunteers 1-2 people in each area of technology**
  - Capture technologies
  - Transport
  - Storage
  - Environmental monitoring
  - technology and skills.
- **Prepare for international CCS technical roadmap to be established looking out to 2050**
- **Note links to other task forces**
- **Recommendations on international collaboration on technology development**





# Time lines

## **Outline structure to be presented in Perth - November 2012**

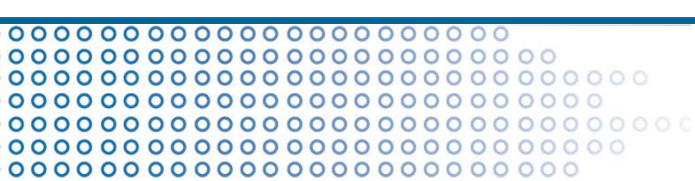
- Prepare AREAS
- Draft gaps in each area – list and rank
- Template for assessment and rank

## **Draft paper - March 2013**

- **Top 10 gaps defined and recommendations on how to close**

## **Links to road Map - mid 2012???**

- **How to link to Road Map**
- **First final report - mid 2012**



# CCS Technology pathways to 2050

- **Countries have signed up to 2050 objectives**
- **The role that CCS plays in meeting those targets will depend on technology**
- **Develop 2-3 scenarios**
  - How much is spent
  - How much international collaboration
  - How quickly we get a price on Carbon or policy support
  - Different technology pathways

