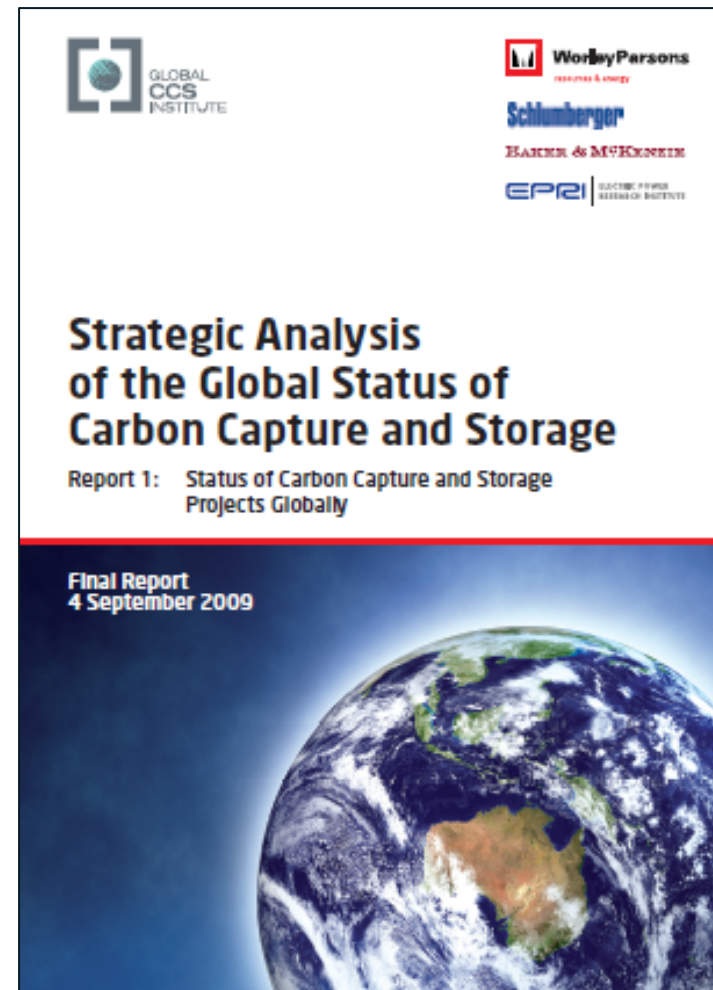


# STATUS OF GLOBAL CCS and BARRIERS TO DEPLOYMENT

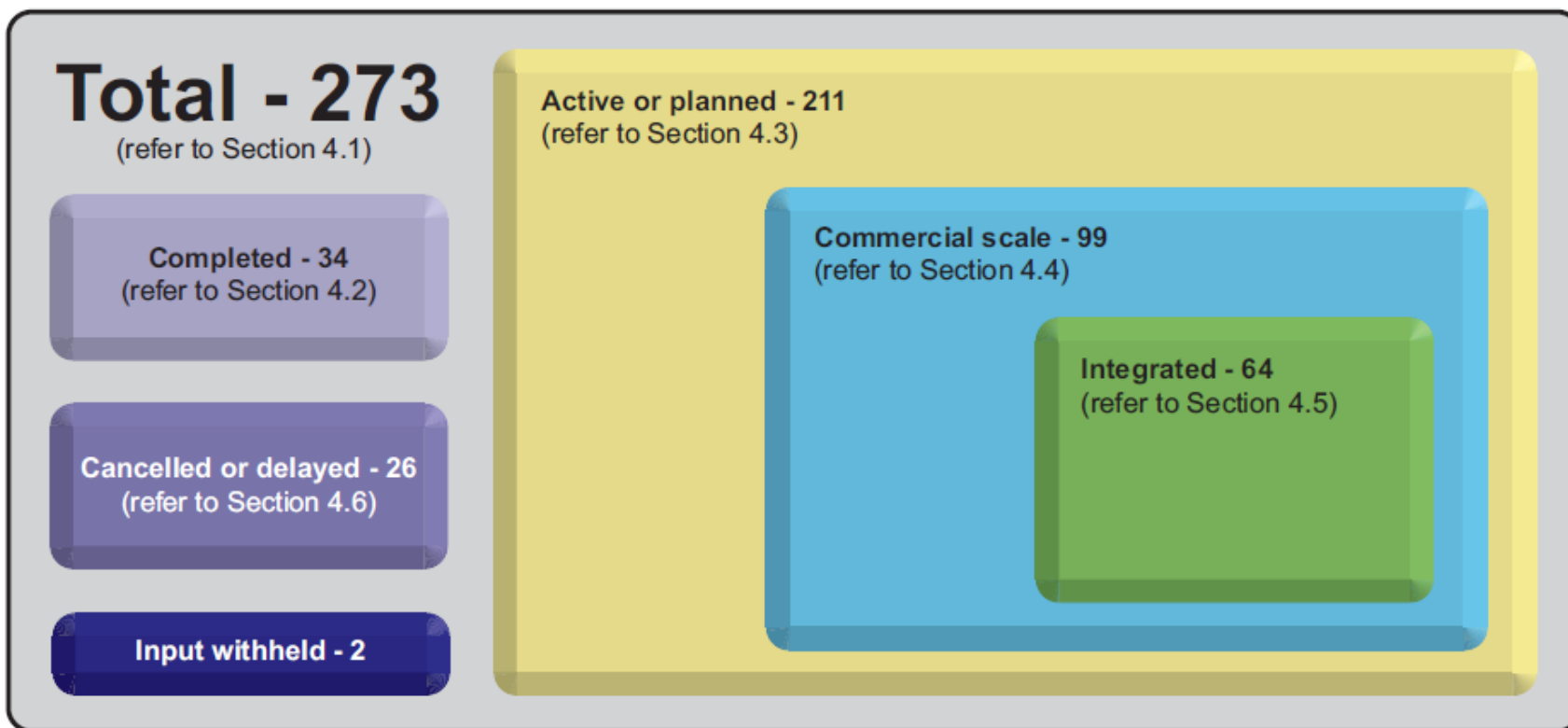
Nick Otter – CEO of Global CCS Institute

# COMPREHENSIVE AUDIT OF GLOBAL STATUS OF CCS

- Undertaken over June-September 2009
- Project status, costs, policy and regulation and R&D
- Realistic and contemporary view of opportunities and challenges to CCS.
- Basis for an annual global `stock take` of CCS

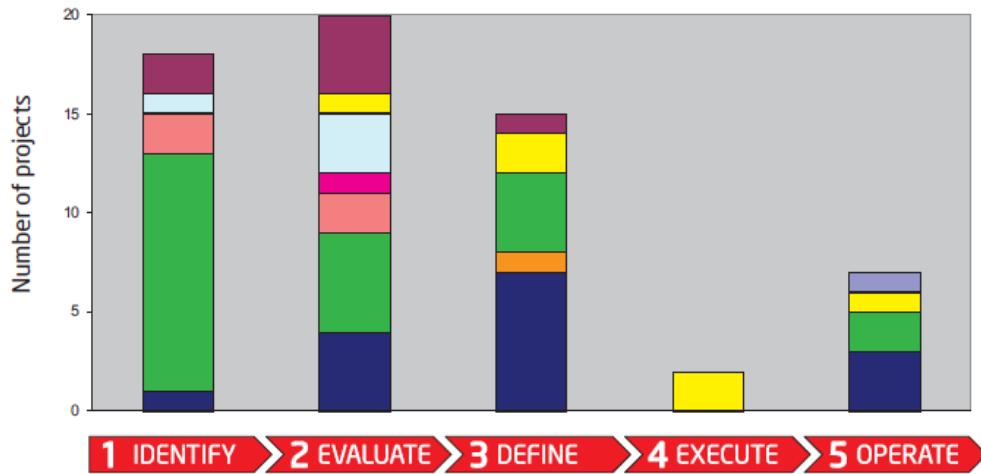


# 273 PROJECTS IDENTIFIED WORLDWIDE



64 commercial scale integrated projects

# 64 COMMERCIAL INTEGRATED PROJECTS



Region	1 IDENTIFY	2 EVALUATE	3 DEFINE	4 EXECUTE	5 OPERATE	Total
Africa					1	1
Australia and New Zealand	2	4	1			7
Canada		1	2	2	1	6
China	1	3				4
East Asia (ex. Japan)		1				1
Eastern Europe	2	2				4
Europe Area	12	5	4		2	23
Middle East			1			1
USA	1	4	7		3	15
<b>TOTAL</b>	<b>18</b>	<b>20</b>	<b>15</b>	<b>2</b>	<b>7</b>	<b>62</b>

- only 7 large scale CCS projects operational

- no large scale fully integrated power gen projects

How to move the 50+ projects to implementation?

# BARRIERS TO CCS DEPLOYMENT – AREAS TO FOCUS ON : 1

- **Storage**
  - improved identification and characterisation of suitable safe and reliable storage sites for projects
  - national issue for many countries
- **Costs/Financing**
  - “Bridging the commercial gap” for CCS demonstration of a `first of a kind` nature
  - Sustained `help` for projects until the `long term game` of stable carbon pricing is in place
- **Risk Mitigation**
  - Better understanding of risk for large scale demonstration
  - Development of confidence for commercial deployment/investment

# BARRIERS TO CCS DEPLOYMENT – AREAS TO FOCUS ON : 2

- **Legislation/Regulations**
  - absence or weak policy and regulatory framework for CCS development and deployment
- **Technology**
  - continuing need for technology advancements, cost reduction
  - very little experience in scale-up of technologies and their integration
- **Public acceptance**
  - there has to be an understanding of the need and support for CCS
  - “not a given”
- **Infrastructure**
  - planning and access to transport infrastructure
  - water availability and use becoming increasingly significant

The top half of the image features a dark blue background with four thin, white, wavy lines that create a sense of movement and depth. These lines are horizontal and vary in their wave patterns, with some having more pronounced peaks and troughs than others.

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