

7 CONTROLLING QUALITY

Introducing Operational Research: Using scientific approaches to optimise company performance

(This extension material accompanies the text on p. 677 of your book.)

Most of the topics in the *Business Modelling* part of this book come under the heading of Operational Research (OR). OR is the use of mathematical models of an organisation to inform decision making with a view to making more efficient use of resources.

Whilst cost reduction might have been the key goal in the past, nowadays there is a growing emphasis on a more efficient use of resources to reduce emissions of greenhouse gases, even if this results in an increase in costs.

See, for instance, Dekker, R., Bloemhof, J. and Mallidis, I. (2012) 'Operations Research for green logistics – An overview of aspects, issues, contributions and challenges', *European Journal of Operational Research*, 219, 671–679.
<http://www.sciencedirect.com/science/article/pii/S0377221711009970>

Specialist software is available for common OR techniques like linear programming, inventory control and project planning networks so business analysts can use these techniques as part of their job. However, less routine applications might require an OR professional. Some jobs which involve OR will have OR in the title, but others come under 'decision support', business or marketing analyst or logistics planner.

The Operational Research Society in the UK seeks to promote the subject and provides a website aimed at business professionals:
<http://www.theorsociety.com/>

The Science of Better website, provided by the OR Society, describes how OR can help business and includes some interesting case histories:
<http://www.scienceofbetter.co.uk>

And if you are thinking about a career in OR, here is a starting point:
http://www.prospects.ac.uk/operational_researcher_job_description.htm