



Monitoring Wrap-up

- What the attendees get from network
- What we saw as important
- Role of network in information exchange
- Planning of meeting
- Interplay of networks/ joint meetings and hence goals...where should we be in 3 yrs
- Reservoir characterization ?



What people get from the meeting

- The current brochures don't necessarily reflect what has happened in the network yet
- There are other people who do not attend the networks who would be interested in getting the information
- The size of the meetings is good and lends itself to discussion
- The discussion is the most valuable part of the meetings



Like to see - 1

- Include a review session at the START of each meeting (global view)
- A cross-network registration and email invitation list
- Need better links to regional work (RCSP)
- Better information could be provided before the network so the meetings hit the ground running
- Issue focused or specific goal focused meetings with key issues to be addressed rather than more general presentations
 - Eg. Ground water protection, emissions credits
- Training type sessions associated with network meetings (tutorials)
- Field data supported activities
- Review communications
 - Currently web-based
- Review Projects



Like to see - 2

- Linkages with projects that have budget to explore the issues we discuss (CCP3)
 - Network cant fund but could facilitate or support the “platform” of technology
- The Network contribute to ongoing “transfer of knowledge” to regulators
 - “Clue-in” tutorial process in the UK
- Cherry-picking the most interesting parts of projects
- More modellers need to be attracted to the network process



Other points

- We are not an exclusive club, we can invite expertise in from outside the network
- Do not abandon the technical nature of the meetings
- There is mixed opinion about the open inclusion of regulators into the network
 - Planned integration of regulators in meetings
 - Regulators need to be informed by the network but the method is unclear (possible webinars for regulators once a year)
- Does the reporting of the networks stop a lot of people from sharing their information about projects
- How do you get the network to help scope the meetings
- The networks are best scoped by the questions they are trying to answer
- Workflow type interaction in flow of data between areas? (Networks?)
- “Inform” industry or be “informed by” industry?



Network integration

- The chairs of the networks could discuss their upcoming programmes
- Maybe an annual joint network webcast in additions to the specific networks
- More joint network meetings (3 years?)
 - Where would we want to be by then
- More web based meetings
- The monitoring network will always focus on tools unless there is integration of risk
 - Risk has to be a formal part of the monitoring agenda
 - Risk assessment was discussed at the end of the monitoring network in Edmonton
- Representatives from one network representing at others
- How long to monitor for is a risk/monitoring issue



Network integration

- Which network does site characterization fit in the networks?
 - Does it warrant a network or focus in current networks?
 - Is site characterization just the front end of performance/risk assessment?



Topics to address

- Monitoring for fault activation, pore pressure
 - Issues surrounding CO₂ moving through a fault (how, why, when)
- Dissolved CO₂ in-situ
- How to plan a monitoring programme
 - The process of identifying the things to do with monitoring
 - Should involved people from the Risk Assessment network
- Innovative emerging monitoring technologies
- How modelling fits into monitoring



Japan – 2009

- Key issues to address
 - Time for cross-network discussion and timing (closure, post closure, etc)
 - Risk
 - What does risk assessment really need to know from monitoring and can monitoring provide it? (thresholds, triggers, etc)
 - Emphasis on projects
 - Planning
 - Systems approach
 - Innovative/emerging technologies
 - Sensitivities, application
 - Monitoring for DETAILED processes in geological container (faults, fault reactivation, etc)
 - How are modelling and monitoring linked/integrated



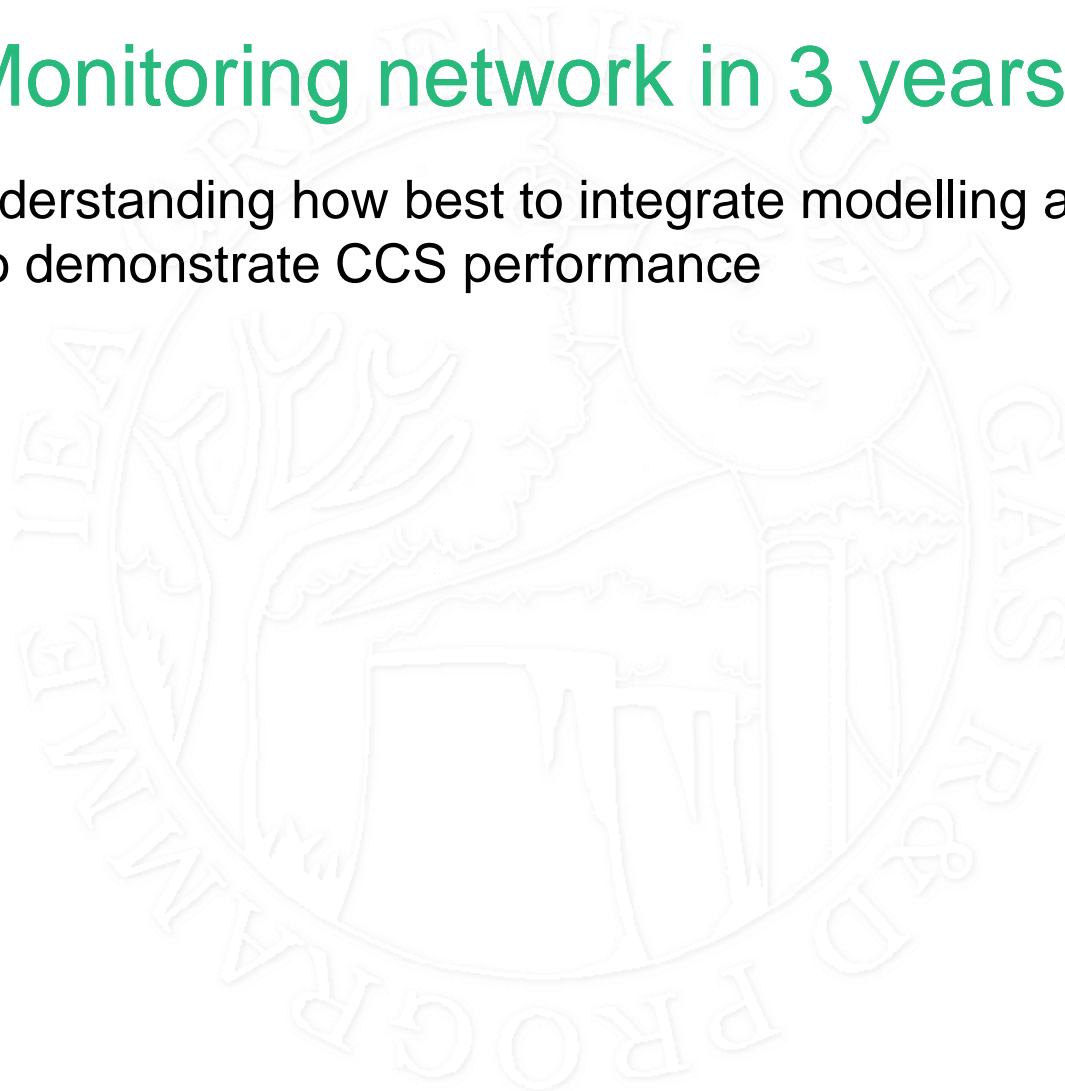
Monitoring network in 3 years

- More learning from projects more projects
 - RCSP will have 20 small scale injections underway/complete
 - Ketsin, Otway, Snhovit, Lacq, Weyburn+3, In Salah+3, Sleipner+3
 - Better understanding of what regulators (globally) have asked of monitoring programmes
 - Review of tools, what has been applied, what has worked or not, what was applicable
- Quantitative discussion on performance limits for monitoring
- How to plan a monitoring programme based on risk assessment
- Improved understanding of how risk/performance assessment processes guide development of a monitoring programme



Monitoring network in 3 years

- Improved understanding how best to integrate modelling and monitoring to demonstrate CCS performance





A Systems Approach to Monitoring

1. What/why
 - Goal – project performance, environment (groundwater, ecosystems, etc)
 - Tools
 - Timeframes
2. Spatial distributions/frequency
 - Based on site characterisation & data needs
 - How do we get a useful data set
3. Thresholds/Detection limits
 - Informed by Risk Assessment and/or Regulation
 - Do tools have capabilities
4. Actions taken when
 - What do we do?
 - What are the tools?