

STAGE-GATE MODEL IN ACTION: REGULATING CREATIVITY AND BUSINESS IMPERATIVES IN CREATIVE INDUSTRIES

Ricky, Yuk-kwan NG (1), Sherman, Sheung-man YEUNG (2)

1: Vocational Training Council, Hong Kong; 2: Independent Researcher

ABSTRACT

Inspiration and intuition seem to be the two essential components for designers to generate creativity. It is not surprising that designers think differently and very often possess with distinctive concepts of idea generation and time management. Managers and producers regard creative people difficult to work with, in particularly when it comes to the relationships between creativity, budgeting, timing and producing. It is quite obvious that people engaged in creative industries have unique traits which require specific management approaches to accommodate their work styles in order to unleash their creative potentials. In view of the above, this study introduces the 'stage-gate model' and examines to what extent it will enable better release of creativity while achieving more effective management of creative projects in creative industries. Case studies of various disciplines in Hong Kong's creative industries were conducted. Views on specific management of creativity and the significance of using 'stage-gate model' as management strategy were discussed. Implications of this research suggested that stage-gate model to a large extent is suitable for creative industries.

Keywords: stage-gate model, expert judgment

Contact:

Ricky, Yuk-kwan Ng
Vocational Training Council, Hong Kong
Centre for Learning and Teaching
N.T., Hong Kong
Saikung
Hong Kong S.A.R. (China)
rickyng@vtc.edu.hk

1 AN INTRODUCTION: DRIVING ON THE FREEWAY

Imagine driving on the freeway inside a super car, you attract gazes of the other drivers you pass by and they may be amazed, envied or even irritated by your top gear and would think “how brilliant, isn’t that nice if I were the one who is driving that fast car on a fast lane”. A second look to what happens inside the car reveals that while the super car driver is zooming at a fast speed, he/she in one hand is trying to get the most pleasure out of the super horsepower ride while on the other, abide by the protocols of the freeway simultaneously keep an eye on the speedometer and the other users of the road and traffic conditions, to name just a few. A strong hit on the gas brings more pleasure and satisfaction but at the same time, it may violate the law and jeopardize the other road users. The drive on the freeway is full of pleasure but the driver has to considerate the others, not mere pleasure build on the pains of the others. Framing this scenario into Freud’s concepts of “Instinctual Desire (ID) and “Ego”, the driver is regulated by his/her internal psychic regulating apparatus, the “Super-ego”. In the same sense, creative people at work may take advantage of stretching their time to the fullest to generate idea, waiting for the particular spark from inspiration and intuition. Using this ‘*déjà vu*’ as a metaphor of the design profession, it is common to hear outsiders regard creative people think, work and manage their time differently. Very often, creative people are being seen as heretics, wild horses or egoists; management rules for normal business seem not applied to the profession of creative industries. The myth that creativity is associated with “irrationality or divine madness” and, creative people are “opposed to the rules and boundaries of common sense and reason” (Bilton, 2007, p. xiv) are still the notorious images of designers to most of the outsiders. There is a myth that creative people could not be managed because of their distinctive concepts of work and time. It is not new to hear creative people argue that excessive controls will hinder their creativity. Interestingly, Amabile’s study finds that creative people are less likely to explore new solutions if external control is high, this would reduce creativity and thus productivity in result (Amabile, 1988). On the other hand, it is also argued that creative people are thinking on both sides of their brains, they would have the ability to think irrationally and rationally, to think cross boundaries and to merge different thinking styles. Following this vein, therefore, this paper argues that by applying the concept of super-ego to management strategy, it would be able to manage creative people by regulating the creative and business imperatives and at the same time encourages their idea generation. The empirical study looks into the influences of creative and business imperatives on creativity and examines whether the stage-gate model is applicable to the creative industries.

2 FACING THE UNCERTAINTY

Uncertainty is the major psychological barrier for creative people. Creative people are people who take high risks, the creative process is introverted and solitary, and solutions are unpredictable. Idea generation is a process to unveil the unknown. Csikszentmihalyi and Getzels asserts that “the unknown is a place of ambiguity, complexity, and sometimes, utter darkness. It takes guts to go there; it means losing our foothold for periods of time; it makes us vulnerable, and many of us find it too uncomfortable to bear. Making quick decisions can be the road back into safety, but that is unlikely to lead to new discoveries. In order to reach a higher level of consciousness and possible crystallization, we must endure the complexity and ambiguity for as long as it takes” (Csikszentmihalyi and Getzels, 1976 in Friis, 2012, p.4). Amabile also expresses her view that creativity is characterised by consistent discovery of new cognitive pathways to solve problems (Amabile, 1988). Idea generation takes time, and time is the creative people’s biggest enemy. There is a tendency for creative people to continue trying out different solutions and eats up the time and resources of the project. It is obvious that how much time is allowed for accomplishing the project is not the decision of creative individual or creative team; instead it is given by the client or top management. Similar to the writer’s blockage, designers tend to have designer’s blockage resulted from their personal characters as the perfectionist (one seek for perfect solutions and leads to heavy block in the work process), the pleaser (influenced by what others like and value, and afraid of no appreciation of the work and thus hinders the free expression) and the pusher (who rushes to get thing done without coming up with creative solutions) (Friis, 2012). Studies suggest that creativity can be encouraged by providing appropriate working environment and conditions to creative people. In addition, providing freedom to allow for specific working style and personality is also crucial (Amabile, 1998, Forbes & Domm, 2004, Fisher & Amabile, 2009). Nevertheless, it is noticed that this freedom is with limits, it is “a sense of control

over one's own work and own ideas: a freedom from having to meet someone else's constraints" (Forbes & Domm, 2004, p.4). Apparently, influences of time and self pressure tend to reduce freedom of creativity. Because of the heavy involvement of human capital, creative work is volatile, dynamic and risk-taking in nature (Bilton, 2006; Jeffcut, 2009). Hence, working with creative people resemble the experience of walking on thin ice, every little step means uncertainty.

3 A RISKY BUSINESS

Creative industries are businesses draw on knowledge from art and design, consumer psychological, management and marketing strategies. Creativity allows creative people (designers, artists, film makers, musicians etc.) to express their self talent or vision, as the business of creative industries is about communicating ideas, images and experiences to the audience. Creative product has to be novel or difference; it has to fulfil the purposes of meaningful, relevant and effective and to satisfy the consumers' demand for amusement, ornamentation, self-affirmation and social display (Jeffcut, 2009). Cropley & Cropley contend that "in the case of functional creativity there can be no discussion of creativity without first dealing with the issue of effectiveness (Cropley & Cropley, 2005, p. 173). Novelty and effectiveness are the prime criteria in creativity industries to serve for the business purpose. Dahlén also argues that creativity has to fulfill a few criteria in the business discipline, which makes it measurable and manageable. First, creativity has to be novel and meaningful (Dahlén, 2008). Novelty refers to the new and surprise element; it must contribute to the field that was not existed before. Secondly, success in business is always the ultimate goal, so it is rational to look at creativity results to define creativity in creative industry. It has come to sense that this novelty element does not make any absurd ideas qualified as creative, as it also has to serve a purpose and be meaningful in the second criteria. Dahlén further finds that creativity product novelty and marketing novelty significantly affect customer satisfaction, they draw attentions and increase sells (Dahlén, 2008). In the creative industries, the most significant capital is creativity that generates from human. However, unlike business management, creativity as an input in creative industries offers no guarantee on the outputs. The process of idea generation seems like a leap into the void. There are a lot of uncertainties and recursions and these can slow down the project and increase cost (Bruce, 2009). The risk level of creative industry is high because the major input: creativity is largely hinges on subjective interpretation of the target audience. The correlation between inputs and outputs in creative industry is weak because creativity largely depends on the creativity of creative people as well as subjective interpretations of the target audience. It is not surprisingly for many investors, creative industry is synonymous with risky business.

4 THE STAGE-GATE MODEL IN ACTION

There are myths that cast doubt on the management of creative people because creativity is an individual talent like intelligence, creative people is individual who takes high risks, the creative process is introverted and solitary, and creativity could not be managed. Managing creative people requires the soft side of management, that is, the management of creative performance through individual and organisational approaches. The stage-gate model may encourage creativity among people while balancing the creative and business imperatives. The stage-gate model resemblances Freud's psychological apparatus 'Super-ego' that regulates the psychological 'Instinctual Desire' (ID) and 'Ego' and when applying this concept to managing creative people, stage-gate model plays the role of super-ego to regulate the creativities and business imperatives. Stage-gate model (Cooper, 2001) is a widely adopted risk management method in the new product development industry to manage, direct and accelerate their innovative efforts, it provides a systematic approach to visualize, develop and launch product development projects by the application of processing management and quality management. By making go/kill decisions, the stage-gate process is an uncertainty-reduction process in an incremental manner, every stage requires more resources than the previous ones, and each gate reduces uncertainty by evaluations and decisions (Sloane, 2007, Cooper, 2001). Stage-Gate model (see figure 1) breaks the innovation process into a number of distinct stages, each stage consists a set of discrete, identifiable, cross-functional and parallel activities. A gate is found before entry to each stage. These gates are served as checkpoints for go/kill decisions to control quality of the whole production process.

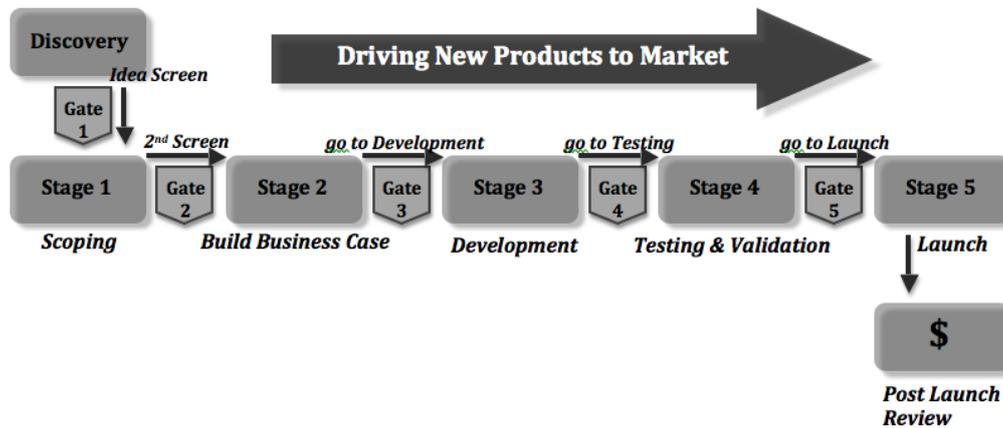


Figure 1. Stage-Gate Model (Cooper, 2001)

4.1 The stages and gates

The Stage-gate model divides the new product project into distinct, cross-functional stages. In each stage (*Discovery, Scoping, Building Business Case, Development, Testing and Validation and Launch*) information is gathered to go through the next decision making gate. Gates is an entry point to a new stage, it provides a checkpoint for go/kill and prioritisation decisions, they serve as quality control monitors in the project. In each gate, ideas are screen with reference to the criteria such as business strategy, feasibility, opportunities, financial returns and market attractiveness set up by the management. If an idea failed to fulfill any criteria, the management may kill it or go back to the previous stage for moderation. Presumably, stage-gate process may allow the creative project teams to visualize the idea before development and market launch as well as to create a concrete description and goals to ensure deliverables.

5 THE EMPIRICAL WORK

This study was carried out in three chosen industries among Hong Kong's creative industries and they are: 1) advertising, 2) film and television and 3) publishing industries. The reasons for choosing these three industries are firstly, these industries are businesses based on creativity, the key assets are employees and the core deliverables are creative thinking. Secondly, the four stages in project lifecycle, 1) initiation, 2) planning, 3) execution and 4) closing are visible in the operations of these industries. Although there are slight operation variations between the industries, they are most appropriate disciplines amongst Hong Kong's creative industries.

6 OVERALL RESEARCH DESIGN

This empirical study adopts the "expert judgment" techniques by Dempster (Yager and Liu, 2008) as an evaluation method; the nature is qualitative using a combination of interviews and case studies. Data was collected from experts from advertising, film and television and publishing industry by face to face interviews with a structured questionnaire. The characteristic of stage-gate model was explained to the experts and they were asked to draw out their production process, and then similarities and differences are identified by comparing it to stage-gate model. For analysis, data collected from the interviews were transcribed from the voice recordings. They were sorted and arranged according to the interview questions to obtain a general reflection of the information and the meanings. The data was then categorised for comparisons to generate theme. Each participated expert was selected as an individual case study because of the distinctiveness of the industry. A total of six interviews were conducted, two experts were chosen from each industry and they were selected by the use of a number of pre-determined criteria as suggested by Dempster, these included: 1) a minimum of seven years of direct work experience in the respective creative industries, 2) experience at a senior level of business management on top of the content creation or manufacturing input

segment in the production process, 3) experience in working as a member in the creative project teams, and working alongside with other specialised creative workers and 4) experience in managing the whole production process and the management of creativity throughout the production process.

Advertising

Expert A works for an international advertising firm stationed in Hong Kong and Beijing. Her firm is specialised in brand building, consulting, and consumer research. She possesses industry experience for ten years and has experience in managing design projects. Expert B has over 20 years experience in the advertising industry and he is the founder and the principal of a renowned design school in Hong Kong. He is an executive committee member of Hong Kong Designers Association. He has won several awards in local and overseas competitions and has been a judge of design competitions in Hong Kong.

Film and television

Expert C possesses over 35 years in the film and television industry, she has massive experience in both television and film production. She has engaged in a variety of roles in television and film production as an actress, script-writing and director. By 2010, she has produced 25 films and awarded the Best Director in a number of well-known Asian Film Awards. Expert D is working as a producer in a Hong Kong based television broadcaster. He has 7 year of experience in producing a broad mix of programmes, ranging from political and economic news and current affairs, the target audience are from mainland China, Taiwan and Hong Kong.

Publishing

Expert E has over 20 years of industry experience. He is currently the Art Director of a flagship magazine which has second highest number of readership in Hong Kong. He has experience in managing the whole production process from content creation, design and printing and publishing. Expert F has engaged in publishing industry for 11 years, he is the Director of Media Content Production in a well-established magazine. He has engaged in different roles such as designer and programmer, which provides him in-depth knowledge of magazine and comics publishing.

7 FINDINGS AND DISCUSSION

7.1 Keys influences to creativity: time, budget, client and management approaches

Findings indicate that time and budget could hinder creativity and quality is being compromised in time/cost prioritised projects. In general, experts agreed on compromising the trade-off between time, budget and quality. They suggested that it is hard to accommodate creativity and quality under tight schedule and cost, for example, expert D suggests that in some projects, budget plans are predetermined and inflexible, production team cannot ask for more money if they go over that cost limit, the only thing they could do is to look for areas to cut expenses, and thus could not meet the initial quality standard. Expert E also claimed that there were situations that they have to sacrifice the big ideas so as to stay within cost limit. Interestingly and conversely, expert C expressed her view that in certain situation, budget may not be an obvious obstacle to creativity, she did not consciously prioritise budget in creative projects. Her viewpoints could be explained by two reasons: her industry reputation allows her a large degree of autonomy and the nature of financial support in film industry. Production house normally invested in a film project after concept evaluation and it is under the director and the producer's control on how to complete the project within the budget. Responses from the experts also revealed that clients and senior management have significant influences to creativity. Clients adopting a conservative manner could undermine creativity by setting tight budget or time requirement. Clients are seen as an obstacle to creativity, either from their time priority or conservative attitudes to creativity, while senior management could enhance creativity. Responses further highlighted the importance of management approaches to provide an environment to nurture creativity. Senior management could enhance creativity by motivating creative people to take manageable risks during idea generations. Expert D pointed out that the more creativity background the senior management processes, they are more willing to take risk, to create rooms for creativity and to implement the creative ideas.

7.2 Time pressure and creativity

Experts have diverging viewpoints on whether a positive correlation exists between time and creativity. Expert A believed that limited time will exert frustration and depression on creative workers, making them unwilling to work for that project. Her view supported the idea that self-regulation is vital to creative thinking, while working under extreme time pressure, people may lose interest in the task. Expert B asserted that there is a direct relationship between time and creativity, but he also suggested that even under extreme time pressure, good quality of work is still possible if clear directions are given. Expert C also claimed that time is not threatening when the schedule is well planned. Although there are implicit relationship between time pressure and creativity, good scheduling could be used as a tool to reduce time pressure. Expert C suggested using time buffers to leave room for creativity because she likes improvisational creativity instead of compositional creativity during her creative process. She admitted that most of the time her idea is generated in a flash or imagination, without systematically structured procedures. Expert D and expert F's comments on the unpredictable nature of creativity also support the idea of improvisational creativity. Citing his own experience, Expert E laid stress on the relationship between time and self-motivation, task importance and creativity and found that when the task is important and challenging, creative ideas could also be generated even on a tight schedule. The above findings further suggest that if creative project is regulated effectively by a process model, time pressure may not always lead to the lack of creativity.

7.3 Patterns of stages and gates

Obvious patterns of stages and gates were found in all production processes as described by the experts. In general, all production processes start with a concept formation stage, either it is from clients, self-researched or generated from senior management. Although the production processes differ from each other within the creative industries, they resemble the process of the stage-gate model. Further mapping the Stage-gate model with the experts' illustration of existing production process revealed that 1) although stages and gates were found in the production process, stage is not always followed by a gate, for example, expert A mentioned that gate functioned when the possibility of failure was detected by her team and that resulted in the rejection of the client's request. This internal approval gate was not applicable to expert B's company because of the company's ability to serve selective clients. 2) Content of each stage and gate differed across industries because stage-gate is generic and allowed modification to fit in different industries. Expert C said sometimes investors may interrupt the sequences of stages by providing their own concepts, and thus the concept generation stage would be passed or merged into the preproduction stage. 3). Gates to assess technical capabilities and market responses were found. Activities aimed to ensure sufficient resources and technologies within the companies to support implementation of the concepts were identified. During the interview, expert F suggested conducting technical assessment right after the scoping stage in order to work out realistic estimation of the project goals. Market assessment activities to engage customers' perception were also found along the production process, for instance, in film production, there was preliminary market research to test local acceptance as early in the concept research stage followed by screening sessions to determine the best marketing approaches before launching. 4) Monitoring and tracking were used as gates to evaluate performance and modification after product was delivered. Expert F revealed that there was consistent monitoring of the online magazine's performance to manage benefits. The targets set out during market and financial assessments were compared to the actual market response and financial returns. This resembles to the "fuzzy gates" feature in stage-gate model, which allows a project to have accelerated development in a constant state of gradual evolution (Jones, 2002). The overall findings suggest alternative forms of stage-gate model are actually in practices, without explicitly aware by the experts. The findings also showed that the production process of creative industries is similar to the process of the stage-gate model. Comparison of the existing production process and the stage-gate model suggests that their functions and practices are similar and it is feasible to apply the stage-gate model to regulate the creativities and business imperatives in creative industry.

8 IMPLICATIONS, LIMITATIONS AND CONCLUSION

There are a few Implications and suggestions for the creative industry practitioners in planning, managing and controlling creative projects. Firstly, time buffers should be included to reduce time

pressure on creative individual and allow room to perform creativity. Secondly, adopts stage-gate model for early recognition of failures in each gate. It also allows time and resources for recovery actions to ensure the quality of creative projects. By identifying the variables that influence creativity, managers could adopt appropriate management approaches to promote an encouraging environment to enable a flexible and risk-taking manner for creative peoples. Last but not least, the stage-gate model should able to regulate the creativity and business imperatives in creative industries. The limitations of this study rest in the generalisability and reliability of the findings. For future research, a large sample size of expert should be taken. Moreover, because of creative industries' subjective and distinctive nature, the creative experts' views may not applicable to other specialties in the creative industry. To conclude, this study reveals the essential variables that influence creative and business imperatives and recommends the possible applications of the stage-gate model to the creative industries.

ACKNOWLEDGMENTS

The authors would like to express their sincere acknowledgement to the industry experts who have participated in this study for their generous sharing of views and insights. The authors are indebted to their work colleagues and family members for the attentive support, assurance and encouragement given during this study.

REFERENCES

- Amabile, T.M. (1988) "A Model of Creativity and Innovation in Organisations, in B.M. Staw and L. L. Cummings (Eds.) *Research in Organisational Behavior*, vol. 10, JAI Press.
- Amabile, T.M. (1998) "How to Kill Creativity," *Harvard Business Review*, pp. 77–87.
- Amabile T.M., Hadley C.N., and Kramer S.J. (2002) "Creativity Under the Gun," *Harvard Business Review*, p. 57.
- Bruce, Margaret. (2009) "Unleashing the Creative Potential of Design in Business", *The Routledge Companion to Creativity*, pp.37-45
- Cropley, D. & Cropley, A. (2005) "Engineering Creativity: A Systems Concept of Functional Creativity", In Kaufman, J.C. & Baer, J. *Creativity Across Domains: Faces of the Muse*, Lawrence Erlbaum Associates, Inc., Publishers, New Jersey, pp.169-187.
- Cooper, R.G. (2001) *Winning at New Products: Accelerating the Process from Idea to Launch*. Perseus Publishing.
- Dahlén, Micael. (2008) *Creativity Unlimited: Thinking Inside the Box for Business Innovation*. John Wiley & Sons, UK.
- Fisher, C. & Amabile, T. (2009) "Creativity, Improvisation and Organisations". *The Routledge Companion to Creativity*, pp. 13-24.
- Freud, Sigmund. (1984) *On Metapsychology: The Theory of Psychoanalysis: Beyond the Pleasure Principle. The 'Ego and the Id' and Other Works*. Pelican.
- Friis, Silje Alberthe Kamille. (2012) *Developing Creative Competencies*. Design Education. DesignEd Asia Conference 2012, Hong Kong, 4-6 December, 2012.
- Forbes, JB, & Domm, DR. (2004) Creativity and Productivity: Resolving the Conflict. *SAM, Advanced Management Journal*, 69, pp.4 -13.
- Jeffcut, Paul. (2004) "Knowledge Relationships and Transactions in a Cultural Economy: Analyzing the Creative Industries Ecosystem". *Media International*, Australia pp.112:67-82.
- Jeffcut, Paul. (2009) "Creativity and Knowledge Relationships in the Creative Industries", in Rickards, T., Runco, M.A. & Moger, S. *The Routledge Companion to Creativity*, Routledge, New York, pp.88-98.
- Jones, Tim. (2002) *Innovating at the Edge: How Organisations Evolve and Embed Innovation Capability*, Butterworth-Heinemann.
- Sloane, Paul. (2007) *The Innovative Leader: How to Inspire Your Team and Drive Creativity*. Kogan Page.
- Yager, Ronald R. and Liu, Liping. (2008) *Works of the Dempster-Shafer Theory of Belief Functions*, Springer.