

By Benoît Gailly, 17 January 2018

# Innovation as a process: beyond ideation

**NEW:** Watch the executive summary

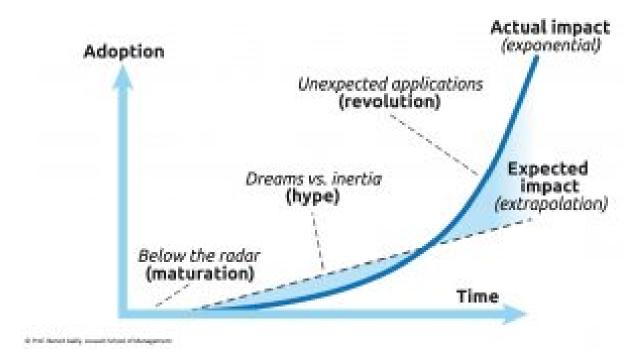
### Voir la vidéo

Most people **resist change**. As a consequence, the main job of an innovator will be to drive adoption, by convincing people and organizations to **disrupt their routines**.

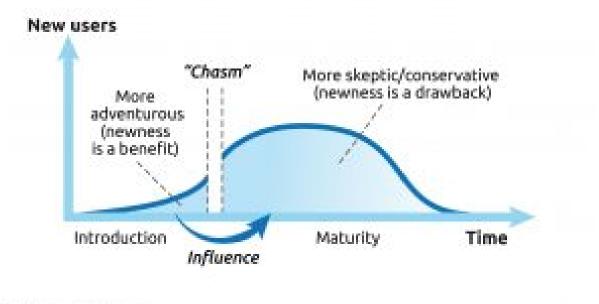


**Driving adoption** means demonstrating to key stakeholders that disrupting the status quo **is** worth it and that adopting the innovation will bring significant perceived benefits.





**Driving adoption** also means convincing key stakeholders that adopting new routines will be neither too difficult nor too risky, and that they and others can **easily make it happen**.



& Parl Book Sally asset School of Management



## **Bibliography**

#### Resistance to change: disrupting routines

**Keywords**: human fear, inertia, job destruction, organizational routines, , path dependency, precautionary principle, resistance to change, responsible innovation, routines, technology assessment

- (Book) Callon, M. (2009). Acting in an uncertain world. MIT press.
- (Book) Godin, S. (2003). Purple cow: <u>Transform your business by being remarkable</u>. Penguin.
- (Book) Harremoës, P., Gee, D., MacGarvin, M., Stirling, A., Keys, J., Wynne, B., & Vaz, S. G. (2013). The precautionary principle in the 20th century: Late lessons from early warnings. Routledge.
- (Book) Juma, C. (2016). *Innovation and its enemies: Why people resist new technologies*. Oxford University Press.
- (Book) Kotter, J. P., & Rathgeber, H. (2006). <u>Our iceberg is melting: Changing and succeeding under any conditions</u>. Macmillan.
- (Book) Lewin, K. (2013). A Dynamic Theory of personality-Selected papers. Read Books Ltd.
- (Book) Perez, C. (2003). <u>Technological revolutions and financial capital</u>. Edward Elgar Publishing.
- (Book) Senge, P. M. (2014). <u>The dance of change: The challenges to sustaining momentum in a learning organization</u>. Crown Business
- (Video) Dean Kamen: <u>To invent is to give</u> (TED talk)
- (Video) <u>Back to the Future</u>
- (Video) How to Deal with Resistance to Change | Heather Stagl | TEDxGeorgiaStateU.
- (Article) Alexy, O., Henkel, J., & Wallin, M. W. (2013). From closed to open: Job role changes, individual predispositions, and the adoption of commercial open source software development. *Research Policy*, 42(8), 1325-1340.
- (Article) Bacq, S., & Aguilera, R. V. (2021). Stakeholder Governance for Responsible Innovation: A Theory of Value Creation, Appropriation, and Distribution. *Journal of Management Studies, Forthcoming*.
- (Article) Becker, M.C. (2004). Organizational routines: a review of the literature. *Industrial and Corporate Change*, 13(4), 643-678.
- (Article) Cohen, M. D., Burkhart, R., Dosi, G., Egidi, M., Marengo, L., Warglien, M., & Winter, S. (1996). Routines and other recurring action patterns of organizations: contemporary research issues. *Industrial and Corporate Change*, 5(3), 653-698.
- (Article) Dobusch, L., & Schüßler, E. (2012). Theorizing path dependence: a review of positive feedback mechanisms in technology markets, regional clusters, and organizations. *Industrial and Corporate Change*, 22(3), 617-647.
- (Article) Eggers, J. P., & Kaplan, S. (2013). Cognition and capabilities: A multi-level perspective. *Academy of Management Annals*, 7(1), 295-340.
- (Article) Feldman, M.S. (2000). Organizational Routines as a Source of Continuous Change. *Organization Science*, 11(6): 611-629
- (Article) Felin, T., & Foss, N. J. (2009). Organizational routines and capabilities: Historical drift and a course-correction toward microfoundations. *Scandinavian Journal of*



- Management, 25(2), 157-167.
- (Article) Ford, J. D., Ford, L. W., & D'Amelio, A. (2008). Resistance to change: The rest of the story. *Academy of Management Review*, 33(2), 362-377.
- (Article) Ford, J. D., & Ford, L. W. (2009). Decoding resistance to change. *Harvard Business Review*, 87(4), 99-103.
- (Article) Fosfuri, A., & Rønde, T. (2009). Leveraging resistance to change and the skunk works model of innovation. *Journal of Economic Behavior & Organization*, 72(1), 274-289.
- (Article) Frambach, R. T., & Schillewaert, N. (2002). Organizational innovation adoption: A multi-level framework of determinants and opportunities for future research. *Journal of Business Research*, 55(2), 163-176.
- (Article) Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, *36*(3), 399-417.
- (Article) Kotter, J. P. (1995). Leading change: Why transformation efforts fail. *Harvard Business Review*, Reprint 95204
- (Article) Kotter, J. P. (2012). Accelerate! Harvard Business Review, 90(11), 45-56
- (Article) Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 149-164.
- (Article) Heidenreich, S., & Spieth, P. (2013). Why innovations fail—The case of passive and active innovation resistance. *International Journal of Innovation Management*, 17(05), 1350021.
- (Article) Hellström, T. (2003). Systemic innovation and risk: technology assessment and the challenge of responsible innovation. *Technology in Society*, 25(3), 369-384.
- (Article) Huy, Q. N. (2002). Emotional balancing of organizational continuity and radical change: The contribution of middle managers. *Administrative Science Quarterly*, 47(1), 31-69.
- (Article) Kleijnen, M., Lee, N., & Wetzels, M. (2009). An exploration of consumer resistance to innovation and its antecedents. *Journal of Economic Psychology*, 30(3), 344-357.
- (Article) Lapointe, L., & Rivard, S. (2007). A triple take on information system implementation. *Organization Science*, 18(1), 89-107.
- (Article) Le Bas, C., Mothe, C., & Nguyen-Thi, T. U. (2015). The differentiated impacts of organizational innovation practices on technological innovation persistence. *European Journal of Innovation Management*, 18(1), 110-127.
- (Article) Liebowitz, S. J., & Margolis, S. E. (1995). Path dependence, lock-in, and history. *Journal of Law, Economics, & Organization*, 205-226.
- (Article) Logue, D., & Grimes, M. (2022). Living up to the hype: How new ventures manage the resource and liability of future-oriented visions within the nascent market of impact investing. *Academy of Management Journal*, 65(3), 1055-1082.
- (Article) Mani, Z., & Chouk, I. (2018). Consumer resistance to innovation in services: challenges and barriers in the internet of things era. *Journal of Product Innovation Management*, 35(5), 780-807.
- (Article) Marcati, A., Guido, G., & Peluso, A. M. (2008). The role of SME entrepreneurs' innovativeness and personality in the adoption of innovations. *Research Policy*, 37(9), 1579-1590.
- (Article) Marquis, C. (2003). The pressure of the past: Network imprinting in intercorporate communities. *Administrative Science Quarterly*, 48(4), 655-689.
- (Article) Pardo del Val, M., & Martínez Fuentes, C. (2003). Resistance to change: a



literature review and empirical study. Management Decision, 41(2), 148-155.

- (Article) Pentland, B. T., & Feldman, M. S. (2005). Organizational routines as a unit of analysis. *Industrial and Corporate Change*, 14(5), 793-815.
- (Article) Schot, J., & Rip, A. (1997). The past and future of constructive technology assessment. *Technological forecasting and social change*, 54(2-3), 251-268.
- (Article) Sydow, J., Schreyögg, G., & Koch, J. (2009). Organizational path dependence: Opening the black box. *Academy of Management Review*, 34(4), 689-709.
- (Article) Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17(S2), 27-43.
- (Article) Van de Ven, A. H., & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of Management Review*, 20(3), 510-540.
- (Article) Van de Ven, A. H., & Poole, M. S. (2005). Alternative approaches for studying organizational change. *Organization Studies*, 26(9), 1377-1404.
- (Article) Vergne, J. P., & Durand, R. (2010). The missing link between the theory and empirics of path dependence: conceptual clarification, testability issue, and methodological implications. *Journal of Management Studies*, 47(4), 736-759.
- (Article) Vuori, T., & Huy, Q. (2016). 'Distributed Attention and Shared Emotions in the Innovation Process: How Nokia Lost the Smartphone Battle'. *Administrative Science Quarterly*, 61, 1-43.
- (Article) Walsh, J.P., & Ungson, G.R. (1991). Organizational memory. *Academy of Management Review*, 16(1), 57-91

#### Drivers of adoption: make it worth it

**Keywords**: adoption, bandwagon, diffusion, emergence, marketing of innovation, perceived benefits, social contagion, technology foresight

- (Book) Bijker, W. E., Hughes, T. P., & Pinch, T. J. (2012). The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology.
- (Book) Cialdini, R.B. (2007) Influence: the Psychology of Persuasion
- (Book) Gladwell, M. (2006). The tipping point: How little things can make a big difference. Little, Brown.
- (Video) iDiots
- (Article) Abrahamson, E., & Rosenkopf, L. (1993). Institutional and competitive bandwagons: Using mathematical modeling as a tool to explore innovation diffusion. *Academy of Management Review*, 18(3), 487-517.
- (Article) Agarwal, R., & Bayus, B. L. (2002). The market evolution and sales takeoff of product innovations. *Management Science*, 48(8), 1024-1041.
- (Article) Aghion, P., Dechezleprêtre, A., Hemous, D., Martin, R., & Van Reenen, J. (2016). Carbon taxes, path dependency, and directed technical change: Evidence from the auto industry. *Journal of Political Economy*, 124(1), 1-51.
- (Article) Antonides, G., Bas Amesz, H., & Hulscher, I. C. (1999). Adoption of payment systems in ten countries-a case study of diffusion of innovations. *European Journal of Marketing*, 33(11/12), 1123-1135.
- (Article) Arts, J. W., Frambach, R. T., & Bijmolt, T. H. (2011). Generalizations on consumer innovation adoption: A meta-analysis on drivers of intention and behavior. *International*



Journal of Research in Marketing, 28(2), 134-144.

- (Article) Bakker, S. (2010) The car industry and the blow-out of the hydrogen hype. *Energy Policy*, vol. 38, no. 11, pp. 6540-6544.
- (Article) Choi, J. N., Sung, S. Y., Lee, K., & Cho, D. S. (2011). Balancing cognition and emotion: Innovation implementation as a function of cognitive appraisal and emotional reactions toward innovation. *Journal of Organizational Behavior*, 32(1), 107-124.
- (Article) Cialdini, R.B., & Goldstein, N.J. (2004) Social influence: Compliance and conformity. *Annu. Rev. Psychol.*, 55, 591-621.
- (Article) Eerkens, Jelmer W., and Carl P. Lipo. "A tale of two technologies: Prehistoric diffusion of pottery innovations among hunter-gatherers." *Journal of Anthropological Archaeology* 35 (2014): 23-31.
- (Article) Geroski, P. A. (2000). Models of technology diffusion. *Research Policy*, 29(4-5), 603-625.
- (Article) Gollier, C. (2001). "Should we beware of the precautionary principle?" *Economic Policy*, 33, 303-327.
- (Article) Iyengar, R., Van den Bulte, C., & Valente, T. W. (2011). Opinion leadership and social contagion in new product diffusion. *Marketing science*, 30(2), 195-212.
- (Article) Jeyaraj, A., Rottman, J. W., & Lacity, M. C. (2006). A review of the predictors, linkages, and biases in IT innovation adoption research. *Journal of Information Technology*, 21(1), 1-23.
- (Article) Nelson, R. R., Peterhansl, A., & Sampat, B. (2004). Why and how innovations get adopted: a tale of four models. *Industrial and Corporate Change*, 13(5), 679-699.
- (Article) Saloner, G., & Shepard, A. (1992). Adoption of technologies with network effects: an empirical examination of the adoption of automated teller machines (No. w4048). NBER
- (Article) Seligman, L. (2006). Sensemaking throughout adoption and the innovation-decision process. *European Journal of Innovation Management*, 9(1), 108-120.
- (Article) Stock, R., von Hippel, E., & Gillert, N. (2016). 'Impacts of personality traits on consumer innovation success'. *Research Policy*, 45, 757-769.
- (Article) Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management*, (1), 28-45.
- (Article) Van den Bulte, C., & Joshi, Y. V. (2007). New product diffusion with influentials and imitators. *Marketing science*, 26(3), 400-421.
- (Article) Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- (Article) Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478
- (Article) Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 36(1), 157-178.

#### **Drivers of adoption: make it easy**

**Keywords**: adoption hurdles, adoption engineering, compatibility, complexity, cultural ambience, influencer, observability, product lifecycle, public sector innovation, skeuomorphism, standardization, switching costs, triability



- (Book) Abrahamson, E. (2004). *Change without pain: How managers can overcome initiative overload, organizational chaos, and employee burnout.* Harvard Business Press.
- (Book) Eagleman, D., & Brandt, A. (2017). *The Runaway Species: How human creativity remakes the world*. Catapult.
- (Book) Fagerberg, J. (2005) The Oxford Handbook of Innovation, Oxford University Press.
- (Book) Norman, D. A. (2013). <u>The design of everyday things</u>: Revised and expanded edition. Basic books.
- (Book) Rogers, E. M. (2010). <u>Diffusion of innovations</u>. Simon and Schuster.
- (Book) Thaler, R. and Sunstein, R. (2012) Nudge
- (Book) Dawkins, R. (2016). *The selfish gene*. Oxford university press.
- (Video) The Zinnovants, "Convince"
- (Video) <u>The diffusion of innovation theory</u> (Aiman Pht)
- (Article) Adner, R. (2006). Match your innovation strategy to your innovation ecosystem. *Harvard Business Review*, 84(4), 98.
- (Article) Adner, R., & Kapoor, R. (2016). Right Tech, Wrong Time. *Harvard Business Review*, 94(11), 60-67.
- (Article) Albury, D. (2005). Fostering innovation in public services. *Public Money and Management*, 25(1), 51-56.
- (Article) Allen, R. H., & Sriram, R. D. (2000). The role of standards in innovation. *Technological Forecasting and Social Change*, 64(2-3), 171-181.
- (Article) Bass, F.M. (2004). Comments on "a new product growth for model consumer durables the bass model". *Management Science*, 50(12 supplement), 1833-1840.
- (Article) Bessant, J. (2005). Enabling continuous and discontinuous innovation: Learning from the private sector. *Public Money and Management*, 25(1), 35-42.
- (Article) Chakravorti, B. (2004). The new rules for bringing innovations to market. *Harvard Business Review*, 82(3), 58-67.
- (Article) Choi, J. N., & Chang, J. Y. (2009). Innovation implementation in the public sector: An integration of institutional and collective dynamics. *Journal of Applied Psychology*, 94(1), 245.
- (Article) Chiesa, V., & Frattini, F. (2011). Commercializing technological innovation: Learning from failures in high-tech markets. *Journal of Product Innovation Management*, 28(4), 437-454.
- (Article) Coeurderoy, R., Guilmot, N., & Vas, A. (2014). Explaining factors affecting technological change adoption: A survival analysis of an information system implementation. *Management Decision*, 52(6), 1082-1100.
- (Article) Damanpour, F., & Schneider, M. (2008). Characteristics of innovation and innovation adoption in public organizations: Assessing the role of managers. *Journal of Public Administration Research and Theory*, 19(3), 495-522.
- (Article) De Vries, H., Bekkers, V., & Tummers, L. (2016). Innovation in the public sector: A systematic review and future research agenda. *Public Administration*, 94(1), 146-166.
- (Article) Frambach, R. T., Barkema, H. G., Nooteboom, B., & Wedel, M. (1998). Adoption of a service innovation in the business market: an empirical test of supply-side variables. *Journal of Business Research*, 41(2), 161-174.
- (Article) Goldenberg, J., Han, S., Lehmann, D. R., & Hong, J. W. (2009). The role of hubs in the adoption process. *Journal of Marketing*, 73(2), 1-13.
- (Article) Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004).



- 'Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations'. The Milbank Quarterly, 82, 581-629.
- (Article) Greenwood, R., Suddaby, R., & Hinings, C. R. (2002). Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1), 58-80.
- (Article) Griliches, Z. (1957). Hybrid corn: An exploration in the economics of technological change. *Econometrica*, *Journal of the Econometric Society*, 501-522.
- (Article) Hameed, M. A., & Counsell, S. (2014). Establishing relationships between innovation characteristics and IT innovation adoption in organisations: A meta-analysis approach. *International Journal of Innovation Management*, 18(01), 1450007.
- (Article) Hard M. & Knie A. (2001) The cultural dimension of technology management: Lessons from the history of the Automobile. *Technology Analysis & Strategic Management* Vol. 13(1);
- (Article) Hartley, J. (2005). Innovation in governance and public services: Past and present. *Public Money and Management*, 25(1), 27-34.
- (Article) Leonard-Barton, D., & Sinha, D. K. (2017). Developer-user interaction and user satisfaction in internal technology transfer. *Academy of Management Journal*.
- (Article) Lounsbury, M. (2007). A tale of two cities: Competing logics and practice variation in the professionalizing of mutual funds. *Academy of Management Journal*, 50(2), 289-307.
- (Article) Mahajan, V., Muller, E., & Bass, F. M. (1990). New product diffusion models in marketing: A review and directions for research. *Journal of Marketing*, 54(1), 1-26.
- (Article) Micheli, P., Schoeman, M., Baxter, D., & Goffin, K. (2012). New business models for public-sector innovation: Successful technological innovation for government. *Research-Technology Management*, 55(5), 51-57.
- (Article) Mustonen-Ollila, E., & Lyytinen, K. (2003). Why organizations adopt information system process innovations: a longitudinal study using Diffusion of Innovation theory. *Information Systems Journal*, 13(3), 275-297.
- (Article) Reinders, M. J., Frambach, R. T., & Schoormans, J. P. (2010). Using product bundling to facilitate the adoption process of radical innovations. *Journal of Product Innovation Management*, 27(7), 1127-1140.
- (Article) Tucker, C. (2008). Identifying formal and informal influence in technology adoption with network externalities. *Management Science*, 54(12), 2024-2038.
- (Article) van Oorschot, J. A., Hofman, E., & Halman, J. I. (2018). A bibliometric review of the innovation adoption literature. *Technological Forecasting and Social Change*, 134, 1-21.
- (Article) Wisdom, J. P., Chor, K. H. B., Hoagwood, K. E., & Horwitz, S. M. (2014). Innovation adoption: a review of theories and constructs. *Administration and Policy in Mental Health and Mental Health Services Research*, 41(4), 480-502.
- (c) Prof. Benoit Gailly, Louvain School of Management