

# Transport // Carbon, Capture and Storage Technology

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## EU on research and development

The EU spends large amounts of money on research and development projects. These funds are channelled through so-called frame programmes which run for a number of years. Currently the EU is on its seventh frame programme (FP7) and 380 billion DKK, i.e. 32,4 billion Euros, have been set aside for the purpose.

FP7 covers a wide range of strategic research in 10 different high-tech areas including biomass, health, foodstuffs, nanotechnology and the environment. Climate and environmental technologies are key focus areas.

## Accoat's part in the research

Accoat participate in FP7 as part of an intra-European plan to develop high-tech carbon capture and storage (CCS) solutions. The idea is to collect CO<sub>2</sub> from areas in which it is generated and transport it to redundant oilfields deep underground. In layman's terms; reducing CO<sub>2</sub> emissions by storing the gas instead of releasing it into the atmosphere.

Accoat come into the equation in the transport phase of the process because further research is required in this area.

By contrast, the capture and transport stages of the process are well understood.

It is proposed, naturally enough, that CO<sub>2</sub> be transported in pipelines - in much the same fashion as conventional gas pipelines. The only issue being that natural gas differs from CO<sub>2</sub> in that it is a very light gas which burns off in the event of leakages. This is not the case with CO<sub>2</sub>, which is incombustible and a very heavy gas. In fact, because it's heavier than air, CO<sub>2</sub> from a leakage would collect at ground level posing a danger of suffocation.

CO<sub>2</sub> is also very corrosive and, because of our extensive knowledge of surface coatings, it is in protecting pipes from CO<sub>2</sub> corrosion that Accoat can contribute to the research project. Accoat's first task will be to map the mechanisms and circumstances under which CO<sub>2</sub> corrodes pipes and the risks that would arise from such corrosion.

## In short

Accoat's project role thus encompasses safety optimisation and corrosion prevention. A role which entails significant responsibility given the fact that internal pipe surface treatments are crucial to protecting pipelines from CO<sub>2</sub> corrosion and thus to providing secure CO<sub>2</sub> transport to the benefit of all Europeans.