

Workshop-based Policy Platform for Public-Private Partnership (WP5): Designing Co-Creative Policy-Making Platform for Regional Development of Nagano

Toshiyuki Yasui^{*1}, Takashi Maeno¹, Seiko Shirasaka¹, Yoshikazu Tomita¹ and Kanenori Ishibashi¹

¹ Graduate School of System Design and Management, Keio University,
Collaboration Complex, 4-1-1 Hiyoshi, Kohoku-ku, Yokohama City, Kanagawa Prefecture, 223-8526, Japan
Tel: +81 45 5642461, Fax: +81 45 5642541, E-mail*: t.yasui@z2.keio.jp

Abstract

Most of local governments are now facing citizens' disillusion to government services. This illusion is mainly coming from their unmatched desires for co-creative policy-making process. Corresponding to the recent paradigm shift of service design from the value exchange model to the value co-creation model, local governments are pressed to develop co-designing policy platform with private and non-profit stakeholders for co-producing better government services. This paper is to propose the model of Workshop-based Policy Platform for Public-Private Partnership (WP5 Model), a co-creative policy-making platform for regional development based upon both system thinking and design thinking. The authors qualitatively and quantitatively validated efficacy of the WP5 Model with two cases of *Nagano* local government workshops in October 2013 and in March 2014, respectively.

Keywords:

Government Service, Regional Development, Co-creation, System x Design Thinking, Workshop

1 INTRODUCTION: TOWARD CO-CREATIVE POLICY

1.1 Problem

In many industrialized country, governments face frustrated and disillusioned taxpayers because of poor quality of government services delivered to taxpayers [1][2]. Major source of frustration and disillusion is coming from the lack of participation in policy-making process in governments [3].

Addressing to taxpayers' quest of participation in policy-making process, there has recently emerged several concepts on how government provide services in participatory way. Some concepts drew attentions of the academic circle and government officials such as; the participatory budgeting [4], new public governance [5], and open government [6][7]. However, taxpayers' quest of participation never ceased particularly in policy-making site of local governments since the previous concepts contain little elements of co-creative design of policy with government officials and other local stakeholders [8].

1.2 Purpose and Perspective

This paper is to build a co-creative and co-designing model for collective policy-making at local government level with multi-stakeholders in regions, and to validate qualitatively and quantitatively efficacy of the model to create innovative regional development policy with diversified stakeholders. The Workshop-based Policy Platform for Public Partnership Model (WP5 Model), proposed in this paper, is expected to contribute to enhance better government service provisions for local area.

The WP5 Model reflects the recent paradigm shift of service theory. The serviceology is observing that major qualified services are now shifting from the model of value exchange to the model of value co-creation [9][10].

Paralleling to this paradigm shift of service design, the model of government service is also shifting from the new public management (NPM) [11], the exchanging value-based model to more co-creating network-based model [12][13]. The WP5 Model is proposed as a concrete policy-design tool to materialize this paradigm

shift of government service design to the era of co-creation.

The WP5 Model is relevant to be applied for policy-design when a local government plans to create innovative regional development policy with local stakeholders from private and non-profit sectors, because the face-to-face workshop is embedded in the model for architecting 'ba', namely an organic grounds for better knowledge creation [14] in order to accommodate diversified policy ideas into a innovative policy solution.

2 CONCEPTUAL BACKGROUND: SYSTEM X DESIGN THINKING

2.1 System x Design Thinking

The WP5 Model is conceptually rooted upon the system x design thinking, a hybrid methodology to formulate an innovative solution for social and business problem [15]. The system x design thinking emerged from project-based learning experiences in the Graduate School of System Design and Management of Keio University from 2008 to 2013 [16][17].

The system x design thinking inherited two major methodologies for solving a real-world problem by socially implementing a better solution; system thinking [18][19] and design thinking [20][21].

2.2 Innovation Cycles of System x Design Thinking

The system x design thinking has cycled sequence for reaching to innovative solution. A team of stakeholders iterates to trail like a loop three dimensions until breakthrough; observation, ideation and prototyping after they start to co-design until they will gain breakthrough innovation (see Fig.1).

Observation stage is for identifying and sharing a problem to which stakeholders want to address collectively. Ideation stage is for systematic ideation of solutions and their systemic visualization. Prototyping is for empathy and reflection of the early-stage solutions, as well as their verification and validation.

The system x design thinking frequently utilizes the workshop as human-centred platform to stimulate collectively creativity for innovative design. Workshop represents a standard way as group-setting to enhance high-performance work by teams in the field of management study [22]. And work by teams in itself is known to have remarkable impact to increase intellectual performance by inspiring collective intelligence [23]. Thus the system x design thinking embeds a workshop to let team participants pop up collective intelligence.

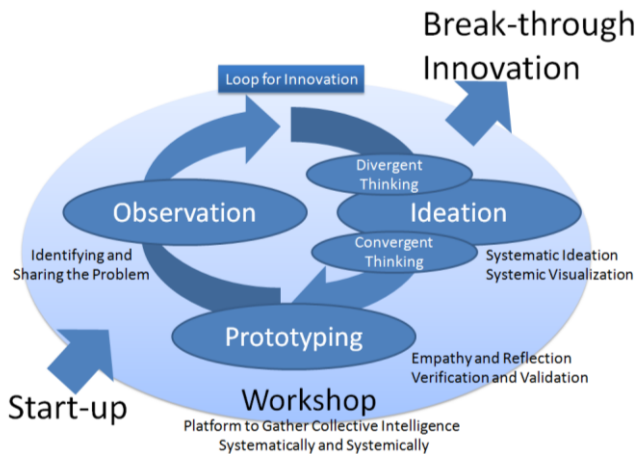


Fig.1 Cycled Sequence of the System x Design Thinking

3 ARCHITECTURE: WP5 MODEL

3.1 Five Phases of WP5 Model

The WP5 model is an application for policy-dialogue tool relied on the system x design thinking. It has five phases to co-create an innovative policy of regional development; start-up, policy observation, policy ideation, policy prototyping, and innovative policy formulation (see Fig.2). The whole phases are implemented in most cases through a workshop designed for creating certain regional policy agenda.

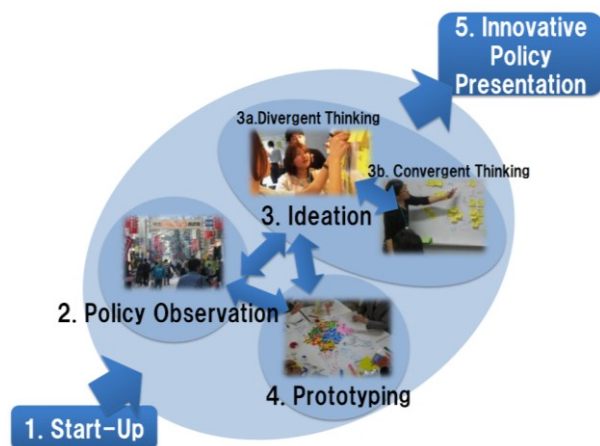


Fig.2 Five Phases of MP5 Model

3.1.1 Start-up

Local government officials working for scattered sectors, regional organizers, NPO officials, corporate workers and retired citizens gather at one place for teaming-up.

They have a single purpose to be there for formulating collectively an innovative regional policy. Participants typically organize themselves into groups of 5-6 persons.

3.1.2 Policy Observation

A facilitator of WP5 Model invites groups of participants to go outdoors to implement fieldwork and interview with town residents.

By ethnography and research, participants as teams share problems and identifying gravity and width of the problems which they observed in their fieldwork and interview.

3.1.3 Policy Ideation

The teamed participants organize with facilitator an ideation meeting. This phase is composed of two sub-phases; divergent thinking phase to enlarge solution-space and to produce flexible policy ideas as many as possible; and convergent thinking phase to shift and structure into a solid and truly innovative idea.

3.1.4 Policy Prototyping

Based upon a structured policy idea, teams make rapidly a prototype of policy solution to visualize and share it with local residents. After teams get feedbacks of their policy prototypes, they decide whether they will return to the observation phase again or exit to the presentation phase.

3.1.5 Innovative Policy Presentation

When participants feel the right time to exit the iterative three phases of policy observation, policy ideation and policy prototyping, they come out of workshop and make an innovative policy presentation for decision-maker of that policy. Typical decision-makers include mayor, prefectural governor, Member of Parliament, city manager, and executive officer of local government.

3.2 Toolbox Approach

The iterative three phases of WP5 Model adopt the toolbox approach for tools to be used in those phases. There is no one-by-one fixed tool to specific phase, but rather participants in workshop can select their suitable tool among candidate tools in each phase like the system x design thinking workshop [15].

Table 1 shows the toolbox of representative tools which can be used in each phase of policy observation, policy-ideation (divergent phase and convergent phase respectively), and policy prototyping.

Table 1 Toolbox of WP5 Model

Phase	Representative Tools (For Example)
3.1.2 Policy Observation	Fieldwork, Ethnography, Interview, Intensive Research, Data-Mining
3.1.3 a Policy Ideation: Divergent Thinking	Brainstorming, Planned Cell, Brain Writing, Value Graph, Scenario Graph
3.1.3 b Policy Ideation: Convergent Thinking	Affinity Diagram, Structural Shift Ideation, Enabler Framework, Causal Relation Diagram, CVCA, WCA, Pugh Concept Selection
3.1.4 Policy Prototyping	Drawing, Painting, Playback Theatre, Improvised Story Play, Storytelling

Note: This table provides categorization of the most typical case that certain tool is used, but not necessarily means that that tool should only for designed phase in this table. Tools may overlap each other and shift their positions among phases when they are used in different phases from one indicated in this table.

4 SOCIAL EXPERIMENTS: NAGANO WORKSHOP

4.1 Case: WP5 Workshops in Nagano

The authors conducted as social experiments two WP5 Model workshops on October the 22nd, 2013 and on March 8th 2014 respectively in *Nagano* city, a prefectural capital of *Nagano* prefecture, to validate empirically efficacy of WP5 Model.

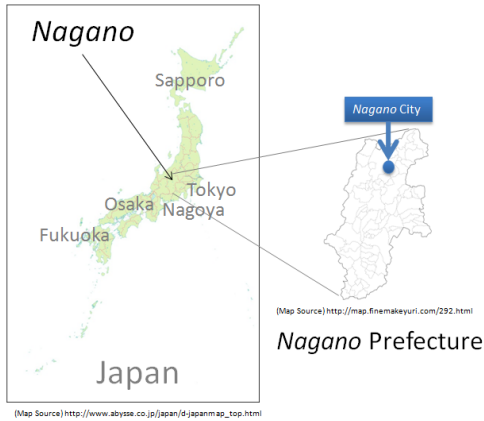


Fig.3 Geographic Location of *Nagano* City

The reason why the authors chose *Nagano* city as the field for social experiments of WP5 Model depended on three crucial conditions that that city is facing. *Nagano* city is thought as one of leading cities in Japan which are experiencing social problems which the entire country of Japan will face severely in the near future.

Firstly, the down-town shopping district of *Nagano* City is experiencing severe aging and fewer population trends. The population of that district at 2007 decreased to three-fourth of the population of 1980 [24]. On the contrary, senior population of that district is increasing beyond 25% of the total population.

Secondly, most of local governments in *Nagano* prefecture including *Nagano* city deteriorate fiscal conditions. For example, according to the Ministry of General Affairs of Japanese Government, *Nagano* City's fiscal strength index is 0.68 (FY2012)[25], which is relatively worse number as prefectural capitals. This number is indicating fiscal fragility of *Nagano* city.

Thirdly, while some social indicators are dauntingly severe, *Nagano* City is one of centres in Japan for innovation movement of government services. In *Nagano* prefecture several local governments such as *Obuse* Town and *Shimojo* village are promoting advanced model of regional re-vitalization. Public-private-non-profit collaboration is quite active in *Nagano* prefecture. For example, some junior level officials of *Nagano* prefectural government organized *Shinshu* Innovation Project (SHIP) to innovate government services of their government toward more co-creative way [26].

4.2 WP5 Workshops Participants

The topics of two WP5 workshops were the same; the better policy design for regional revitalization of *Nagano*. In the first workshop in October 2013, thirty-five participants joined in the session and they were randomly teamed up into six workshop sub-groups. In the second workshop, in March 2014, twenty-eight participants joined in the session and they were randomly teamed up into five workshop sub-groups.

Table 2 lists attributions of workshop participants both in October 2013 and in March 2014.

Table 2 Attributions of WP5 Model Workshop Participants in *Nagano*

Workshop #1 (October 22nd, 2013): N=35	
Gender	Male: 30, Female 5
Age	20s: 7, 30s: 26, 40s: 1, N/A: 1
Vocation	Corporate: 8, Government: 23, NPO and other: 1, N/A: 3
Workshop #2 (March 8th, 2014): N=28	
Gender	Male: 21, Female: 7
Age	20s: 6, 30s: 12, 40s: 4, 50s: 4, 60s: 2
Vocation	Corporate: 10, Self-Employed 2, Government: 13, NPO and other: 3

4.3 Tools Used in Two Workshops

Innovation dialogue tools used in two workshops from policy observation phase, to policy ideation phase, then to policy prototyping phase were selected abiding with the toolbox approach referred in 3.2.

Table 3 is the list of tools used in two workshops.

Table 3 Innovative dialogue tools used in two WP5 Model workshops in *Nagano*

Workshop #1 (October 22nd, 2013): N=35	
Phase	Used Tools
3.1.2 Policy Observation	Fieldwork
3.1.3 a Policy Ideation: Divergent Thinking	Brainstorming
3.1.3 b Policy Ideation Convergent Thinking	Affinity Diagram, Structural Shift Ideation
3.1.4 Policy Prototyping	Improvised Story Play
Workshop #2 (March 8th, 2014): N=28	
Phase	Used Tools
3.1.2 Policy Observation	Fieldwork
3.1.3 a Policy Ideation: Divergent Thinking	Brainstorming
3.1.3 b Policy Ideation Convergent Thinking	Affinity Diagram, Causal Relation Diagram and Leverage Point
3.1.4 Policy Prototyping	Drawing and Doll Play Theatre

Fig.4 and Fig.5 are the photos of two WP5 Model Workshops held in *Nagano* in October 2013 and in March 2014.



Fig.4 WP5 Model Workshop (October 22nd, 2013 at *Nagano* city) photo by the authors



Fig.5 WP5 Model Workshop (March 8th, 2014 at Nagano city) photo by the authors

5 EVALUATION: WORKSHOP RESULTS

5.1 Qualitative Evaluation

Eleven of eleven teams participated in two WP5 Model workshops trailed all five phases of the Model and successfully reached to the stage of innovative policy presentation for regional development of Nagano city.

This fact qualitatively proved efficacy of WP5 Model for co-creating regional development policy with government and non-government stakeholders.

5.2 Statistical Test

The authors implemented the satisfaction and creativity surveys immediately after two workshops. These surveys are to test quantitatively participants' post-workshop satisfaction and creativity-increase with five-degree scale (5=very good; 4=good; 3=neutral, 2=poor; 1=very poor).

This paper interprets the survey results to show efficacy of WP5 Model for co-creating policy for regional development, since better subjective satisfaction and creativity-increase should reflect real outcomes of policy design [27] according to the subjective approach of social policy theory [28].

As for creativity-increase evaluation, these surveys adopt four-point scales of creativity applied from the Torrance Test of Creative Thinking [29]; fluency; flexibility; originality; and elaboration.

Table 4 show statistical tests results of two WP5 Model workshops implemented in Nagano in October 2013 and in March 2014, respectively. Satisfaction rate, apprehensibility rate, and creativity-increase of two workshops are statistically significant in satisfying 1% significant level.

Table 4 Independent t-Test to the Median (M=3)

Workshop	Average	Standard Deviation	Significant Probability
#1: October 2013 (N=35)			
Satisfaction	4.49	.562	.000
Apprehensibility	4.29	.524	.000
Creativity Increase			
Fluency	4.14	.692	.000
Flexibility	4.20	.632	.000
Originality	3.74	.741	.000
Elaboration	3.66	.765	.000

#2: March 2014 (N=28)			
Satisfaction	4.79	.418	.000
Apprehensibility	4.36	.559	.000
Creativity Increase			
Fluency	4.39	.567	.000
Flexibility	4.07	.766	.000
Originality	3.68	.772	.000
Elaboration	3.57	.742	.000

This study also implemented t-test of averaged scores of the above surveys to verify whether particular attributions of workshop participants such as gender and vocation (i.e. government officials or non-officials) would show significant difference in satisfaction, apprehensibility and creativity-increase in using WP5 Model, the proposed co-creative policy-making tool.

In the October 2013 workshop, gender showed difference only in averaged fluency (male 4.28; female 3.50) and this difference was statistically significant at 1% level ($p=.010$, two-sided). Other than that any attributions resulted at no differences in satisfaction, apprehensibility and creativity-increase at statistically significant level.

In the March 2014 workshop, gender also made difference in averaged fluency (male 4.48; female 4.14), but this difference did not satisfy the 10% significant level with relatively narrow margin ($p=.183$, two-sided). In contrast, this workshop led the difference in averaged fluency between government officials and non-officials (government officials 4.21; non-officials 4.57). This difference satisfied the 10% significant level ($p=.096$, two-sided).

The above test results weakly implied that the WP5 Model may cause fluency gap to some gender and vocation (government officials and non-officials) with some degree in their co-creative policy-making works.

5.3 Correlation Analysis

The authors conducted Pearson's correlation analysis to see which factor of creativity is correlated in co-creating public policy for regional development in workshops.

Table 5 shows Pearson's correlation analysis for two workshop results. Fluency and originality are correlated at highly significant level (**) in the October 2013 workshop. In that workshop, fluency and flexibility, fluency and elaboration, and originality and elaboration are significantly correlated (*).

The March 2014 workshop showed somewhat different results from the previous workshop, except that fluency and flexibility are highly correlated. Fluency and flexibility as well as flexibility and elaboration had high significance (**), but none was similar to the previous workshop.

Two workshops thus validated that fluency and flexibility are two highly correlated factors to lead creativity in co-creative policy-making workshop for regional development of Nagano.

Table 5 Pearson's Correlation Coefficients

Workshop #1: October 2013 (N=35)				
Factor	Fluency	Flexibility	Originality	Elaboration
Fluency	1	.403*	.475**	.373*
Flexibility	.403*	1	.113	.207
Originality	.475**	.113	1	.411*
Elaboration	.373*	.207	.411*	1

Workshop #2: March 2014 (N=28)				
Factor	Fluency	Flexibility	Originality	Elaboration
Fluency	1	.530**	.045	.151
Flexibility	.530**	1	.228	.577**
Originality	.045	.228	1	.074
Elaboration	.151	.577**	.074	1

Note: **satisfied at 1% significant level (two-sided); *satisfied at 5% significant level (two-sided).

6 DISCUSSION, CONCLUSION AND FURTHER RESEARCH AGENDA

6.1 Discussion

Evaluation results qualitatively and quantitatively supported efficacy of WP5 Model. Satisfaction and apprehensibility of the Model was very high.

The authors observed creativity-increase of participants through workshops and it was statistically significant. Pearson' correlation analysis for two workshop results made it clear that fluency and flexibility were correlated to some extent. This result indicates that participants with WP5 Model could go beyond traditional way of thinking in policy design with fluent and flexible manner.

No particular differences among attributions of participants were observed on averages of satisfaction, apprehensibility and four-point scales of creativity-increase, except for gender (male/female: fluency in the October 2013 workshop) and vocation (government official/non-government: fluency in the March 2014 workshop) at weak significance level. This result implies that facilitators of WP5 Model may design carefully their workshop to help some participants' fluent thinking, especially that of female participants and government officials.

6.2 Conclusion

This paper proposed the WP5 Model for co-creative and co-designing platform of regional development policy. The MP5 model has the features as collaborative dialogue tools for policy innovation based upon the system x design thinking.

The MP5 Model is qualitatively and quantitatively validated its efficacy both in method and in outcome. This Model contributed significantly to help participants in extending spontaneous dialogue and in formulating innovative policy for regional development.

The MP5 Model was proved to stimulate participants' creativity-increase for policy formulation. Among creativity factors, fluency and flexibility were observed to have correlation to some extent in two workshops. No particular difference of creativity-increase was observed through workshops in-between attributions of participants (i.e. gender and vocation) except that only fluency made weak difference sometimes in workshops.

6.3 Further Research Agenda

This paper built the WP5 Model and explained its architecture and sequence. For empirical validation, it used as social experiments two policy formulation workshops in *Nagano*. The authors will apply the Model for more cases to show robustness of this Model.

At this stage, the WP5 Model is designed to be the policy dialogue tool for regional development and revitalization. For the next stage of study, the WP5 Model shall be tested for other domains of government services than regional policy.

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APPENDIX

Appendix 1: Post-Workshop Survey Sheet (on October 22nd, 2013)

(Original in Japanese, translated to English)

Answer: 5 degrees (5=very good; 4=good; 3=neutral, 2=poor; 1=very poor)

- Q1 (satisfaction): Were you satisfied with the workshop?
A: 5, 4, 3, 2, 1
- Q2 (apprehensibility): Did you understand the contents of workshop?
A: 5, 4, 3, 2, 1
- Q3 (Creativity-Increase): By compared with other ideation methods which you experienced in the past, how did you feel with this model particular in these points;
Q3-1 (Fluency): Was it easy to ideate?
A: 5, 4, 3, 2, 1
Q3-2 (Flexibility): Was it flexible to ideate?
A: 5, 4, 3, 2, 1
Q3-3 (Originality): Did you get original idea?
A: 5, 4, 3, 2, 1
Q3-4 (Elaboration): Did you elaborate to new idea?
A: 5, 4, 3, 2, 1
- Q4 (Stage of Innovation): On which stage did you sense shift to innovative idea?
Q4-1: A. Purpose B. Function C. Component
Q4-2: Please answer freely what shift to innovative idea you experienced in this workshop.
A. (Free Answer)

Appendix 2: Post-Workshop Survey Sheet (on March 8th, 2014)

(Original in Japanese, translated to English)

Answer: 5 degrees (5=very good; 4=good; 3=neutral, 2=poor; 1=very poor)

- Q1 (satisfaction): Were you satisfied with the workshop?
A: 5, 4, 3, 2, 1
- Q2 (apprehensibility): Did you understand the contents of workshop?
A: 5, 4, 3, 2, 1
- Q3 (Creativity-Increase): By compared with other ideation methods which you experienced in the past, how did you feel with this model particular in these points;
Q3-1 (Fluency): Was it easy to ideate?
A: 5, 4, 3, 2, 1
Q3-2 (Flexibility): Was it flexible to ideate?
A: 5, 4, 3, 2, 1
Q3-3 (Originality): Did you get original idea?
A: 5, 4, 3, 2, 1
Q3-4 (Elaboration): Did you elaborate to new idea?
A: 5, 4, 3, 2, 1
- Q4 (Stage of Innovation): On which stage did you sense shift to innovative idea?
Q4-1: A. Brainstorming B. Affinity Diagram C. Causal Relations Diagram and Leverage Points D. Prototyping and Story-Telling
Q4-2: Please answer freely what shift to innovative idea you experienced in this workshop.
A. (Free Answer)