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The Business Case for Research and Development

This paper addresses an important new approach in assessing the value of Research and Development programs (R&D) and asserts that there is a reliable process that can be used to calculate the risk-based value of new technologies. It is acknowledged that this process is only a tool to aid in the decision process and the extent upon which it is followed must be decided within the context of other constraints which cannot be expressed statistically. The hypothesis in the next section establishes the objectives of the paper which are addressed through the discussion of a seven step process that examines the alignment of a generic R&D program with portfolio development of assets. In addition, a detailed analysis of these input criteria is provided that shows the NPV (Net Present Value) and EMV (Expected Monetary Value) impacts of this alignment process. The technique discussed in this paper can be used to prioritize R&D programs based upon maximum projected value addition of each technology rather than more subjective methods. Finally, the paper provides the conclusion that this type of assessment process is objective and reliable. It also brings attention to the Opportunity Cost of delaying technology development. The paper is intended to aid companies in making hard decisions on investing in the creation of new technologies now, later or not at all.