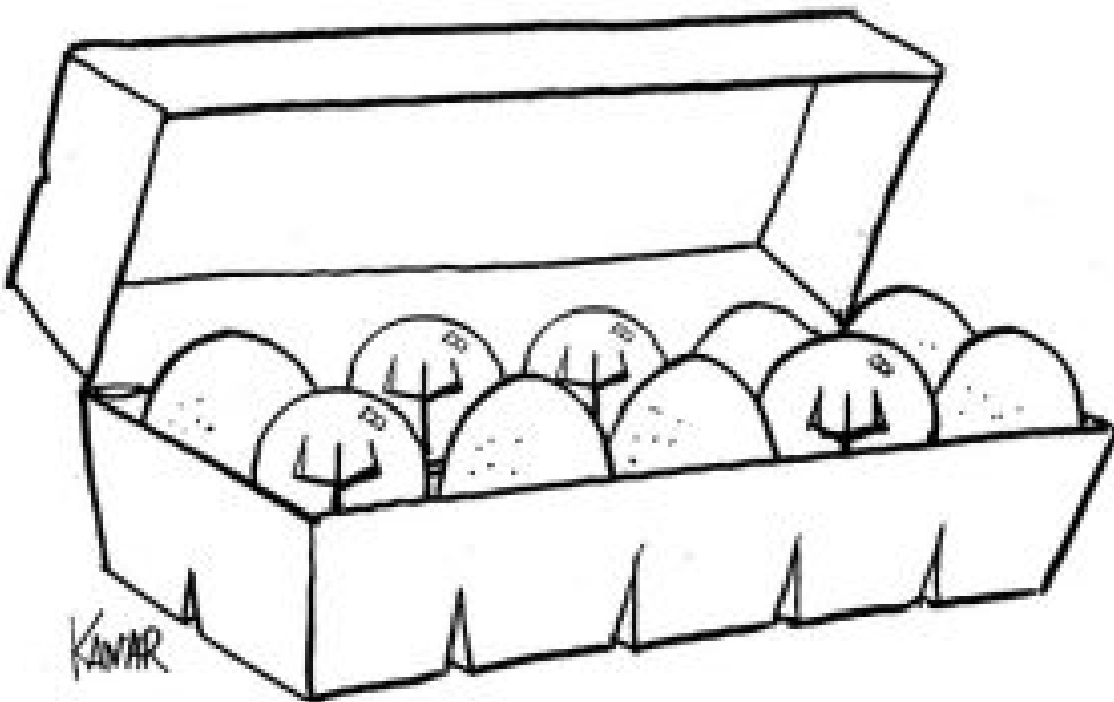
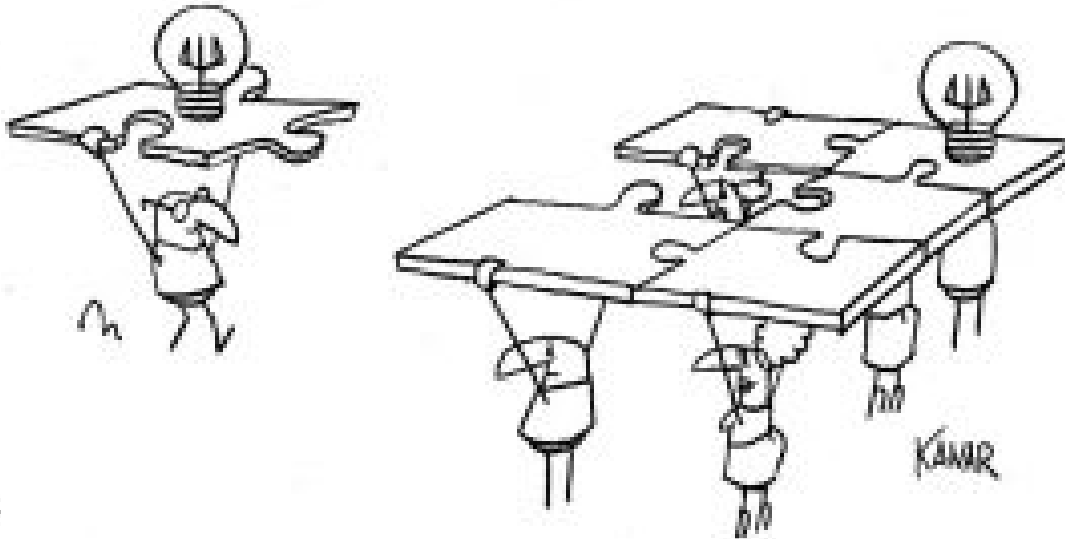


By Benoît Gailly, 17 January 2018

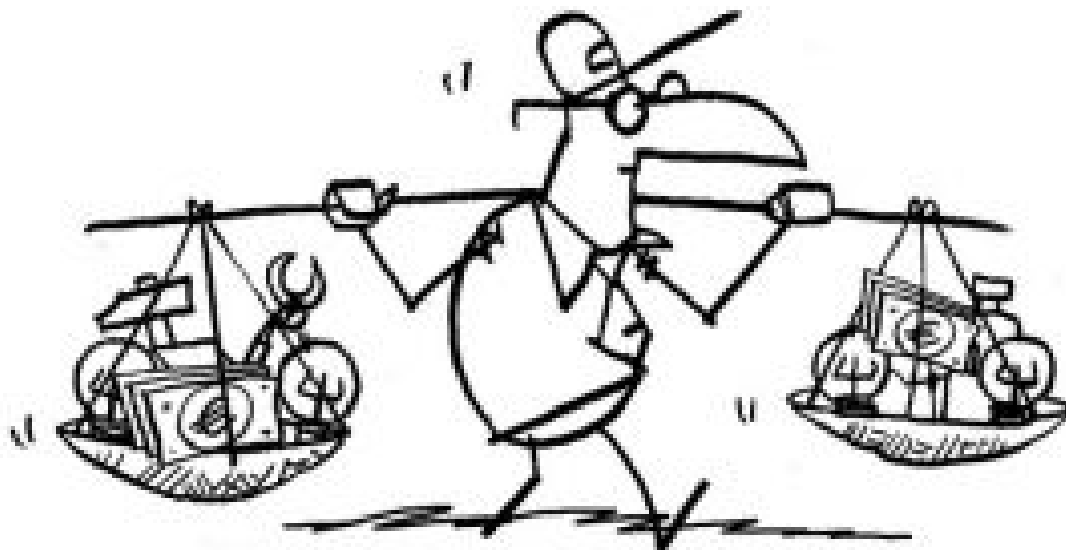
## Building a consistent and balanced innovation portfolio



The value of an innovative opportunity - “the egg” - must be assessed, taking into account how and how much it fits with the **portfolio** of innovative and non-innovative projects currently pursued by an organization - “the baskets”.



How an innovation opportunity will affect the **consistency** of the corporate portfolio should be assessed, in terms of both the potential critical resources bottlenecks - in particular management's and customers' attention - and the potential technological and organizational synergies.



How much an innovation opportunity will affect the **balance and alignment** of the corporate portfolio should be assessed, both in terms of strategic scope - exploitation vs. exploration - and with respect to the time horizon - short-, mid- and long-term.

## Bibliography

### Managing a portfolio of opportunities

**Keywords:** *portfolio management, synergies*

- (Book) Cooper, Robert Gravlin, Scott J. Edgett, and Elko J. Kleinschmidt. [Portfolio management for new products](#). Basic Books, 2001.
- (Video) [Innovation Portfolio Management: The logical, non-sexy yet effective approach](#) from Maddock Douglas, Inc (on Vimeo)
- (Article) Cooper, R., Edgett, S., & Kleinschmidt, E. (2001). Portfolio management for new product development: results of an industry practices study. *R&D Management*, 31(4), 361-380.
- (Article) Engwall, M. (2003). No project is an island: linking projects to history and context. *Research Policy*, 32(5), 789-808.
- (Article) Floricel, S., & Ibanescu, M. (2008). Using R&D portfolio management to deal with dynamic risk. *R&D Management*, 38(5), 452-467.
- (Article) Kang, W., & Montoya, M. (2014). The impact of product portfolio strategy on financial performance: The roles of product development and market entry decisions. *Journal of Product Innovation Management*, 31(3), 516-534.

- (Article) Kester, L., Griffin, A., Hultink, E. J., & Lauche, K. (2011). Exploring portfolio decision-making processes. *Journal of product innovation management*, 28(5), 641-661.
- (Article) Lee, R., Lee, J. H., & Garrett, T. C. (2019). Synergy effects of innovation on firm performance. *Journal of Business Research*, 99, 507-515.
- (Article) Mikkola, J. H. (2001). Portfolio management of R&D projects: implications for innovation management. *Technovation*, 21(7), 423-435.
- (Article) Paulson, A.S., O'Connor, G.C., & Robeson, D. (2007). Evaluating radical innovation portfolios. *Research-Technology Management*, 50(5), 17-29.
- (Article) Smit, H.T., & Trigeorgis, L. (2006). Strategic planning: valuing and managing portfolios of real options. *R&D Management*, 36(4), 403-419.

### Building consistent innovation portfolios

**Keywords:** consistency, modularity, technology roadmap

- (Book) Archibald, Russell D., and Shane Archibald. [Leading and Managing Innovation: What Every Executive Team Must Know about Project, Program, and Portfolio Management](#). CRC Press, 2016.
- (Video) [Embracing Agile](#), Darrell K. Rigby, Jeff Sutherland, Hirotaka Takeuchi
- (Article) Campagnolo, D., & Camuffo, A. (2010). The concept of modularity in management studies: a literature review. *International Journal of Management Reviews*, 12(3), 259-283.
- (Article) Daim, T. U. (2013). Are formal technology integration processes needed for successful product innovations?. *International Journal of Innovation Management*, 17(04), 1350016.
- (Article) Garcia-Vega, M. (2006). Does technological diversification promote innovation?: An empirical analysis for European firms. *Research policy*, 35(2), 230-246.
- (Article) Hoetker, G. (2006). Do modular products lead to modular organizations?. *Strategic Management Journal*, 27(6), 501-518.
- (Article) Kim, S. K., & Min, S. (2015). Business model innovation performance: When does adding a new business model benefit an incumbent?. *Strategic Entrepreneurship Journal*, 9(1), 34-57.
- (Article) Klingebiel, R., & Rammer, C. (2014). Resource allocation strategy for innovation portfolio management. *Strategic Management Journal*, 35(2), 246-268.
- (Article) Nieto-Rodriguez, A. (2016). How to Prioritize Your Company's Projects, *Harvard Business Review*. Accessed December 15 2017. <https://hbr.org/2016/12/how-to-prioritize-your-companys-projects>
- (Article) Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18(S1), 187-206.
- (Article) Phaal, Robert, Clare JP Farrukh, and David R. Probert. "Technology management tools: concept, development and application." *Technovation* 26.3 (2006): 336-344.
- (Article) Rodríguez-Duarte, A., Sandulli, F. D., Minguela-Rata, B., & López-Sánchez, J. I. (2007). The endogenous relationship between innovation and diversification, and the impact of technological resources on the form of diversification. *Research Policy*, 36(5), 652-664.
- (Article) Sanchez, R., & Mahoney, J. T. (1996). Modularity, flexibility, and knowledge management in product and organization design. *Strategic Management Journal*, 17(S2), 63-76.

- (Article) Schilling, M. A. (2000). Toward a general modular systems theory and its application to interfirm product modularity. *Academy of Management Review*, 25(2), 312-334.
- (Article) Schilling, M. A., & Steensma, H. K. (2001). The use of modular organizational forms: An industry-level analysis. *Academy of Management Journal*, 44(6), 1149-1168.
- (Article) Schultz, C., Salomo, S., & Talke, K. (2013). Measuring new product portfolio innovativeness: How differences in scale width and evaluator perspectives affect its relationship with performance. *Journal of Product Innovation Management*, 30(S1), 93-109.
- (Article) Simonse, L.W., Hultink, E. J., & Buijs, J. A. (2015). Innovation roadmapping: Building concepts from practitioners' insights. *Journal of Product Innovation Management*, 32(6), 904-924.
- (Article) Srivastava, M. K., & Gnyawali, D. R. (2011). When do relational resources matter? Leveraging portfolio technological resources for breakthrough innovation. *Academy of Management Journal*, 54(4), 797-810.

### Staying the course: balanced and aligned portfolios

**Keywords:** *balance, time horizons*

- (Book) Baghai, M., Coley, S., & White, D. (2000). [\*The alchemy of growth: Practical insights for building the enduring enterprise\*](#). Da Capo Press.
- (Video) The Zinnovants ["Why innovate?"](#)
- (Article) Bauer, M., & Leker, J. (2013). Exploration and exploitation in product and process innovation in the chemical industry. *R&D Management*, 43(3), 196-212.
- (Article) Bingham, C.B., Furr, N.R., & Eisenhardt, K.M. (2014). The opportunity paradox. *MIT Sloan Management Review*, 56(1), 29.
- (Article) Chao, R. O., & Kavadias, S. (2008). A theoretical framework for managing the new product development portfolio: When and how to use strategic buckets. *Management science*, 54(5), 907-921
- (Article) Cooper, R. G., Edgett, S. J., & Kleinschmidt, E. J. (2000). New problems, new solutions: making portfolio management more effective. *Research-Technology Management*, 43(2), 18-33.
- (Article) Cooper, R. G. (2013). Where are all the breakthrough new products?: Using portfolio management to boost innovation. *Research-Technology Management*, 56(5), 25-33.
- (Article) Eggers, J. P. (2012). All experience is not created equal: Learning, adapting, and focusing in product portfolio management. *Strategic Management Journal*, 33(3), 315-335.
- (Article) Heising, W. (2012). The integration of ideation and project portfolio management—A key factor for sustainable success. *International Journal of Project Management*, 30(5), 582-595.
- (Article) Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management journal*, 40(4), 767-798.
- (Article) Kaiser, M. G., El Arbi, F., & Ahlemann, F. (2015). Successful project portfolio management beyond project selection techniques: Understanding the role of structural alignment. *International Journal of Project Management*, 33(1), 126-139.
- (Article) Lumpkin, G. T. and Brigham, K. H. (2011), Long-Term Orientation and

Intertemporal Choice in Family Firms. *Entrepreneurship Theory and Practice*, 35: 1149-1169.

- (Article) Markides, C.C. (2013). Business model innovation: What can the ambidexterity literature teach us?. *The Academy of Management Perspectives*, 27(4), 313-323.
- (Article) Meskendahl, S. (2010). The influence of business strategy on project portfolio management and its success—a conceptual framework. *International Journal of Project Management*, 28(8), 807-817.
- (Article) Miller, D. J. (2006). Technological diversity, related diversification, and firm performance. *Strategic Management Journal*, 27(7), 601-619.
- (Article) Mohammad, A., Maryam, A., and Ebrahim-Sharifi, T. (2014) Selecting balanced portfolios of R&D projects with interdependencies: a cross-entropy based methodology. *Technovation*, 34, 54-63.
- (Article) Piscitello, L. (2004). Corporate diversification, coherence and economic performance. *Industrial and Corporate Change*, 13(5), 757-787.
- (Article) Quintana-García, C., & Benavides-Velasco, C. A. (2008). Innovative competence, exploration and exploitation: The influence of technological diversification. *Research Policy*, 37(3), 492-507.
- (Article) Schilling, M. A., & Hill, C. W. (1998). Managing the new product development process: strategic imperatives. *Academy of Management Perspectives*, 12(3), 67-81.
- (Article) Smith, W.K., & Tushman, M.L. (2005). Managing strategic contradictions: A top management model for managing innovation streams. *Organization Science*, 16(5), 522-536.
- (Article) Smith, D., & Sonnenblick, R. (2013). From budget-based to strategy-based portfolio management: a six-year case study. *Research-Technology Management*, 56(5), 45-51.
- (Article) Tuff, G., & Nadji, B. (2012). Managing your innovation portfolio. *Harvard Business Review*, <https://hbr.org/2012/05/managing-your-innovation-portfolio>. Accessed December 15 2017.

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