

## Waiting Games

### *Innovation impasses in situations of high uncertainty*

Douglas K. R. Robinson<sup>a, b 1</sup>, Pascal Le Masson<sup>b</sup>, Benoit Weil<sup>b</sup>

a: TEQNODE SARL, 282 Rue Saint Jacques, 75005, Paris, France.

b: MINES Paristech, CGS- center for management science, 60 Bvd Saint Michel, 75272 Paris Cedex 06, France

#### What are waiting games?

**Scene 1:** two companies competing in the same sector of sustainable energy technologies, having developed a novel technology, and both waiting for the other to make the first move and introduce the innovation, which would present the first and best opportunity to really learn about public acceptance of the innovation.

**Scene 2:** a start-up venture in the medical devices sector waiting for established companies to invest in the early phases of the development of a new demonstrator; these companies waiting for the start-up to demonstrate the reproducibility of its demonstrator.

**Scene 3:** a company in the emerging field of nanomedicine waiting for regulatory decisions by the traditional organizations mandated to make these decisions, whilst the latter waits for the new technology to stabilize so that its risks and benefits can be assessed...

The above sketches refer to situations in which technological innovation has reached an impasse: one side waiting for the other to make an important move without which this party cannot move on.

In these situations, the challenge for innovation has shifted from meeting uncertainties to breaking through a waiting game. The topic of 'waiting games' – or technology impasses – although recognised as a key challenge it has not been addressed in the innovation literature, while it is clearly important to understand the phenomenon, and to be able to do something about it. We call this a waiting game because it occurs over and above the strategies of individual actors, even if there is general acceptance that the technology is promising and innovation is necessary.

Such impasses are particularly striking for radical or architectural innovation processes, full of uncertainties and unknowns, and accompanied by high expectations. This special issue explores

---

<sup>1</sup> Douglas K. R. Robinson is Managing Director of teQnode, a consultancy firm, which specializes in the mapping, understanding and prospective analysis of a variety of new and emerging science and technologies. As part of this endeavour, understanding innovation management challenges is key. Waiting games have been visible in areas of new and emerging technologies and this was the reason a special issue was initiated, in conjunction with the editors of Technology Analysis and Strategic Management Journal. For information on this special issue please do not hesitate to contact [douglas.robinson@teqnode.com](mailto:douglas.robinson@teqnode.com).

the variety of waiting games and their dynamics, and offers suggestions about breaking through them.

Waiting games, with their first mover problem, are strategic games in the real world.

To overcome them requires a change at the collective level, amidst high uncertainty. The waiting game may be linked to the design process itself, where cognitive/conceptual lock-in prevents breaking out of an incumbent technological development pathway into fresh and novel areas.

Another form of waiting game is linked to existing technologies like fuel cells which remain limited to niche applications, and have difficulty breaking out of them, even when there are strong expectations (Bakker et al. this issue).

The papers in this special issue address the variety of waiting games, mostly among the actors involved in developing a new technology, but also linked to a “wait and watch” attitude of regulators.

Waiting games go with disruptive innovation where uncertainty and the degree of “unknownness” is high. This special issue of TA&SM provides insights into how uncertainties and open-ended promises can lead to waiting games. Each contribution has also offered suggestions on how to handle, use or avoid waiting games. We hope that this issue will provide a nucleus for further academic and practical explorations of the phenomenon of waiting games in potentially radical innovations.

For more information contact [douglas.robinson@teqnode.com](mailto:douglas.robinson@teqnode.com)

Or visit <http://www.tandf.co.uk/journals/titles/09537325.asp>