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MAIN PAPER

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Replenishing the pipeline: A quantitative approach to optimising the sourcing of new projects

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Abstract

Large pharmaceutical companies maintain a portfolio of assets, some of which are projects under development while others are on the market and generating revenue. The budget allocated to R&D may not always be sufficient to fund all the available projects for development. Much attention has been paid to the selection of optimal subsets of available projects to fit within the available budget. In this paper, we argue the need for a forward-looking approach to portfolio decision-making. We develop a quantitative model that allows the portfolio management to evaluate the need for future inflow of new projects to achieve revenue at desired levels, often aspiring to a certain annual revenue growth. Optimisation methods are developed for the presented model, allowing an optimal choice of number, timing and type of projects to be added to the portfolio. The proposed methodology allows for a proactive approach to portfolio management, prioritisation, and optimisation. It provides a quantitatively