



**Workshop on designing a 'Grand Challenge' style innovation policy:  
a first case for green innovation policy**

**Academics meeting key mission-oriented science policymakers**

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After commenting on the results of the morning's academic brainstorming exercise, key mission-oriented science policymakers focused in the afternoon on the policy aspects of the debate.

It was argued that a top-down approach is too general and unlikely to lead to a transformation of the economy sufficient to tackle climate change. Rather, there is a need for an institutional arrangement that can encourage innovation through a more natural social process. The question is not whether we should choose between a top-down or a bottom-up approach, but to find out how different actors can work together for mutual benefit. Also, different challenges call for different approaches: for the EU 20-20-20 targets, the market is likely to do the job, but for the greenhouse-gas emission reductions foreseen for 2050, specific policies will be needed in priority areas. A top-down approach can come into conflict with a political obligation to be 'technology neutral' (for example, promoting clean cars instead of electric cars).

Timing is important for a 'Grand Challenge' style innovation policy: it should have a portfolio approach that covers existing innovations that need to be diffused, innovations that are close to commercial exploitation and uncertain long-term R&D. As emphasised during the brainstorming session and the seminar with David C. Mowery, demand-side policies are essential, but the question is how to decide between existing technologies and long-term policies? It has been argued that both bottom-up and top-down approaches are required to direct innovation from the top, but also to promote competition, which R&D subsidies should not discourage, either for big players or for SMEs. With regard to research priorities, it is not clear how these should be set. Once again, the example of the electric car was cited: how was the decision taken to invest in these cars and not in alternatives?

Despite the risks of free-riding and of promoting geographical unbalances, consortiums are seen as a good structure for productive R&D efforts. R&D is linked to excellence, and pragmatic policies should allocate money to specific consortiums in this respect.

To conclude, 'Grand Challenges' are an opportunity to link diverse EU policies such as promoting productivity growth, managing immigration and encouraging competition. Nevertheless, there is a risk that by linking too many diverse areas, the success or failure of such a policy becomes difficult to assess.