# Harnessing Creativity and Innovation in the Workplace[1]

By Olivier Serrat

Creativity plays a critical role in the innovation process, and innovation that markets value is a creator and sustainer of performance and change. In organizations, stimulants and obstacles to creativity drive or impede enterprise.

Introduction

Creativity has always been at the heart of human endeavor. Allied to innovation, which creates unexpected value, it is now recognized as central to organizational performance. (Some hold that the capacity to harness intellectual and social capital—and to convert that into novel and appropriate things—has become the critical organizational requirement of the age.) The shift to knowledge economies has been abrupt and there is a flurry of interest in creativity and innovation in the workplace. Innovation is considered, quite simply, an imperative for organizational survival. It may even be the key to some of the biggest challenges facing the world, such as global warming and sustainable development. Notwithstanding, we are still far from a theory of organizational creativity: the avenues for promising research that might contribute to its emergence are innumerable because of the increasing use of systems approaches and the growing number of agents involved in knowledge flows.[2]
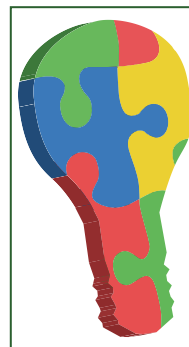
> *There is no doubt that creativity is the most important human resource of all. Without creativity, there would be no progress, and we would be forever repeating the same patterns.*
>
> —Edward de Bono

[1] These *Knowledge Solutions* do not discuss intellectual property, the new knowledge that arises out of the innovation process, nor the management systems that identify, protect, value, manage, and audit an organization's intellectual property, e.g., copyrights, trademarks, patents, etc.

[2] Usefully, given the plethora of opportunities, systemized research might cover four distinct stages: (i) ideas capture, (ii) growth and development, (iii) demonstration, and (iv) application. In general, little work has been done on what types of innovation have the biggest or most significant impact, and in what contexts.

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Definitions

Creativity[3] is the mental and social process—fuelled by conscious or unconscious insight—of generating ideas, concepts, and associations.[4] Innovation[5] is the successful[6] exploitation of new ideas: it is a profitable outcome of the creative process, which involves generating and applying in a specific context products, services, procedures, and processes that are desirable and viable. Naturally, people who create and people who innovate can have different attributes and perspectives.

The Challenge

It follows, then, that innovation begins with creativity. In the world of organizations, be they private or public, lack of either leads to stagnation, and leaves an organization unable to perform or meet change.[7] However, creative thinking cannot be turned on and off at the flick of a switch. And innovation does not occur in a vacuum; it requires effective strategies and frameworks, among which incentives are paramount. Creativity flourishes in organizations that support open ideas:[8] these organizations create environments that inspire personnel and maintain innovative workplaces; those that fail are large organizations that stifle creativity with rules and provide no slack for change. There is a role for management in the creative process: but it is not to manage it; it is to manage for it. Why? Because creativity does not happen exclusively and tacitly in a person's head but in interaction with a social context wherein it may be codified. For any organization, operating in an external environment, an interactionist model of creativity and innovation needs to encompass organizational context, organizational knowledge, and inter- and intra-organizational relationships, not forgetting the (increasingly multicultural) creative makeup of the individuals (antecedent conditions, cognitive style, ability, intrinsic motivation, knowledge, personality) and teams (group composition, characteristics, and processes) who operate in it.[9] Table 1 reveals just how much focus can shift perception even at a simple, generic level.

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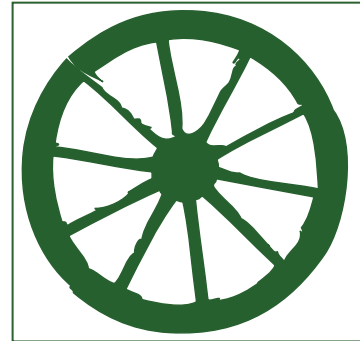
3   Dictionary.com defines creativity as "the ability to transcend traditional ideas, rules, patterns, relationships, or the like, and to create meaningful new ideas, forms, methods, interpretations, etc.; originality, progressiveness, or imagination."

4   Creativity was once considered the province of artists, scientists, and writers. But the creative urge can express itself elsewhere and need not be limited by the job description. There is variety in typologies of creative people too: they can be quick and dramatic, or careful and quiet. It is also true that most new ideas are not flashes of inspiration in an inventor's head; they come from how people identify, create, store, share, and use knowledge. According to the Snowflake Model of Creativity of David Perkins, developed in the 1980s, the six common traits of creative people are (i) a strong commitment to a personal aesthetic, (ii) the ability to excel in finding solutions, (iii) mental mobility, (iv) a willingness to take risks (and the ability to accept failure), (v) objectivity, and (vi) inner motivation. The first three traits are largely cognitive; the last three are dispositional attributes. Because none of the six is thought to be genetic, Perkins argued that creativity can be taught, or at least encouraged.

5   Dictionary.com defines innovation as "the act of innovating; [the] introduction of new things or methods."

6   Success, of course, should be defined by quantitative and qualitative indicators. In addition to market share and reduced costs, for instance, scale and permanence can serve among others.

7   This is not to say that private and public sector organizations have the same reasons to innovate. In the private sector, the imperative owes primarily to economic contexts and concerns, e.g., reducing costs and raising productivity, maintaining competitiveness, breathing life into slowing or stagnant markets (or, alternatively, facilitating entry into new markets), adapting to changing environments. In the public sector, motivation can be political (and therefore less amenable to rational planning and analysis). For instance, innovation has often been exploited to enhance reputation and image. But innovation is also becoming crucial to the design and delivery of public services in a dynamic society. In the 21st century, it is only through innovation, including at policy level, that public sector organizations will shift out of mass provision to efficient, personalized modes of service provision: society is becoming increasingly diverse, and individuals now demand more from public services too—innovations are the product of the creative interaction of supply and demand, for example, in the areas of broad areas of shared services, procurement, efficiency, and joined-up services.

8   Peter Drucker maintained that creativity is rarely a limiting factor. He argued that there are more ideas in any organization than can possibly be put to use. The issue was how to create value out of them.

9   Put simply, drawing from Andrew Van de Ven, the model articulates four basic factors: new ideas, people, interactions, and institutional context. This means that managers seeking to harness creativity and innovation confront four basic problems: (i) a human problem related to managing attention, (ii) a process problem related to managing new ideas into good currency, (iii) a structural problem related to managing part-whole relationships, and (iv) a strategic problem related to institutional leadership.

Table 1: Which Best Demonstrates Creativity? (1 = most popular choice)

	Business / Employers	School Superintendents
Problem identification or articulation	1	9
Ability to identify new patterns of behavior or new combination of actions	2	3
Integration of knowledge across different disciplines	3	2
Ability to originate new ideas	4	6
Comfort with the notion of "no right answer"	5	11
Fundamental curiosity	6	10
Originality and inventiveness in work	7	4
Problem solving	8	1
Ability to take risks	9 (t)	8
Tolerance of ambiguity	9 (t)	7
Ability to communicate new ideas to others	11	5

Note: In 2006, a survey of United States employers rated creativity and innovation among the top five "skills" that they thought would grow in importance over the next 5 years. Yet, a recent survey of 155 public school superintendents and 89 employers revealed great divergence over what best demonstrates creativity. Respondents were asked to select three "skills." Employers ranked problem identification or articulation first, while school superintendents ranked it ninth. Superintendents ranked problem solving first, while employers ranked it eighth. This underscores the primacy of contextual factors, which of course also differ by sectoral specialization (and history).

Source: James Lichtenberg, Christopher Woock, and Mary Wright. 2008. See Ready to Innovate: Are Educators and Executives Aligned on the Creative Readiness of the U.S. Workforce? *The Conference Board. Research Report No. 1,424.*

Types and Sources of Innovation

The main types of innovation are divided into product innovations, service innovations, and organizational (procedural or process) innovations.[10] The most common are market-led or market-push innovation; others are technology-led innovations (for which markets must be developed). All can be classified depending on the degree of their impact, viz., incremental, radical, or systemic. Peter Drucker[11] identified seven sources of innovation: (i) unexpected occurrences, (ii) incongruities of various kinds, (iii) process needs, (iv) changes in an industry or market, (v) demographic changes, (vi) changes in perceptions, and (vii) new knowledge. (These seven sources overlap, and the potential for innovation may lie in more than one area at a time.) He explained that purposeful, systematic innovation begins with the analysis of the sources of new opportunities. However, he emphasized that in seeking opportunities, innovative organizations need to look for simple, focused solutions to real problems. That takes diligence, persistence, ingenuity, and knowledge.

> *The key question isn't "What fosters creativity?" but it is why in God's name isn't everyone creative? Where was the human potential lost? How was it crippled? I think therefore a good question might be not why do people create? But why do people not create or innovate? We have got to abandon that sense of amazement in the face of creativity, as if it were a miracle if anybody created anything.*
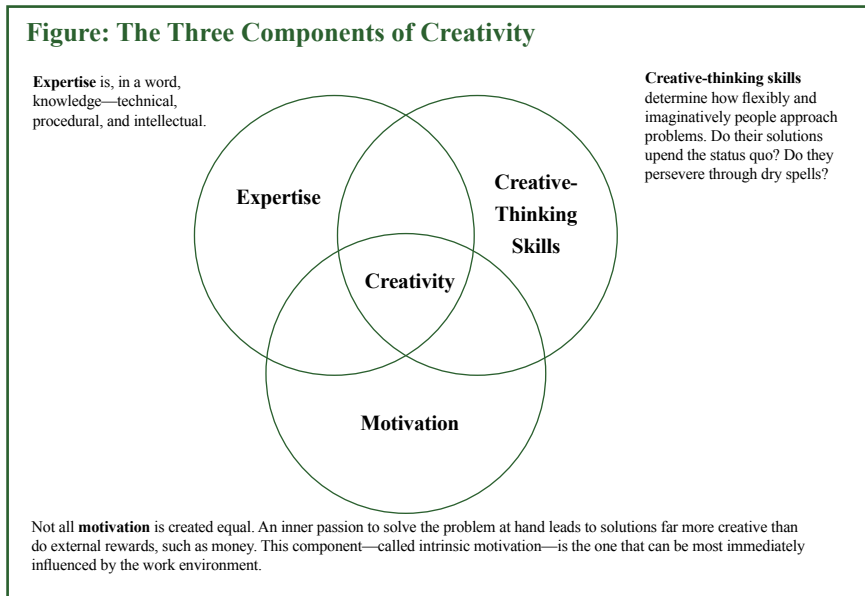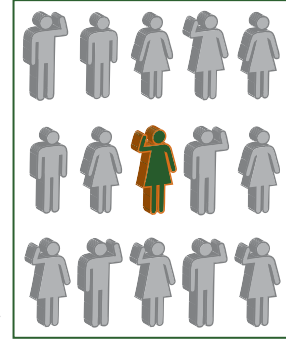>
> —Abraham Maslow

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[10] More recently, ancillary innovations in the form of changes in the boundary relationships of an organization have also appeared. These lead an organization to work with new partners outside previously existing areas and require close cooperation and collaboration in strategic alliances. Knowledge-sharing partnerships may qualify as such. Some have expanded the three conventional categories further, citing organizational innovations.

[11] Peter Drucker. 1985. *Innovation and Entrepreneurship*. New York: HarperCollins.

Leveraging Enterprise

Creativity in products, services, procedures, and processes is now more important than ever. It is needed equally in the established enterprise, the public sector organization, and the new venture. Why is it then that many organizations unwittingly carry out managerial practices that destroy it? With exceptions, most managers do not stifle creativity on purpose.[12] Yet, in the pursuit of productivity, efficiency, and control, they often undermine it. The figure below shows that creative-thinking skills are one part of creativity but that expertise and motivation are also essential. Managers can influence the first two, but doing so is costly and takes time.[13] They can make a more effective difference by boosting the intrinsic motivation of personnel. To manage for creativity and innovation in ways that keep clients, audiences, and partners satisfied, they have five levers: (i) the amount of challenge they give to personnel to stimulate minds, (ii) the degree of freedom they grant around procedures and processes to minimize hassle, (iii) the way they design work groups to tap ideas from all ranks, (iv) the encouragement and incentives they give, which should include rewards and recognition, and (v) the nature of organizational support. Needless to say, managers must themselves be motivated.

Figure: The Three Components of Creativity

Expertise is, in a word, knowledge—technical, procedural, and intellectual.

Creative-thinking skills determine how flexibly and imaginatively people approach problems. Do their solutions upend the status quo? Do they persevere through dry spells?

Expertise

Creative-Thinking Skills

Creativity

Motivation

Not all **motivation** is created equal. An inner passion to solve the problem at hand leads to solutions far more creative than do external rewards, such as money. This component—called intrinsic motivation—is the one that can be most immediately influenced by the work environment.

Source: Teresa Amabile. 1998. How to Kill Creativity. *Harvard Business Review*. September–October: 76–87.

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[12] Still, preventing innovation can secure control over a workforce, be it by centralizing authority in a particular department or person, limiting possibilities for action, or reducing the need for human capital. A further explanation for aversion to risk in the public sector might be that the costs of failure remain so high—both politically and professionally—that managers shy away from innovation as a feature of everyday practice. Another might be that there are few financial or career incentives to think outside the box. Monopolistic structures, "adhocism," tight budgets, and heavy workloads can also hinder the long-term investment and commitment that is needed to truly embed a culture of innovation. Paradoxically, the need to keep up sometimes also means that new technologies or ways of working are adopted before a prior innovation takes root.

[13] Hiring the right person is the single, biggest, most important decision an organization makes. Obviously, success or failure flow from understanding (or not) the need to recruit. Having a talent management strategy gives managers guidance about what they should do more or less of. It also helps ensure that everyone is familiar with the priorities of the organization and how recruitment can impact it. The steps are to (i) specify what kind of talent the organization needs, (ii) identify what and where the gaps are, (iii) identify high potentials, (iv) assess readiness for leadership transitions, (v) accelerate development, and (vi) focus and drive performance. (Personnel should play an active role in the management of their own talent too.)

Opening Doors to Diverse Perspectives

Before World War II, closed innovation was the operating paradigm for most companies.[14] Innovating enterprises kept their discoveries secret and made no attempt to assimilate information from outside their own research and development laboratories. Collaboration need not be bounded by the wall of the organization. In recent years, the world has seen major advances in technology and organization assisting the diffusion of information. Not least of these are electronic communication systems, including the internet. Today, data and information can be transferred so swiftly that it seems impossible to prevent movement

> *If you want to make an apple pie from scratch, you must first create the universe.*
> —Carl Sagan

(should one want to). Since organizations cannot stop this phenomenon, they must learn to take advantage of it.[15] Communities and networks of practice are fertile venues that provide intellectual challenge, allow people to pursue their passions, foster mutual trust, organize a setting for "noble" work, and gather appreciative audiences. Table 2 underscores that open innovation requires mind-sets and organizational cultures different from those of traditional (closed) innovation.

Table 2: Closed and Open Innovation

Closed Innovation Principles	Open Innovation Principles
• The smart people in our field work for us.	• Not all the smart people work for us. We need to work with smart people inside and outside our company.
• To profit from research and development, we must discover it, develop it, and ship it ourselves.	• External research and development can create significant value; internal research and development is needed to claim some portion of that value.
• If we discover it ourselves, we will get it to market first.	• We do not have to originate the research to profit from it.
• The company that gets an innovation to market first will win.	• Building a better business model is better than getting to market first.
• If we create the most and the best ideas in the industry, we will win.	• If we make the best use of internal and external ideas, we will win.
• We should control our innovation process, so that our competitors do not profit from our ideas.	• We should profit from others' use of our innovation process, and we should buy others' intellectual property whenever it advances our own business model.

Source: Wikipedia. 2009. *Open Innovation*. Available: en.wikipedia.org/wiki/open_innovation

Components of Innovation Systems

There is no simple universal formula for successful innovation: it is nonlinear, works at many levels, and is too complex to be pinned down in that way. It is uniquely human and cannot be done by machines. Nevertheless, innovations are not random: they occur in relation to the past, present, and future conditions of an organization. The characteristics of innovation systems are that they recruit and retain highly skilled and trained personnel, give them access to knowledge, and then encourage and enable them to think and act innovatively. Components of an effective innovation system include

• Clarity in *mission statements and goals*, which invariably feature a commitment from senior managers to

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[14] In the past, innovation was considered a simple process of investment in fundamental research leading to commercialization of new products by farsighted management, usually in the "traditional" high-technology and manufacturing sectors. (However, knowledge-intensive services such as finance, business services, and engineering have formed important and successful elements of a trend of innovations in service and organizational, not product, innovations. Silicon Valley has been the world's most prolific laboratory for information technology innovation for more than 40 years.)

[15] Famously, Albert Einstein suggested that problems cannot be solved at the same level of awareness that created them. This means that novel answers often lie outside the current system. Therefore, individuals who search widely for innovations are crucial to a positive future. Organizations that mean to foster performance and change should identify and value scouts and give them the leeway and resources to search in distant places.

assume responsibility for the risk of failure.
- An *organizational culture* that values innovation, where there is encouragement for personnel to think differently, take calculated risks, and challenge the status quo. Major forces such as leadership, attitudes to risk, budgeting, audit, performance measurement, recruitment, and open innovation are aligned in support.
- A *systems approach* to management that understands innovation as one part of a wider context, appreciates interconnections, and can conduct systematic analyses of how a problem interacts with other problems, parts of the organization, projects, etc. Management fosters coordination across these interconnections and stresses integration rather than compartmentalization.
- The adequate *resourcing* of innovation in line with strategy.
- The placing of *responsibility* for innovation on all staff.
- Understanding that *creativity* is desirable but insufficient. Innovation ambassadors must still take responsibility for follow-though.
- An enriched *physical workplace* that enhances creativity by providing accessible, casual meeting spots; physical stimuli; space for quite reflection; a variety of communication tools, e.g., white boards, bulletin boards; contact space for clients, audiences, and partners; and room for individual expression, among others.
- Human resource systems that ensure *staff* have diverse thinking (or learning) styles, giving them a variety of perspectives on single problems.
- Team setups that avoid *groupthink* and balance the beginner's mind with experience, freedom with discipline, play with professionalism, and improvisation with planning. Teams embody divergent and convergent thinking, diverse thinking styles, and diversity of skills; and handle conflict.
- High levels of *decentralization* and *functional differentiation* and a range of *specialized areas* within the organization.
- Honed *knowledge management* systems and processes that constantly bring new ideas, concepts, data, information, and knowledge into the organization.
- Numerous and empowered members of relevant *communities and networks* of practice.
- Processes and methodologies that identify and share *good practice*.
- A *performance measurement* system that measures the innovative pulse of the organization; ensures monitoring and evaluation of inputs, activities, outputs, outcomes, and impacts; and feeds lessons back to the system.
- The instigation of *incentives* and *rewards* for innovative individuals and teams.
- Plentiful *space* for creative thinking and reflective practice, e.g., away-days, brainstorming sessions, peer assists, after-action reviews and retrospects, problem-solving groups, discussion groups and forums.[16]
- Linkages with the *marketing* function, in ways that involve stakeholders and seek regular feedback.
- Effective *dissemination* systems.
- Dedication *information systems* that ensure positive coverage and publicize success.
- Structured *intellectual property management* systems that identify, protect, value, manage, and audit the organization's intellectual property.

Tables 3–5 help determine how friendly a workplace is to creativity and innovation; assess how reward structures, group norms and attitudes, and management styles support creativity; and plan how an idea will be rolled out.

> *To turn really interesting ideas and fledgling technologies into a company that can continue to innovate for years, it requires a lot of disciplines.*
>
> —Steve Jobs

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[16] All Google engineers are encouraged to spend 20% of their work time, i.e., 1 day per week, to pursue independent projects that interest them. At 3M, it is 15%.

Table 3: Assessing a Workplace's Friendliness to Creativity and Innovation

Dimension	Rating		
	Adequate	A Strength	Needs Improvement
Your Leadership Style			
• I can describe my own preferred style of thinking and working.			
• I have talked with members of my group about their preferred modes of problem solving.			
• I encourage intellectual conflict within my group.			
• When group members disagree, I help them determine the source of their differences.			
• When communicating with others, I take into consideration their preferred thinking style.			
Diversity of Styles			
• I am aware of the creative value of diverse thinking styles, and try to incorporate this diversity in teams.			
• I actively seek out or hire people with diverse backgrounds and thinking styles.			
• Our group recognizes the conflict that creative abrasion can cause, but also appreciates its value.			
• We have taken formal diagnostic tests to identify thinking or learning styles, and discussed the results of these assessments.			
Your Work Group			
• The majority never ignores the minority opinions in my work group.			
• I have added someone to my work group specifically because he or she brings a fresh perspective.			
• Our work environment supports those who think differently from the majority.			
• The thinking styles, skills, and experiences of my work group's members are diverse and balanced.			
• I actively look for group members whose thinking styles differ from my own.			
• I help my group establish and agree upon a clear project goal at the start of each project.			
• My group has formally agreed-upon behavior guidelines for how they should work together and treat each other.			
The Psychological Environment			
• I support people taking intelligent risks, and do not penalize them when they fail.			
• There are opportunities for people to take on assignments that involve risk and stretch their potential.			
• We openly discuss risk-taking, assess the risk potential of projects, and make contingency plans or identify risk management strategies.			

Dimension	Rating		
	Adequate	**A Strength**	**Needs Improvement**
• Rewards and/or recognition are given for creative ideas.			
• As long as they show learning from the experience, group members are not penalized for experimentation and risk taking.			
The Physical Workspace			
• Our workspace includes stimulating objects such as journals, art, and other items that are not directly related to our business.			
• I have made changes to our physical workspace to improve communication and creative interaction.			
• I provide group members with a wide variety of traditional and nontraditional communication tools (e-mail, whiteboards, crayons and paper, etc.).			
• Group members are encouraged to make their workspaces reflect their individuality.			
• Our workspace includes both areas for boisterous interaction and areas for quiet reflection.			
Bringing in Outsiders or Alternative Perspectives			
• Our group makes visits to people outside the division or organization in order to find different perspectives and ideas.			
• Our group has observed clients actually using our products or services in their own environment.			
• Our group has observed our clients' customers using our products or services in their own environment.			
• I have arranged for speakers from other industries to come to talk to or work with my group.			
• Our group has observed people using competitors' products or services.			
• Our group has benchmarked the functions and characteristics of our products, services, or processes against an industry other than our own.			
Promoting Group Convergence			
• I encourage group members to bring up and discuss nonwork-related subjects when they interfere with work.			
• When a project has been completed, I hold a debrief meeting to determine specifically what to do differently (or the same) the next time.			
• When I hold a debrief meeting, I always make sure that all members can be present.			
• When my group is stuck on a problem, I make sure they get "down time" or time off to step back, relax, and allow their subconscious minds to work.			
• At the end of a project, I provide a way for my group to celebrate and rejuvenate.			
• Project schedules allow enough time for group brainstorming and discussion of ideas.			

Source: Harvard ManageMentor. 2000. *Managing for Creativity and Innovation*. Boston: Harvard Business School Press.

Table 4: Assessing the Psychological Environment for Creativity

Question	Rating		
	Adequate	**A Strength**	**Needs Improvement**
• Are group guidelines already in place? Are they articulated and disseminated?			
• Do you, as the manager, encourage risk taking?			
• Are people allowed to take intelligent risks, and fail, without being penalized?			
• When someone fails, do you help him/her and the group find the learning in the failure?			
• Do you distinguish between intelligent failures (something risky, but promising) and mistakes (something clearly avoidable)?			
• Do your current rewards motivate group members to be creative?			
• Do you currently have rewards for creative ideas and suggestions?			
• Do you have both extrinsic (for example, money) and intrinsic (for example, providing a sense of accomplishment) rewards in your current reward system?			
• Do you recognize group members who successfully work outside their preferred thinking style or area of expertise?			
• Do you support intellectual conflict within your group?			
• Do you encourage people to point out unacknowledged and taboo subjects that are holding the group back?			
• Do you reward collaboration?			
• Do individuals have freedom to choose their projects or to determine how they reach their agreed-upon goals?			
• Are you, as a manager, alert to individuals who may be burning out?			
• Do you celebrate small successes?			
• Do you encourage the group to stop and review how much progress it has made?			

Ideas for Improvement

Based on your answers, what refinements would you make to your group's norms? To your reward structure? To your own management style?

Table 5: Planning for Innovation

Idea	Generated by	Date
Innovation (What form will the idea take?)		

Sources of Support? (What sources of assistance or support will be needed to carry out the innovation?)

Who?	Why?

What? (e.g., finances, personnel, etc.)

Ways to Gain and Strengthen Support?

Sources of Resistance? (What are the sources of resistance, e.g., people, policies, procedures, that might impede the process of innovation?)

Who?	What?	Why?

What are the Ways to Overcome or Minimize Resistance?

Impact, Outcome, Outputs, and Activities Planned

Impact/Outcome/Outputs/Activities	Assumptions and Risks	Completion Date

Performance Targets and Indicators

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Source: Adapted from Harvard ManageMentor. 2000. *Managing for Creativity and Innovation*. Boston: Harvard Business School Press.

Further Reading

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For further information

Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries substantially reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two thirds of the world's poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Knowledge Solutions are handy, quick reference guides to tools, methods, and approaches that propel development forward and enhance its effects. They are offered as resources to ADB staff. They may also appeal to the development community and people having interest in knowledge and learning.