

7

Creativity Life Cycle Models

INTRODUCTION

Contrary to popular belief, creativity requires having some type of discipline in place to allow it to be further exercised and result in something that is understandable and meaningful to others. Without some kind of rigor, creative energy is dissipated and its effectiveness becomes less than optimal. The following models are just a few of the ones that can blend well with the project life cycle and its defining, organizing, planning, executing, monitoring and controlling, and closing processes.

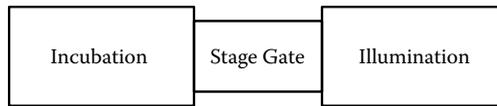
MODELS

These models exist to manage creativity:

- Imagination, illumination, and stage gates
- Creative problem solving
- Behavioral
- Traditional creativity life cycle

Incubation, Illumination, and Stage Gates

Daniel Goleman identifies essentially two main stages (see Figure 7.1) applicable to the creative process. The Incubation Stage is the first one. This stage involves letting the unconscious part of the mind go to work. It does so by allowing the mind to float freely rather than controlling and censoring thoughts. Judgment is suspended through emotion, intuition, daydreaming, and imagery. The Illumination Stage is the

**FIGURE 7.1**

Two-stage creativity process.

second one. The creative idea seems to originate from a void and then provides the groundwork for innovation.¹ To ensure that the creative process generates ideas of value, James Higgins recommends employing a stage gate system to ensure that ideas are evaluated for their innovativeness. The first series of stages involves allowing the creative process to flow; the latter phases allow for the “rational” mind to take over. The gates are threefold: (1) conduct preliminary investigation, (2) perform a business case to determine practicality, and (3) develop and implement a plan.²

Creative Problem Solving Model

Arthur VanGunder provides an in-depth model known as creative problem solving (see Figure 7.2). He identifies the following eight essential processes:

- Understand the environment by analyzing it to determine if a problem needs attention.³ Not all problems are equal; some are more important than others.
- Increase your awareness about the existence of the problem.⁴ In other words, understand what the problem is about. Problem definition is absolutely critical at this point.
- Gather information about the problem.⁵ Collect information surrounding the who, what, where, when, why, and how of the problem. Of course, use judgment to distinguish the critical from the insignificant elements.
- Generate assumptions about the circumstances or conditions that contributed to the problem.⁶ These assumptions will, of course, be challenged as you know more about the problem and what contributed to it. Remember that assumptions are considered facts by most people—until proven otherwise.
- Determine different alternatives, also known as options, to address the problem.⁷ No limit exists as to the number of options, and they

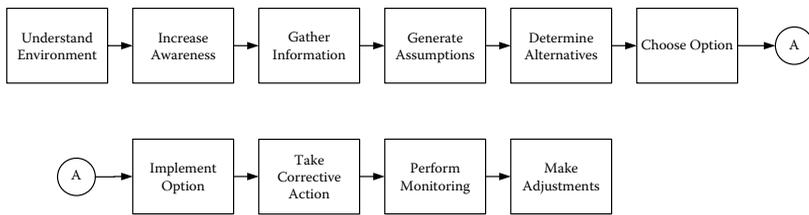


FIGURE 7.2
Creative problem-solving diagram.

can vary in effectiveness. Avoid closing the mind when generating options. It is best to suspend judgment until completing the list.

- Choose one of the options after careful review.⁸ Determine the criteria for making the choice and apply it objectively. Define the criteria clearly. Ideally, it will fix the problem and not the symptoms.
- Implement the option by developing and deploying a plan.⁹ Good project management works well here; its application is a matter of scale.
- Ascertain what was implemented effectively and, if necessary, take any corrective action to ensure the option does the job of fixing the problem.¹⁰ Very few things in life turn out as planned. Implementing a solution to a problem or addressing an issue requires ongoing monitoring that will be likely to involve making adjustments to the plan.

Behavioral Model

Dave Allan et al. developed an extensive creativity process involving six behaviors (referred to as the behavioral model) that conveniently flow in a series: freshness, greenhousing, realness, momentum, signaling, and bravery.

Freshness entails looking at a problem from different perspectives. It requires holding back on accepting assumptions as facts and not using them to provide a solution based upon current reality and previous experience. Freshness, that is, taking a different approach to viewing a problem, is stimulating. It means describing a problem or issue in an alternative way, challenging rules and assumptions, and making seemingly random linkages among different facts and data. Freshness, in others words, centers on reexpression of the issue or problem to be addressed.¹¹

Greenhousing involves laying the groundwork for ideas to blossom by suspending judgment. Analysis often results in exercising judgment

too soon. Under greenhousing, people restrain their analytical side and take a more exploratory view of a problem or issue. They contrast this environment with what they call the emergency-room environment, whereby swift judgment and action allow little flexibility or time to explore. They also note the logical, scientific approach, which, with its pursuit of the right answer, does not allow ideas to take root. They note that greenhouse behavior is exhibited or prohibited in one of two ways. The acronym SUN is used to describe a method that encourages creative behavior through suspension (S) of judgment, understanding (U) via empathy and open questioning, and nurturing (N) by providing a supportive environment. RAIN, as you might suspect, inhibits creative thinking by reacting (R) in a rush to judgment; assuming (A) through the use of uncertain, unverified assumptions that are viewed as facts; and insisting (IN), by attacking an idea right from the beginning. Greenhousing, therefore, allows ideas to grow rather than be attacked the minute they arise.¹²

Realness entails turning an idea into reality through various ways of expressing it. The key is to overcome the tendency to be consumed by a bias toward a way of expressing ideas, verbally or graphically for example, or by developing a prototype. A prototype allows ideas to manifest a sense of being tangible, that is, a sense of realness that has as much an emotional as a logical flavor to it that words and pictures have difficulty eliciting.¹³ However, team members should be open to new ideas for changing a prototype.

Momentum turns an idea into reality. It started with the prototype, but now involves putting it in the real world with urgency and direction. It is taking action by eliminating barriers, such as bureaucracy, and having people no longer bar coding, which starts and stops work when managing several tasks. Both are examples of creating inertia, not momentum. According to the authors, one of the best ways to encourage momentum is to ensure that all energy is aligned toward achieving common goals and objectives, whether organizational or personal.¹⁴

Signaling is about preparing to turn the creation into reality. The purpose is to bridge the difference between analysis and creativity because, as mentioned earlier, a gap often exists here in so many ways. The former is logical, efficient, and judgmental; the latter is open, free flowing, and effective. With signaling, emphasis is on language as a way to bridge the gap. Just as importantly, signaling communicates as much emotion as the logic behind a creative idea and does so in verbal, visual, and kinesthetic ways. Signaling is, therefore, a matter of doing the psychological work to introduce a new idea.¹⁵

Bravery, the final behavior, entails turning an idea into reality. It means that creative people must courageously face all the hardships associated with implementing change. Like all change, positive and negative aspects are associated with taking on the status quo. The slings and arrows of change often inhibit the best creative ideas from being implemented. In addition, overanalysis of an idea and its consequences can be substantially negative when implementing change. Not surprisingly, creative ideas often die during implementation because they become so incremental that they no longer result in any substantive change. True bravery, therefore, requires considerable courage and self-confidence. The forces can be so strong as to seem overwhelming, allowing fear to take over, versus the comfort of the status quo of habitual behavior. With bravery, people often need to step out of the comfort zone by taking action and facing the consequences—intended and unintended—to make an idea a reality through techniques like visualization.¹⁶

Traditional Creativity Model

A more traditional model (see Figure 7.3), and one more frequently cited, consists of five phases that flow in this order: preparation, concentration, incubation, illumination, and verification and production. The *preparation phase* is doing the groundwork to create. It requires learning as much as possible about a certain topic (e.g., issue, problem, concept). It involves obtaining the necessary background, such as common principles, data, problems, and techniques, on a topic. Preparation, therefore, is building a foundation.¹⁷

The *concentration phase* is centered on focusing on a problem or issue by defining exactly what the problem or issue is and determining what is and is not relevant. The result, hopefully, is a well-defined issue. Essentially, it enables focusing on a problem or issue when using creativity.¹⁸

The *incubation phase* is where the focus is least on the conscious level by allowing the subconscious to work and the mind to rest. The mind releases the reigns of concentration and runs free, so to speak. The solution to the issue slowly percolates from the depth of the mind, enabling the next phase to occur.¹⁹

The *illumination phase* is perhaps the shortest of all phases, but by no means the least important. In fact, it is the reason for creativity. This phase allows the creative thought to percolate to the surface. It is what causes

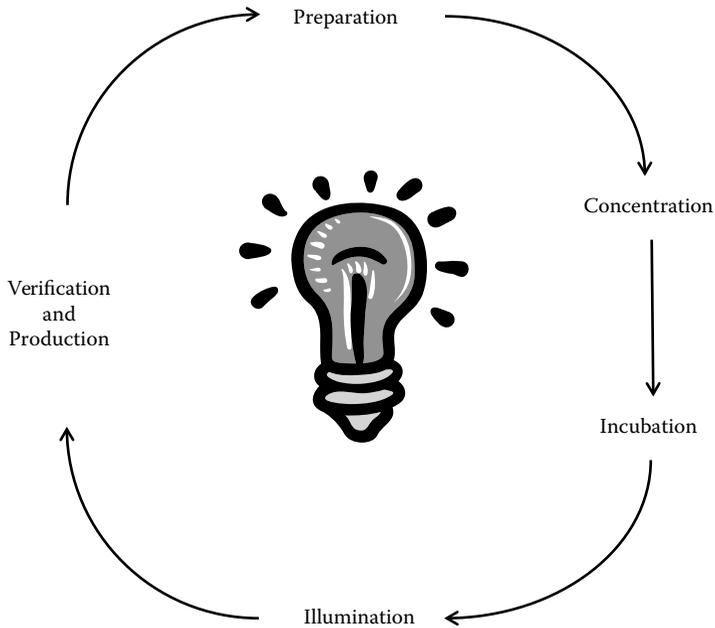


FIGURE 7.3
Traditional creative life cycle.

one to scream, oftentimes figuratively but sometimes literally, “Eureka!” or Aha!” A sort of euphoric feeling consumes the creator.²⁰

Verification and production is the final phase. Now the test of an idea occurs from a practicality standpoint. Technical complications and organizational resistance are just two examples where reality can make or break a creative idea, that is, get it accepted and implemented or rejected.²¹

CONCLUSION

Creativity requires some discipline if it is to contribute to the success of a project. Unfortunately, the perception is often that creativity is something that must lack discipline (e.g., no processes or rules) to enable it to blossom. Nothing could be further from the truth. While occasionally undisciplined, creative people must direct their efforts in a focused and disciplined manner to deliver something that is not only creative, but innovative.

The traditional model of creativity is preferred by the author simply because it has been used extensively in different industries, is the most familiar to people, and has proven to be most effective. The following chapters discuss how the traditional model can be applied with each of the project management processes of defining, organizing, planning, executing, monitoring and controlling, and closing.

Getting Started Checklist

Question	Yes	No
1. Have you decided to follow one or a combination of the following creative processes? Creative problem-solving process as described by Arthur VanGundy Imagination, illumination, and stage gates as described by James Higgins Six behaviors of creativity as described by Dave Allen et al. Traditional model as described by David Campbell Other(s):		
2. Whichever process is chosen, list some ways to apply the processes on your project (e.g., training): Way(s):		

ENDNOTES

1. Daniel Goleman, Paul Kaufman, and Michael Ray, *The Creative Spirit* (New York: Dutton, 1992), pp. 19–22.
2. James M. Higgins, *Innovate or Evaporate* (Winter Park, FL: The New Management Publishing Co., 1995), p. 214.
3. Arthur B. VanGundy, *Creative Problem Solving* (Westport, CT: Greenwood Press, Inc., 1987), pp. 61–65.
4. VanGundy, *Creative Problem Solving*, pp. 61–65.
5. VanGundy, *Creative Problem Solving*, pp. 61–65.
6. VanGundy, *Creative Problem Solving*, pp. 61–65.
7. VanGundy, *Creative Problem Solving*, pp. 61–65.
8. VanGundy, *Creative Problem Solving*, pp. 61–65.
9. VanGundy, *Creative Problem Solving*, pp. 61–65.
10. VanGundy, *Creative Problem Solving*, pp. 61–65.
11. Dave Allan et al., *What If?* (Oxford: Capstone Publishing Limited, 1999), pp. 7–17.
12. Allan et al., *What If?* pp. 54–93.
13. Allan et al., *What If?* pp. 95–123.
14. Allan et al., *What If?* pp. 127–169.
15. Allan et al., *What If?* pp. 171–205.
16. Allan et al., *What If?* pp. 208–237.

17. David Campbell, *Take the Road to Creativity and Get Off Your Dead End* (Niles, IL: Argus Communications, 1977), pp. 30–33.
18. Campbell, *Take the Road to Creativity and Get Off Your Dead End*, pp. 33–36.
19. Campbell, *Take the Road to Creativity and Get Off Your Dead End*, pp. 36–38.
20. Campbell, *Take the Road to Creativity and Get Off Your Dead End*, pp. 39–40.
21. Campbell, *Take the Road to Creativity and Get Off Your Dead End*, pp. 40–41.

Creative, Efficient, and Effective Project Management

Ralph L. Kliem, PMP



CRC Press

Taylor & Francis Group
Boca Raton London New York

CRC Press is an imprint of the
Taylor & Francis Group, an **informa** business
AN AUERBACH BOOK

CRC Press
Taylor & Francis Group
6000 Broken Sound Parkway NW, Suite 300
Boca Raton, FL 33487-2742

© 2014 by Taylor & Francis Group, LLC
CRC Press is an imprint of Taylor & Francis Group, an Informa business

No claim to original U.S. Government works

Printed on acid-free paper
Version Date: 20130916

International Standard Book Number-13: 978-1-4665-7692-6 (Hardback)

This book contains information obtained from authentic and highly regarded sources. Reasonable efforts have been made to publish reliable data and information, but the author and publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The authors and publishers have attempted to trace the copyright holders of all material reproduced in this publication and apologize to copyright holders if permission to publish in this form has not been obtained. If any copyright material has not been acknowledged please write and let us know so we may rectify in any future reprint.

Except as permitted under U.S. Copyright Law, no part of this book may be reprinted, reproduced, transmitted, or utilized in any form by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying, microfilming, and recording, or in any information storage or retrieval system, without written permission from the publishers.

For permission to photocopy or use material electronically from this work, please access www.copyright.com (<http://www.copyright.com/>) or contact the Copyright Clearance Center, Inc. (CCC), 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400. CCC is a not-for-profit organization that provides licenses and registration for a variety of users. For organizations that have been granted a photocopy license by the CCC, a separate system of payment has been arranged.

Trademark Notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Library of Congress Cataloging-in-Publication Data

Kliem, Ralph L.
Creative, efficient, and effective project management / Ralph L. Kliem.
pages cm
Includes bibliographical references and index.
ISBN 978-1-4665-7692-6 (hardcover : alk. paper)
1. Project management. 2. Creative thinking. I. Title.

HD69.P75K577 2014
658.4'04--dc23

2013030836

Visit the Taylor & Francis Web site at
<http://www.taylorandfrancis.com>

and the CRC Press Web site at
<http://www.crcpress.com>

Creative, Efficient, and Effective Project Management
Ralph L. Kliem
International Standard Book Number-13: 978-1-4665-7692-6 (Hardback)
© 2014 by Taylor & Francis Group, LLC

To my wonderful family:

Priscilla, Tonia, Mom, Mulder, and Ludwig von Canine

Contents

List of Figures	xv
List of Tables	xvii
Preface	xix
About the Author.....	xxi
Chapter 1 Creativity and Project Management	1
Introduction	1
Benefits of Creativity.....	1
Building Emotional Involvement	2
Generating New Ideas.....	2
Increasing Teaming.....	2
Leading to Competitive Advantage	3
Leveraging and Increasing Knowledge	3
Opening Minds.....	4
Stretching the Performance of People	4
Misperceptions about Creativity	5
Creativity Involves Some Degree of Mental Illness	5
Not Everyone Is Creative	5
Only Individuals, Not Groups, Are Creative.....	6
Creativity Is Restricted to Certain Fields	6
Only Certain Segments of the Population Are Creative...7	
Downsides of Creativity	7
Cause of Anxiety and Fear	8
Challenge Authority.....	8
People May Leave.....	9
Upset Team.....	9
Upsetting the Status Quo	9
Waste of Resources	10
What Exactly <i>Is</i> Creativity?.....	10
What Is the Relationship between Creativity and Projects?.....	12
Conclusion.....	19
Endnotes	20

Chapter 2	Creative Thinking Abilities.....	21
	Introduction	21
	A Word about Brain Hemispheres.....	21
	Creative Thinking Abilities.....	22
	Cross-Domain Thinking	23
	Having Fun.....	23
	Listening to Your Intuition	24
	Shifting Perspectives	25
	Being an Iconoclast, Even Nihilistic	26
	Unlearning and Relearning.....	27
	Looking from the Outside In.....	27
	Reverse Thinking.....	28
	Conceptualizing.....	28
	Embracing Ambiguity	29
	Seeing Multiple Answers	30
	Defining the Problem.....	31
	Being Observant	31
	Tinkering	32
	Determining the Essence of Something.....	32
	Being Self-Aware.....	33
	Competing and Collaborating.....	34
	Persevering	34
	Shifting Thinking	35
	Suspending Judgment	37
	Communicating.....	37
	Tools for Project Managers	38
	Birkman Model.....	39
	Hartman Color Code.....	39
	Myers-Briggs	40
	The Enneagram.....	41
	Multiple Intelligences.....	42
	Models of Creative Individuals.....	44
	Creative Roles.....	44
	Five Mental Skills of Creativity.....	45
	Conclusion.....	47
	Endnotes	48

Chapter 3	Groups and Creativity.....	51
	Introduction	51
	Characteristics of Creative Groups	51
	Synergistic.....	52
	Have a Diverse Membership	52
	Care Less about the Physical Environment	53
	Avoid “Noncontributory” Activities	53
	Emotional and Logical.....	53
	Collegial and Nonhierarchical.....	54
	Have Facilitative and Supportive Leadership	54
	Have Fun.....	55
	Allow the Individual and Group to Coexist	55
	Unafraid to Push Boundaries	56
	They Are Small in Size	57
	Seek Balance among Creating, Planning, and Implementing.....	57
	View Failure as a Learning Experience	58
	Know the Priorities	58
	Share Tangible and Intangible Assets.....	58
	Are Curious	59
	Are True Believers	59
	Have High Esprit de Corps	59
	Adapt	60
	Team Tools	60
	Organizational Engineering.....	60
	People Styles Typology.....	61
	Six Thinking Hats.....	63
	Conclusion.....	65
	Endnotes	66
Chapter 4	Challenges and Constraints	69
	Introduction	69
	The List.....	69
	Groupthink.....	70
	Mores, Beliefs, Values.....	71

Fear	71
Mismatch	73
Lack of Tools.....	73
Lack of Data and Information	74
Too Much and Too Little Training.....	74
Start and Stop Workflow	75
Impatience	75
Specialization	76
Craving for Predictability.....	76
Inability to Adapt.....	77
Poor Communications.....	78
Poor Coordination.....	78
Leaping to Judgment	79
Faster, Better, Cheaper Philosophy.....	79
Stretching Resources Too Thin	80
Silos.....	80
Focusing on the Past or Future, Not the Present	81
Lack of Sharing	82
Compliant Workforce	82
Hierarchy	84
Not Listening to Inner Voice.....	84
Taking on Only What Is Known	85
Management's Lack of Responsiveness	86
Success.....	86
Too Many Positive and Negative Incentives	87
Team Composition Imbalance	88
Dominance of Brain Thinking	88
Infighting.....	89
Conclusion.....	90
Endnotes	96

Chapter 5 Laying the Groundwork for a Creative Environment	99
Introduction	99
Necessary Actions	99
Establish a Receptive Audience	100
Make Training Available	100
Grant Necessary Access to Data and Tools.....	101
Concentrate Creative Energy.....	102

Encourage a Certain Degree of Anxiety and Tension.....	102
Establish Priorities.....	103
Encourage Diversity	104
Build and Maintain Trust.....	105
Support People’s Growth	105
Encourage Ownership	106
Stress Communications	107
Emphasize Coordination.....	107
Relax Rules and Procedures	108
Align Individual and Organizational Goals and Objectives.....	108
Allow for Risk Taking.....	109
Allow Time for Problem or Issue Definition	110
Provide Opportunities to Create	111
Broaden People’s Knowledge and Experience	111
Counter Groupthink.....	112
Encourage Transformational Leadership.....	113
Conclusion.....	114
Endnotes	120

Chapter 6 Common Creativity Tools and Techniques..... 121

Introduction	121
Common Approaches and Techniques	122
Brainstorming.....	122
Role Playing.....	123
Tree Diagram	124
Delphi Technique.....	125
Fishbone Diagram	126
Brainwriting	127
Affinity Diagramming.....	127
Trend Chart	128
Statistical Process Control Chart	129
Offsite	130
Force Field Analysis.....	131
Pareto Chart	131
Benchmarking.....	132
Nominal Group Technique	133
Modeling.....	134

Mind Mapping	135
Imagineering.....	136
Lateral Thinking	137
Workflow Analysis	138
Matrices.....	139
Reengineering	140
PDCA Cycle.....	141
Scatter Gram	142
Crawford Slip Technique.....	142
Hypothetical Scenario	143
Synectics.....	144
Storyboarding	145
Problem Solving.....	146
Compare and Contrast	147
Analogies, Metaphors, and Similes Thinking	147
Literature Reviews	148
Devil’s Advocate	149
Checklists.....	150
Observation	151
Interviewing	152
Field Trip.....	153
Idea Bulletin Board.....	153
Conclusion.....	154
Endnotes	156
Chapter 7 Creativity Life Cycle Models	159
Introduction	159
Models.....	159
Incubation, Illumination, and Stage Gates	159
Creative Problem Solving Model.....	160
Behavioral Model.....	161
Traditional Creativity Model	163
Conclusion.....	164
Endnotes	165
Chapter 8 Creativity and the Defining Process.....	167
Introduction	167
Benefits.....	167

Consequences of Failure.....	167
Deliverables	168
Ideal State.....	168
Context.....	169
Challenges and Constraints.....	169
Creative Abilities	171
Groundwork for Creative Environment.....	171
Groundwork for Individual Creativity.....	171
Groundwork for Team Creativity	174
Relevant Tools and Techniques	174
Traditional Creativity Life Cycle Model.....	175
Preparation Phase.....	175
Concentration Phase	176
Incubation Phase	176
Illumination Phase	176
Verification and Production Phase	177
Conclusion.....	177
Chapter 9 Creativity and the Organizing Process.....	181
Introduction	181
Benefits.....	181
Consequences of Failure.....	181
Deliverables	182
Ideal State.....	183
Context.....	183
Challenges and Constraints.....	184
Creative Abilities	185
Groundwork for Creative Environment.....	185
Groundwork for Individual Creativity.....	186
Groundwork for Team Creativity	187
Relevant Tools and Techniques	187
Traditional Creativity Life Cycle Model.....	188
Preparation Phase.....	188
Concentration Phase	189
Incubation Phase	190
Illumination Phase	190
Verification and Production Phase	190
Conclusion.....	191

Chapter 10 Creativity and the Planning Process	193
Introduction	193
Benefits	193
Consequences of Failure.....	193
Deliverables	194
Ideal State.....	195
Context.....	195
Challenges and Constraints.....	196
Creative Abilities	196
Groundwork for Creative Environment.....	198
Groundwork for Individual Creativity.....	201
Groundwork for Team Creativity	201
Relevant Tools and Techniques	201
Traditional Creativity Life Cycle Model.....	203
Preparation Phase.....	203
Concentration Phase	205
Incubation Phase	206
Illumination Phase	206
Verification and Production Phase	206
Conclusion.....	206
Chapter 11 Creativity and the Executing Process.....	211
Introduction	211
Benefits.....	211
Consequences of Failure.....	211
Deliverables	212
Ideal State.....	212
Context.....	213
Challenges and Constraints.....	214
Creative Abilities	216
Groundwork for Creative Environment.....	217
Groundwork for Individual Creativity.....	217
Groundwork for Team Creativity	219
Relevant Tools and Techniques	219
Traditional Creativity Life Cycle Model.....	222
Preparation Phase.....	222
Concentration Phase	225
Incubation Phase	225

Illumination Phase	225
Verification and Production Phase	226
Conclusion.....	226

Chapter 12 Creativity and the Monitoring and Controlling

Process	231
Introduction	231
Benefits.....	231
Consequences of Failure.....	231
Deliverables	232
Ideal State.....	233
Context.....	233
Challenges and Constraints	234
Creative Abilities	236
Groundwork for Creative Environment.....	236
Groundwork for Individual Creativity.....	238
Groundwork for Team Creativity	239
Relevant Tools and Techniques	240
Traditional Creativity Life Cycle Model.....	240
Preparation Phase.....	241
Concentration Phase	242
Incubation Phase	242
Illumination Phase	242
Verification and Production Phase	243
Conclusion.....	243

Chapter 13 Creativity and the Closing Process..... 247

Introduction	247
Benefits.....	247
Consequences of Failure.....	247
Deliverables	248
Ideal State.....	249
Context.....	249
Challenges and Constraints	250
Creative Abilities	250
Groundwork for Creative Environment.....	252
Groundwork for Individual Creativity.....	253
Groundwork for Team Creativity	254

Relevant Tools and Techniques	254
Traditional Creativity Life Cycle Model.....	255
Preparation Phase.....	255
Concentration Phase	256
Incubation Phase	257
Illumination Phase	257
Verification and Production Phase	257
Conclusion.....	258
Chapter 14 A Baker's Dozen of Takeaways	261
Takeaway Number 1.....	261
Takeaway Number 2.....	262
Takeaway Number 3.....	262
Takeaway Number 4.....	263
Takeaway Number 5.....	263
Takeaway Number 6.....	264
Takeaway Number 7.....	265
Takeaway Number 8.....	265
Takeaway Number 9.....	266
Takeaway Number 10.....	266
Takeaway Number 11.....	267
Takeaway Number 12.....	268
Takeaway Number 13.....	269
Conclusion.....	269
Endnotes	270
Glossary.....	273
References.....	283
Index.....	291

List of Figures

Figure 1.1	Product/project management life-cycles relationship.....	17
Figure 1.2	Project management processes/creativity phases relationship.....	18
Figure 7.1	Two-stage creativity process.	160
Figure 7.2	Creative problem-solving diagram.	161
Figure 7.3	Traditional creative life cycle.	164
Figure 8.1	Defining process and deliverables.....	168
Figure 9.1	Organizing process and deliverables.	182
Figure 10.1	Planning process and deliverables.	194
Figure 11.1	Executing process and deliverables.....	212
Figure 12.1	Monitoring and controlling process and deliverables.	232
Figure 13.1	Closing process and deliverables.....	248

List of Tables

Table 8.1	Defining Process Challenges and Constraints.....	170
Table 8.2	Defining Process and Creative Abilities	172
Table 8.3	Defining Process and Groundwork for Creative Environment.....	173
Table 8.4	Defining Process and Groundwork for Individual Creativity.....	173
Table 8.5	Defining Process and Groundwork for Team Creativity	174
Table 8.6	Defining Process and Tools and Techniques.....	175
Table 9.1	Organizing Process and Challenges and Constraints.....	184
Table 9.2	Organizing Process and Creative Abilities	185
Table 9.3	Organizing Process and Groundwork for Creative Environment	186
Table 9.4	Organizing Process and Groundwork for Individual Creativity	187
Table 9.5	Organizing Process and Groundwork for Team Creativity....	188
Table 9.6	Organizing Process and Tools and Techniques	189
Table 10.1	Planning Process and Challenges and Constraints.....	197
Table 10.2	Planning Process and Creative Abilities.....	199
Table 10.3	Planning Process and Groundwork for Creative Environment.....	200
Table 10.4	Planning Process and Groundwork for Individual Creativity	202
Table 10.5	Planning Process and Groundwork for Team Creativity.....	203
Table 10.6	Planning Process and Tools and Techniques	204
Table 11.1	Executing Process and Challenges and Constraints	215
Table 11.2	Executing Process and Creative Abilities	218

Table 11.3	Executing Process and Groundwork for a Creative Environment.....	220
Table 11.4	Executing Process and Groundwork for Individual Creativity.....	221
Table 11.5	Executing Process and Groundwork for Team Creativity.....	223
Table 11.6	Executing Process and Tools and Techniques.....	224
Table 12.1	Monitoring and Controlling Process and Challenges and Constraints.....	235
Table 12.2	Monitoring and Controlling Process and Creative Abilities.....	237
Table 12.3	Monitoring and Controlling Process and Groundwork for Creative Environment.....	238
Table 12.4	Monitoring and Controlling Process and Groundwork for Individual Creativity.....	239
Table 12.5	Monitoring and Controlling Process and Groundwork for Team Creativity.....	240
Table 12.6	Monitoring and Controlling Process and Tools and Techniques.....	241
Table 13.1	Closing Process and Challenges and Constraints.....	251
Table 13.2	Closing Process and Creative Abilities.....	252
Table 13.3	Closing Process and Groundwork for Creative Environment.....	253
Table 13.4	Closing Process and Groundwork for Individual Creativity.....	254
Table 13.5	Closing Process and Groundwork for Team Creativity.....	255
Table 13.6	Closing Process and Tools and Techniques.....	256

Preface

Creativity is a word that means so many things to so many different people. Yet, like most abstract concepts, everyone has an intuitive sense of what it is but has difficulty explaining it in concrete terms. Many people and organizations seek to grasp it, knowing all too well that, once in possession, it can turn mediocre performance to levels of greatness not foreseen by any individual or organization.

While this book also covers creativity for individuals, the primary purpose is to enable and harness the creativity of project teams to achieve even greater than expected levels of performance.

In my thirty-plus years in the corporate environment, I have had the pleasure of witnessing and managing teams that had creativity lie dormant and, when the circumstances became right, let the creative juices flow. These juices, if not managed and led satisfactorily, can either destroy or enhance a person's and an organization's performance.

Project managers need to identify ways to capitalize on the creative talents of their people and manage them in a way that not only achieves the vision of a project but does so in a way that exceeds expectations. By exceeding expectations, I am not advocating gold plating, which is giving customers more than what they want. Rather, I mean enticing stakeholders, especially the project team, to perform in a manner that far exceeds the expectations of everyone by creating and improving processes and products, as well as services, which result in innovation.

If you think creativity does not matter, just look at the differences between those companies that place little value on it and those that do. Companies that fail to embrace the importance of creativity often discover themselves lacking the ability to adapt and thrive in a dynamic, changing economy. While their products or services may have reigned supreme for a moment in time, their success is often eclipsed by their overconfidence and arrogance. They get complacent and their output of products or services becomes routine and protective. They are too reluctant to change their processes or products. Firms can arise out of nowhere, taking down a behemoth in an industry through the application of creativity, and become the new market leaders.

I remember watching a television interview with Bill Gates, the founder of Microsoft. He said something to the effect that one of his

biggest fears is that someone in a garage could develop software that could essentially jeopardize his company. That's just how powerful creativity is.

Contrary to popular belief, creativity is not reserved for madmen or people of dysfunctional behavior. Everyone on a project team has it, and every team uses it to some degree or another. Unfortunately, creativity is like energy. It resides in everyone, but for the most part remains untapped. In this book, I want to provide project managers with thoughts, tools, and techniques that will enable them to tap creative energy and direct it to achieving the goals and objectives of projects.

I also want to thank Ameeta Chainani for taking time to review the manuscript and providing insights for improving it.

Ralph Kliem

President, LeanPM, LLC

<http://www.theleanpm.com>

Ralph@theleanpm.com

About the Author

Ralph L. Kliem, PMP, has more than twenty-five years of experience with Fortune 500 firms in the financial and aerospace industries. His vast and varied experience in project and program management includes managing compliance, business continuity, and information technology projects and programs.

In addition to being the author of more than 15 books, which have been translated into several languages, he has published more than 200 articles in leading business and information systems publications.

Kliem is an adjunct faculty member of City University in Seattle and a former member of the Seattle Pacific University faculty, an instructor with Bellevue College and Cascadia Community College, and a frequent presenter to the Puget Sound chapter of the Project Management Institute and other professional organizations. He also teaches Project Management Professional (PMP) certification and other project management seminars and workshops in the United States and abroad.