Title	Proposal of business-ecosystem mainly created by "Location-based service" from user view enhance communication and contribute to realizing creative city : Proposal of business-ecosystem mainly created by "Location-based service" from user view-enhance com
Sub Title	クリエイティブシティを実現する位置情報サービスを中心としたビジネスエコシステムの提案
Author	東京急行電鉄株式会社(Tokyu Corporation) 白坂, 成功(Shirasaka, Seiko) 津々木, 晶子(Tsutsuki, Akiko)
Publisher	慶應義塾大学大学院システムデザイン・マネジメント研究科
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Jtitle	Active learning project sequence report Vol.2011, (2011.) ,p.633- 721
JaLC DOI	
Abstract	The project object is Proposal of business-ecosystem 1mainly created by "Location-Based Service" from user view - Enhance communication and contribute to realizing Creative City. The city Futakotamagawa is located in Tokyo metropolis with rich nature, developed by Tokyu Corporation aiming to realize Creative City defined as a city that develops sustainable implementing new ways of working and living. In our proposal, we divided the Business-Eco System into 4 phases, "Acknowledge", "Expand", "Establish", and "Develop". The core subject is to solve flood and drought of Tama-river, which is an important landscape in Futakotamagawa. The root cause of this problem comes from abandoned man-made forests in the upper stream. Regarding to insure safety of the river, we made a scenario to realize Creative City by creating new demands for the man-made forest area upper stream of Tama-river implying into the 4 phased Business-Eco System . We developed a new method Dynamic Stakeholder Analysis (DSA) to achieve the goals of each stakeholder and to check it in each phase of Business-Eco System. This new method basically uses Customer Value Chain Analysis (CVCA) for the basis and Want Chain Analysis (WCA) to connect stakeholder's wants, visualizing the time series of CVCA. As a result, from DSA we successfully verified our solution has achieved all the wants for every stakeholder. In the phase "Acknowledge", consumers shall recognize the Tama-made woods via LBS at FUTAKO TAMAGAWA rise.2 For "Expand" phase, the shopping district outside of rise and local people shall commit. In the "Establish" phase the LBS penetrates throughout the city and crops from Okutama and products outside of rise would be sold inside rise which shall improve the bond between stakeholders. Lastly for the "develop" phase, the interchange based on LBS shall start use Tama-made woods to develop a "Creative Spot". Inside the design process, we implement designers from Futakotamagawa, students, residents to maintain various types of people to enhance communication which forms the Creative City.
Notes	Student final reports Group J
Genre	Research Paper
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=KO40002003-00002011-0633

Group J

Group J's Theme Proposed by TOKYU Corporation

ALPS "Symbiosis and Synergy" theme title:

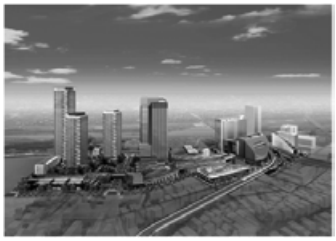
Proposal of Business-ecosystem mainly created by "Location-Based Service" from user view– Enhance communication and contribute to realizing Creative City

Proposer Organization's Name:TOKYU Corporation
Contact Person's Name: Satoshi ISHIDERA Contact Person's email: satoshi.ishidera@tkk.tokyu.co.jp

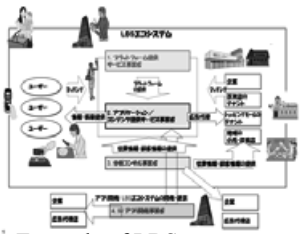
We want to build creative city. The city which grows sustainably and in which people practice new work-style and new life-style in matured society, Japan.

Field trials to build creative city –one initiative is to create Business-ecosystem of "Location-Based Service" – are going to launch at Futako-tamagawa, Tokyo.

Our question is what we need to build the framework of "Location-Based Service" business-ecosystem in Japan for sake of not only business success, but also sustainable growth of the industry, common good and social happiness.



Futako-tamagawa city



Example of LBS ecosystem

ALPS Final Report 2011

Group J

Project Title:

Proposal of Business-Ecosystem Mainly Created by "Location Based Service" from User View Enhance Communication and Contribute to Realizing Creative City

Theme:

Proposal of Business-Ecosystem Mainly Created by “Location-Based Service” from User View - Enhance Communication and Contribute to Realizing Creative City

Proposer Organization: TOKYU Corporation

Proposer Organization’s Supporter: Satoshi ISHIDERA, Keigo Fukushima & Yuuhi Sato

Keio Mentor: Seiko SHIRASAKA & Akiko TSUTSUKI

Members:

Kenichiro ITO

Toshinobu INOMATA

Toru KOBUKAI

Yasuhiro KADOKURA

Masaki HIDAKA

Graduate School of System Design and Management

Keio University

Proposal of Business-ecosystem mainly created by "Location Based Service" from user view

Enhance Communication and contribute to realizing Creative City

Kenichiro Ito, Toshinobu Inomata, Toru Kobukai, Yasuhiro Kadokura, Masaki Hidaka

Graduate School of System Design Management,

Keio University

1

1. Executive Summary

The project object is *Proposal of business-ecosystem [1]mainly created by "Location-Based Service" from user view ----- Enhance communication and contribute to realizing Creative City*. The city Futakotamagawa is located in Tokyo metropolis with rich nature, developed by Tokyu Corporation aiming to realize Creative City defined as a city that develops sustainable implementing new ways of working and living.

In our proposal, we divided the Business-Eco System into 4 phases, "Acknowledge", "Expand", "Establish", and "Develop". The core subject is to solve flood and drought of Tama-river, which is an important landscape in Futakotamagawa. The root cause of this problem comes from abandoned man-made forests in the upper stream. Regarding to insure safety of the river, we made a scenario to realize Creative City by creating new demands for the man-made forest area upper stream of Tama-river implying into the 4 phased Business-Eco System .

We developed a new method Dynamic Stakeholder Analysis (DSA) to achieve the goals of each stakeholder and to check it in each phase of Business-Eco System. This new method basically uses Customer Value Chain Analysis (CVCA) for the basis and Want Chain Analysis (WCA) to connect stakeholder's wants, visualizing the time series of CVCA. As a result, from DSA we successfully verified our solution has achieved all the wants for every stakeholder.

In the phase "Acknowledge", consumers shall recognize the Tama-made woods via LBS at *FUTAKO TAMAGAWA rise*.[2] For "Expand" phase, the shopping district outside of *rise* and local people shall commit. In the "Establish" phase the LBS penetrates throughout the city and crops from Okutama and products outside of *rise* would be sold inside *rise* which shall improve the bond between stakeholders. Lastly for the "develop" phase, the interchange based on LBS shall start use Tama-made woods to develop a "Creative Spot". Inside the design process, we implement designers from Futakotamagawa, students, residents to maintain various types of people to enhance communication which forms the Creative City.

[1] Defined by Tokyu Corporation. In our proposal, we use the word "Business-Eco System" as the same meaning.
[2] Official area named by Tokyu Corporation. In this document we often use the name "rise".

2. Table of Contents

2.1 Table of Figures

2.2 Table of Tables

3. Problem Statement

As you can see from Figure 1 , Figure 2, Figure 3, even though Futakotamagawa is a city located near Tokyo, the surroundings has rich nature with about 100,000 populations. Currently, Tokyu Corporation has been redeveloping Futakotamagawa to realize a compact-sustainable city basically with the idea of Compact City (Dempsey, 2010). The first phase of city developing has finished in March 2011 completing office, shopping center, and apartments. The second developing planed completing in 2015 will bring cinema complex, parks, hotels, and more offices. All established with IMES terminals, believed to enhance customer-participated city model using ICT solutions focused on location based services.

By establishing a Business-Eco System it is believed to form a sustainable developing Creative City regarding rich life and work; a Business-Ecological System in a social term. We have focused to propose a completely new Business-Eco System. In the following details, we explain specifically by using ALPS methods.

Figure 1.The place of Futakotamagawa[3]

[3] © 2011 Google Maps

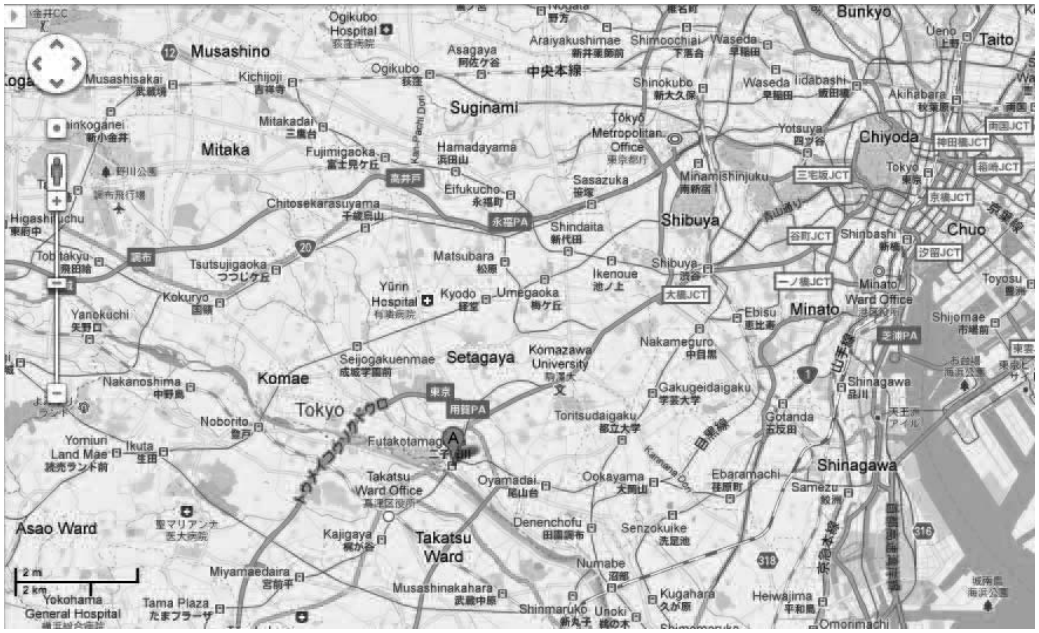


Figure 2.Location of Futakotamagawa (Larger map)[4]

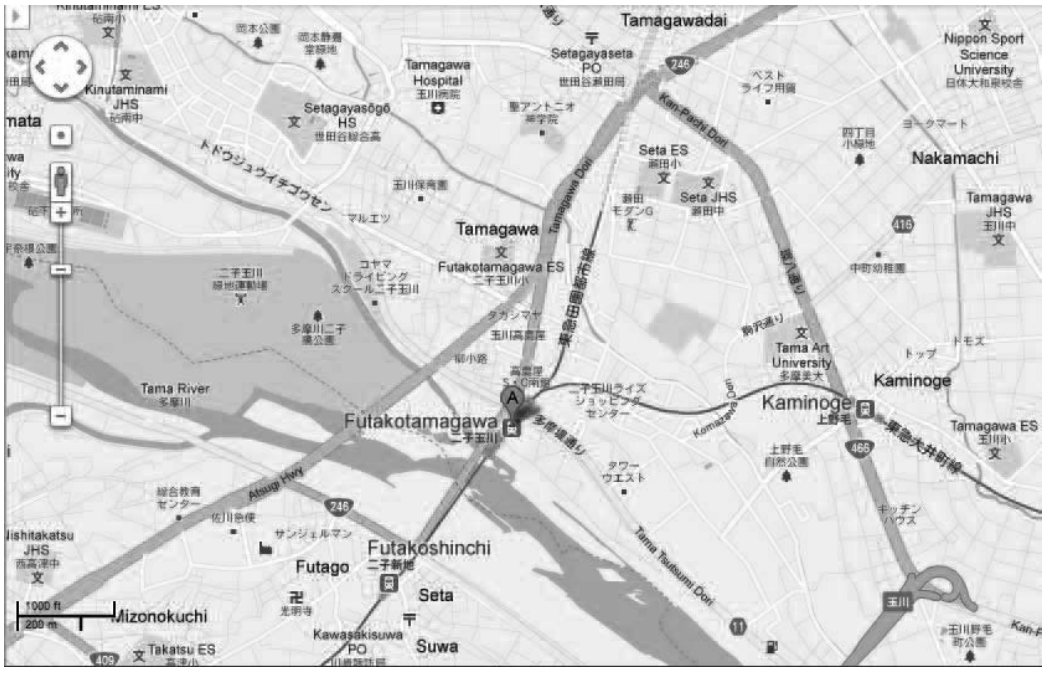


Figure 3.Location of Futakotamagawa (Zoom in)[5]

[4] © 2011 Google Maps

[5] © 2011 Google Maps

4. Analysis and Discussion of ALPS Methods

4.1 Interview/Observation

We interviewed 10 times and nearly 60 people. Before starting brainstorming, we went several times to Futakotamagawa and Okutama to do Observation. These interview and observation made us recognize the importance of how dangerous the flood of Tama-river could be, and how severe the problem was.

4.2 Brainstorming

Regarding the results from interview and observation, we preformed brainstorming putting 5 axes of “Who”, “When”, “Where”, “What”, “user state” to understand and share the information and knowledge visually. As a result, we defined the Business-Eco System to realize Creative City specifically in the To By Using Statement Part.1.

Table 1.Brainstorming

Result of Brain storming

where	Road, abroad, regional mall, the city itself, Catalyst BA, studio, office environment, a second home, the city can demonstrate, the city of fashion, women's town, town of consumers, commercial town, city of different faces in the day and night, wine bar, Galleria, work, rise shopping mall, shopping district, neighboring buildings, Okutama, office buildings, housing buildings, apartments, outdoor cafes, Hinohara village, Art Village, rural, urban, just past the town, old man , old bag, the city of your own, Nishihour Biennale Nakanojo, escalators, elevators, toilets, baby room, before the touch, slopes, shopping mall, flowers, sports facilities, terrace, sea, Tama-river, Park, earth, space, taxi stands, road, railway station, schools, universities, bus roundabout, pedestrian crossing, station gates, sidewalks, airplane, bus, taxi lines, kindergarten, in the train, bus terminal, station buildings, in cars, street food pubs, cafes, food shops, fast food, restaurant, Arcade, retreat, eco apartments, car, school, vacant land, old buildings, town hall
what	play, show, karaoke, dating, movies, bowling, watching TV, shopping, cellular phone, tasting (department store basement), marriage, sleep, handmade, exercise bike, walking, running, confession, shake, propose, original goods, field, business, workshop, cleaning, services, money, products, companies hypothetical, content, location based service, connections, social media, trust, knowledge, construction, water projects, learning, meeting, work, the well investigated, brain dumping, white board, art graffiti, idea, lucrative, CRM, add value to content, harvesting, distribution, depopulated, tourism, made extraordinary, tea, dinner, lunch, meal, breakfast , forestry, design, funding, furnishings, management, surveys, brush up, view maps, Lost, meeting, necessity, exchange, innovation and cost from a combination of cost (of production) visible, continue to use, bear ″food″ program, spread throughout the city, recycling, art, design, take pictures, preservation of the Tama-river
who	JAXA, NASA, teacher, student, businesses, who want to teach for free, sponsors, designers, electric company, water company, gas componey, building management company, property company, workers, local grandpa, key personnel, rise staff, chefs, office worker, OL, metropolitan government officials, borough officials, public servants, taxi companies, Tokyu Corporation, station attendant, taxi driver, photographer, painter, tea masters, madam, pets, landlords, Shiroganeze, Tokyu Group users, parents with children, lovers, the elderly, students, local residents, children, office workers, school girls, dentist, NPO,
when	At breakfast, at lunch, when dinner time snack, during a meal, barbecue, at tea, seasonal, day and night, schooltime, worktime, after the lifetime, while walking, while driving, rush in morning, rush at night, train, the way to home, sleeping, dating, gardening, television time, killing time, shopping, playing, pet walking, fishing, early morning, morning, noon, evening, night midnight, sunny day, rainy day, sometime, anytime, seasons, once in life time event, holiday, weekday
users state	discover something, flower blooms, moderate diet, creative, satiety, feel free, become wise, convenience, hunger, shout, annoyed, sleepy, April weather, fatigue, empathy, fun, urgency, intimacy, unity, excitement, innovation, reversal of values, pride, notice, feel better, love is born, happy, impressed, sad, depressed, hurt the conscience , frustration, despair, hatred, anger

4.3 To By Using Statement Part.1

Regarding the Brainstorming, the general idea of “Business-Eco System to realize Creative City” has been discussed on meta-level. The result of ”Realize Creative City” came out with definition of 4 aspects of creative idea, service and goods, wealth, and safety would be necessary to be developing throughout the whole city. Then, in order to realize, we used the “the city where we feel nature and city” as a key phrase to connect to ideas in how to construct the sustainable Business-Eco System. From the result of 4.1Interview /Observation we found out two important facts.

(i) In order to maintain the safety of Futakotamagawa, the administration of upstream Tama-river was mandatory.

(ii) To realize Creative City in the whole Futakotamagawa, it is impossible to not include the shopping district and local residents inside the Business-Eco System.

According to James F. Moore (Moore, 1997), Business-Eco System has a definition meaning a leader in the system has to show and share it’s vision through four time sequence in a cycle: “Pioneering”, “Expansion”, “Authority”, and “Renewal or Death”. Regarding the theory, in order to fulfill the two points above, we set up a gradual developing business model: “Acknowledge”, “Expand”, “Establish”, and “Develop”. This is why our Business-Eco System uses the 4 Phase model. For further understanding, we wrapped the idea and converted it to To By Using.

TO

Realize “Creative City”. Meaning, creative idea, service and goods, wealth, and safety would be necessary to be developing throughout the whole city.

BY

“The city where we feel nature and city” as a key phrase, connect various people and ideas in how to construct the sustainable Business-Eco System.

USING

The following four phases to grow gradually in Futakotamagawa city.

(i) Acknowledge
(ii) Expand
(iii) Establish
(iv) Develop

The figure below is the conceptual diagram of Creative City and Business-Eco System (Figure 4).

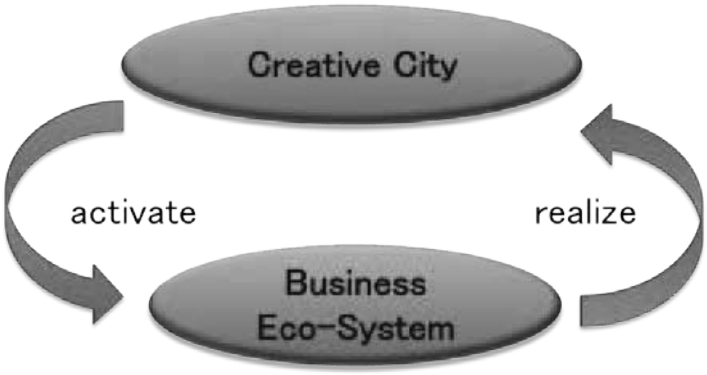


Figure 4.Conceptual Diagram

This becomes a sustainable developing device while the Business-Eco System output becomes the Creative City's input, and vice versa.

4.4 Scenario Graph

From the Brainstorming and To By Using, scenario graph was necessary for each phase. The specific solutions are described in the 5.Design Recommendation section.

4.4.1. Acknowledge Phase

For *what* is action of making Tama-made wood demand inside the rise using LBS to acknowledge against customers. For *where*, the rise is the core. Rise is one of the most leading places in the nation for its density of IMES, which makes it possible to use LBS inside the buildings. *Who* is obviously customers in rise and *when* is during shopping.

Table 2.Scenario Graph.Phase1

PHASE 1

where	Rise shopping mall, Okutama, Shopping district
what	Preservation of the Tama-river, Original goods, Location based service, Tourism
who	Tokyu Corporation, Tokyu Group users
when	Shopping
user's state	Fun, Notice

4.4.2. Expand Phase

What is generally expanded LBS business from rise to the whole Futakotamagawa city. Therefore, *where* expands including the Shopping district. In this phase, the local residents are included in *who* and start to use LBS. *When* is the same as the Acknowledge Phase.

Table 3.Scenario Graph.Phase2

PHASE 2

where	Rise shopping mall, Okutama, Shopping district
what	Location based service, Spread (throughout the city)
who	Tokyu Corporation, Tokyu Group users, Local residents
when	Shopping
user's state	Fun, Notice

4.4.3. Establish Phase

What establishes the stronger connection between stakeholders. In the Establish Phase, since it focuses on the establishment *where*, *who*, *when* does not change.

Table 4.Scenario Graph.Phase3

PHASE 3

where	Shopping district, Okutama
what	Location based service, Establish connections
who	Tokyu Corporation, Tokyu Group users, Local residents
when	Shopping
user's state	Fun, Impressed

4.4.4. Develop Phase

What is to take action for preserving forest and to start using Tama-made woods through workshops. For the *Who*, with the cooperation of Tokyu Corporation and the government, co-lab creators and local students will have a workshop to facilitate the design and usage of the woods for Futakotamagawa. *Where* is inside rise office and schools for an example of a place to do workshops.

Table 5.Scenario Graph.Phase4

PHASE 4

where	Rise shopping mall, Schools
what	Field, Workshop, Continue to use, Design
who	Students, Designers, Government officials, Tokyu Corporation, Tokyu Group users, Local residents
when	Schooltime, Worktime, Shopping
user's state	Creative, Fun, Happy

4.5 Pugh Concept Selection

In the Pugh Concept Selection we analyzed and visualized the effects against the stakeholders. By the rearranging the"theme" into "phase", we got a hypothesis that there are more effects regarding time series rather than thinking individually.

[+] ... Positive Impact
[−] ... Negative Impact
[blank] ... No Impact

Concept Influence Analysis

Title:Money		Theme			
Stakeholders	As Is	Theme1	Theme2	Theme3	Theme4
1. Forestry Cooperative	D	+	+	+	++
2. Administration(Okutama)		+	+	+	++
3. Administration(Futakotamagawa)	A	+	+	+	−
4. Schools					
5. TOKYU	T	−	−	−	++
6. Creator		+	+	+	+
7. Shopping District	U	−	+	+	+
8. Customer		−	−	−	−
9. Tenant	M	+	−	+	+

Concept Influence Analysis

Title:Wants		Theme			
Stakeholders	As Is	Theme1	Theme2	Theme3	Theme4
1. Forestry Cooperative	D	+	+	+	++
2. Administration(Okutama)		+	+	+	++
3. Administration(Futakotamagawa)	A				+
4. Schools					+
5. TOKYU	T	+	+	+	++
6. Creator		+	+	+	+
7. Shopping District	U		+	+	+
8. Customer		+	+	+	+
9. Tenant	M	+		+	+

Figure 5.Pugh Concept Selection (Theme)

Concept Influence Analysis

Title:Money		TIME			
		Phase			
Stakeholders	As Is	Phase1	Phase 2	Phase 3	Phase 4
1. Forestry Cooperative	D	+	+	++	++
2. Administration(Okutama)		+	+	++	++
3. Administration(Futakotamagawa)	A	+	+	++	+
4. Schools					
5. TOKYU	T	−	−	−	++
6. Creator		+	+	++	++
7. Shopping District	U	−	+	++	++
8. Customer		−	−	− −	− −
9. Tenant	M	+	+	++	++

Concept Influence Analysis

Title:Wants		TIME			
		Phase			
Stakeholders	As Is	Phase1	Phase 2	Phase 3	Phase 4
1. Forestry Cooperative	D	+	+	++	++
2. Administration(Okutama)		+	+	++	++
3. Administration(Futakotamagawa)	A				++
4. Schools					++
5. TOKYU	T	+	+	++	+++
6. Creator		+	+	++	++
7. Shopping District	U		+	++	++
8. Customer		+	+	++	++
9. Tenant	M	+	+	++	++

Figure 6.Pugh Concept Selection (Time)

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4.6 To By Using Statement Part.2

The re-described scenario in To By Using Statement regarding the phases from Scenario Graph and Pugh Concept Selection are as follows.

TO

Realize “Creative City”. Meaning, creative idea, service and goods, wealth, and safety would be necessary to be developing throughout the whole city.

BY

“The city where we feel nature and city” as a key phrase, connect various people and ideas in how to construct the sustainable Business-Eco System.

USING

The following four phases to grow gradually in Futakotamagawa city.

(i) Acknowledge: Start using LBS inside rise shopping mall.
(ii) Expand: Expand to the other shopping districts.
(iii) Establish: Stronger connection between stakeholders.
(iv) Develop: A city develop with people using Tama-made wood.

4.7 CVCA

Our model of Business-Eco System is divided into phases. So, the CVCA is also divided into phases “As Is”, “Phase 1”, “Phase 2”, “Phase 3”, “Phase 4”. By centralizing Tokyu Corporation under the geographical positions, we evidently determined the stakeholders. The reason we considered the geographical position is to obviously understand the influence of geographical condition. From this analysis we found out that there were clear changes with the stakeholder for each phase. Also to actuate the changes, we found out that the changes of “Wants” between stakeholders. To clearly understand the changes, distinct understanding was necessary.

4.7.1 Geographical Positions

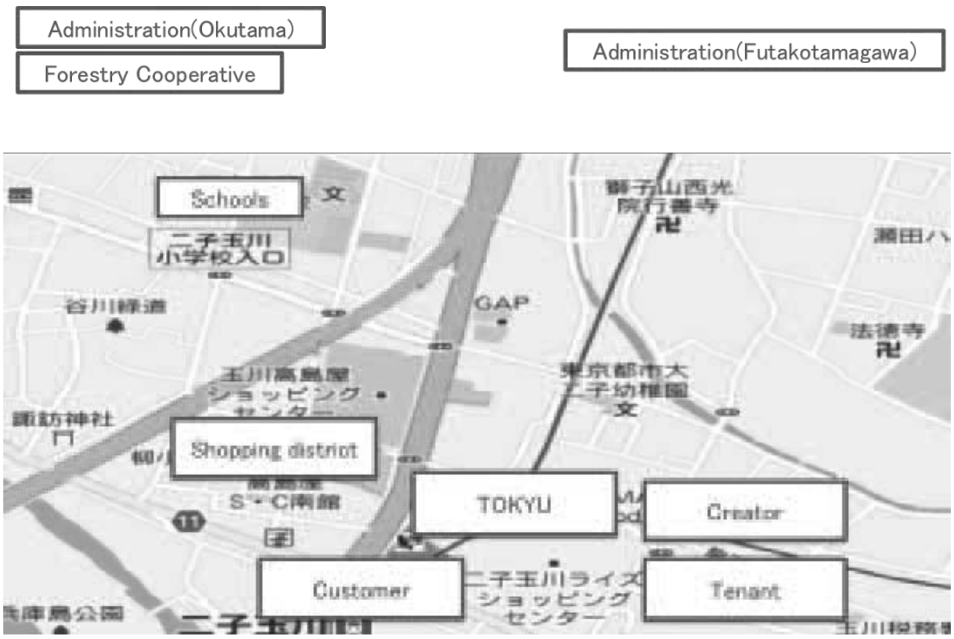

Figure 7.Stakeholders Shown in Map

12

4.7.2 As Is

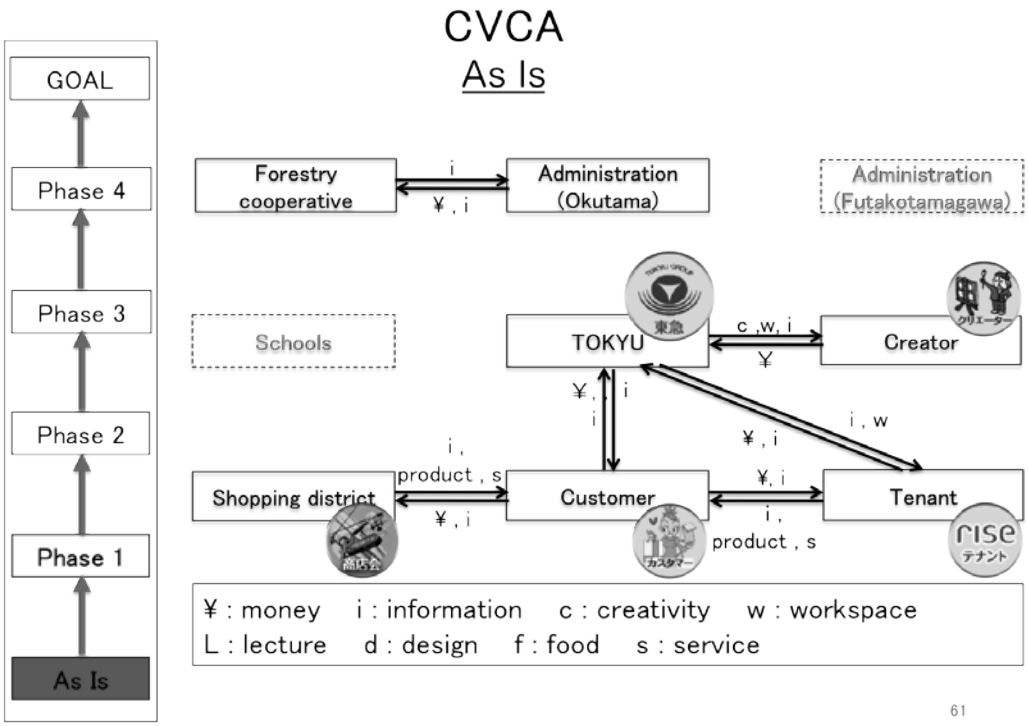

Figure 8.CVCA.As Is

4.7.3 Phase 1

The difference between “As Is”, is the new connection between Tokyu Corporation and Forestry cooperative. Also introducing “LBS signage” generated new value “point”, “lecture”, and “design”.

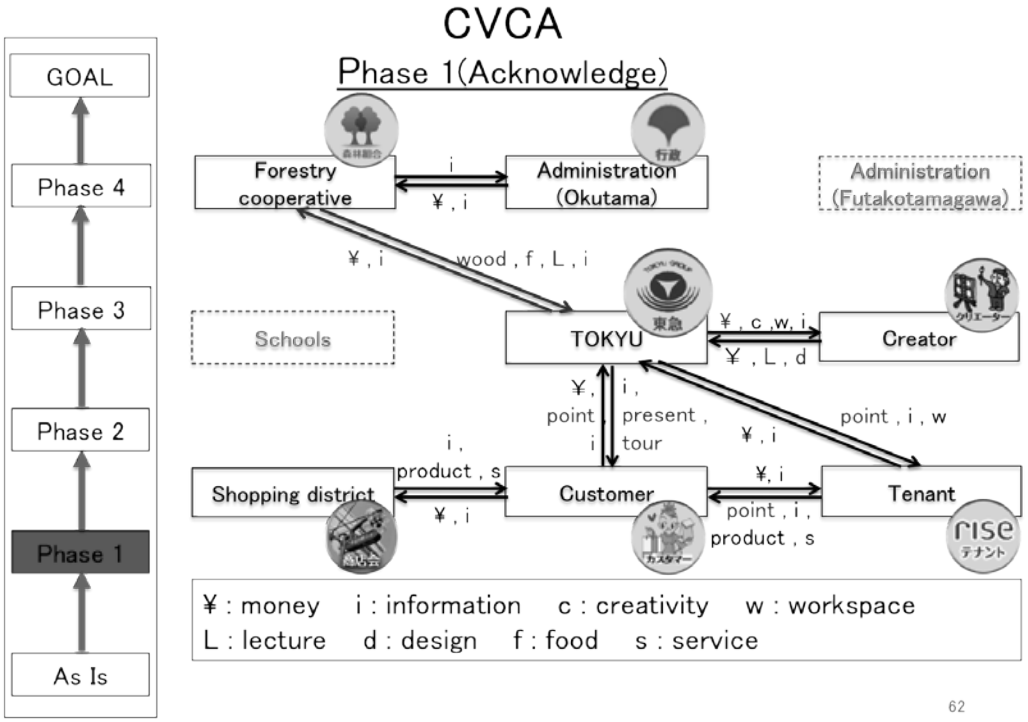

Figure 9.CVCA.Acknowledge

4.7.4 Phase 2

The difference from previous phase is clear within the expansion of range of Business-Eco System to include other area in Futakotamagawa, like the “Shopping district”.

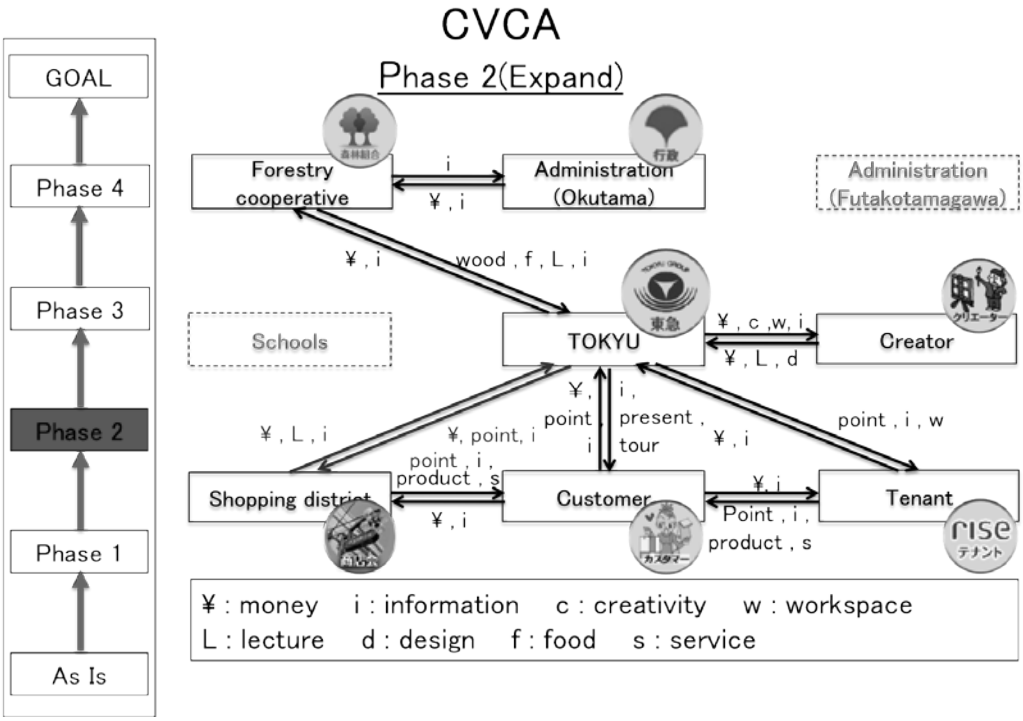

Figure 10.CVCA.Expand

4.7.5 Phase 3

There are no major change from Phase 2 because it is the establish sequence. Although there are no new connections of stakeholders, but a new value “galleria” emerges because of wants to open a street stall in the galleria.

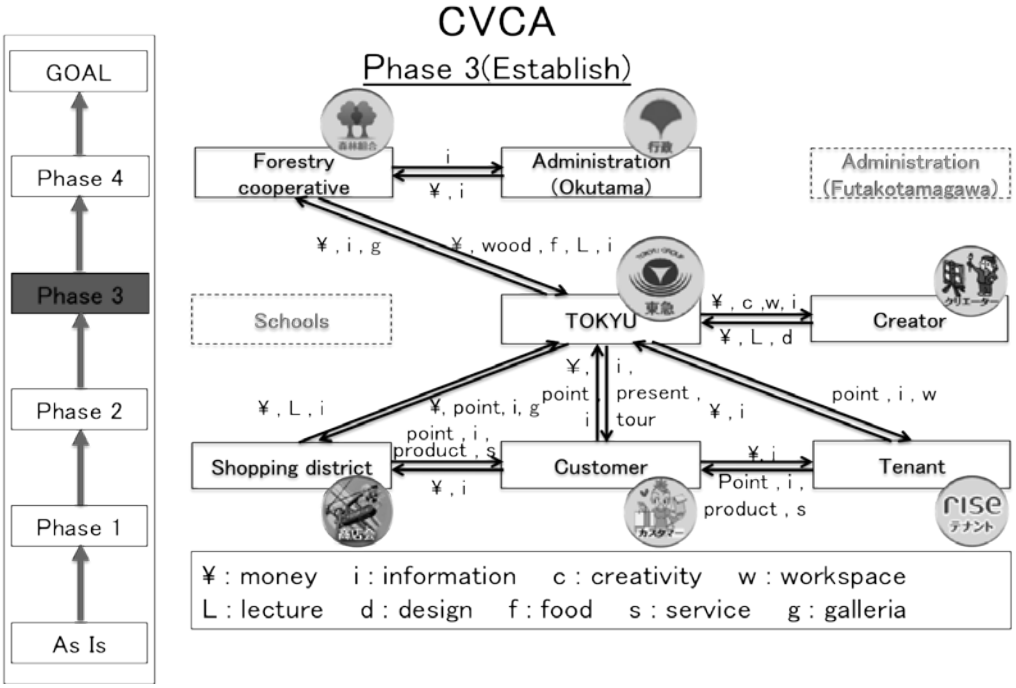

Figure 11.CVCA.Establish

4.7.6 Phase 4

This phase's main concept is developing the Business-Eco System to spread throughout the city making connections between "Administration (Futakotamagawa)" and "Schools". Regarding the new connections, a new value of "education" and "architecture" establishes in the CVCA.

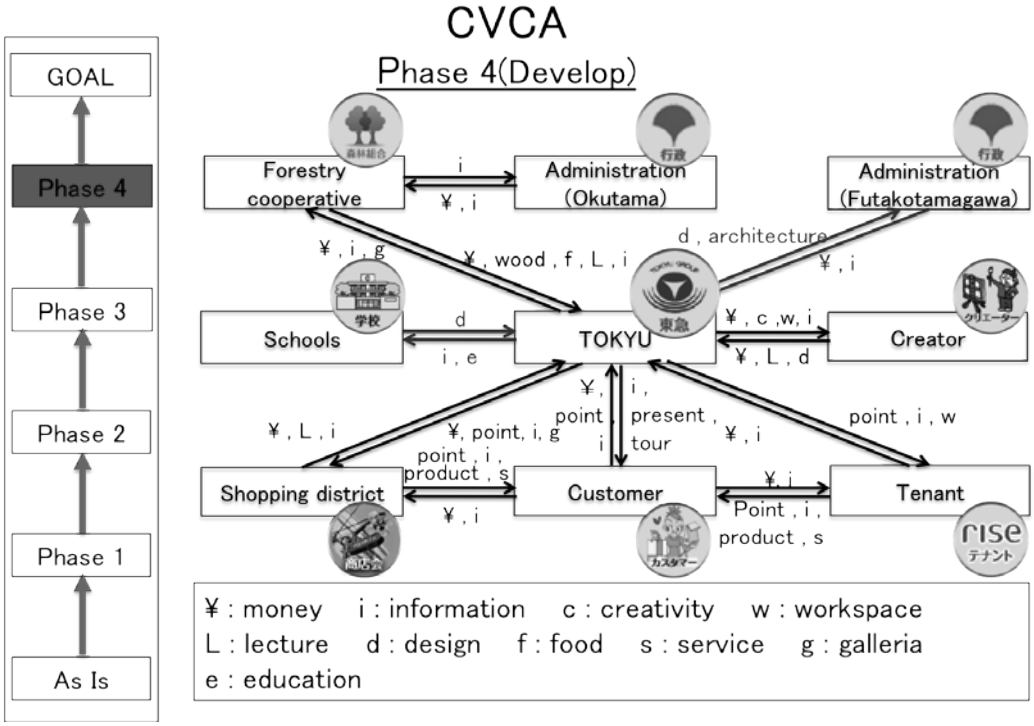

Figure 12.CVCA.Develop

4.8 Wants Selection

The stakeholder's wants from Requirement Analysis and CVCA were not the same. So to understand and visualize the wants, "whose wants" "affects whom" was a fact to reconsider. We used the method "Wants Selection" in order to solve this problem. The stakeholder's wants comes in vertical, and put the stakeholders in the horizontal. This way, we achieved which phase satisfies which stakeholder, in what kind of way.

The result of here links to Value Graph and QFD showing the value, function, mechanism, and the connection. The matrix numbers corresponds to the meaning below.

3: want very
2: want normal
1: want little
0: Do not want

Also the gray part indicates that the stakeholder has nothing in the phase (see also 4.7 CVCA).

4.8.1 As Is to Phase 1

The wants to be satisfied in Phase 1 is listed below.

1. Forestry Cooperative : Want wood to be used
2. Administration(Okutama) : Want wood to be used
5. TOKYU : CC realized by Business-Eco System is wanted
6. Creator : Want a creative job
7. Customer : Want Futakotamagawa originality
9. Tenant : Want a lot of people to come and buy

Also the connection of As Is wants from the stakeholder is shown as yellow.

As Is to 1 WantsSelection

Theme : Start LBS		Stakeholders(Phase 1)								
Stakehoders(As Is)	Wants	①	②	③	④	⑤	⑥	⑦	⑧	⑨
①Forestry Cooperative	Want wood to be used		1	0	0	3	1	0	1	1
②Administration(Okutama)	Want wood to be used	3		1	0	1	1	0	1	1
③Administration(Futakotamagawa)	Want to resident participated city-building									
④Schools	Want Tamagawa utilized education									
⑤TOKYU	CCrealized by BESis wanted	3	0	1	1		3	1	3	3
⑥Creator	Want a creative job	1	0	1	1	3		0	2	2
⑦Shopping District	Risecustomers to buy more	0	0	0	0	2	0		2	0
⑧Customer	Want Futakotamagawa originality	0	0	0	1	3	0	2		2
⑨Tenant	Want a lot of people to come and buy	0	0	1	0	3	2	1	2	

Table 6.Wants Selection.As Is to 1

4.8.2 Phase 1 to Phase 2

The wants to be satisfied in Phase 2 is listed below.

2. Administration (Okutama): Want wood to be used
5. TOKYU: Want LBS used by many people in city
7. Shopping District: Rise customers to buy more

The connection of Phase1 wants from the stakeholder is shown as yellow.

Phase 1 to 2 WantsSelection

Theme : Shopping disrtict join		Stakeholders(Phase 2)								
Stakehoders(PHASE 1)	Wants	①	②	③	④	⑤	⑥	⑦	⑧	⑨
①Forestry Cooperative	Want wood to be used		1	0	0	2	1	0	1	1
②Administration(Okutama)	Want wood to be used	3		1	0	1	1	0	1	1
③Administration(Futakotamagawa)	Want to resident participated city-building									
④Schools	Want Tamagawa utilized education									
⑤TOKYU	Want LBS used by many people in city	0	0	1	1			3	3	2
⑥Creator	Want LBS used by many people	0	0	1	1	2		2	2	2
⑦Shopping District	Risecustomers to buy more	0	0	0	0	3	0		2	0
⑧Customer	Want Futakotamagawa originality	1	0	0	1	2	1	2		2
⑨Tenant	Want a lot of people to come and buy	0	0	1	0	2	2	1	2	

Table 7.Wants Selection.Phase1 to Phase2

4.8.3 Phase 2 to Phase 3

The wants to be satisfied in Phase 3 is listed below.

1. Forestry Cooperative: Want wood to be used, convey the village charm
2. Administration (Okutama): Want wood to be used
5. TOKYU: Want to improve convenience by tightening relations
6. Creator: Want LBS used by many people
7. Shopping District: Rise customers to buy more
8. Customer: Want Futakotamagawa originality
9. Tenant: Want customers from multiplier effect with shopping district

The connection of Phase2 wants from the stakeholder is shown as yellow.

Phase 2 to 3 WantsSelection

Theme : Provision of Galleria space		Stakeholders(Phase 3)								
Stakehoders(PHASE 2)	Wants	①	②	③	④	⑤	⑥	⑦	⑧	⑨
①Forestry Cooperative	Want wood to be used, convey the village charm		1	0	0	3	2	0	2	2
②Administration(Okutama)	Want wood to be used	3		1	0	1	1	0	1	1
③Administration(Futakotamagawa)	Want to resident participated city-building									
④Schools	Want Tamagawa utilized education									
⑤TOKYU	Want to improve convenience by tightening relations	3	2	1			3	3	3	3
⑥Creator	Want LBS used by many people	0	0	1	2	3		2	2	2
⑦Shopping District	Risecustomers to buy more	0	0	0	0	3	1		2	1
⑧Customer	Want Futakotamagawa originality	1	0	0	1	3	2	2		2
⑨Tenant	Want customers from multiplier effect with shopping district	0	0	1	2	3	2	2	2	

Table 8.Wants Selection.Phase2 to Phase3

4.8.4 Phase 3 to Phase 4

The wants to be satisfied in Phase 4 is listed below.

3. Administration (Okutama): Want wood to be used
4. Administration (Futakotamagawa): Want to resident participated city-building
5. Schools: Want Tamagawa utilized education
6. TOKYU: Want to realize resident participated CC and Want to preserve Tamagawa, use wood

The connection of Phase3 wants from the stakeholder is shown as yellow.

Phase 3 to 4 WantsSelection

Theme : Future center for creative spot		Stakeholders(Phase 4)								
Stakehoders(Phase 3)	Wants	①	②	③	④	⑤	⑥	⑦	⑧	⑨
①Forestry Cooperative	Want wood to be used, convey the village charm		1	1	1	2	2	2	2	2
②Administration(Okutama)	Want wood to be used	3		1	1	2	1	1	1	1
③Administration(Futakotamagawa)	Want to resident participated city-building	0	0		2	3	2	1	1	1
④Schools	Want Tamagawa utilized education	2	2	2		3	2	2	1	1
⑤TOKYU	Want to realize resident participated CC Want to preserve Tamagawa, use wood	3	2	3	3		3	3	3	3
⑥Creator	Want LBS used by many people	0	0	1	2	2		2	2	2
⑦Shopping District	Risecustomers to buy more	0	0	0	0	2	1		2	2
⑧Customer	Want Futakotamagawa originality	2	1	0	1	2	2	2		2
⑨Tenant	Want customers from multiplier effect with shopping district	0	0	1	2	2	2	2	2	

Table 9.Wants Selection.Phase3 to Phase4

4.8.5 Phase 4 to Goal

In this phase, it is clear that the connections between the stakeholder's are centralizes to TOKYU indicating the role of increase of job offers like a facilitator in Table 10. At this point, if finally becomes the Business-Eco System in our definition. The total wants to be satisfied in Phase 4 is listed below.

1. Forestry Cooperative no: Want wood to be used, convey the village charm
2. Administration(Okutama): Want wood to be used
3. Administration(Futakotamagawa): Want to resident participated city-building
4. Schools: Want to design city and Want Tamagawa utilized education
5. TOKYU: Want to satisfy demand and realize CC
6. Creator: Want LBS used by many people
7. Shopping District: Rise customers to buy more
8. Customer: Want Futakotamagawa originality
9. Tenant: Want customers from multiplier effect with shopping district

The connection of Phase4 wants from the stakeholder is shown as yellow.

Phase 4 to GOAL WantsSelection

Theme : Future center for creative spot		Stakeholders(Phase 5)								
Stakeholders(Phase 4)	Wants	①	②	③	④	⑤	⑥	⑦	⑧	⑨
①Forestry Cooperative	Want wood to be used, convey the village charm		1	2	2	3	2	2	2	2
②Administration(Okutama)	Want wood to be used	3		2	2	2	2	2	2	2
③Administration(Futakotamagawa)	Want to resident participated city-building	2	2		2	3	2	2	1	1
④Schools	Want to design city Want Tamagawa utilized education	2	2	2		3	2	2	1	1
⑤TOKYU	Want to satisfy demand and realize CC	3	3	3	3		3	3	3	3
⑥Creator	Want LBS used by many people	0	0	2	2	3		2	2	2
⑦Shopping District	Risecustomers to buy more	0	0	0	0	3	2		2	2
⑧Customer	Want Futakotamagawa originality	2	2	0	1	3	2	2		2
⑨Tenant	Want customers from multiplier effect with shopping district	0	0	1	2	3	2	2	2	

Table 10.Wants Selection.Phase4 to GOAL

4.9 WCA

We conducted the WCA to confirm stakeholder's wants. We made the WCA based on the results of Wants Selection, Value Graph and QFD.

4.9.1 As Is

Current connections are shown in Figure 13.

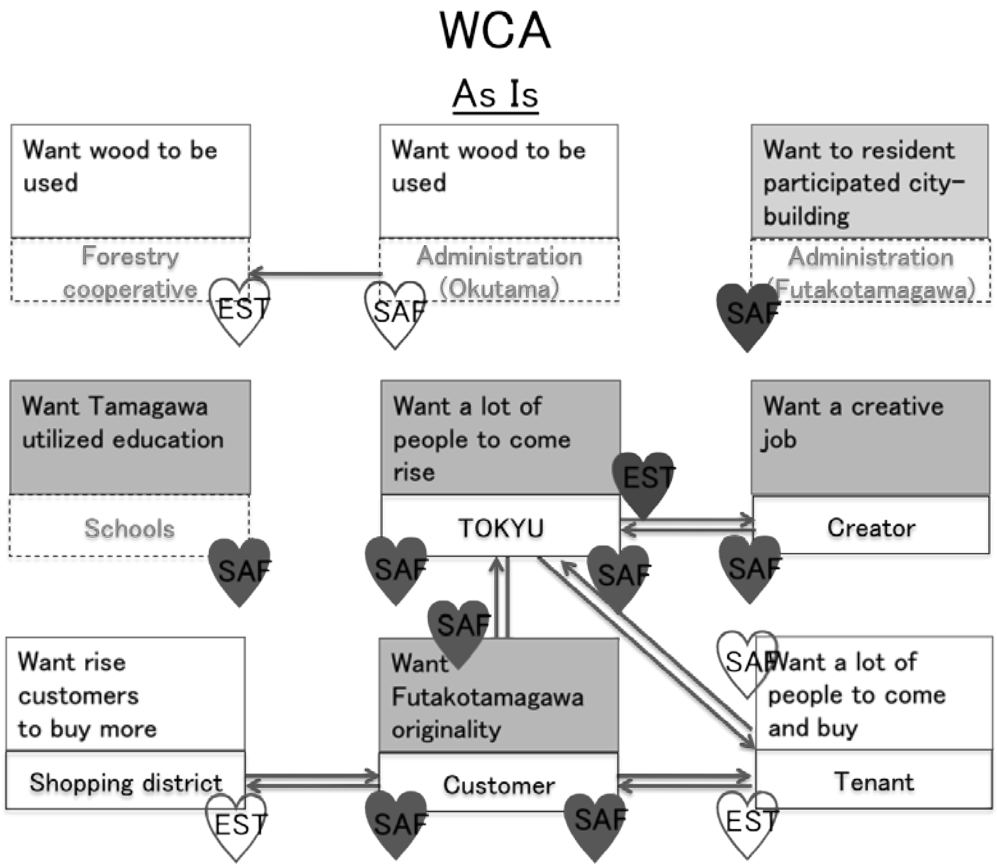

Figure 13.WCA.As Is

4.9.2 As Is to Phase 1

The WCA of As Is to Phase 1 is shown in Figure 14 . The difference from the previous figure is the new connection between Tokyu Corporation and Forestry cooperative. Also introducing “LBS signage” strengthens the connection among Tokyu and creator, customer, tenant.

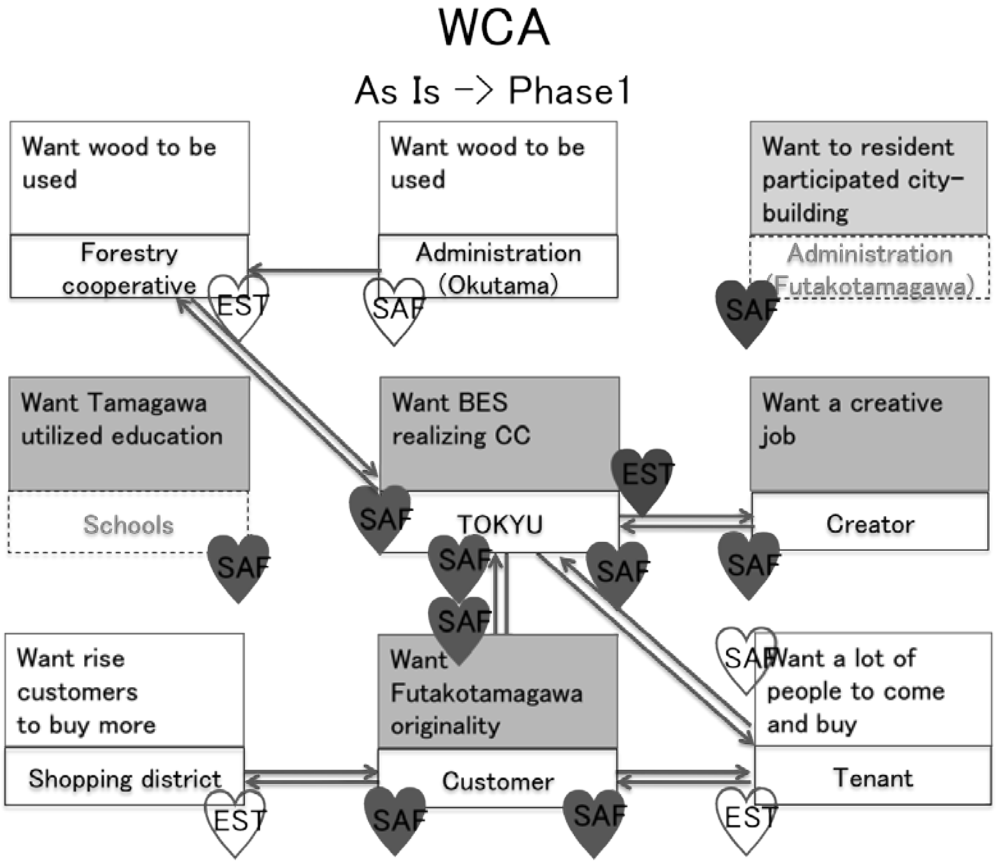

Figure 14.WCA.As Is to Phase1

4.9.3 Phase1 to Phase 2

The WCA of Phase 1 to Phase 2 is shown in Figure 15. In this WCA, wants of Tokyu and creator becomes more advanced, and a new connection between Tokyu and shopping district emerges. Also shopping district's participating in "LBS signage" strengthens the connection between shopping district and customer.

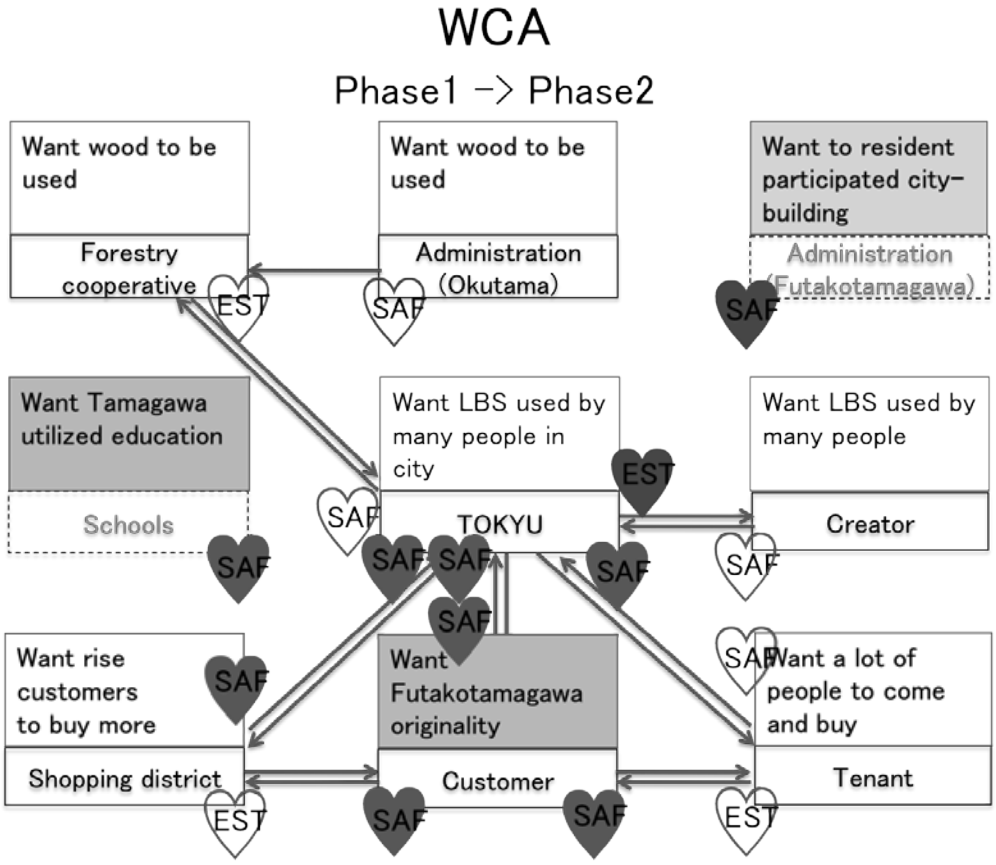

Figure 15.WCA.Phase1 to Phase2

4.9.4 Phase2 to Phase 3

The WCA of Phase 2 to Phase 3 is shown in Figure 16. In this WCA, wants of Tokyu, forestry cooperative and tenant become more advanced, but there are no major change of connections from previous WCA because it is the establish sequence. However, current connections are strengthened.

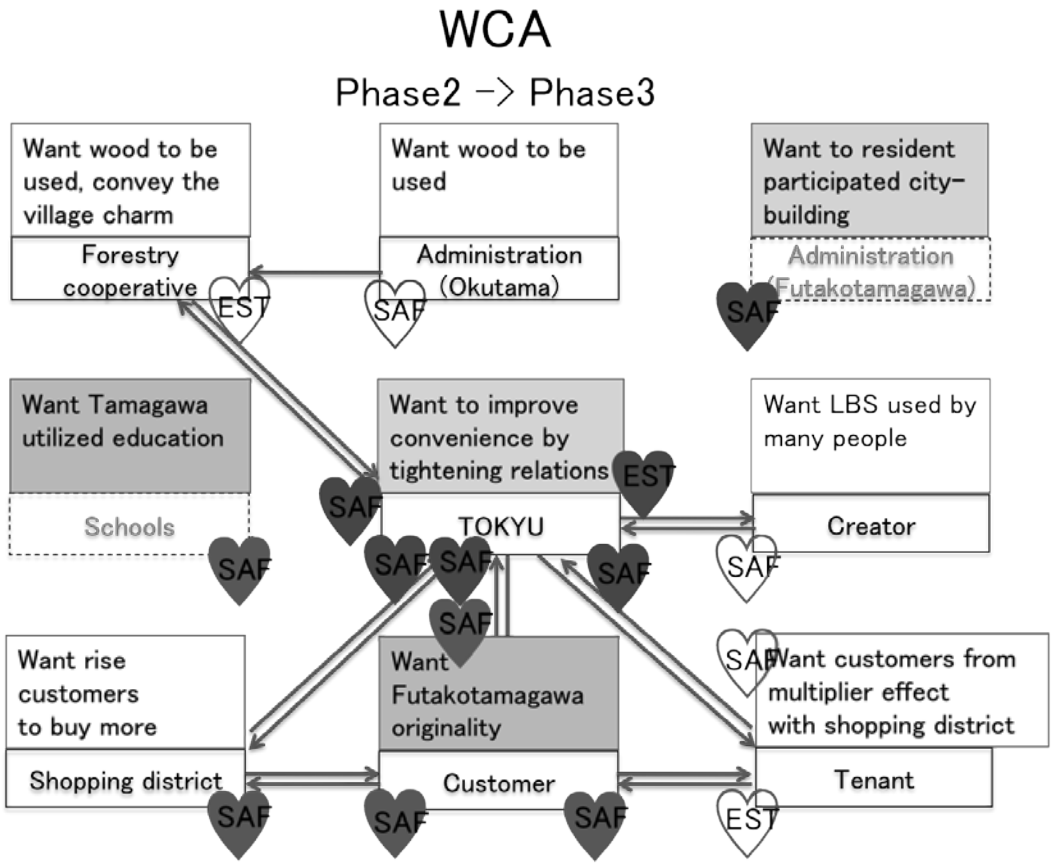

Figure 16.WCA.Phase2 to Phase3

4.9.5 Phase3 to Phase 4

The WCA of Phase 3 to Phase 4 is shown in Figure 17. In this WCA, wants of Tokyu become more advanced, and more connection with administration (Futakotamagawa) and schools. From this, the Business-Eco System is spread throughout the city.

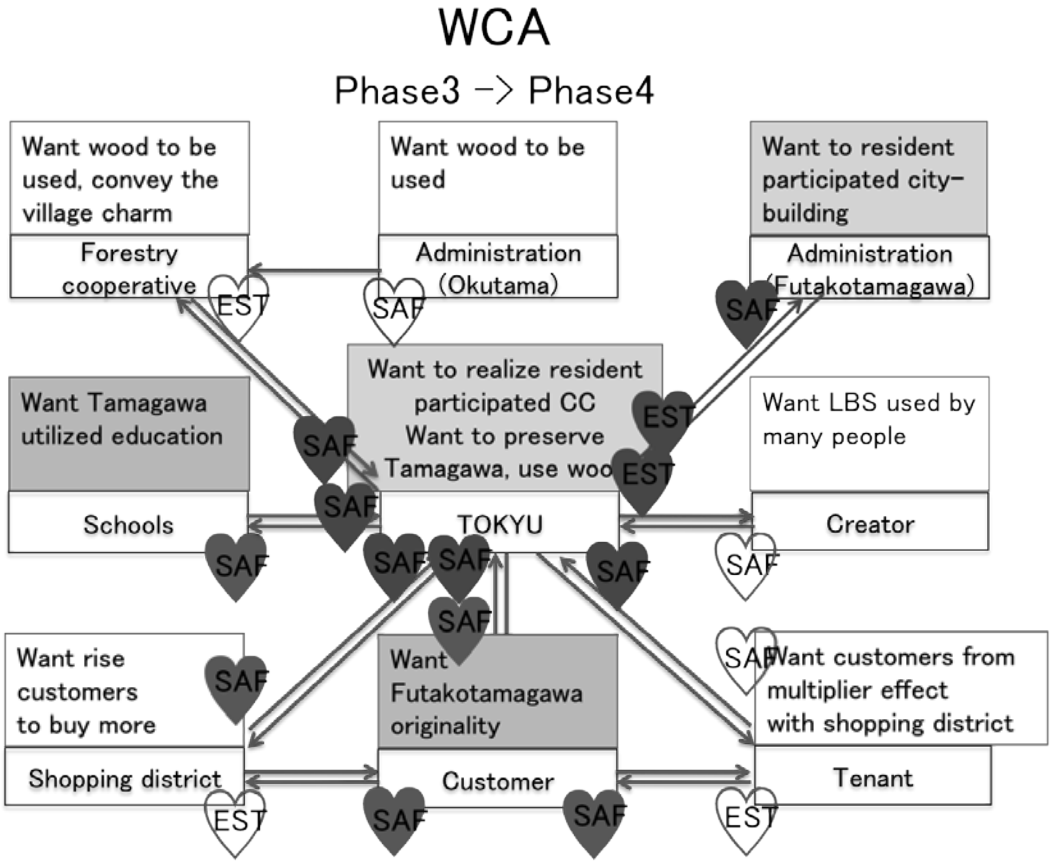

Figure 17.WCA.Phase3 to Phase4

4.9.6 Phase4 to GOAL

The WCA of Phase 3 to Phase 4 is shown in Figure 18. In this WCA, wants of Tokyu and Schools, Creator, Shopping district, Customer and Tenant become more advanced. By this, wants of stakeholders gathers to Tokyu and the system which Tokyu leads the whole city to Creative City as a facilitator is prepared.

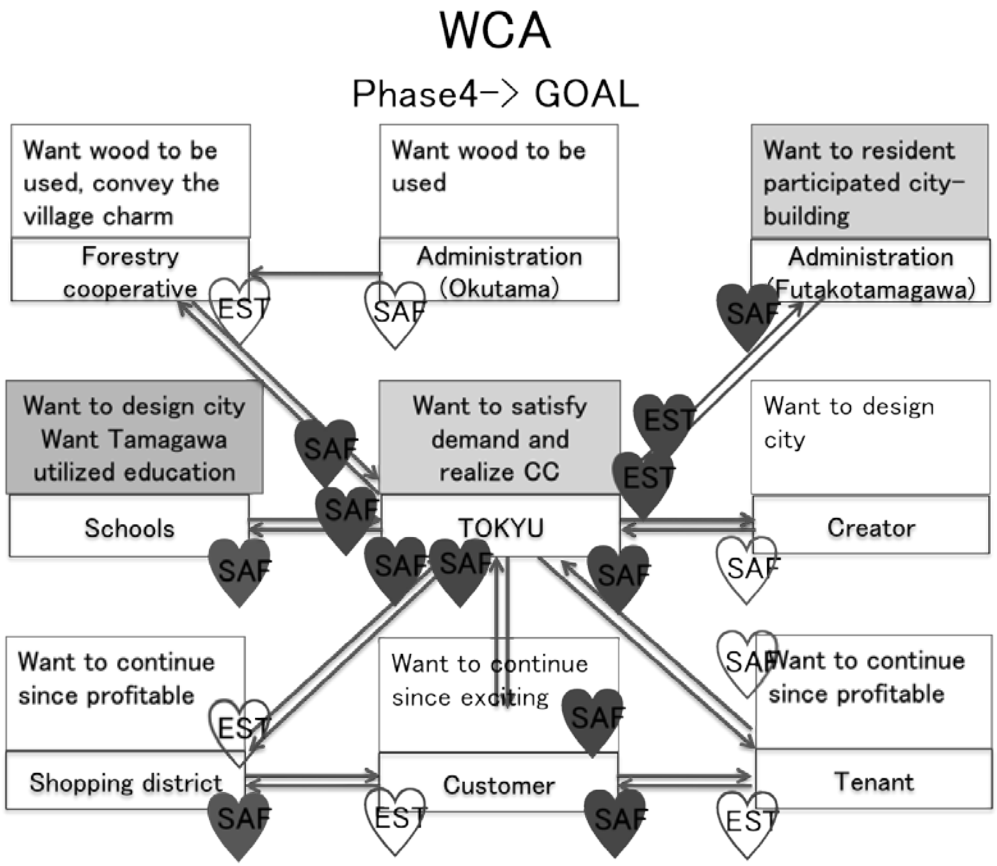

Figure 18.WCA.Phase4 to GOAL

4.10 Value Graph

In Value Graph, we treated the requirement of Want Selection as Voice of Stakeholder and its inputs. Value graph visualized how to make values for people and how to realize the requirements. Activity has been arbitrarily chosen to satisfy the Voice of stakeholder. The arbitrarily chosen Activity proves that the QFD fulfills Voice of Stakeholder

4.10.1 As Is to Phase 1

Figure 19 is the Value Graph of As Is to Phase1. It describes that “Have a good time”, “Get money” and “Become famous” as Value. And it is found that to achieve Phase 1 is to realize stakeholder’s requirement by activity.

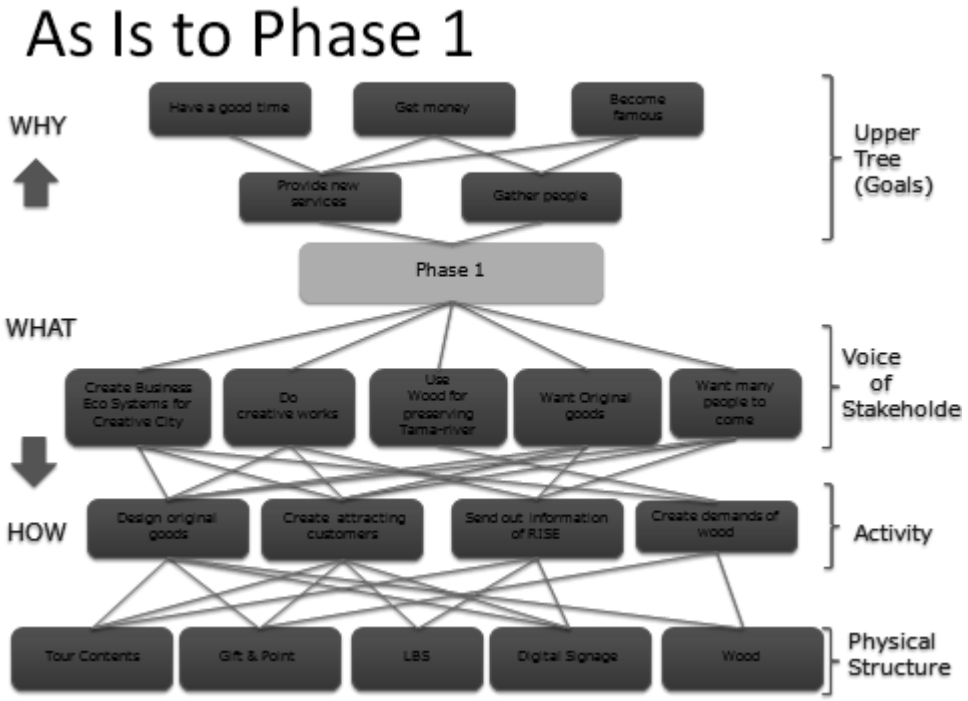

Figure 19. Value Graph. Phase 0 to 1

4.10.2 Phase 1 to Phase 2

This is Value Graph of Phase1 to Phase 2. It is described that nothing is new Value. In Voice of Stakeholder, red letters are new requirement of stakeholder and new activity achieve them had appeared. The new ones are connected with old ones too.

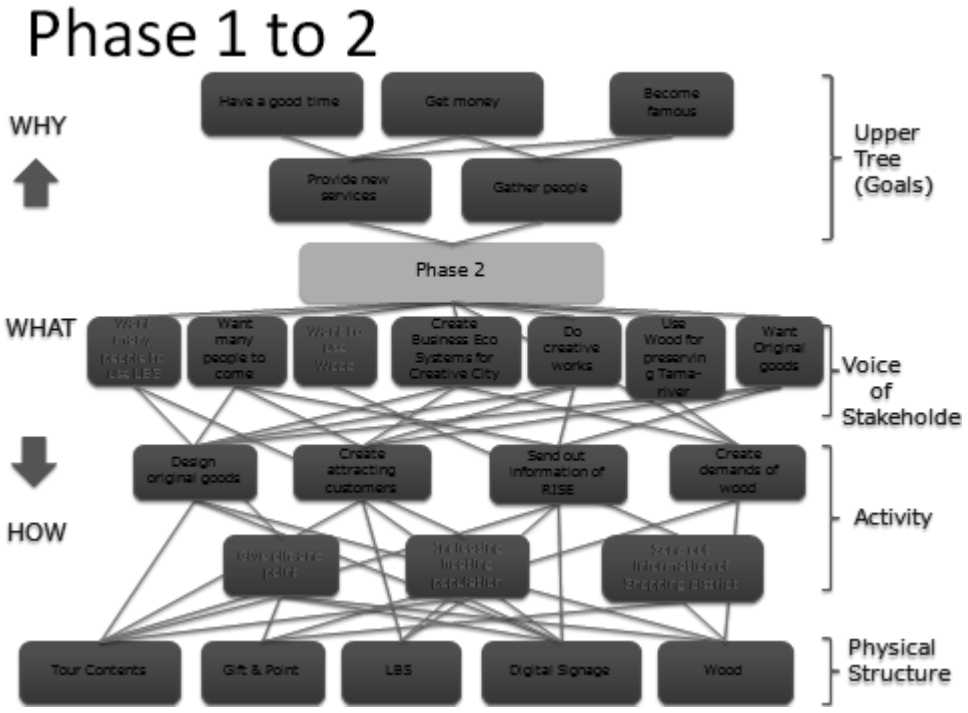

Figure 20. Value Graph. Phase 1 to 2

4.10.3 Phase 2 to Phase 3

This is Value Graph of Phase 2 to Phase 3. It is described that “Become sustainable”, “Catering store” and so on are new Value. In Voice of Stakeholder, red letters are new requirement of stakeholder and new activity achieve them had appeared. The new ones are connected with old ones too. New Values are achieved by activities realized Voice of Stakeholder.

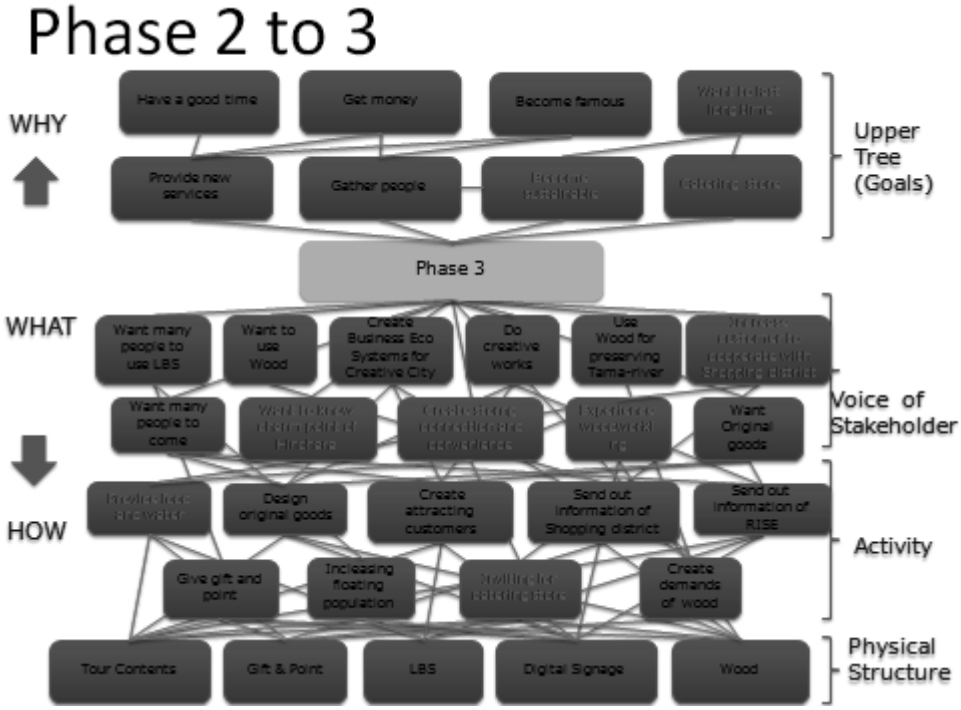

Figure 21. Value Graph. Phase 2 to 3

4.10.4 Phase 3 to Phase 4

This is Value Graph of Phase 3 to Phase 4. It is described that “Get many chance” is new Value. In Voice of Stakeholder, red letters are new requirement of stakeholder and new activity achieve them had appeared. The new ones are connected with old ones too. New Values are achieved by activities realized Voice of Stakeholder.

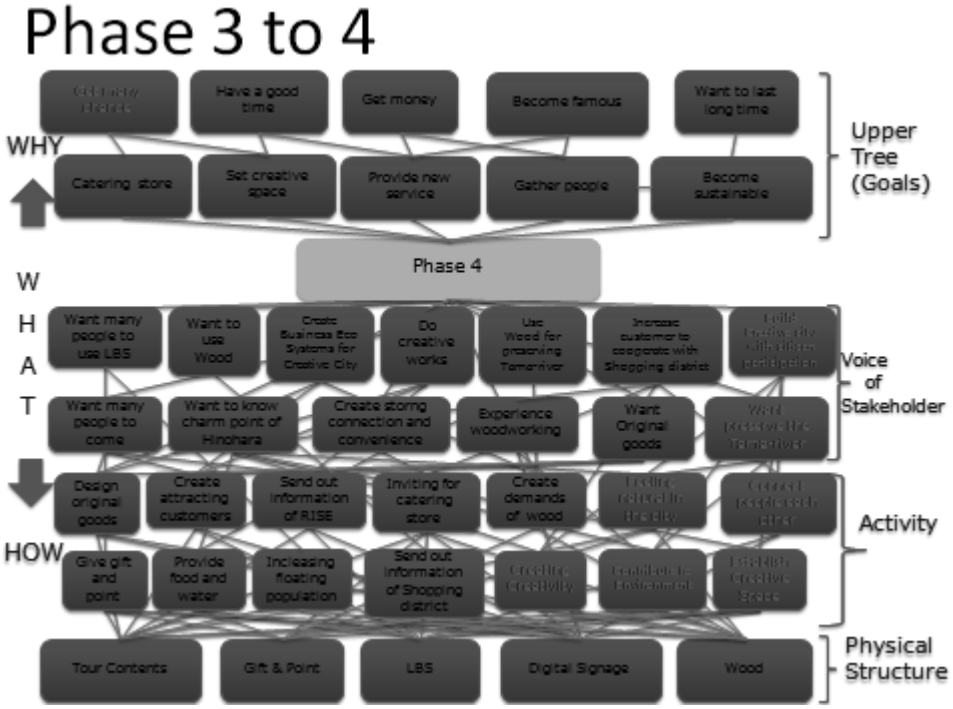

Figure 22. Value Graph. Phase 3 to 4

4.10.5 Phase 4 to GOAL

This is Value Graph of Phase 4 to Phase Goal. It is described that “Become Creative” is new Value. In Voice of Stakeholder, red letters are new requirement of stakeholder and new activity achieve them had appeared. The new ones are connected with old ones too. New Values are achieved by activities realized Voice of Stakeholder.

Figure 23.Value Graph. Phase 4 to Goal

4.11 QFD1.2 & Cost-Worth Diagram

This section describes the results of QFD and Cost Worth Analysis (CWA). QFD has two phases. First phase of QFD describes the relation between requirements and activity. On the other hand, second phase describes the relation of activity and physical structures. QFD is a tool which helps to meet the customer's requirements, ensure the quality, and let them feel satisfied during the whole project, because it can prevent big mistakes. Therefore QFD can tell the orientation of our solution. CWA is used to conclude QFD to know proper cost distribution according to the importance. As the phase goes ahead, QFD shows that usefulness of physical structure increases.

4.11.1 Phase 1

Table 11.QFD1.Phase1

As Is to 1 QFD Matrix		activity										
Stakehoders	Wants	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space
①Forestry Cooperative	Want wood to be used											
②Administration (Okutama)	Want wood to be used											
③Administration (Futakotamagawa)	Want to resident participated city-building											
④Schools	Want Tamagawa utilized education											
⑤TOKYU	CCrealized by BESis wanted		9			9		9			9	
⑥Creator	Want a creative job		1			9		9	9		1	
⑦Shopping District	Risecustomers to buy more											
⑧Customer	Want Futakotamagawa originality		1			9		9	9		1	
⑨Tenant	Want a lot of people to come and buy		1			9		9	9		9	
Reration		①&②	①&⑤	③&⑤	④&⑤	⑤&⑥	⑤&⑦	⑤&⑧	⑤&⑨	⑦&⑧	⑧&⑨	③&⑤
Total of point			12	0	0	36	0	36	27	0	20	0
Relative importance		0.00	0.06	0.00	0.00	0.17	0.00	0.17	0.13	0.00	0.10	0.00

Stakehoders	Wants	Contribute to Environment	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city
①Forestry Cooperative	Want wood to be used										
②Administration (Okutama)	Want wood to be used										
③Administration (Futakotamagawa)	Want to resident participated city-building										
④Schools	Want Tamagawa utilized education										
⑤TOKYU	CCrealized by BESis wanted		9	9	9						
⑥Creator	Want a creative job		3	3	3						
⑦Shopping District	Risecustomers to buy more										
⑧Customer	Want Futakotamagawa originality			9	3						
⑨Tenant	Want a lot of people to come and buy		9	9	9						
Reration		①&⑤	⑤&⑧	⑤&⑧	⑤&⑧	⑤&⑦	⑤& ⑧	①&⑤	all	all	all
Total of point		0	21	30	24	0	0	0	0	0	0
Relative importance		0.00	0.10	0.15	0.12	0.00	0.00	0.00	0.00	0.00	0.00

From Table 11, what type of activity is important to satisfy the requirement of the stakeholder is observed. "Send out information of RISE", "Design original goods" and so on are important.

Table 12.QFD2.Phase1

Activity	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Inclea sing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space	
Relative Importance	0.00	0.00	0.00	0.00	0.00	0.27	0.18	0.00	0.18	0.06	0.00	
Tour contents	0.00	0.00	0.00	0.00	0.00	2.45	0.00	0.00	0.00	0.00	0.00	
LBS	0.00	0.00	0.00	0.00	0.00	2.45	1.64	0.00	1.64	0.00	0.00	
Wood	0.00	0.00	0.00	0.00	0.00	0.82	1.64	0.00	0.55	0.00	0.00	
Gift & Point	0.00	0.00	0.00	0.00	0.00	0.27	0.55	0.00	0.18	0.00	0.00	
Digital Signage	0.00	0.00	0.00	0.00	0.00	0.27	0.55	0.00	0.18	0.00	0.00	
Activity	Contribute to Environment	Let to recognize LBS tree	implement wood working tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city	Point	Relative importance
Relative Importance	0.00	0.18	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	140	19.73
Tour contents	0.00	0.55	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	3.55	0.18
LBS	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.36	0.37
Wood	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	3.55	0.18
Gift & Point	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	0.13
Digital Signage	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	0.13

From Table 12, what Physical structure is important to realize the activity is observed. It is clear that Gift & Point is important.

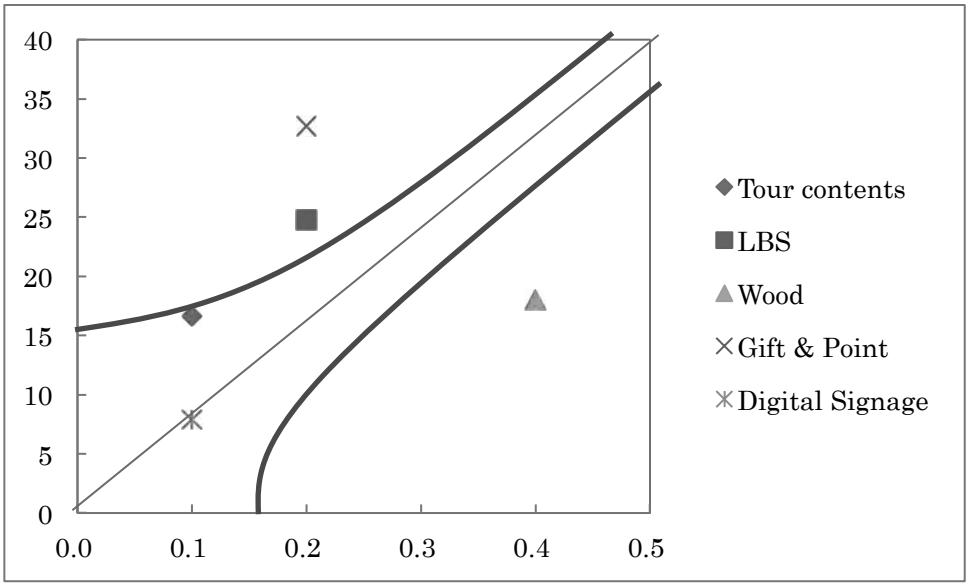

Figure 24.CWA.Phase1

Figure 24 describes the ratio of Relative Worth to Relative Cost in Phase 1. It also shows that the Digital Signage is appropriate.

4.11.2 Phase 2

Table 13.QFD1.Phase2

Phase 1 to 2 QFD Matrix		activity									
Stakehoders	Wants	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space
①Forestry Cooperative	Want wood to be used											
②Administration (Okutama)	Want wood to be used											
③Administration (Futakotamagawa)	Want to resident participated city-building											
④Schools	Want Tamagawa utilized education											
⑤TOKYU	Want LBS used by many people in city		9			9		9			9	
⑥Creator	Want LBS used by many people		1			9		9	9		1	
⑦Shopping District	Risecustomers to buy more											
⑧Customer	Want Futakotamagawa originality		1			9		9	9		1	
⑨Tenant	Want a lot of people to come and buy		1			9		9	9		9	
Reration		①&②	①&⑤	③&⑤	④&⑤	⑤&⑥	⑤&⑦	⑤&⑧	⑤&⑨	⑦&⑧	⑧&⑨	③&⑤
Total of point			12	0	0	36	0	36	27	0	20	0
Relative importance		0.00	0.06	0.00	0.00	0.17	0.00	0.17	0.13	0.00	0.10	0.00

Stakehoders	Wants	Contribute to Environment	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city
①Forestry Cooperative	Want wood to be used										
②Administration (Okutama)	Want wood to be used										
③Administration (Futakotamagawa)	Want to resident participated city-building										
④Schools	Want Tamagawa utilized education										
⑤TOKYU	Want LBS used by many people in city		9	9	9						
⑥Creator	Want LBS used by many people		3	3	3						
⑦Shopping District	Risecustomers to buy more										
⑧Customer	Want Futakotamagawa originality			9	3						
⑨Tenant	Want a lot of people to come and buy		9	9	9						
Reration		①&⑤	⑤&⑧	⑤&⑧	⑤&⑧	⑤&⑦	⑤& ⑧	①&⑤	all	all	all
Total of point		0	21	30	24	0	0	0	0	0	0
Relative importance		0.00	0.10	0.15	0.12	0.00	0.00	0.00	0.00	0.00	0.00

It is clear that “Send out information of shopping districts”, “Increasing floating population”, etc. are important from Table 13.

Table 14.QFD2.Phase2

Activity	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space	
Relative Importance	0.00	0.00	0.00	0.00	0.00	0.27	0.18	0.00	0.18	0.06	0.00	
Tour contents	0.00	0.00	0.00	0.00	0.00	2.45	0.00	0.00	0.00	0.00	0.00	
LBS	0.00	0.00	0.00	0.00	0.00	2.45	1.64	0.00	1.64	0.00	0.00	
Wood	0.00	0.00	0.00	0.00	0.00	0.82	1.64	0.00	0.55	0.00	0.00	
Gift & Point	0.00	0.00	0.00	0.00	0.00	0.27	0.55	0.00	0.18	0.00	0.00	
Digital Signage	0.00	0.00	0.00	0.00	0.00	0.27	0.55	0.00	0.18	0.00	0.00	
Activity	Contribute to Environment	Let to recognize LBS tree	implement wood working tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city	Point	Relative importance
Relative Importance	0.00	0.18	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	140	19.73
Tour contents	0.00	0.55	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	3.55	0.18
LBS	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.36	0.37
Wood	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	3.55	0.18
Gift & Point	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	0.13
Digital Signage	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	0.13

It is clear that LBS is important from Table 14.

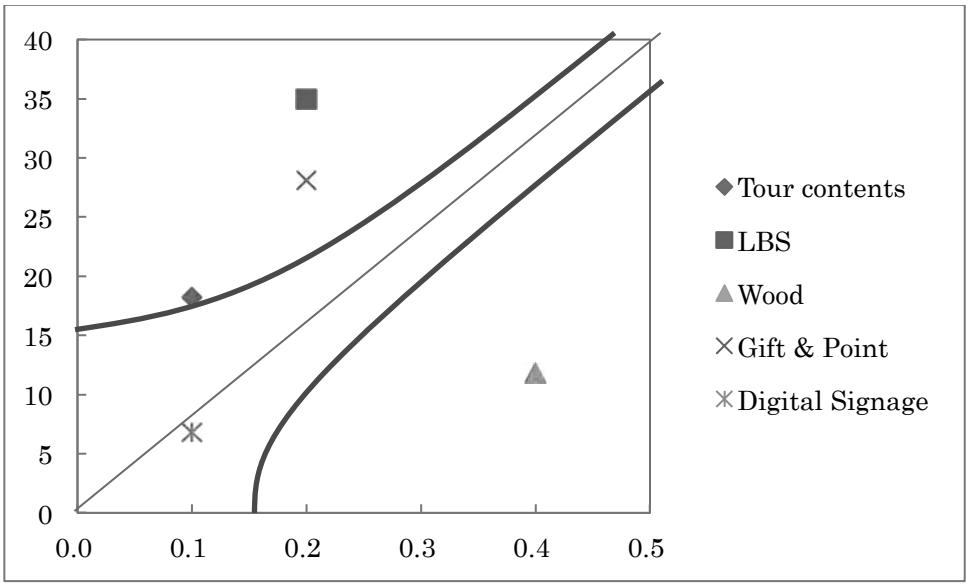

Figure 25.CWA.Phase2

Figure 25 describes the ratio of Relative Worth to Relative Cost in Phase 2. It also shows that the Digital Signage is appropriate.

4.11.3 Phase 3

Table 15.QFD1.Phase3

Phase 2 to 3 QFD Matrix		activity										
Stakeholders	Wants	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space
①Forestry Cooperative	Want wood to be used, convey the village charm											
②Administration (Okutama)	Want wood to be used											
③Administration (Futakotamagawa)	Want to resident participated city-building											
④Schools	Want Tamagawa utilized education											
⑤TOKYU	Want to improve convenience by tightening relations		9			9		9			9	
⑥Creator	Want LBS used by many people		1			9		9	9		1	
⑦Shopping District	Risecustomers to buy more											
⑧Customer	Want Futakotamagawa originality		1			9		9	9		1	
⑨Tenant	Want customers from multiplier effect with shopping district		1			9		9	9		9	
Reration		①&②	①&⑤	③&⑤	④&⑤	⑤&⑥	⑤&⑦	⑤&⑧	⑤&⑨	⑦&⑧	⑧&⑨	③&⑤
Total of point			12	0	0	36	0	36	27	0	20	0
Relative importance		0.00	0.06	0.00	0.00	0.17	0.00	0.17	0.13	0.00	0.10	0.00

Stakeholders	Wants	Contribute to Environment	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city
①Forestry Cooperative	Want wood to be used, convey the village charm										
②Administration (Okutama)	Want wood to be used										
③Administration (Futakotamagawa)	Want to resident participated city-building										
④Schools	Want Tamagawa utilized education										
⑤TOKYU	Want to improve convenience by tightening relations		9	9	9						
⑥Creator	Want LBS used by many people		3	3	3						
⑦Shopping District	Risecustomers to buy more										
⑧Customer	Want Futakotamagawa originality			9	3						
⑨Tenant	Want customers from multiplier effect with shopping district		9	9	9						
Reration		①&⑤	⑤&⑧	⑤&⑧	⑤&⑧	⑤&⑦	⑤& ⑧	①&⑤	all	all	all
Total of point		0	21	30	24	0	0	0	0	0	0
Relative importance		0.00	0.10	0.15	0.12	0.00	0.00	0.00	0.00	0.00	0.00

Table 16.QFD2.Phase3

Activity	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space	
Relative Importance	0.00	0.18	0.00	0.00	0.07	0.00	0.06	0.05	0.00	0.01	0.00	
Tour contents	0.00	1.66	0.00	0.00	0.07	0.00	0.00	0.05	0.00	0.00	0.00	
LBS	0.00	0.55	0.00	0.00	0.00	0.00	0.55	0.47	0.00	0.00	0.00	
Wood	0.00	1.66	0.00	0.00	0.64	0.00	0.55	0.00	0.00	0.00	0.00	
Gift & Point	0.00	1.66	0.00	0.00	0.64	0.00	0.55	0.00	0.00	0.13	0.00	
Digital Signage	0.00	0.18	0.00	0.00	0.00	0.00	0.18	0.16	0.00	0.00	0.00	
Activity	Contribute to Environment	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	g natural in the city	Point	Relative importance
Relative Importance	0.00	0.06	0.08	0.08	0.17	0.06	0.16	0.00	0.00	0.00	235	22.51
Tour contents	0.00	0.18	0.76	0.76	0.52	0.51	1.40	0.00	0.00	0.00	5.92	0.26
LBS	0.00	0.55	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	2.65	0.12
Wood	0.00	0.00	0.76	0.76	0.00	0.51	0.00	0.00	0.00	0.00	4.88	0.22
Gift & Point	0.00	0.00	0.76	0.76	1.57	0.17	1.40	0.00	0.00	0.00	7.64	0.34
Digital Signage	0.00	0.55	0.00	0.00	0.17	0.17	0.00	0.00	0.00	0.00	1.42	0.06

It is clear that Gift & Point and Wood are important from Table 16.

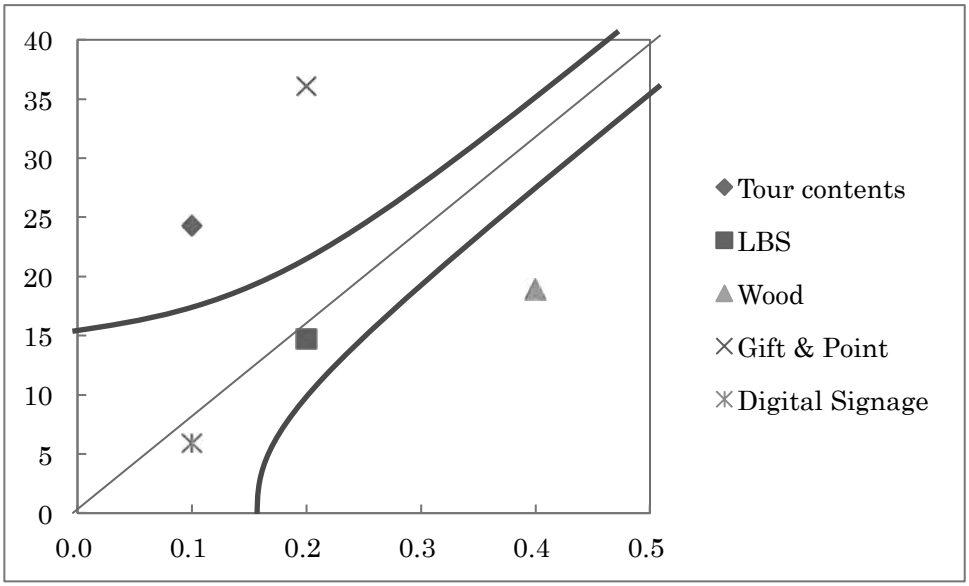

Figure 26.CWA.Phase3

Figure 26 describes the ratio of Relative Worth to Relative Cost in Phase 3. It also shows that the Digital Signage and LBS is appropriate.

4.11.4 Phase 4

Table 17.QFD1.Phase4

Phase 3 to 4 QFD Matrix		activity										
Stakehoders	Wants	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space
①Forestry Cooperative	Want wood to be used, convey the village charm											
②Administration (Okutama)	Want wood to be used											
③Administration (Futakotamagawa)	Want to resident participated city-building											
④Schools	Want Tamagawa utilized education											
⑤TOKYU	Want to realize resident participated CC Want to preserve Tamagawa, use wood		9			9		9			9	
⑥Creator	Want LBS used by many people		1			9		9	9		1	
⑦Shopping District	Risecustomers to buy more											
⑧Customer	Want Futakotamagawa originality		1			9		9	9		1	
⑨Tenant	Want customers from multiplier effect with shopping district		1			9		9	9		9	
Reration		①&②	①&⑤	③&⑤	④&⑤	⑤&⑥	⑤&⑦	⑤&⑧	⑤&⑨	⑦&⑧	⑧&⑨	③&⑤
Total of point			12	0	0	36	0	36	27	0	20	0
Relative importance		0.00	0.06	0.00	0.00	0.17	0.00	0.17	0.13	0.00	0.10	0.00

Stakehoders	Wants	Contribute to Environment	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city
①Forestry Cooperative	Want wood to be used, convey the village charm										
②Administration (Okutama)	Want wood to be used										
③Administration (Futakotamagawa)	Want to resident participated city-building										
④Schools	Want Tamagawa utilized education										
⑤TOKYU	Want to realize resident participated CC Want to preserve Tamagawa, use wood		9	9	9						
⑥Creator	Want LBS used by many people		3	3	3						
⑦Shopping District	Risecustomers to buy more										
⑧Customer	Want Futakotamagawa originality			9	3						
⑨Tenant	Want customers from multiplier effect with shopping district		9	9	9						
Reration		①&⑤	⑤&⑧	⑤&⑧	⑤&⑧	⑤&⑦	⑤& ⑧	①&⑤	all	all	all
Total of point		0	21	30	24	0	0	0	0	0	0
Relative importance		0.00	0.10	0.15	0.12	0.00	0.00	0.00	0.00	0.00	0.00

It is clear that that “Connect people each other”, “Feeling natural in the city”, etc. are important from Table 17.

Table 18.QFD2.Phase4

Activity	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Send out information of shopping district	Give gift and point	Establish Creative Space	
Relative Importance	0.04	0.04	0.08	0.05	0.04	0.05	0.02	0.02	0.03	0.03	0.10	
Tour contents	0.11	0.36	0.24	0.46	0.13	0.48	0.00	0.02	0.00	0.00	0.86	
LBS	0.00	0.12	0.71	0.05	0.00	0.48	0.20	0.18	0.29	0.00	0.29	
Wood	0.32	0.36	0.71	0.46	0.13	0.16	0.20	0.00	0.10	0.00	0.86	
Gift & Point	0.00	0.36	0.24	0.05	0.39	0.48	0.20	0.00	0.29	0.27	0.29	
Digital Signage	0.00	0.04	0.08	0.05	0.13	0.05	0.07	0.06	0.03	0.00	0.29	
Activity	Contribute to Environment	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city	Point	Relative importance
Relative Importance	0.08	0.02	0.10	0.01	0.01	0.03	0.02	0.09	0.09	0.06	452	22.29
Tour contents	0.24	0.06	0.86	0.07	0.04	0.25	0.21	0.80	0.27	0.50	5.94	0.26
LBS	0.00	0.18	0.00	0.00	0.04	0.00	0.00	0.80	0.27	0.17	3.76	0.17
Wood	0.71	0.00	0.86	0.07	0.00	0.25	0.00	0.27	0.80	0.50	6.75	0.30
Gift & Point	0.24	0.00	0.86	0.07	0.11	0.08	0.21	0.27	0.09	0.06	4.53	0.20
Digital Signage	0.00	0.18	0.00	0.00	0.01	0.08	0.00	0.09	0.09	0.06	1.30	0.06

It is clear that Tour contents and Wood are important from Table 18.

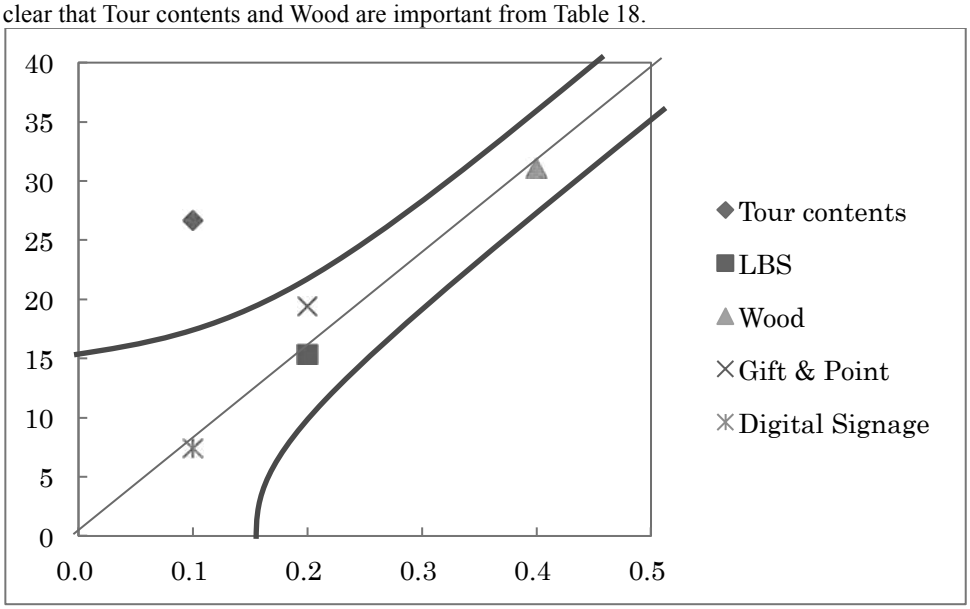

Figure 27.CWA.Phase4

Figure 27 describes the ratio of Relative Worth to Relative Cost in Phase 4. It also shows that all physical structure except Tour contents is appropriate.

4.11.5 Phase Goal

Table 19.QFD1.Phase Goal

Phase 4 to GOAL QFD Matrix		activity											
Stakehoders	Wants	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Innovation occurs almost permanently	Create new business	Establish Creative Space	Contribute to Environment
①Forestry Cooperative	Want wood to be used, convey the village charm	9	9	3	3		3			9	9	9	9
②Administration (Okutama)	Want wood to be used	9	9	3						3	3	3	9
③Administration (Futakotamagawa)	Want to resident participated city-building					1	1		1	9	9		
④Schools	Want to design city Want Tamagawa utilized education			3		3		1	1	9	9		
⑤TOKYU	Want to satisfy demand and realize CC	3	3		3	1				9	9		
⑥Creator	Want LBS used by many people			9	1	3				9	9		
⑦Shopping District	Risecustomers to buy more	1				1				9	9		
⑧Customer	Want Futakotamagawa originality	3				1	1			9	9		
⑨Tenant	Want customers from multiplier effect with shopping district	1		1		1				9	9		
Reration		①&②	①&③	③&⑤	④&⑤	⑤&⑥	⑤&⑦	⑤&⑧	⑤&⑨			③&⑤	①&⑤
Total of point		26	21	19	7	11	5	1	2	75	75	12	18
Relative importance		0.04	0.03	0.03	0.01	0.02	0.01	0.00	0.00	0.12	0.12	0.02	0.03
Stakehoders	Wants	Let to recognize LBS tree	implement woodworking tour	Change point for Gift	Inviting for catering store	Raise awareness of Hinohara	Provide food and water	Connect people each other	Creating Creativity	Feeling natural in the city	Industrial development carried out	Become sustainable system	Job creations in Futako-tamagawa
①Forestry Cooperative	Want wood to be used, convey the village charm	3	1	1		9	9	1	3		3	3	9
②Administration (Okutama)	Want wood to be used	1	1	1	1	3		1	3		9	3	3
③Administration (Futakotamagawa)	Want to resident participated city-building						1	9	9		9	9	9
④Schools	Want to design city Want Tamagawa utilized education	1		1	1		1	3	3		9		
⑤TOKYU	Want to satisfy demand and realize CC		1				3	9	3		9	9	9
⑥Creator	Want LBS used by many people	3			3	3		3	9	3	3	9	9
⑦Shopping District	Risecustomers to buy more	1	3	3			3	3	3		9	9	9
⑧Customer	Want Futakotamagawa originality	3	9	9	3		3	3	3		9	9	
⑨Tenant	Want customers from multiplier effect with shopping district	1	1	3	3	1	3	3	3		9	9	9
Reration		⑤&⑧	⑤&⑧	⑤&⑧	⑤&⑦	⑤& ⑧	①&⑤						
Total of point		13	16	18	11	16	23	35	39	3	69	60	57
Relative importance		0.02	0.03	0.03	0.02	0.03	0.04	0.06	0.06	0.00	0.11	0.09	0.09

It is clear that that “Innovation occurs almost permanently”, “Industrial development carried out”, etc. are important from Table 19.

Table 20.QFD2.Phase Goal

Activity	Build a system consuming wood	Create demands of wood	Build Creative city with citizen participation	Training to utilize the Tama River	Design original goods	Incleasing floating population	To create attracting customers	Send out information of RISE	Innovation occurs almost permanently	Create new business	Establish Creative Space	Contribute to Environment	Let to recognize LBS tree
Relative Importance	0.04	0.03	0.03	0.01	0.02	0.01	0.00	0.00	0.12	0.12	0.02	0.03	0.02
Tour contents	0.12	0.30	0.09	0.10	0.02	0.07	0.00	0.00	1.07	1.07	0.17	0.09	0.06
LBS	0.00	0.10	0.27	0.01	0.00	0.07	0.01	0.03	1.07	1.07	0.06	0.00	0.19
Wood	0.37	0.30	0.27	0.10	0.16	0.02	0.01	0.00	1.07	1.07	0.17	0.26	0.00
Gift & Point	0.00	0.30	0.09	0.01	0.16	0.07	0.01	0.00	1.07	1.07	0.06	0.09	0.00
Digital Signage	0.00	0.03	0.03	0.01	0.00	0.01	0.00	0.01	0.36	1.07	0.06	0.00	0.19
Activity	implement wood workin	Change point for	Inviting for catering	Raise awareness of	Provide food and water	Connect people each	Creating Creativity	Feeling natural in	Industrial development	Become sustainable	Job creations in Futak	Point	Relative importance
Relative Importance	0.03	0.03	0.02	0.03	0.04	0.06	0.06	0.00	0.11	0.09	0.09	623	31.58
Tour contents	0.23	0.26	0.05	0.23	0.33	0.50	0.19	0.04	0.98	0.28	0.81	7.06	0.31
LBS	0.00	0.00	0.05	0.00	0.00	0.50	0.19	0.01	0.98	0.85	0.81	6.27	0.28
Wood	0.23	0.26	0.00	0.23	0.00	0.17	0.56	0.04	0.98	0.28	0.81	7.35	0.33
Gift & Point	0.23	0.26	0.16	0.08	0.33	0.17	0.06	0.00	0.98	0.85	0.81	6.85	0.30
Digital Signage	0.00	0.00	0.02	0.08	0.00	0.06	0.06	0.00	0.98	0.28	0.81	4.06	0.18

It is clear that Tour contents, Gift & Point, Wood and LBS are important from Table 20.

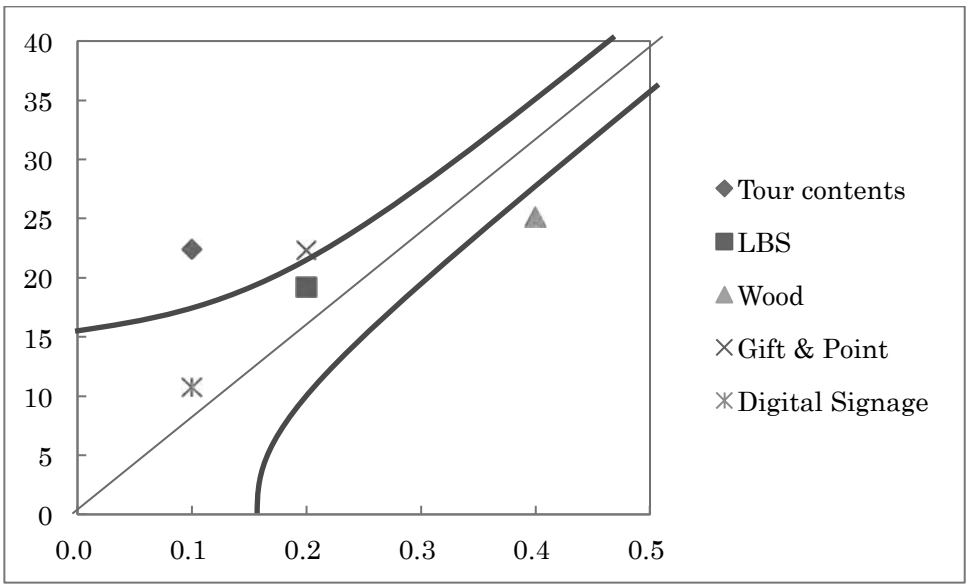

Figure 28.CWA.Phase Goal

Figure 28 describes the ratio of Relative Worth to Relative Cost in Phase Goal. It shows that the number of physical structure has decreased.

4.12 Requirement Analysis

We successfully obtained specific wants by processing Voice of Customers into Requirement Analysis. Regarding the results, we found out that satisfying the concept in a single time is very difficult, and were necessary to divide them into several phases. That output of this analysis is used in all over like Voice of Stakeholder, and Wants. Also this table is used for validation.(※ Written in Appendix 2 - 14)

4.13 DSA

Constructing an analysis cycle from the outputs of 4.7 – 4.11, the stakeholder's role, wants, and value for each phase in a time series are visualized. From this analysis, we think we proposed a dynamic analysis of CVCA, WCA, Value Graph, and QFD in time series.

4.13.1 Overview

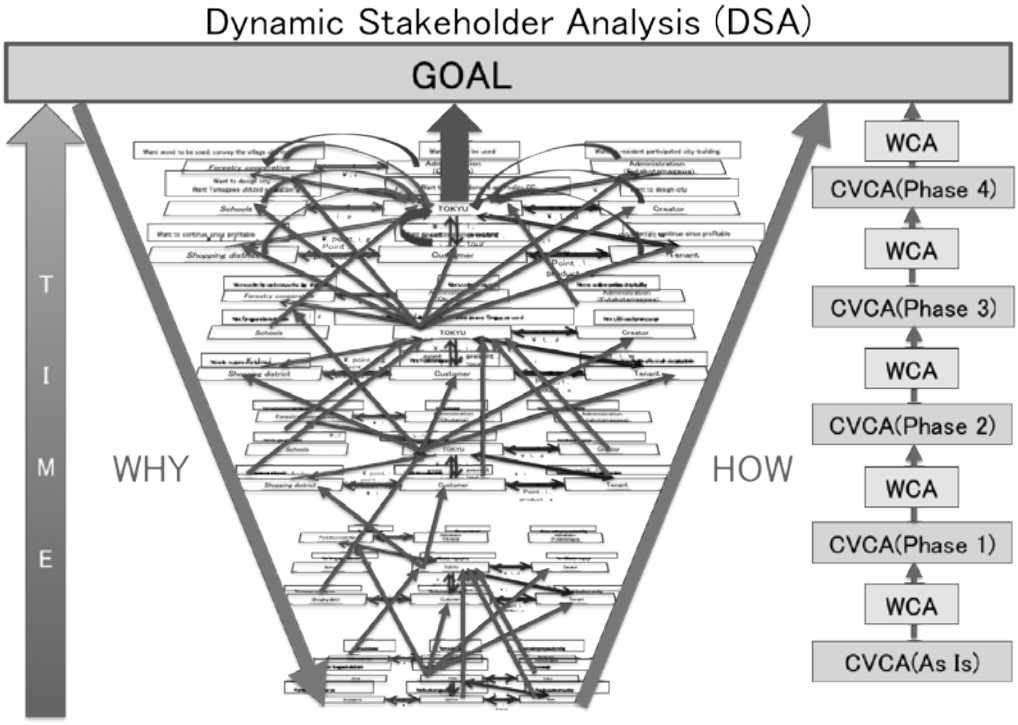

Figure 29.Dynamic Stakeholder Analysis (DSA)

4.13.2 Cycle Method

Figure 30 shows the connection to next phase's CVCA and WCA from current CVCA.

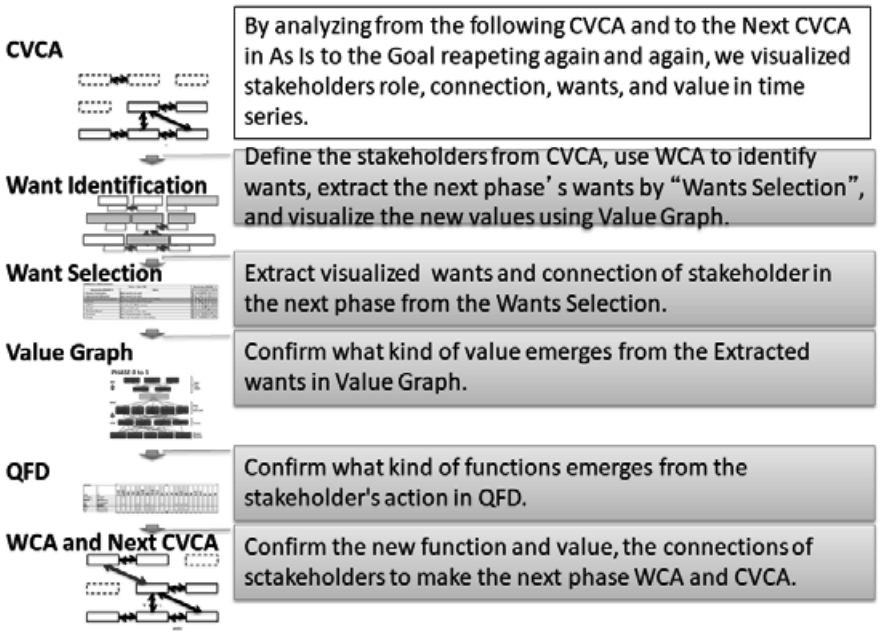

Figure 30.DSA.Cycle Method

4.13.3 As Is to Phase 1

The follow statements describe how to look DSA diagrams.

- The left boxes display the phase.
- The bottom figure represents current CVCA. The stakeholder enclosed in dotted box represents the stakeholder that has no connection with other stakeholders.
- The boxes above the CVCA represent stakeholders' wants. Colored boxes represent that the subject of needs is the stakeholder's own. On the other hand, white boxes with colored outline represent that the subject of needs is someone else. Red color represents that object of needs is the stakeholder's own whereas green color represents that object of needs is someone else.
- The red arrows represent the relationship between current stakeholder's wants and next stakeholders to satisfy
- The green arrows represent the relationship between current other stakeholder's wants and next stakeholders to satisfy.
- The top figure represents next phase's CVCA.

Analyzing by DSA, we confirmed that the new connection between Tokyu and Forestry cooperative is created based on the stakeholder's wants in the 'As Is' phase.

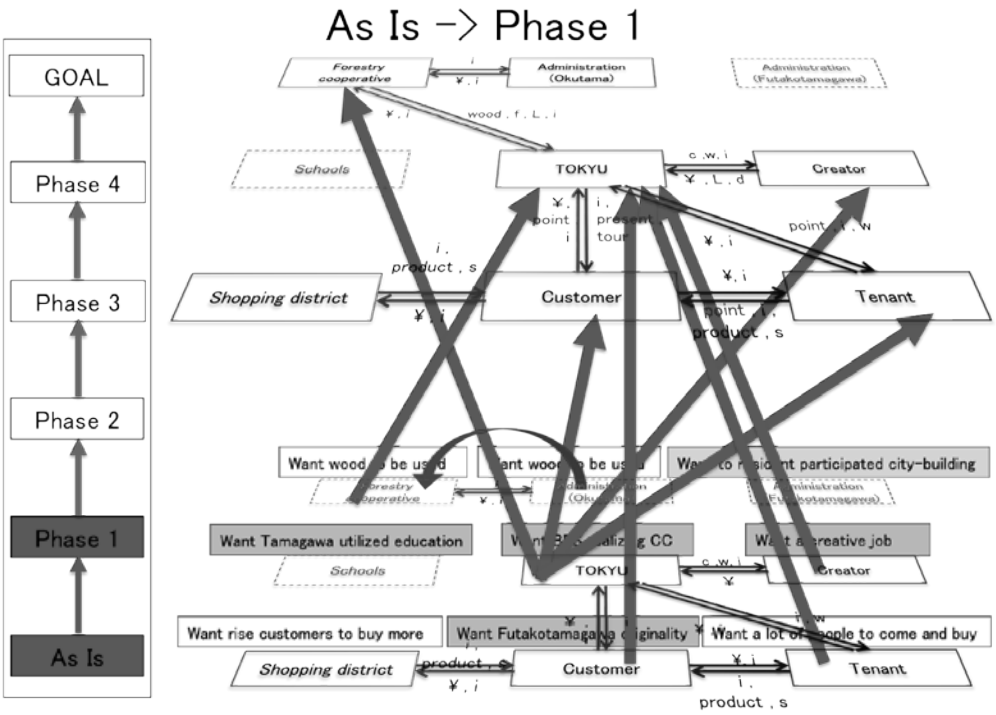

Figure 31.DSA.As Is to Phase 1

4.13.4 Phase 1 to Phase 2

In phase 2, we can see that the boundary of the Business-Eco System has expanded to the shopping district based on the stakeholder's wants in the phase 1.

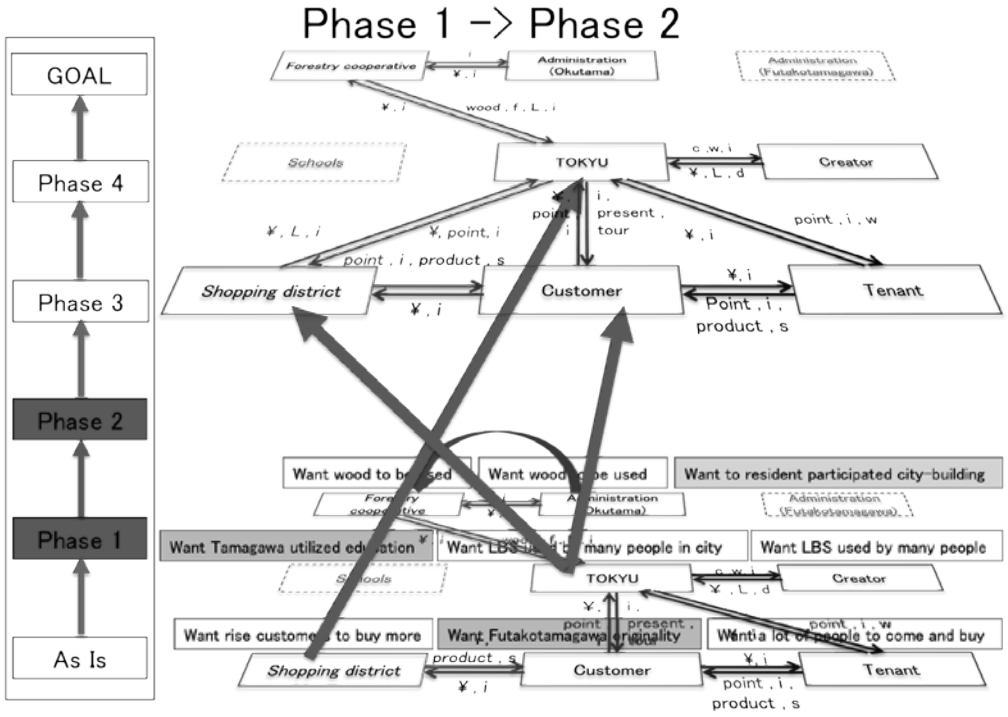

Figure 32.DSA.Phase 1 to Phase 2

4.13.5 Phase 2 to Phase 3

In phase 3, we can see that the new commercial form like catering store at Galleria is generated based on the stakeholder's wants in the phase 2.

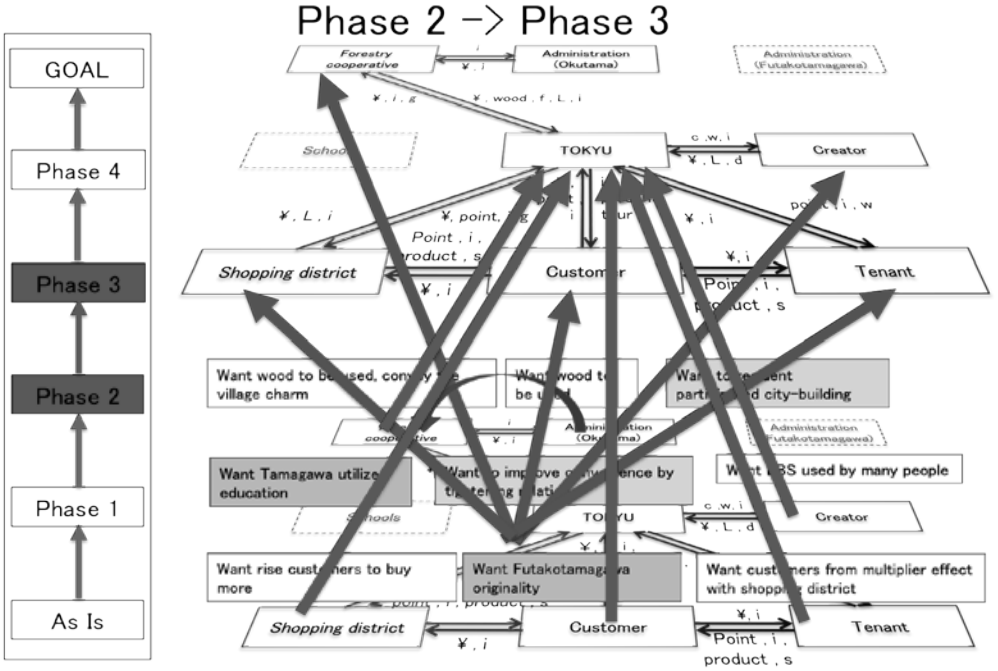

Figure 33.DSA.Phase 2 to Phase 3

4.13.6 Phase 3 to Phase 4

In the phase 4, we can see that the Business-Eco System is expanded throughout the entire city and Tokyu is connected to administration and schools at Futakotamagawa based on the stakeholder's wants in the phase 3.

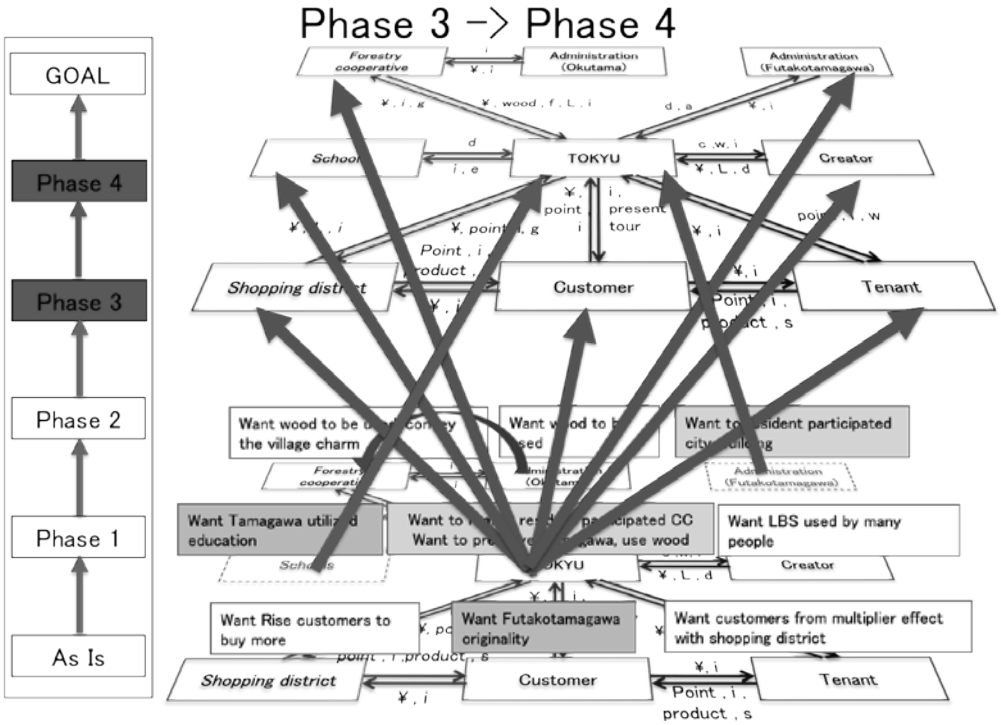

Figure 34.DSA.Phase 3 to Phase 4

4.13.7 Phase 4 to Goal

In the GOAL, we can see that Tokyu becomes the center of the stakeholders and facilitator of the Creative City based on the stakeholder's wants in the phase 4. By this, the Business-Eco System circulates sustainably and the values mentioned in the following are created.

- Can feel rich mother nature in the city
- Preserving Tama-river by CSR investment
- Actuating CRM by Location-Based Service
- People gathering to "Creative Spot", and communication arise
- Elementry students, residents, designers, creates the city actively
- Employment grow
- Education of Tama-river penetrates
- Shopping district's publicity increases
- Increase Futakotamagawa attractivness

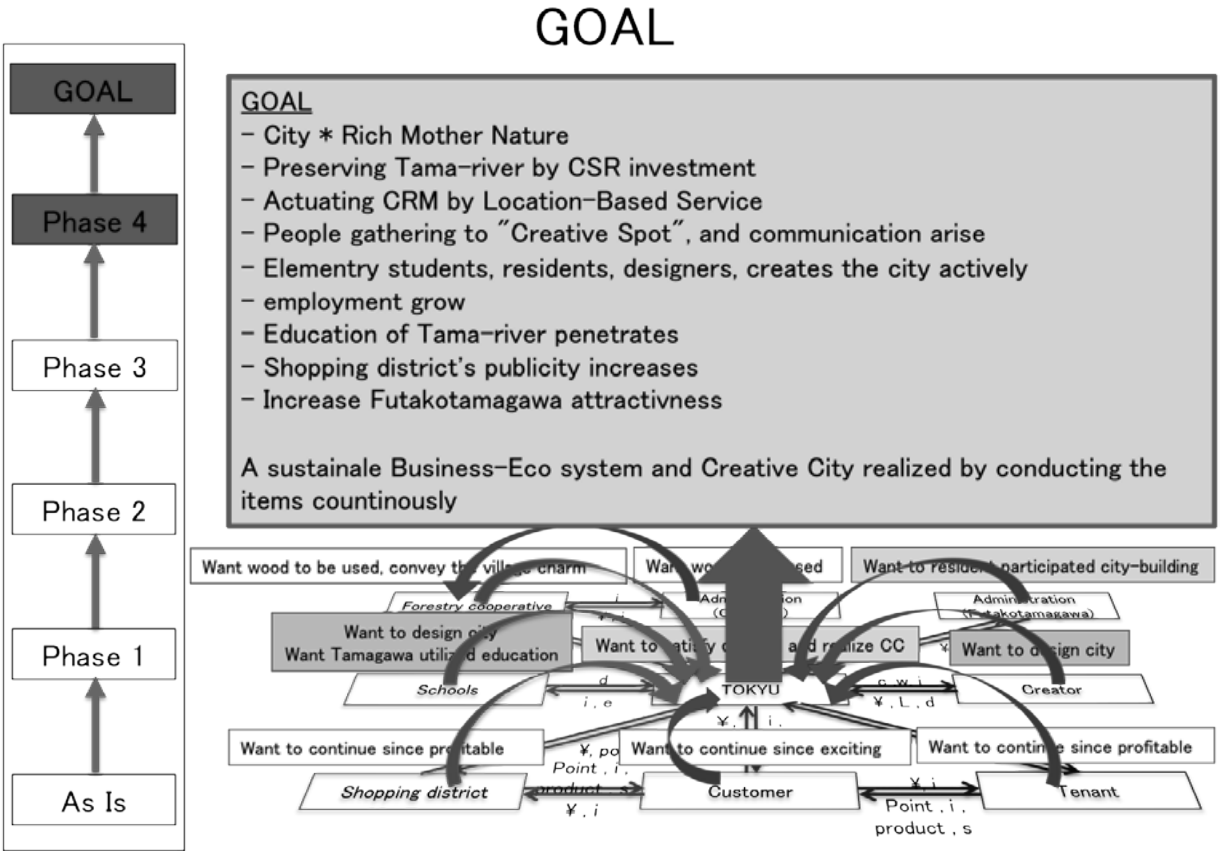

Figure 35.DSA.Phase 4 to Goal

4.14 FMEA

FMEA stands for Failure Mode and Effect Analysis, also known as FMECA (Failure Mode and Effects, and Criticality Analysis). FMEA and FMECA are not the same, as you can see from the definition of FMECA: "FMECA indicates that potential failures may occur that either: cannot be removed through re-design but can be avoided through preventive maintenance; or have a non-critical impact and therefore can be allowed to occur, with subsequent rectification through corrective maintenance" (Haskins, 2011). The field of reliability would be verified through clearness of functions, and how they could fail, and the possible causes for each failure and its effect to the whole system. Regarding the FMEA, what is important here is to determine

To develop this idea, we preformed this in each scenario graph result (Annex 1.Result of Scenario Graph) to check the reliability considering the function, failure mode, cause of failure, effect of failure and action to correct.

Although, regarding the results, for the scenarios we preformed, No.1 and No.5 came up with clear and critical failures. Mainly the failure came from relying to the technology, full with failure model. This first helped to overcome the idea of thinking somewhat future-like city as Creative City. For the other scenario, we found out a lot of failure mode to understand what was wrong and would be needed to be fixed in going on with those scenarios. Especially the importance to sustain originality was crucial, since the idea's we constructed were basically based on some reference that has already been performed. Not just coming to think a new solution, it took us back to reconsider what is the significant requirement. Regarding the result, trying to exclude the factors and function from the brainstorming, we were able to reconstruct a new scenario based on the new idea focusing on Business-Eco system.

4.15 Scenario Prototyping Rapidly

This section explains the movie of scenario prototyping rapidly. This movie showed 6 things.

(i) To information collected by Location Based Service in Futakotamagawa
(ii) To tackle environmental conservation by Futakotamagawa and Okutama
(iii) To get original goods of Futakotamagawa
(iv) To be able to communicate with various people in the Creative Spot
(v) To evolve the Creative City sustainably

This movie content is convinced by proposer Tokyu Corporation. It was also found that our scenario was promoted in a way that meets the proposal requirements.

4.16 OPM

Object-Process Methodology (OPM) is a holistic, integrated approach to the study and development of systems in general and information systems in particular (Siddiqi, 2011). As you can see from the model name, the model indicates the connection of objects and processes. We used OPM to determine the weakness from the results of each scenario graph (Annex 1.Result of Scenario Graph) regarding the To By Using method. Since our final solution did not come out as a product or an object, we used OPM for previous solutions we came up that were clearly objects. An example of OPM is shown in the Figure 36 indicates one of the products that would be used in the No.1 scenario.

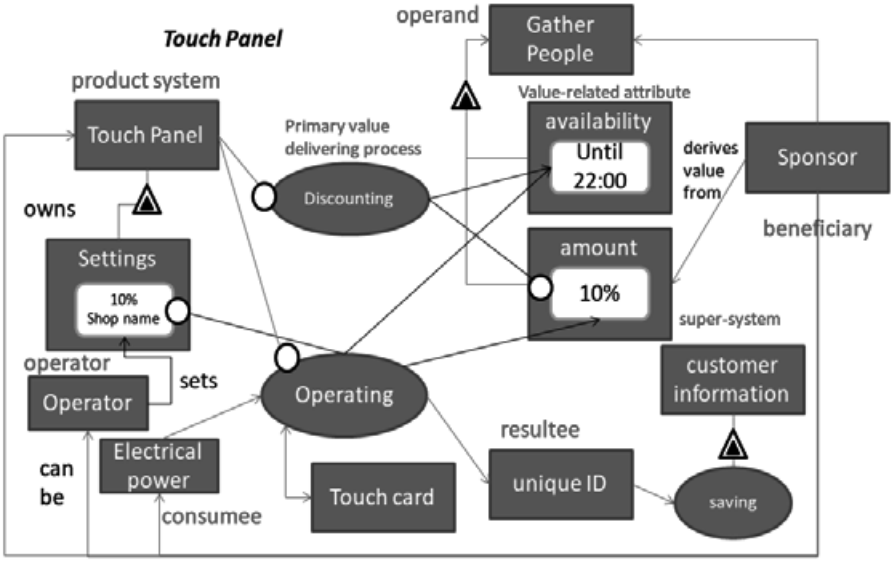

Figure 36.Sample of Object-Process Methodology level-0

Generally, from this we can clearly understand the object and process which goes on to check system function's design with QFD1.2 & Cost-Worth Diagram. However, by looking through we found out that operating this needs a lot of effort in current technology, which became a risk to achieve the main goals. Also the goal we could have achieved was only *Gather People*; we found out that using *Touch Panel* would not fulfill the other final goals. The calculations of the amount of satisfactions are calculated in the quality scorecarding.

4.17 Project Priority Matrix

Looking through from the center of the phase Tokyu Corporation, Project Priority Matrix is shown as Table 21.Project Priority Matrix.

Table 21.Project Priority Matrix

	Constrain	Optimeze	Accept
Feature	●		
Cost			●
Time		●	

In the vertical axis, “Feature” is described from number of customers from outside Futakotamagawa, LBS user, sales of each shop, and Tama made wood consumption. “Cost” describes the cost of system develop, maintenance, advertise, and wood expenditure. “Time” refers to the speed of market penetration. In our proposal the central stakeholder Tokyu Corporation is responsible for the initial cost (See also Pugh Concept Selection). So, the “Cost” priority becomes the least. Comparing “Feature” and “Time”, “Time” exists rather longer throughout the whole project which we think the priority not high as “Feature”. As a result, the priority order is “Feature”, “Time” and “Cost”.

4.18 Design Structure Matrix

We expressed the flow of the activities of phase 1 to phase 4 by using Design Structure Matrix. The activity A, B, C and D enclosed in red box are parallel processes. The activity I and J enclosed in green box are coupled processes. The activity A, B, C and D correspond to phase 1 whereas G to phase 2, H to phase 3 and I, J, K to phase 4. There are feedbacks in the end of each phase therefore the activities A to F are repeated as the phase is forwarded.

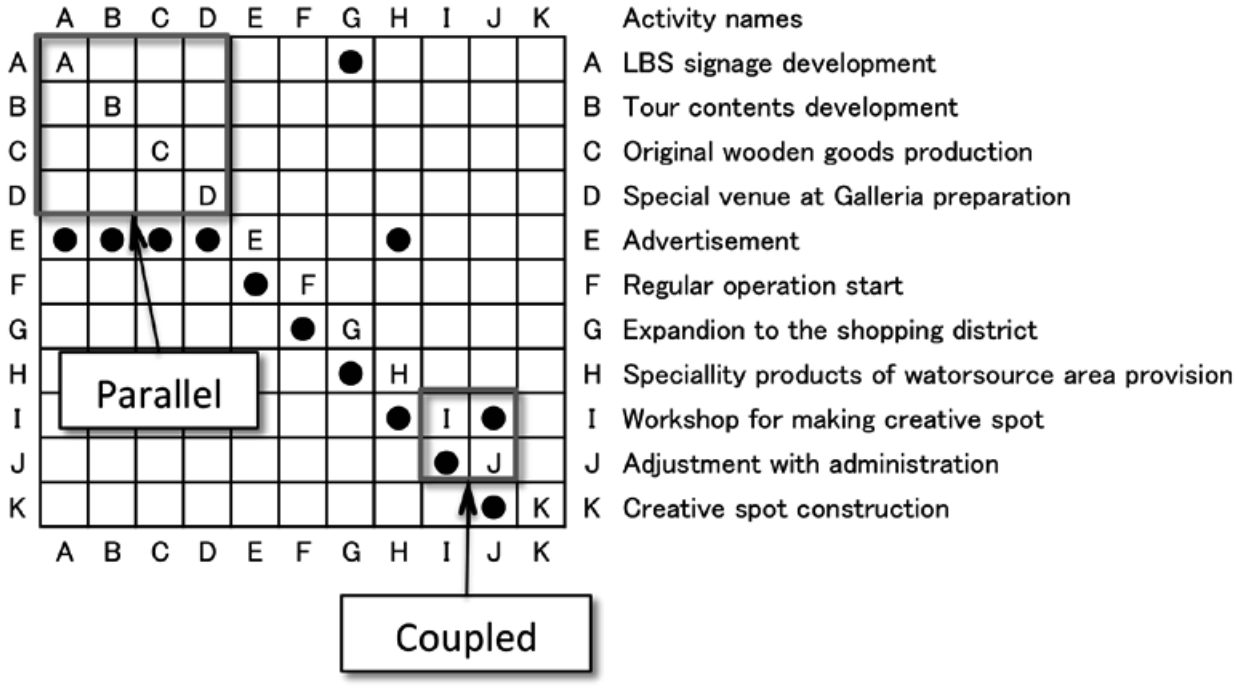

Figure 37.Design Structure Matrix

4.19 Quality Scorecarding

Quality Scorecarding is a tool to check if the model is satisfying the requirements and the goals. The equation of transfer function is described as Y=F(X, V). Project objective stands for the biggest Y, which is defined as a number to maximize. X stands for control factors and V for Noise. For big Y's there are many small y's which these describe the objective measures like system EM level. For Big X, there are also X's which indicates that there are multiple control factors (Kim, 2011).

In our group, we preformed this to see if the measures can actually maximize the project objective which is to realize Business-Eco System in Figure 38. The objective measures came from thinking how to make profit using touch panels, which the touch panel idea refers from the first interview and observation. Main components are specified through OPM, adding some information like to V to break OPM connections.

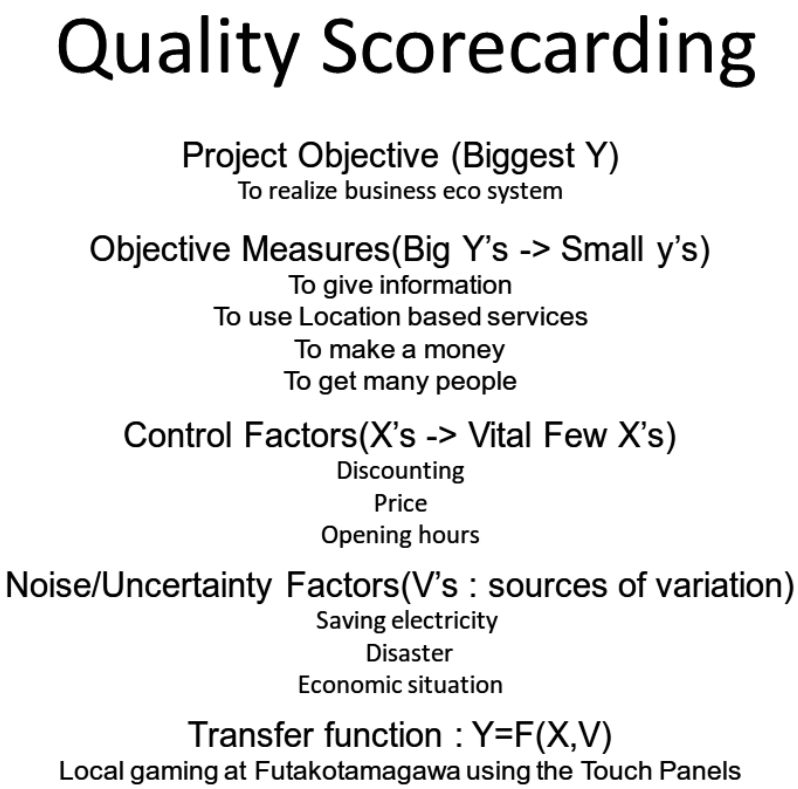

Figure 38.Quality Scorecarding

The results obtained from here helps to draw new CVCA while thinking through the CVCA which was in the basic concept when using this method. But since when we actually used this, we were pretty sure the basic direction to solve the whole problem was wrong, we nearly used this method to just clarify the transfer function will not work. We obtained that actually the "Local gaming at Futakotamagawa using the Touch Panels" was a mistake, not even satisfying to maximizing biggest Y.

4.20 Function-Structure Map

We used the Function-Structure Map to clarify and stratum the necessary functions for Business-Eco System. From the map, the function weight applied from QFD became clear and understandable.

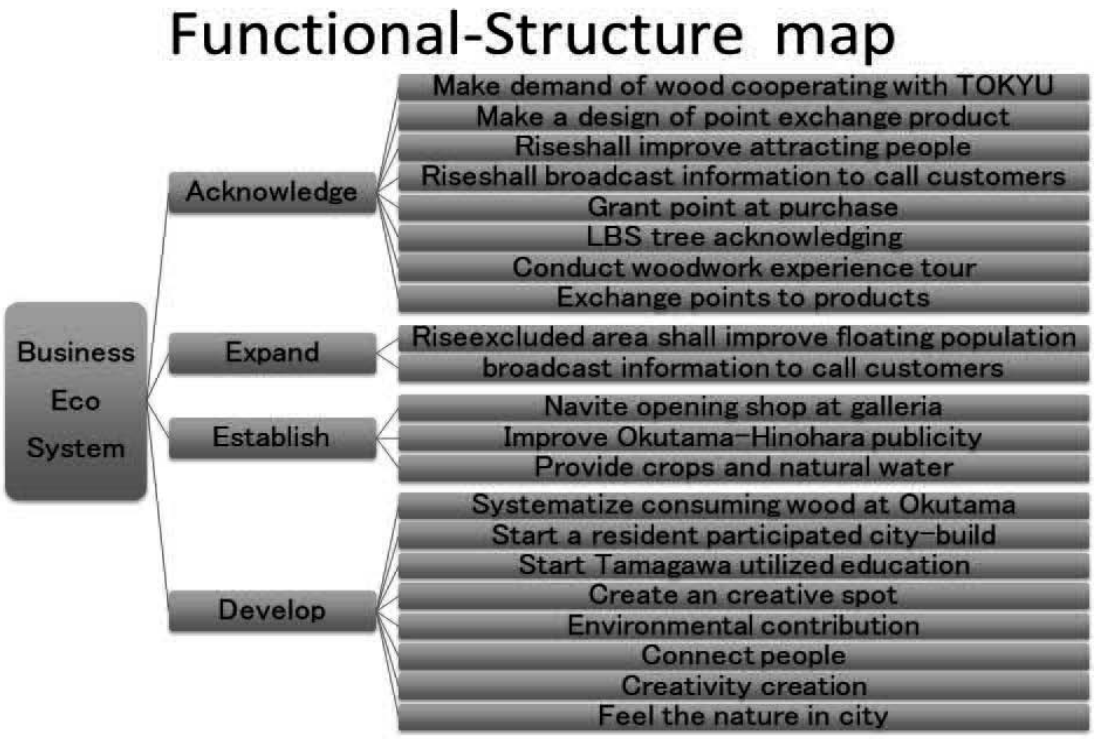

Figure 39.Functional-Structure map

4.21 Design for Variety

The Design of Variety method was unable to apply for our theme. This method analysis various subdivided design to determine the effective design but it was not applicable in an occasion in time series. Even though we could not completely adapt it, we partially used in a way to unify the variety and visualize in Pugh concept Selection.

4.22 Environmental Complexity/Recyclability

It is described in “4.21 DSA”.

4.23 Serviceability

The proposed system has various functions. The following shows the Service Matrix mainly woodworking experience as an example of its various services. Because woodworking has risk of injury, the service including that can handle the case.

4.24 Net Present Value Analysis

NPV predicts investment, costs, and costs, and represents the value of the project. Net Present Value (NPV) Analysis is described by the following formula.

$$\mathrm{NPV} = \sum_{i} \frac{Value_i}{(1+Rate)^i} \qquad \cdots\cdots(4.24\text{-}1)$$

$Rate$: Discount Rate

$Value_i$: Profit after i years

45

Table 22. Cash forecast (Unit: Thousand yen)

		Phase1	Phase2	Phase3	Phase4	Goal
A:Direct Costs	Labor cost	140,000	280,000	420,000	600,000	700,000
	Facilities and equipment	100,000	20,000	50,000	100,000	90,000
	Material	30,000	50,000	60,000	100,000	150,000
	Warranty	5,000	10,000	10,000	10,000	10,000
	Transportation	10,000	10,000	20,000	30,000	40,000
	Subcontracting cost	10,000	10,000	10,000	30,000	50,000
	Total	295,000	380,000	570,000	870,000	1,040,000
B:Overhead Cost	Labor cost	21,000	56,000	56,000	86,000	100,000
	Utility cost	5,000	5,000	5,000	5,000	5,000
	Communication cost	3,000	5,000	5,000	7,000	7,000
	Total	29,000	66,000	66,000	98,000	112,000
C:Inclusive Cost		324,000	446,000	636,000	968,000	1,152,000
D:Prediction of Sales		200,000	300,000	600,000	1,300,000	2,000,000
Income(Value):D-C		(124,000)	(146,000)	(36,000)	332,000	848,000

Table 23. NPV (Unit: Thousand yen)

E:Net Present Value(NPV)		NPV in each two years					Sum of NPV in decade
Discount Rate	5%	¥-118,095	¥-139,048	¥-34,286	¥316,190	¥807,619	¥832,381
	10%	¥-112,727	¥-132,727	¥-32,727	¥301,818	¥770,909	¥794,545

Profit will not be obtained immediately after introducing the services. However, continuing the services, it is estimated to obtain huge profit.

4.25 Mind Map

Figure 40 visualizes and shares ideas based on the interview and observation at Futakotamagawa. From this we overlooked the position of our solution in the overall elements at Futakotamagawa.

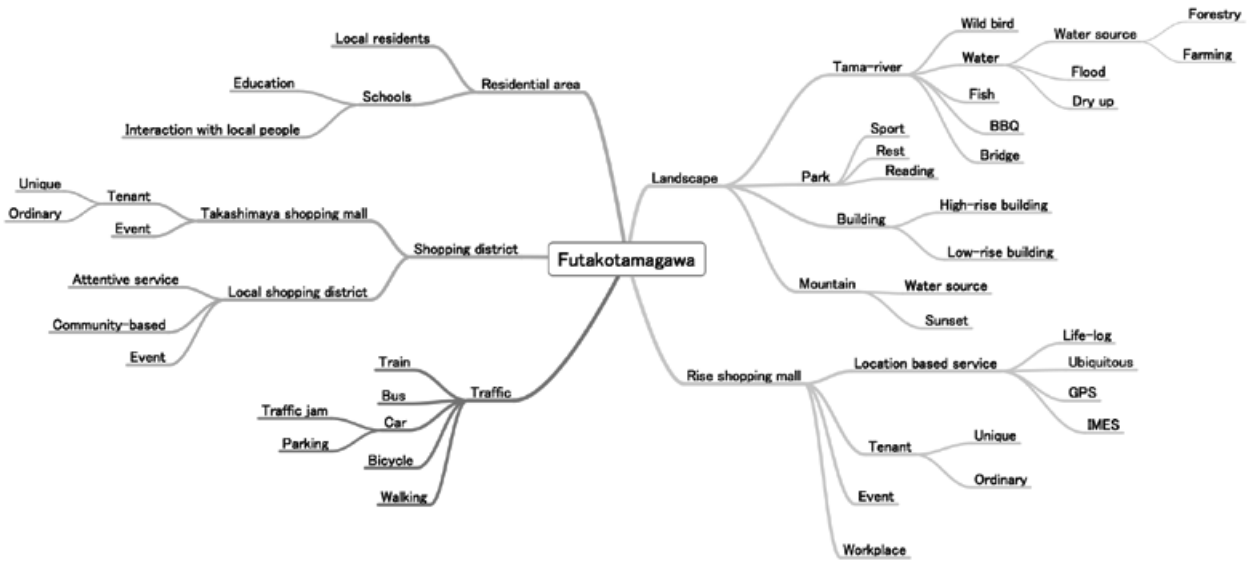

Figure 40.Mind Map

5. Design Recommendation

The Tama-river is one of the most important roles in the site view of Futakotamagawa, becoming like a monument. However its upper stream if formed by nearly 60% by Japanese cedar and Japanese cypress which is feared to become ruined because lack of domestic-wood demand. If the upper stream forest desolates, the risk of flood and exhaustion increases. So in order to avoid these risks, we aimed in constructing a Business-Eco System to realize Creative City by converting the weakness to strength. Futakotamagawa has a face of "Consumption City" its various consuming places like rise shopping mall. Therefore, we thought to enhance upper stream's wood demand in Futakotamagawa.

Regarding To By Using method, our proposal is divided into four phases. The specific explanation is as follows.

(i) Acknowledge

In phase 1, the Tama-made wood consumption and usage of LBS are linked inside the rise shopping mall. Consumer will obtain information through a tree interface like Figure 41. The roots of the trees refer to the galleria in rise shopping mall, the leaves as the tenants. The original design of the galleria comes from "Tama-river". On the other hand, the tree illustration indicates the trees in "Okutama" which is the upper stream water source of Tama-river. When the customer shops at rise, customers achieve points and the tree grows. This point is compatible with Tokyu cooperation's credit card named "TOP Card". By saving points at various shops, the interface shows some new features(Figure 41). The saved points can also be exchanged into co-lab designed original products like wooden study desk, wooden stationary, and wooden dishes. For these products, the materials all come from Okutama. At the galleria's event, customers can also experience wood-woks. It is also possible to go to an Okutama tour by using up the points. The advantages to the customers are information and points, which reflect the "Tree Growth". The advantages for tenants which is the customer movement, is visualized from the tree.

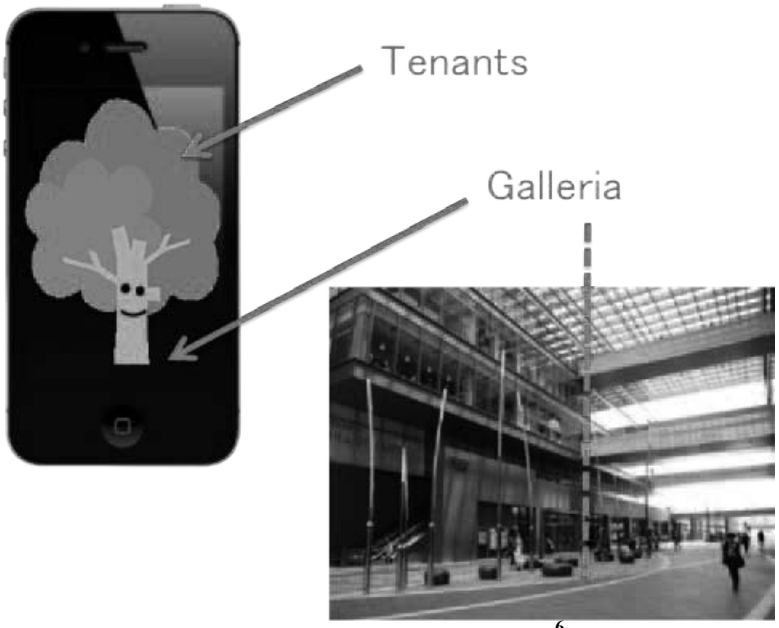

Figure 41.Linked tree and rise[6]

[6] http://www.wanpug.com/illust225.html

Figure 42.Sample of Tree Growth[7]

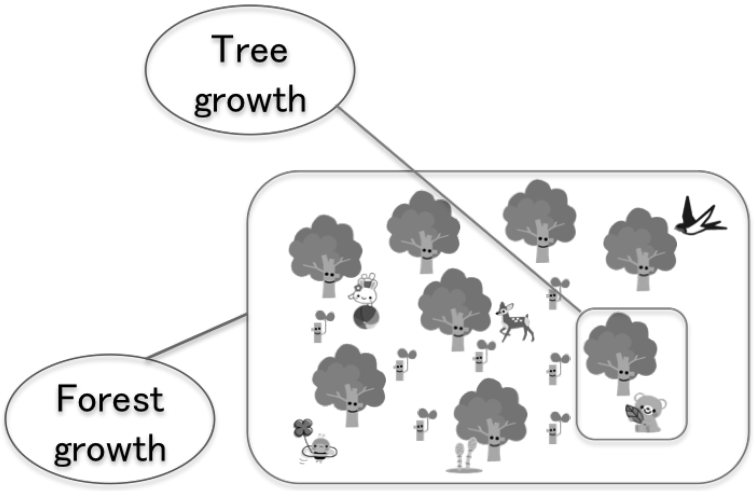

Figure 43.Overall Growth[8]

(ii) Expand

In phase 2, the LBS in phase 1 will expand and cover the entire business areas. This will provide opportunities to come to Futakotamagawa and also appeal information that will not be able to feel by only shopping. The tour content provided in Phase 1 would have new features. Also a wood-work art exhibit event cooperated with the shopping district will take place to make stronger connection and enhance activities between rise and shopping district.

(iii) Establish

In Phase 3, the LBS tree grows inside the forest, synced with the actual tree and forest in Okutama. The acknowledgement of Okutama increases throughout rise customers and local residents improving relationship. Okutama's crops and natural water will start to be provided in Futakotamagawa. A temporary store space will open in the galleria providing to shopping district shops at Futakotamagawa, and to farmers in Okutama.

(iv) Develop

In Phase 4, Okutama-woods will be used widely in Futakotamagawa for boardwalks, river banks, and for parks. The design would be created by co-lab, local students and residents, assuring the quality and resident participant at the same time. The creators, students, and residents will start to have emotional attachment and gather to "Creative Spot" and communicate. From this, education and understanding of Tama-river's environment improves, enhancing various types of people's communication. The upper stream water source area's wood usage scheme becomes a model for a sustainable city

[7] http://www.wanpug.com/illust225.html

[8] http://www.wanpug.com/illust225.html

development with forestry control. Tokyu Corporation plays a role as a facilitator of using woods which leads to creating job offers. “The city where we feel rich Mother Nature”, surely increases the city’s value.

6. Competitive Analysis

6.1 Financial affairs: Profit and loss of operation and development.

Forecasting of Tokyu Corporation's financial affairs in Business-Eco System, our suggestion is shown in 4.23 NPV.

As an abstract, the phases from the 1st to the 3rd are time of investing. Total costs for the first six years of this project may be larger than total profits for the same periods, so 300 million yen must be secured for investment in advance. However after the 4th phase, regarding the increase of constructing parks and facilities, total profits of this model will be exceeding total costs. Especially after 10th year, more than 800 million yen will be anticipated as the operating profit. This assumption is calculated plus the value using wood based key phrase “The city where we feel rich Mother Nature”.

For the discussion how long this operating profit continues, we have some estimation. It is continuous as maintaining work basically for increasing advantage of wood to be maintained. It continues because of the very long term regarding expanding area using wood, thinking relation between life time, and exchanging of wood. There is an opposite argument whether this operation can continue for such a long term. First, basically wood needs maintenance. The more you care about wood, the more attractive it becomes which means maintenance work is necessary. Secondly, wood should be eventually replaced at the end of its life cycle. This is also, maintenance. So, it takes long time for this operation.

Although about forecasting this operation, how Tokyu Corporation will play a role as a facilitator considering relationship between stakeholders is the most important issue in this project. About this, we consider that it seems that Business-Eco System suggested chooses the way to realize that because of that Business-Eco System’s solution is satisfying needs of stakeholders which joins each phases which means it is a realistic method.

6.2 Development and risks

Developing Business-Eco System may take more than 10 years. Each phase includes buffer time of about 6 months on top of the initial discussion period. Though, it is unlikely to take more than 6 years of investment from Phase 1 to Phase 3. However, as mentioned before, costs and profits after Phase 4 will be reversed with the increase of construction-related works like parks and facilities. Particularly after the 10th year, more than 800 million yen of operating profits are expected. Risks are risks, but are profits in advance.

6.3 Financial feasibility and its methods

Possible methods have been mentioned in our solutions. As covered in 6.1 and 6.2, operating profits are expected to be achieved from the mid-term of 10-year plan despite the initial risks. Regarding that, existing resources are utilized and applied in terms of technology and infrastructure. Feasibility looks rather favorable based in this aspect.

6.4 Competitions, competitive areas and products should be identified to find out what should be done.

Although there are many other city developers against Tokyu Corporation, Tokyu Corporation has its advantageous position at Futakotamagawa in the following are.

- Transport
- Rise creators
- Local foundation as facilitator
- Rise: symbolic place as consumer town

6.5 Analysis

Financial values of our proposal, "Business-Eco System" are explained as above. We have mentioned that the total values are expected to be more than NPV results as Business-Eco System can create additional values. Expected total values are mentioned in "GOAL" in DSA of 4.13 including financial assumptions as you see below.

- Can feel rich mother nature in the city
- Preserving Tama-river by CSR investment
- Actuating CRM by Location-Based Service
- People gathering to "Creative Spot", and communication arise
- Elementry students, residents, designers, creates the city actively
- Employment grow
- Education of Tama-river penetrates
- Shopping district's publicity increases
- Increase Futakotamagawa attractivness
- Rise: symbolic place as consumer town

7. ALPS Roadmap and Reflections

Roadmap in our ALPS project is shown in Figure 44, 45, 46. We successfully applied 12 tools during ALPS workshop and obtained the key moments “Aha”, “Oops”, “Eureka”.

7.1 ALPS Workshop No.2 to No.3

After workshop No.2, we did interview, observation and studied about Futakotamagawa. Then, we did brainstorming and Scenario Graph, which made” Local gaming at Futakotamagawa”. This solution aimed to installing digital signage throughout the town to give user an incentive to buy with reduced price. We assured that this solution increases the majority and lead to the development of the city. That was “Aha”.

We did analysis based on this scenario, created a prototype, and presented at Workshop No.3. Figure 44 is analysis of what we did. However, this scenario was considered taking huge cost and using too much underdeveloped technology. We needed to think again about feasibility of this.

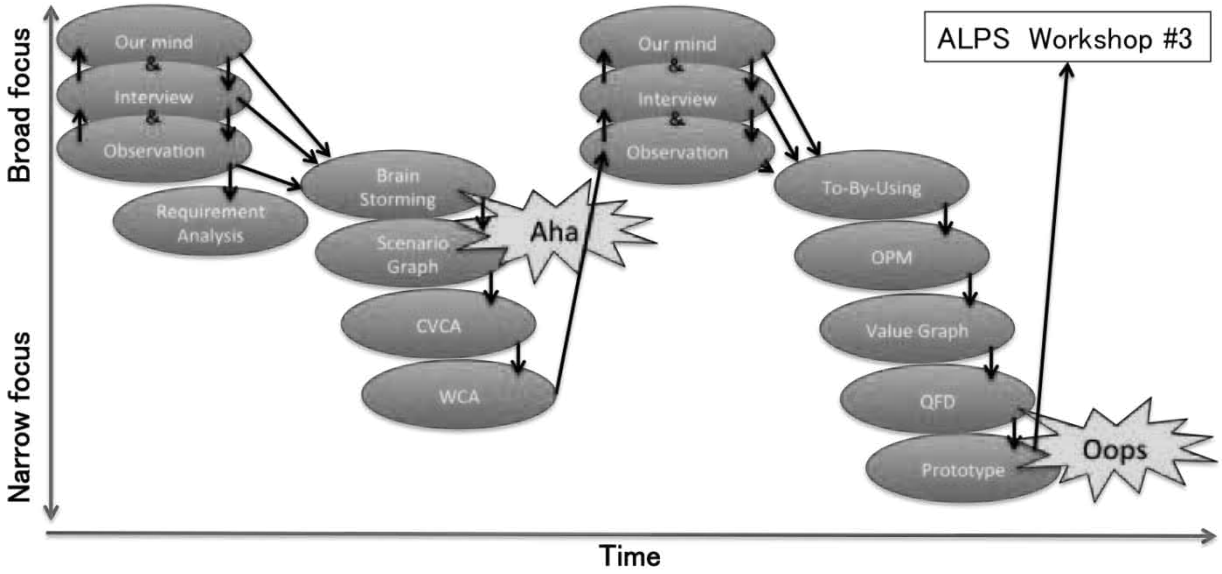

Figure 44.ALPS Roadmap(ALPS Workshop No.2 ~ No.3)

7.2 ALPS Workshop No.3 to No.4

After workshop No.3, we noticed very important problem while studying Futakotamagawa. That was the second “Aha”. The issue was flood of Tama-River, flowing along Futakotamagawa. As long as Futakotamagawa is in fear of the flood, we thought that Creative City can’t be achieved. So we had to consider a new solution to solve both Business-Eco System and the preservation of the Tama River. Therefore, the solution from Scenario Graph was to hold the Workshop about floods in Futakotamagawa and gather diverse human resources. This led to the idea of preserving Tama-river and to come up with various ideas which was “Eureka”. Then, we described the Prototype in Workshop No.4. However, we couldn’t explain about difference between general public workshop and our original workshop in Futakotamagawa. This is the moment “Oops”. In addition, Service Map surrounded by dotted line in the lower right shows an analysis carried out by Workshop No.4.

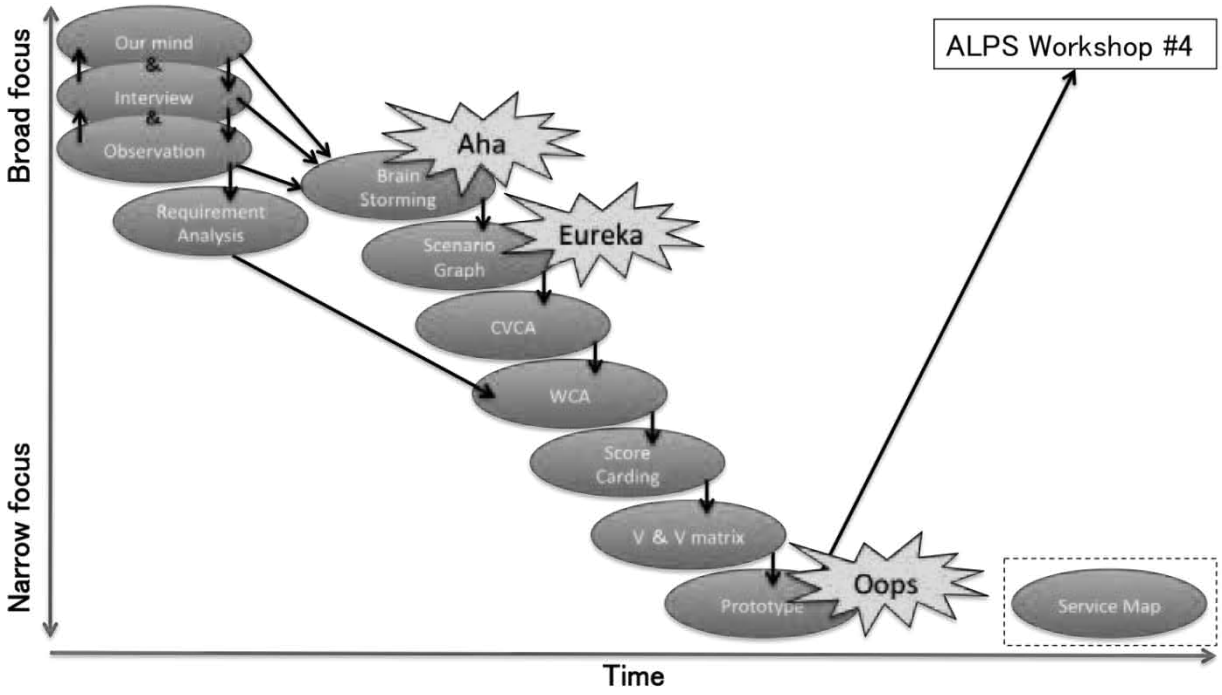

Figure 45.ALPS Roadmap(ALPS Workshop No.3 ~ No.4)

7.3 ALPS Workshop No.4 to No.5

We did Brainstorming and Scenario Graph many times after studying, interview and observation. However we noticed that one scenario can't solve that Business-Eco System and preserve Tama-River at the same time. "Aha" and "Oops" occurred simultaneously. Using Scenario Graph and considering many solutions, we implement Pugh Selection. As a result, we made hypotheses that our Business-Eco System could be achieved by dividing into four phases "acknowledge", "expansion", "establish", "development". This was "Eureka". Then, it carried out many tools to understand the current states of Futakotamagawa. After that, we were confident to be able to use tools with time sequential as one cycle. Tools are CVCA, Wants Selection, Value Graph, and QFD. That was "Aha". From there, we analyzed repeatedly and used our original tool DSA, which visualizes roles, values, connections, requirements of stakeholders with time sequential. This is another "Eureka". Then we considered details of the solution we had proposed.

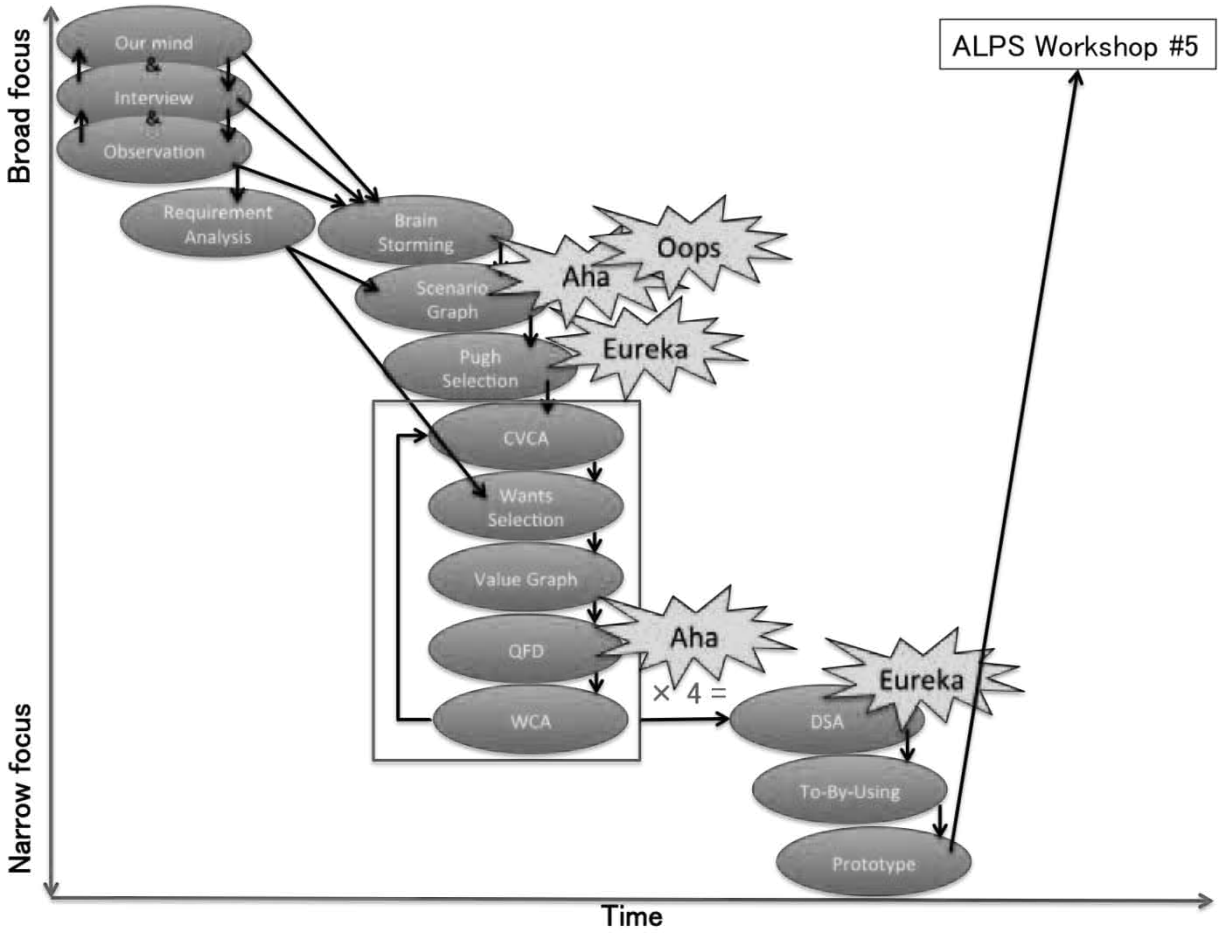

Figure 46.ALPS Roadmap(ALPS Workshop No.4 ~ No.5)

7.4 If we have an ALPS project again

We mention following three points. First, project management should be taught more deeply at ALPS No.1. In particular, not only leader ship but also follower ships are important. If we can do with same members, we could build much better solutions like this. Second, it is necessary to teach about how to apply tools for social systems. Since many exercises and tools are technical, many students thought that tools were not useful for social system. Fortunately, we knew that tools are supposed to be to be used as tools and if it was difficult to use, minor changes which can be explained logical were necessary. However, students like our group that recognized about how to use the tools, was completely the minority. Third, we want to more non-faculty advisors. We learned how to use the tools and during ALPS from last year's students and their advices made our solution better.

8. Conclusion and Future Work

Our solution we proposed is a Business-Eco System to realize Creative City in Futakotamagawa. However, to realize our so solution there are several issues to solve. The issues are listed as follows. Also when to solve is shown as Figure 47.

1. Probability of the stakeholder participating
2. Traffic problem for various people to gather
3. Planning issues

For the 1st issue, we think that the stakeholders will participate. That is because our solution satisfies every stakeholders wants and it has advantages in participating the solution. However, in a realistic term, the time period to inform and convince each stakeholder is necessary.

2nd, there are already high traffic problems, and by increasing the customers from outside of Futakotamagawa local area will make the situation worse. To prevent and make the traffic better we can take measures in Phase4. For example, using woods throughout the site will enhance relax effect to lower stressed problems against traffic. Moreover, by enhancing communication will lead to other and more solutions.

For 3rd, we think that this whole plan will finish during 10 years. Since this is thought in the fastest plan, there are strong probabilities in changing the road map longer. However, even though the plan schedule changes, the by having a facilitator within the stakeholder will improve leadership by sharing the entire vision of goal through our method of Business-Eco System, sustaining development.

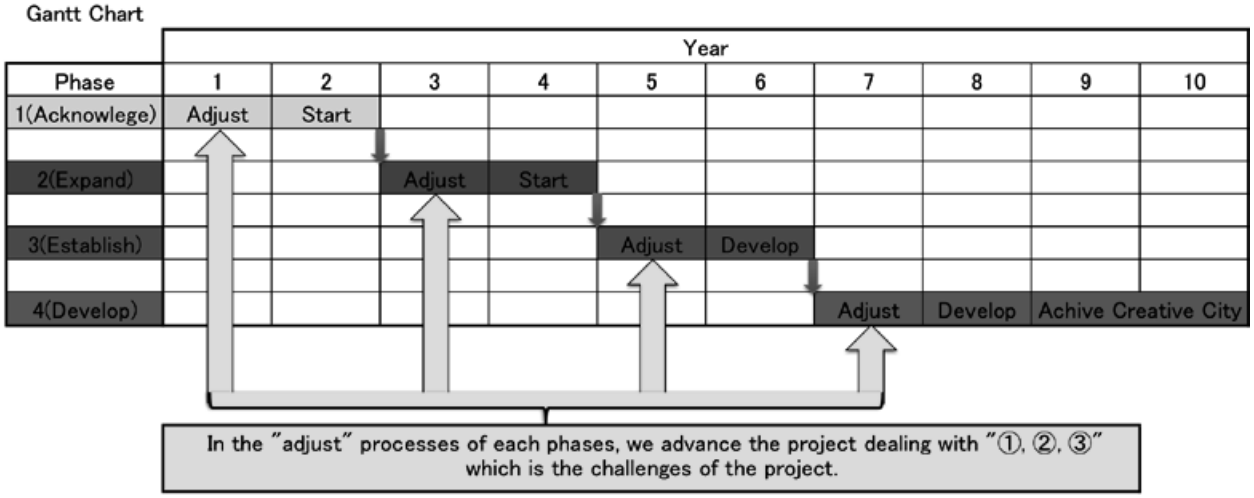

Figure 47.Gantt Chart

9. Acknowledgments

We thank all the people for suggestions, meetings and taking time with us. Moreover, we specially thank Tokyu Corporation which gave us a great and interesting proposal; Professor Seiko Shirasaka for giving us great support during the entire period of ALPS; To Ms. Akiko Tsutsuki for giving us advice and knowledge of regional activation; All the professor's from MIT, Stanford, TU Delft for giving us the amazing lectures. Over the past half year, we suffered and enjoyed all the hard team plays, and it was an experience we would never forget. At last, thank you all.

10. References

Dempsey, N. (2010). Revisiting the Compact City? *Built Environment*(36), 5-8.

Haskins, C. (2011). *INCOSE Systems Engineering Handbook v. 3.2.1.* San Diego, CA: SE Handbook Working Group Internactional Council on Systems Engineering (INCOSE).

Kim, S. (2011). Workshop #3. *Active Learning Project Sequence (ALPS)* (p. Quality Scorecarding). Yokohama City: The Graduate School of System Design and Management, Keio University.

MooreF.James. (1997). The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems. NY: Collins.

Siddiqi, A. (2011). System Architecture, To_By_Using, OPM. *ALPS 2011 WORKSHOP #2* (p. 18). Yokohama City: The Graduate School of System Design and Management - Keio University ALPS.

11. Appendix

Result of Scenario Graph

No.	Name	Main function	Risk
1	Local gaming at Futakotamagawa	Play game	Cost and Technology
2	The ZA community	Creative Community	Not originality
3	The Nicotamariver	Have a Workshop	Not originality
4	Geo-front	Build underground cities	Cost and Space
5	Real and Virtual	Virtual City	Cost and Technology
6	Sports and Work	Championship of Sports	Not originality
7	Work and Life	Work and Life	Not originality
8	Doraemon City	Can anything	Not Realization

Annex 1.Result of Scenario Graph

Requirement Analysis

Stake holder name	initial requirement analysis	requirement development(As Is)	requirement development(To Be)	achieve phase	We used this for analysis of "As Is"
TOKYU	You want innovation cause hopefully permanently.	There is no semipermanent innovation.	THE SYSTEM shall cause innovation semipermanently.	4	
	Partnerships that allow companies and creators. Or if you even got into the creative side of the company to share in the office. Individuals even if you have interesting ideas, it is usually not difficult to form, this might cause innovation by providing a forum to interact with companies. Said the business ecosystem in that sense.	Futakotamagawa is not hookup companies with creators.	THE SYSTEM shall hookup companies with creators.	4	
		The creators share in the office with the company.	THE SYSTEM shall hookup companies with creators.	4	
		Individuals even if you have interesting ideas, it is usually not difficult to form, this might cause innovation by providing a forum to interact with companies. Said the business ecosystem in that sense.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	May be learned on the ecosystem may be to learn. "Business Ecosystem" by using the word, somebody wins, somebody loses, such as "business models" and wanted to differentiate.	May be learned on the ecosystem may be to learn. "Business Ecosystem" by using the word, somebody wins, somebody loses, such as "business models" and wanted to differentiate.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Here (Futakotamagawa) to create employment in.	Futakotamagawa is not enough employment.	THE SYSTEM shall create employment in Futakotamagawa.	4	
	Community association can create jobs, and thankfully we concentrate on system dynamics. (Box and buildings made just does not make sense.)		THE SYSTEM shall make possible the employment-related social dynamics.	4	
		and thankfully we concentrate on system dynamics. (Box and buildings made just does not make sense.)	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Think you can lead to the creation of jobs and how do I service location	Futakotamagawa doesn't use location based service.	THE SYSTEM shall use location based service	1	
		The location based service of Futakotamagawa doesn't increase the employment.	The location based service of THE SYSTEM shall increase the employment	1	
	City to work in Japan, Futakotamagawa	Futakotamagawa isn't enough the best city to work in Japan.	THE SYSTEM shall make the best city to work in Japan.	4	
	The rise of new industries, which must be satisfied beyond a social ecosystem, business-critical system design considering the stakeholders involved in the essential sound and sustainable industrial development there.	Futakotamagawa doesn't have sastainable business eco system.	THE SYSTEM shall be a social need beyond the business ecosystem.	4	
			THE SYSTEM shall be a system designed to take into account the stakeholders.	4	
			THE SYSTEM shall be satisfied beyond a social ecosystem to rise new industry.	4	

Annex 2.Requirement Analysis Part.1

			new industry.		
	To propose an operational and continuity innovative business ecosystem.		THE SYSTEM shall propose an continuity innovative business ecosystem.	4	
			THE SYSTEM shall propose an operational innovative buisness ecosystem.	4	
	To clarify the proposal's main stakeholders and target	Futakotamagawa doesn't clarify the proposal's main targets.	THE SYSTEM shall clarify the proposal's main targets.	4	
		Futakotamagawa doesn't clarify the proposal's main stakeholders.	THE SYSTEM shall clarify the proposal's main stakeholders.	4	
	The indoor facility is about GPS. That the application is now active.	The indoor facility is about GPS. That the application is now active.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Have done today is about signal strength and positioning, but there are those that measure induced by human walking speed	Have done today is about signal strength and positioning, but there are those that measure induced by human walking speed	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	The next step is trying to make the organization to disseminate the world. B2C application development and technical information that we publish.	Futakotamagawa doesn't have the organization to disseminate the world.	THE SYSTEM shall make the organization to disseminate the world.	4	
		Futakotamagawa doesn't have B2C application of THE SYSTEM.	THE SYSTEM shall develop B2C application.	4	
		Futakotamagawa doesn't publish technical information of THE SYSTEM.	THE SYSTEM shall publish technical information.	4	
	What is the location of one of the flattening of the information, considered one of the factors that influence the decisions of ordinary consumers.	What is the location of one of the flattening of the information, considered one of the factors that influence the decisions of ordinary consumers.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Is a social media and location. And the current location of the limelight as one of the flattening of information, various mechanisms have been changed. Going to affect consumers' purchasing behavior of the normal decision-making no doubt. Please capture as a society that is changing the way the ecosystem of information. Also part of the LBS also involved, as the magnitude is interested.	Is a social media and location. And the current location of the limelight as one of the flattening of information, various mechanisms have been changed. Going to affect consumers' purchasing behavior of the normal decision-making no doubt.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Futakotamagawa doesn't capture a changing information of ecosystem society.	THE SYSTEM shall capture a changing information of ecosystem society.	4	

Annex 3.Requirement Analysis Part.2

		Also part of the LBS also involved, as the magnitude is interested.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Please consider a service that combines the technology of location-based services		THE SYSTEM shall consider the technology of locaion-based services.	1	
	To arrive at your destination, such as impressing the process, and service.	To arrive at your destination	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
			THE SYSTEM shall impress the process.	4	
	Location based services in particular, will change the process to take place and purpose of each point. Come join the elements of time there, and what you can do what we do. What the heck creative process? Please believe in such a direction. Basically this project requires that I see the flow of people and money.		THE SYSTEM shall change the process at each point	4	
		Location based services in particular, will take place. Come join the elements of time there, and what you can do what we do. What the heck creative process?	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
			THE SYSTEM shall see the flow of people.	4	
			THE SYSTEM shall see the flow of money.	4	
	Location-based services, and real-world solutions that connect the network said Geo media, happy society, the social experiment has started activities to create jobs and new businesses.	Location-based services, and real-world solutions that connect the network said Geo media, happy society, the social experiment has started activities to create jobs and new businesses.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Taking advantage of location-based services as well as indoor positioning in mind even outdoors.		THE SYSTEM shall use indoor positioning	1	
			THE SYSTEM shall use outdoor positioning.	1	
	About Eco is right. For location information and connection, death unrelated to social loneliness, and insufficient communication towns, there are new forms of community appropriate distance to the animal comfortable friendly to human nature and contemporary ICT and Tech I thought not. And in the IT industry that it becomes a big business idea, to be happy with a lot of people think that.	Futakotamagawa doesn't have Enhance Communication.	THE SYSTEM shall have Enhance Communication.	4	
			The Enhance communication of THE SYSTEM shall create new IT industry business.	4	
			THE SYSTEM shall make people happy.	4	

Annex 4.Requirement Analysis Part.3

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			happy.		
		For location information and connection, death unrelated to social loneliness, and insufficient communication towns, there are new forms of community appropriate distance to the animal comfortable friendly to human nature and contemporary ICT and Tech I thought not.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	highly concerned about the social distribution of information, such as facebook and twitter.	highly concerned about the social distribution of information, such as facebook and twitter.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	To create a mechanism so that people looking like such a fun place to work in the network have all AR · GPS.		THE SYSTEM shall include cyber system.	1	
		Futakotamagawa doesn't have network of THE SYSTEM.	The cyber of THE SYSTEM shall have network.	1	
		Futakotamagawa doesn't have AR of THE SYSTEM.	The cyber of THE SYSTEM shall have AR.	1	
		Futakotamagawa doesn't have GPS of THE SYSTEM.	The cyber of THE SYSTEM shall have GPS.	1	
			The cyber of THE SYSTEM shall make "people want to work place"	1	
			The cyber of THE SYSTEM shall make "people want to fun place"	1	
	Like those who entered the landlord in the city, Once you have somehow to find a local approach, can be linked. <Sato>	Like those who entered the landlord in the city, Once you have somehow to find a local approach, can be linked. <Sato>	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	I want that aims to make sustainable systems.	There is no sustainable business eco system in Futakotamagawa.	THE SYSTEM shall make sustainable systems.	4	
	Creative is the importance of the industry: corresponding to social issues such as aging	Creative is the importance of the industry.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Futakotamagawa is not coresopnding to aging population.	THE SYSTEM shall correspond to aging population.	4	
		Futakotamagawa is not corresponding to social issues.	THE SYSTEM shall correspond to social issues.	4	
	The need for CC: support the work of human creativity, discussion of a new urban environment	Futakotamagawa does not have CC.	THE SYSTEM shall realize CC.	4	
		Futakotamagawa does not support the work of human creativity	THE SYSTEM shall support the work of human creativity.	4	
		The users can not discuss a new urban environment.	THE USERS shall discuss of a new urban environment.	4	
	Futakotamagawa's CC possibility: A new urban design role to play in nurturing the creative industries internationally competitive	Futakotamagawa does not have CC possibility.	THE SYSTEM shall have Futakotamagawa's CC possibility.	4	
		Futakotamagawa does not have a new design role.	THE SYSTEM shall have a new design role	4	

Annex 5.Requirement Analysis Part.4

		Futakotamagawa is not in nuturing the creative industries.	THE SYSTEM shall play in nurturing the creative industries.	4	
		Futakotamagawa is not internationally competitive.	THE SYSTEM shall be internationally competitive.	4	
	In order to further develop the industry has a role as a city. Than just the location of the business people seeking efficiency diverse natural places Futakotamagawa Some people have been living children or not it is more appropriate to the CC where it can be hot work style.		THE SYSTEM shall have a role as a city.	4	
			THE SYSTEM shall not be just the location where nature seek efficiency.	4	
			THE SYSTEM shall not be just the location where diverse people seek efficenecy.	4	
			THE SYSTEM shall not be just the location where business people seek efficenecy.	4	
			THE SYSTEM shall be a location for children.	4	
			THE SYSTEM shall be a location for living people.	4	
		Futakotamagawa is not appropriate to the CC.	THE SYSTEM shall be appropriate to the CC.	4	
		Futakotamagawa can not be hot work style.	THE SYSTEM shall be where it can be hot work style.	4	
		In order to further develop the industry	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Three T's ("Talent (talent)", "Technology (Technology)", "Tolerance (tolerance)" is a necessary perspective to Futakotamagawa cultural facilities are insufficient. As in Roppongi ball to the west there is no cultural facilities.		THE SYSTEM shall have Talent.	4	
			THE SYSTEM shall have Technology.	4	
			THE SYSTEM shall have Tolerance.	4	
		Futakotamagawa is lack of cultural facilities.	THE SYSTEM shall have cultural facilities.	4	
		Futakotamagawa does not have cultural facilities.	As in Roppongi ball to the west there is no cultural facilities.	4	
	Greater presence of the Tama River. "Rural city" (not the city in the country, making the countryside in the city), aims to.		We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
			THE SYSTEM shall aim "Rural city" (not the city in the country, making the countryside in the city).	4	

Annex 6.Requirement Analysis Part.5

	Unlike Shibuya, at Futakotamagawa there are not many shops and people. Futakotamagawa is believed that it has a personality suitable for using LBS.	Futakotamagawa does not have many shops and people	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Futakotamagawa is believed to have personality suitable for using LBS.	THE SYSTEM shall have personality suitable for using LBS.	1	
	People just because they come cheap, but only provided that the building box. For example, "I'll do one with nature, I'll do from attract" like to do to attract.		THE SYSTEM shall have other attraction than cheap.	4	
		For example, "I'll do one with nature, I'll do from attract" like to do to attract.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	As you develop a good synergy with the Xindi burning rivalry has two children at the same time promote development in accordance with the Futagotamagawa CCC. Looking rather than the other side as to the world from Haneda Airport and close to town with a good eye for example is named.		THE SYSTEM shall develop Futakotamagawa in acordance with CCC.	1	
		Futakotamagawa does not have a synergistic effect with Futakoshinchi.	THE SYSTEM shall cause a synergistic effect with Futakoshinchi.	1	
		Futakotamagawa does not have a synergistic effect with the world.	THE SYSTEM shall cause a synergistic effect with the world.	1	
	Futakotamagawa types of users can be obtained from observation of the city. A variety of weekdays weekend strollers also seen a situation in which I Toka elderly in three generations.	Futakotamagawa types of users can be obtained from observation of the city. A variety of weekdays weekend strollers also seen a situation in which I Toka elderly in three generations.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Increase in population numbers are increasing all along the Tokyu Meguro, Ota Setagaya Shibuya and Shinagawa.	Increase in population numbers are increasing all along the Tokyu Meguro, Ota Setagaya Shibuya and Shinagawa.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Futakotamagawa have been resident in 3,000 new homes for children already in 1330.	Futakotamagawa have been resident in 3,000 new homes for children already in 1330.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Coined a Nikotamadamu	Coined a Nikotamadamu	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	If the audience is different depending on the time, rather than only configurating the space of the city changing to match it, but by considering the perspectives of time the angle becomes space * time which is very important for systemizing the social behavior	Futakotamagawa audience is different depending on time.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○

Annex 7.Requirement Analysis Part.6

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		only configurating the pace of the city changing to match it.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Futakotamagawa is not considering the perspective of time.	THE SYSTEM shall consider the perspective of time.	4	
		Futakotamaga has not systemized the social behavior from the angle of space * time.	THE SYSTEM shall systemize the social behavior from the angle of space * time.	4	
	Weekday users are 50,000 people. noon : Wifes=Nikotamadamu, evening: Student	Weekday Futakotamagawa users are 50,000 people.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Weekday Futakotamagawa users at noon are wifes.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
			We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Weekday users at evening are students	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Holidays: 80,000 families	Holiday Futakotamagawa users are 80,000 people.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Holiday Futakotamagawa users are family users,	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Futakotamagawa want to increase the town of more daily factors.	Futakotamaga has not increased daily factors.	THE SYSTEM shall increase more daily factors to Futakotamagawa.	4	
	Transportation to Futakotamagawa is basically train (the back of the Denentoshi Line, Miyamae-ku many). Families come from the car, causing a major traffic jam.	Transportation to Futakotamagawa is basically from train.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Transportation to Futakotamagawa is mainly from Denentoshi Line, Miyamae-ku.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Famly's transportatin to Futakotamagawa is from car.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	People who come to work in Futakotamagawa come new in the middle of a population increase as a result Futakotamagawa as Tokyu will become the ideal scenario.		THE SYSTEM shall increase of worker in Futakotamagawa.	4	

Annex 8.Requirement Analysis Part.7

			THE SYSTEM shall increase the daytime people in Futakotamagawa.	4	
	Tokyu is in Japan was a mature economy and society for sustainable urban living and growing really want to support people thinking continues.	Tokyu is in Japan was a mature economy and society for sustainable urban living and growing really want to support people thinking continues.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Originating the living / new way of working, make a creative city-town sustained growth		THE SYSTEM shall propose to the public a new life style.	1	
			THE SYSTEM shall propose to the public a new way of working.	1	
			THE SYSTEM shall create Creative City-town sustained growth.	4	
	Creative City Consortium is a platform to realize open innovation from the idea created by exchange among companies, local authorities, experts and local residents that resonates with ambition beyond the framework of various organizations.	There is a platform called "Creative City Consortium".	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		The platform is intended to realize open innovations.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		The platform is consisted of companies, local authorities, experts, and local residents.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Creative City Consortium has been not only based on contents and art, but on the idea that social innovation create business and employment in all traditional industries including manufacturing and agriculture.	Creative City Consortium has been not only based on contents and art.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		Creative City Consortium has been based on the idea that social innovation create business and employment in all traditional industries including manufacturing and agriculture.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Subject of study is basically around Futakotamagawa and along Tokyu line, but it is not necessary to limit the area to there.		THE SYSTEM shall be considered in the area around Futakotamagawa and along Tokyu line.	1	
		It is not necessary to limit the area to there.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Analyze and consider the strengths and weaknesses of the Tokyu group.		THE SYSTEM shall reflect the strength of Tokyu Group.	4	
			THE SYSTEM shall reflect the weakness of Tokyu Group.	4	
	Include Futakotamagawa area in the proposal.		THE SYSTEM shall be used in around Futakotamagawa area.	4	

Annex 9.Requirement Analysis Part.8

Tenant	Want a lot of people to come and buy		The SYSTEM shall have a lot of people to come and buy	1	
Shopping district	Shutter to prevent and be as quiet, "the Young" is held by the efforts of the various events.	Shutter to prevent and be as quiet, "the Young" is held by the efforts of the various events.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Takashimaya will go and have a rise in customers. But you want to get along.	Takashimaya will go and have a rise in customers.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		The shopping district is not getting along with rise and Takashimaya.	THE SYSTEM shall make the shopping district to get along with rise and Takashimaya.	2	
	Will require the activation of Futakotamagawa mall. Interaction.	THE SYSTEM does not require the activation of Futakotamagawa mall.	THE SYSTEM shall require the activation of Futakotamagawa mall.	2	
		THE SYSTEM does not require Interaction.	THE SYSTEM shall require Interaction.	2	
	But clientele is different, often used by elderly people who live in the back of the shop. rise and Takashimaya, but "struggle to be small and this small." Business has been strong in areas in close contact with the little attention.	But clientele is different, often used by elderly people who live in the back of the shop. rise and Takashimaya, but "struggle to be small and this small." Business has been strong in areas in close contact with the little attention.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Many people will be temporarily taken up by the media, the base is also supported by local people.	Many people will be temporarily taken up by the media, the base is also supported by local people.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Clientele are regulars from the past and I, many parents of elementary school students.	Clientele are regulars from the past and I, many parents of elementary school students.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Since the front of the school, take care of that speech and communication with students. May be presented on television.	Since the front of the school, take care of that speech and communication with students. May be presented on television.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	As so many dangerous car look like that. (4:00 p.m. to 6:00 p.m. is closed to traffic)	As so many dangerous car look like that. (4:00 p.m. to 6:00 p.m. is closed to traffic)	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	When you exit the mall, I have some fear of crime prevention will not reach the adult eye.	When you exit the mall, I have some fear of crime prevention will not reach the adult eye.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	"Youth Department" is that about 15 members.	"Youth Department" is that about 15 members.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	"Art and Mart Road Oyama" is the first time in four or five times.	"Art and Mart Road Oyama" is the first time in four or five times.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Tamagawa beautification activities were experienced during the elementary school.	Tamagawa beautification activities were experienced during the elementary school.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○

Annex 10.Requirement Analysis Part.9

	Futakotamagawa school is "a model school pet bird." The school has a birdhouse. The timber made of whether this is? In the construction of the rise, no longer flying swallows. (The Station and Takashimaya have a bird's nest, but, because the crows in the mall was 来Naku?)	Futakotamagawa school is "a model school pet bird." The school has a birdhouse.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
		The birdhouse is using timber.	THE SYSTEM shall make the timber using woods.	2	
		In the construction of the rise, no longer flying swallows. (The Station and Takashimaya have a bird's nest, but, because the crows in the mall was 来Naku?)	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Customer base, the second 30-39 to 70. Come mostly in their 20s.	Customer base, the second 30-39 to 70. Come mostly in their 20s.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
Administrator (futakotamagawa)	We want citizen participation in urban development		The SYSTEM shall have citizen participation in urban development	1	
Costomer	Want Futakotamagawa originality		The SYSTEM shall make Futakotamagawa originality	1	
	To receive good service		The SYSTEM shall have good service.	1	
	To feel the richness		The SYSTEM shall feel the richness	1	
Schools	Urban development is an ongoing story so vividly, and can not comment.	Urban development is an ongoing story so vividly, and can not comment.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	As a public school shall observe neutral.	Public elementary school must keep the neutral position.	THE SYSTEM shall save the neutral position of public elementary school.	4	
	Futakotamagawa school, the "core of the local" has a face.	Futakotamagawa school, the "core of the local" has a face.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Education is an emphasis on nature of the Tama River.	Education is an emphasis on nature of the Tama River.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Opened 38 years as a model school favorite bird, the bird has been observed to be open to the river.	Opened 40 years as a model school favorite bird, the bird has been observed to be open to the river.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
Creator	Want a creative job		The SYSTEM shall have a creative	1	

Annex 11.Requirement Analysis Part.10

Forestry cooperative	Impression that the frequency decreased to buy the fish's regulars.	Impression that the frequency decreased to buy the fish's regulars.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	As more and more people want more.	There are not many people going through the shopping district.	THE SYSTEM shall increase more people going through the shopping district.	3	
	That make a few small woodwork.	That make a few small woodwork.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Cedar is so soft, there is no compression, it is turning to local In many cases the product will come back one more time.	Cedar is so soft, there is no compression, it is turning to local In many cases the product will come back one more time.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Have water rights to the forest Tokyo Waterworks Bureau.	Have water rights to the forest Tokyo Waterworks Bureau.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Most of drought percentage of truncation.	Most of drought percentage of truncation.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Difficult to get the logs say. Forest roads is advanced. Finally came the movement to build a road work.	Difficult to get the logs say. Forest roads is advanced. Finally came the movement to build a road work.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Difficult because of the high cost of quality material. If there is something to clear it, great. Emission costs.	Difficult to solve because of the high cost of quality material.	THE SYSTEM shall solve the high material cost difficultness.	1	
		Emission costs.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	The thickness of wood used as the building is said to have a diameter about 18-20. ~ 3m in length, straight not bent wood just useless	The thickness of wood used as the building is said to have a diameter about 18-20. ~ 3m in length, straight not bent wood just useless	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Dattara interior moisture content 13%, falling far. The fall only about 20%.	Dattara interior moisture content 13%, falling far. The fall only about 20%.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Technology has cedar thoughts have changed, and you try to dry locally Behind when compared nationally.	Technology has cedar thoughts have changed, and you try to dry locally Behind when compared nationally.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Machine and dryer will fix 10000-5000 yen 20 million yen. Inspection machines are tens of millions yen.	Machine and dryer will fix 10000-5000 yen 20 million yen. Inspection machines are tens of millions yen.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○

Annex 12.Requirement Analysis Part.11

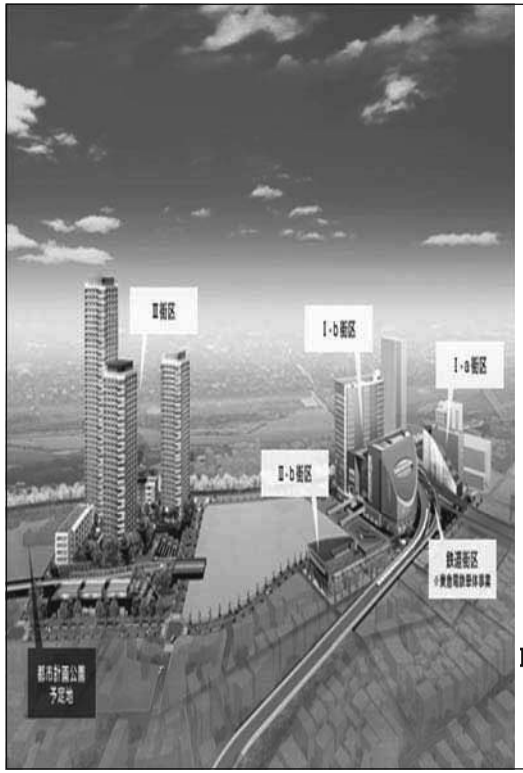
	Japan's timber, or to what level the world is still unsure.	Japan's timber, or to what level the world is still unsure.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Some people with low broadleaf plant pollen.	Some people with low broadleaf plant pollen.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Ise Forest Forest ideal. There was little damage in the Ise Bay Typhoon. Devise a way of planting planted.	Ise Forest Forest ideal. There was little damage in the Ise Bay Typhoon. Devise a way of planting planted.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	To make some forest companies Tteiu business. Forest companies are also Hibara village. Suntory.	To make some forest companies Tteiu business. Forest companies are also Hibara village. Suntory.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	The wood we have to think the Japanese have the world's timber.	Domestic timber doesn't have added value against world wood.	THE SYSTEM shall add some value to domestic timber against world wood.	1	
	Of moving out from the subsidies. Government does not work and can not help it.	Of moving out from the subsidies. Government does not work and can not help it.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	In order to use domestic materials and how do I do? Fixed carbon dioxide to the environment as a motivation, and with good will can go.	Wood is used for saving envirionment.	THE SYSTEM shall use wood for saving envirionment	1	
	Good use in schools and education. Currently, the children know.	Wood is not used for education.	THE SYSTEM shall use wood for education.	1	
	In the absence of learning that combines forestry and distribution or not? Go there to study, fusion research is not at? If you have a better distribution mechanism, so good.	Forestry and lumber have been not considered in fusion.	THE SYSTEM shall consider forestry and lumber in fusion.	1	
	Made no balance between supply and demand. Both are now useless.	The supply of and demand for wood is not balanced well.	THE SYSTEM shall fix the balance of supply of and demand for wood.	1	
	Weakened the labor force of older technology and the supply side. Continued for a period not sell, did not raise a successor force.	Weakened the labor force of older technology and the supply side. Continued for a period not sell, did not raise a successor force.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	I like the hub role of forestry and market → The main work so far from the state that are not silvicultural care what is planted.	I like the hub role of forestry and market → The main work so far from the state that are not silvicultural care what is planted.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	In Tokyo, the technology has little to unloading. Fewer people are having to really. The amount is not so great. Woodman hire from outside the prefecture, come. Currently it looks like.	In Tokyo, the technology has little to unloading. Fewer people are having to really. The amount is not so great. Woodman hire from outside the prefecture, come. Currently it looks like.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○

Annex 13.Requirement Analysis Part.12

	Some operations work order. The spring is less work. The cause is not seasonal. Fall harvest is about to spring. Truncation thinning can be year round.	Some operations work order. The spring is less work. The cause is not seasonal. Fall harvest is about to spring. Truncation thinning can be year round.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	The ordinary people do get a forestry risk. But to experience forestry, forestry real tough.	The ordinary people do get a forestry risk. But to experience forestry, forestry real tough.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Where there is no risk, planting pruning Toka. That is just as content to enjoy, whether on the level of a profession should not be.	Where there is no risk, planting pruning Toka. That is just as content to enjoy, whether on the level of a profession should not be.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Make money at it if healing forest. If a coordinator who will look something comes between.	Make money at it if healing forest. If a coordinator who will look something comes between.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Messing with the local population into the forest companies that I do not know how well, if you fine people who accept the village.	Messing with the local population into the forest companies that I do not know how well, if you fine people who accept the village.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	In terms of increasing safety, and also different because Toka really like vegetation Germany, as associations of forest stages that go into learning the art union is proceeding at the national forest.	In terms of increasing safety, and also different because Toka really like vegetation Germany, as associations of forest stages that go into learning the art union is proceeding at the national forest.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Originally planted, was planning can be recovered more quickly. Was supposed to collect 30 years elapse.	Originally planted, was planning can be recovered more quickly. Was supposed to collect 32 years elapse.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Water retention is higher than deciduous conifer.	Water retention is higher than deciduous conifer.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Good and well distributed around the timber. Timber and much longer. Rotate the demand is not predictable.	The demand of wood is low.	THE SYSTEM shall make the demand of wood.	1	
		The distribution of wood is not circulated well.	THE SYSTEM shall promote the distribution of wood.	1	
	Symbiotic forest, forest cycling, alive or zoning itself is unknown. Private business is around 5%. The present situation is coming up around 山主 money.	Symbiotic forest, forest cycling, alive or zoning itself is unknown. Private business is around 7%. The present situation is coming up around 山主 money.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
Administration (Okutama)	"Forest development plan" in order that the village came and county ⇒ ⇒ ⇒ national capital, it is based.	"Forest development plan" in order that the village came and county ⇒ ⇒ ⇒ national capital, it is based.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Future FSC (Forest Certification, Global Authentication) to get the next year. After the acquisition, COC (manufacturer approved) build, continue to branding.	Future FSC (Forest Certification, Global Authentication) to get the next year. After the acquisition, COC (manufacturer approved) build, continue to branding.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	Roadside landscape maintenance, have been harvested in the unloading operations.	Roadside landscape maintenance, have been harvested in the unloading operations.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	You can build a house of wood Hinohara, 200,000 auxiliary limit. The little sticks subsidy established forest road.	You can build a house of wood Hinohara, 200,002 auxiliary limit. The little sticks subsidy established forest road.	We used this for analysis of "As Is"	We used this for analysis of "As Is"	○
	I want you to use as a timber for content in children (Steiner education system).	I want you to use as a timber for content in children (Steiner education system).	THE SYSTEM shall use timber as education for children.	4	
	Connect your home city and want.	The tie between urban and rural area is weak.	THE SYSTEM shall connect urban and rural area.	1	

Annex 14.Requirement Analysis Part.13

Group J’s Final Presentation Slides



Proposal of Business-ecosystem mainly created by "Location Based Service" from user view-Enhance Communication and contribute to realizing Creative City

Group J

Ito , Inomata , Kadokura , Kobukai , Hidaka

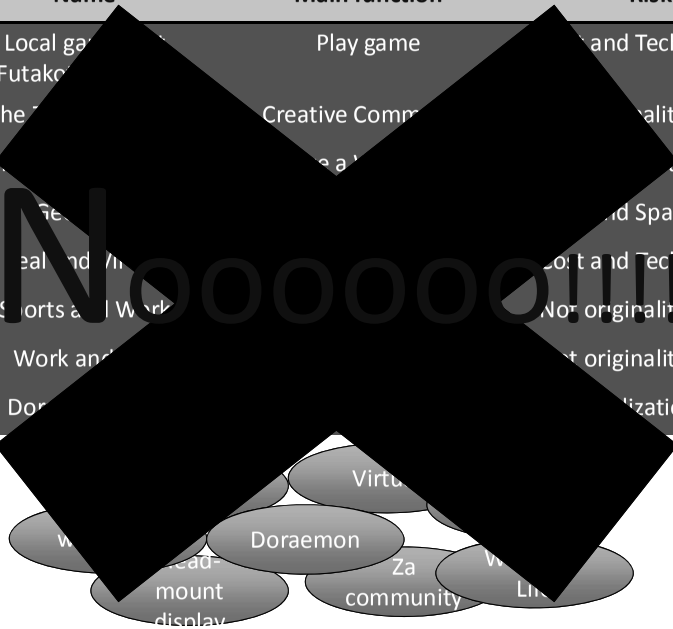
Interview and Observation

Brainstorming

where	The road, traveling, international, and foreign, regional mall, the city itself, Catalyst BA, studio, office environment, a second home, the city can demonstrate, the city of fashion, woman's town, town of consumers, commercial town, city of different faces in the day and night, wine bar, Galleria, work, alternating, rise, neighboring buildings, office buildings, housing buildings, apartments, outdoor cafes, Hinohara village, Art Village, rural, urban, just past the town, old man , old bag, the city of your own, Nishihour Biennale Nakanojo, escalators, elevators, toilets, baby room, before the touch, slopes, shopping mall, flowers, sports facilities, terrace, sea, Tama, Park, earth, space, copy the Tamagawa, taxi stands, road, railway station, schools, universities, bus roundabout, pedestrian crossing, station gates, sidewalks, airplane, bus, taxi lines, kindergarten, in the train, bus terminal, station buildings, in cars, street food pubs, cafes, food shops, fast food, restaurant, Halas
what	Arcade, play, show, karaoke, dating, movies, bowling, watching TV, shopping, phone, tasting (department store basement), Tampa, handmade, marriage, sleep, exercise bike, walking, running, confession, shake, propose, Futakotamagawa Made in, field, business, workshop, cleaning, services, money, products, companies hypothetical, content, connections, social media, trust, knowledge, construction, water projects, dentist, learning, meeting, work, the well investigated, brain dumping, white board, art graffiti, idea, lucrative, CRM, trees add value to content, harvesting, distribution, depopulated, tourism, made extraordinary, tea, dinner, lunch, meal, breakfast , traditional forestry, design, tourism, funding, furnishings, management, good Japanese, surveys, twist, brush up, Futakotamagawa retreat, inn, Eco apartments, view maps, train, car, school, Lost, meeting, necessity, exchange, innovation and cost from a combination of cost (of production) visible, continue to use, bear "food" program, spread throughout the city, recycling, art, design, take pictures
who	JAXA, NASA, teach people, taught people, businesses, vacant land bad, I hope, old buildings, who want to teach for free, to pay for those who want to participate, sponsors, designers, town hall, NPO, electric company, water, gas, building management companies, property companies, workers, local grandpa, key personnel, rise staff, chefs, office worker, OL, metropolitan government officials, borough officials, public servants, taxi companies, Tokyu Corporation, station attendant, taxi driver, photographer, painter, tea masters, madam, pets, landlords, Shiroganeze, Tokyu Group users, parents with children, lovers, the elderly, students, disabled people and building new residents, children, office workers, school girls
when	At breakfast, at lunch, when dinner time snack, during a meal, barbecue, at tea, seasonal, seasons, day and night, studying, in work, the universe after the lifetime, while walking, while driving, rush morning rush at night, when I ride the train, the exit way home, sleeping, dating, gardening, television time, killing time, when you go shopping, when you are playing, window-shopping, pet walking, fishing, early morning, morning, noon, evening, night midnight, sunny day, rainy day, sometime, anytime, seasons, once in life time event, holiday, weekday
users state	Better eye, to discover, the better the flowers, moderate diet, be creative, satiety, not want, get the horn, will feel free to become a for fixed a, Satoshi, the better the head, will want convenience, hunger, shout, annoyed, grieved been shaken, sleepy, eyes go bad, April weather, fatigue, and empathy, FUN!!!, a sense of urgency, a sense of intimacy, a sense of unity, excitement, innovation reversal of values, pride, lead (to transitory) notice, feel better, love is born, happy, impressed, happy, think nothing, sadly, become depressed, hurt the conscience becomes uneasy , frustration, despair, hatred, anger

Result of Scenario Graph

No.	Name	Main function	Risk
1	Local ga… Futako…	Play game	…and Technology
2	The …	Creative Comm…	…ality
3	T…	…e a…	…y
4	Ge…		…d Space
5	…eal …nd /…		…ort and Technology
6	S…orts a…d W…		…Nor originality
7	Work an…		…t originality
8	Dor…		…ization



Process of Concept Development

So...We thought many times.

We thought, and thought many times about the concept.

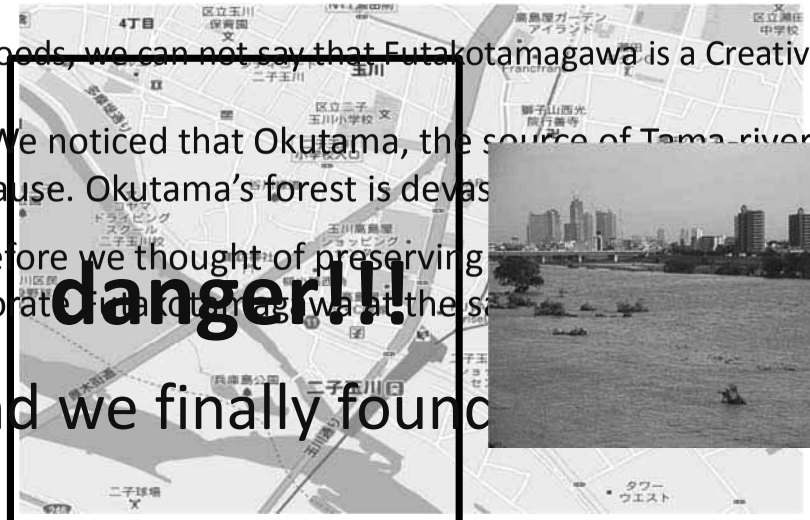
He is gone… but we did not stop thinking.

Finall…t the pro… for Futakota…ecome a

Process of Concept Development

The problem is, Tama-river is likely to flood!

If it floods, we can not say that Futakotamagawa is a Creative City!



And We noticed that Okutama, the source of Tama-river was the cause. Okutama's forest is devas…

Therefore we thought of preserving … invigorate Futakotamagawa at the sa…

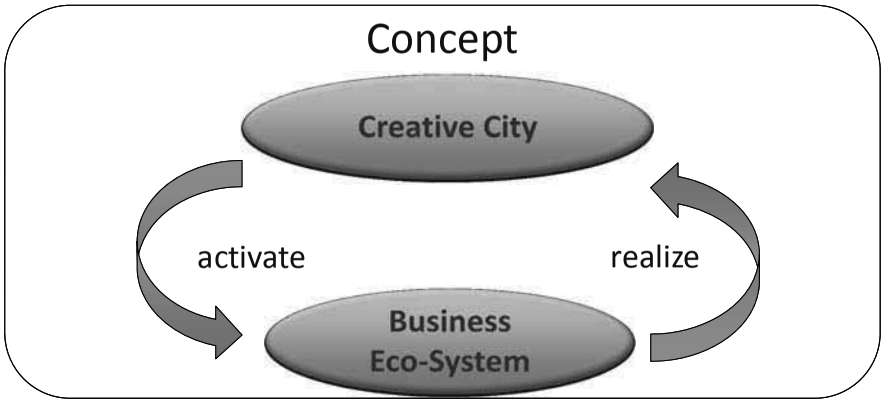
And we finally found

Abstract of Concept

[TO] : Realize <Creative City>

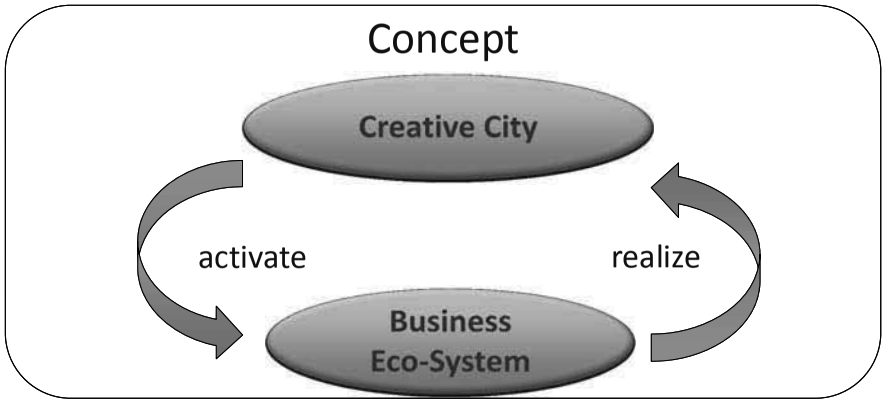
[BY] : Business Eco-System

[USING] : 1.Acknowledge -> 2.Expand -> 3.Establish -> 4.Develop



Goal of Concept

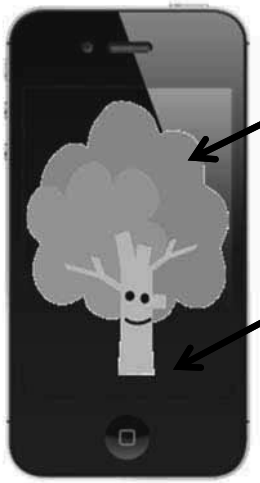
GOAL
- People gather, and communication arise
- Increase Futakotamagawa attractiveness
- Job development



PHASE 1
Acknowledge

9

PHASE 1 LBS singnage



Tenants

Galleria

10

PHASE 1 LBS singnage

Points

Many fun and cute gadgets appears

Save up points and then...

11

PHASE 1 LBS singnage

Points

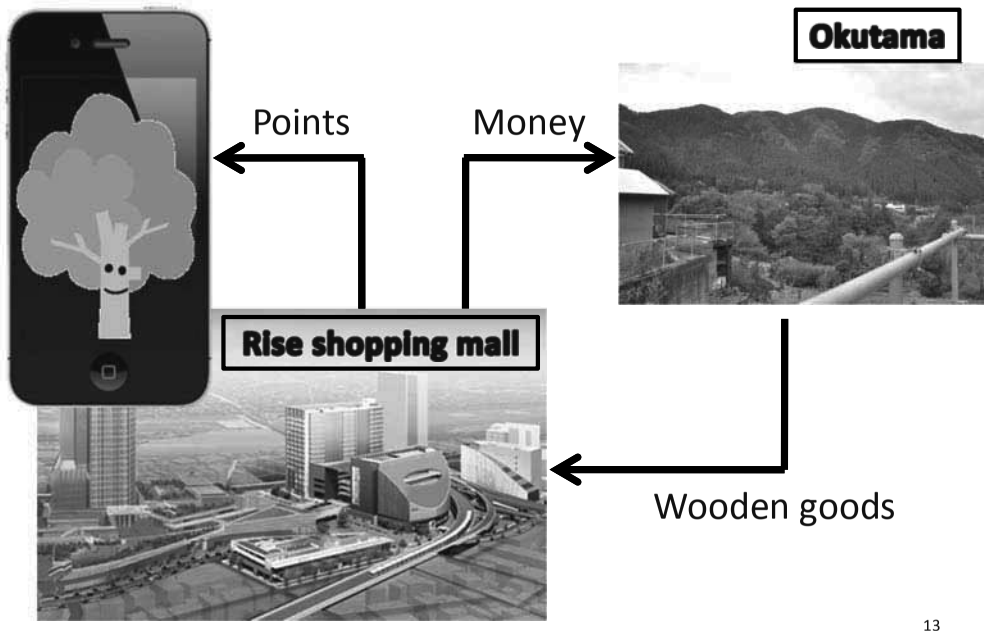
Exchanging Points

Original-goods
made in Okutama

A tour to Okutama

12

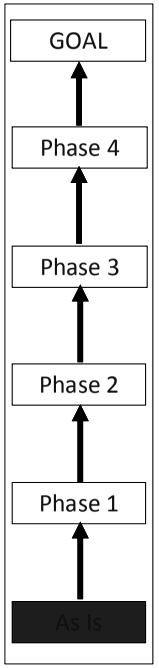
PHASE 1 LBS singnage

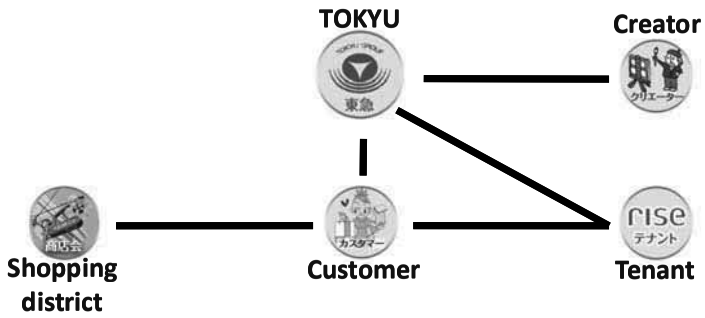


13

Stakeholder

As Is

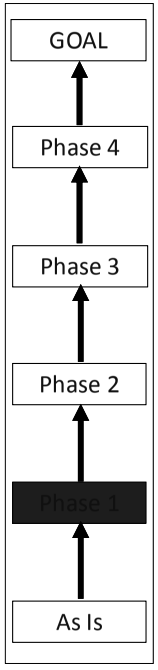


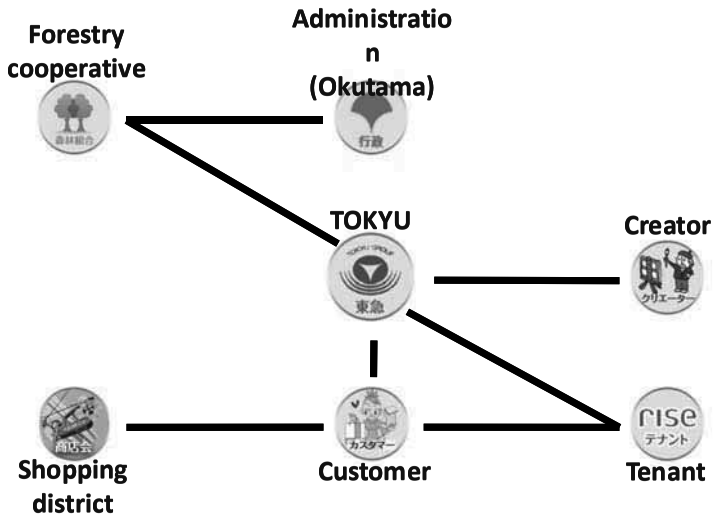


14

Change of Stakeholder

Phase 1(Acknowledge)





15

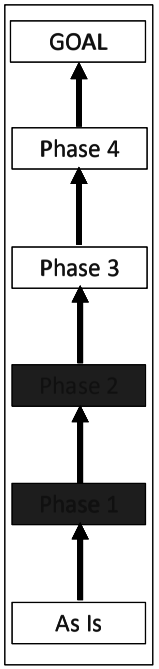
PHASE 2
Expand

16

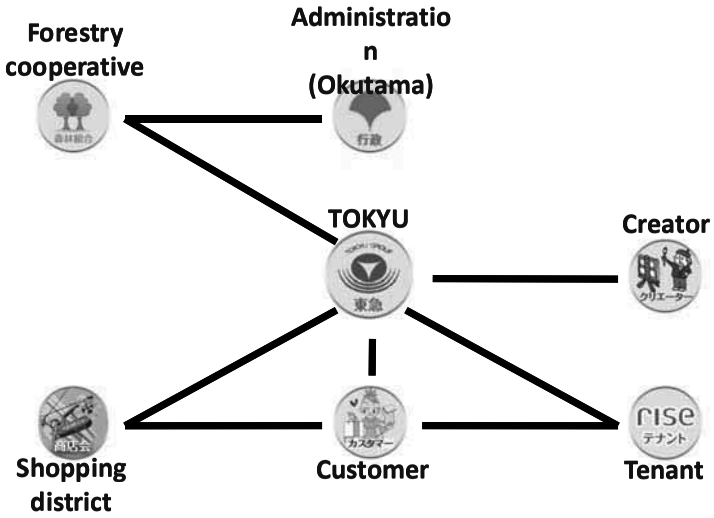
PHASE 2 Participation of shopping district

17

Change of Stakeholder



Phase 4 (Expand)

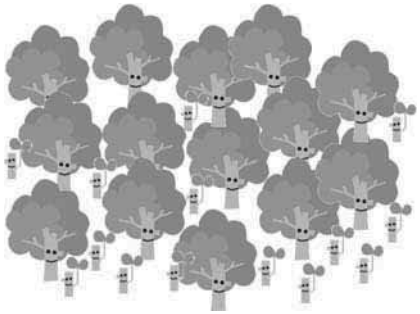


18

PHASE 3 Establish

19

PHASE 3 Branding of Okutama, establishing closer friendship



LBS tree growth

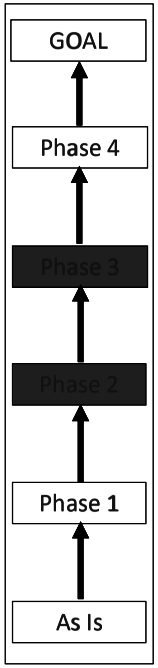
promote

link to healthy growth
to the real forest in Okutama

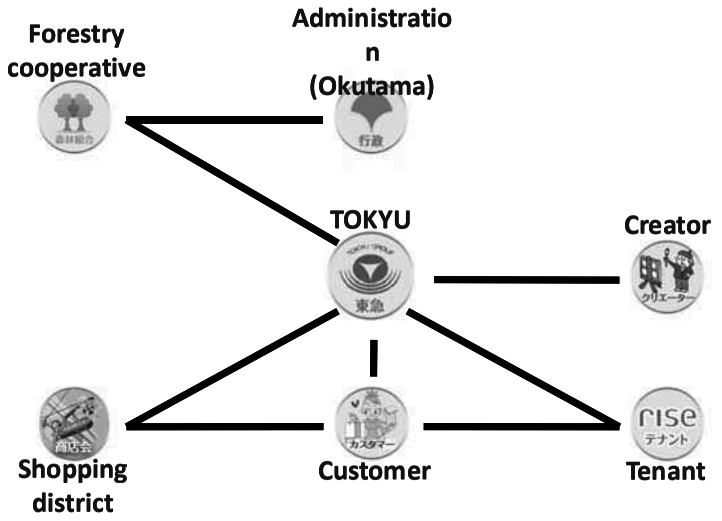
Provision of crops

20

Change of Stakeholder



Phase 3 (Establish)



21

PHASE 4
Develop

22

PHASE 4 Establish of Creative spot
(Tama-grown woods, full-scale use starts)

co-lab ×

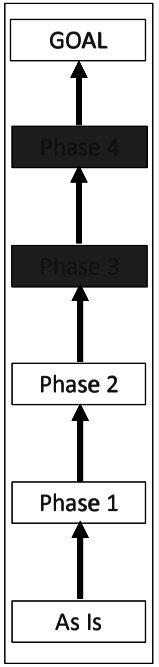
woods

design

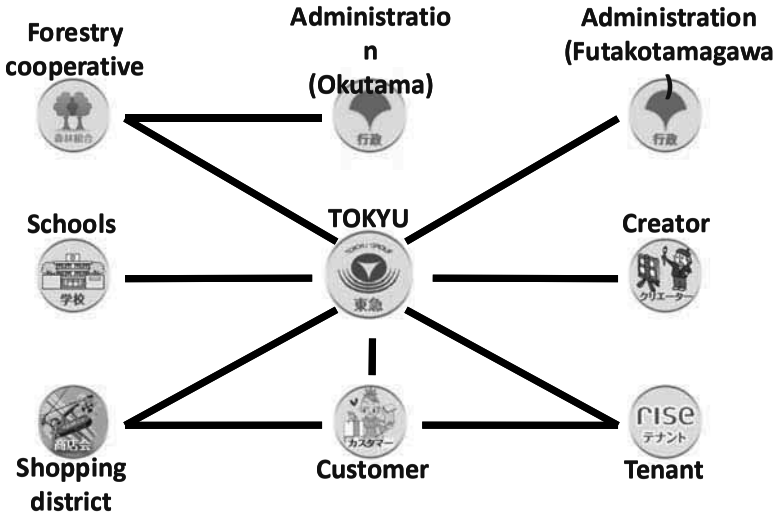
Creative spot

23

Change of Stakeholder



Phase 3 (Establish)



24

Video

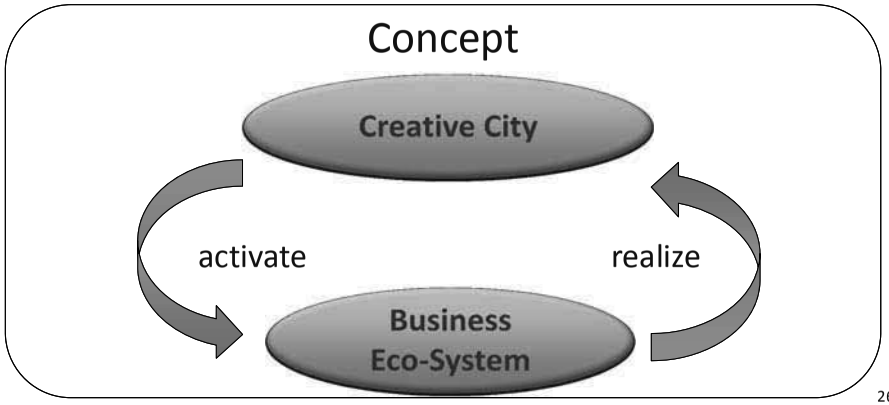
25

Concept and Goal

[TO] : Realize <Creative City>

[BY] : Business Eco-System

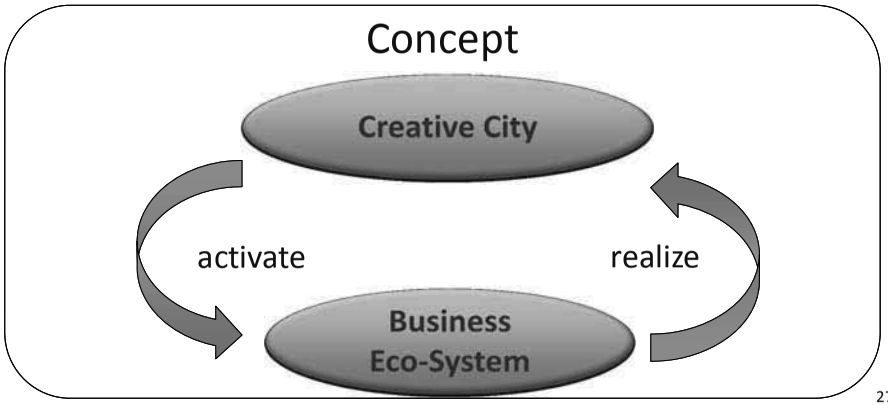
[USING] : 1.Acknowledge -> 2.Expand -> 3.Establish -> 4.Develop



26

Concept and Goal

GOAL
- People gather, and communication arise
- Increase Futakotamagawa attractivness
- Job development



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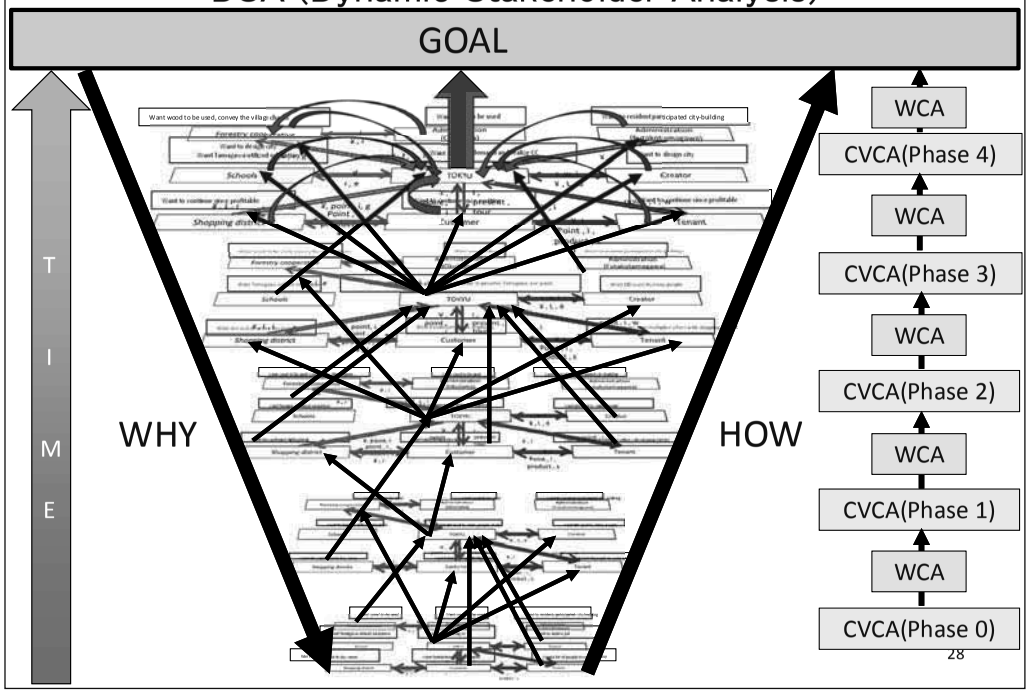
DSA (Dynamic Stakeholder Analysis)



28

Pugh Concept Selection

[+] ... Positive Impact
[-] ... Negative Impact
[blank] ... No Impact

Concept Influence Analysis

Title:Money		Theme			
Stakeholders	As Is	Theme1	Theme2	Theme3	Theme4
1. Forestry Cooperative	D	+	+	+	++
2. Administration(Okutama)		+	+	+	++
3. Administration(Futakotamagawa)	A	+	+	+	-
4. Schools					
5. TOKYU	T	-	-	-	++
6. Creator		+	+	+	+
7. Shopping District	U	-	+	+	+
8. Customer		-	-	-	-
9. Tenant	M	+	-	+	+

Concept Influence Analysis

Title:Wants		Theme			
Stakeholders	As Is	Theme1	Theme2	Theme3	Theme4
1. Forestry Cooperative	D	+	+	+	++
2. Administration(Okutama)		+	+	+	++
3. Administration(Futakotamagawa)	A				+
4. Schools					+
5. TOKYU	T	+	+	+	++
6. Creator		+	+	+	+
7. Shopping District	U		+	+	+
8. Customer		+	+	+	+
9. Tenant	M	+		+	+

Pugh Concept Selection

[+] ... Positive Impact
[-] ... Negative Impact
[blank] ... No Impact

Concept Influence Analysis

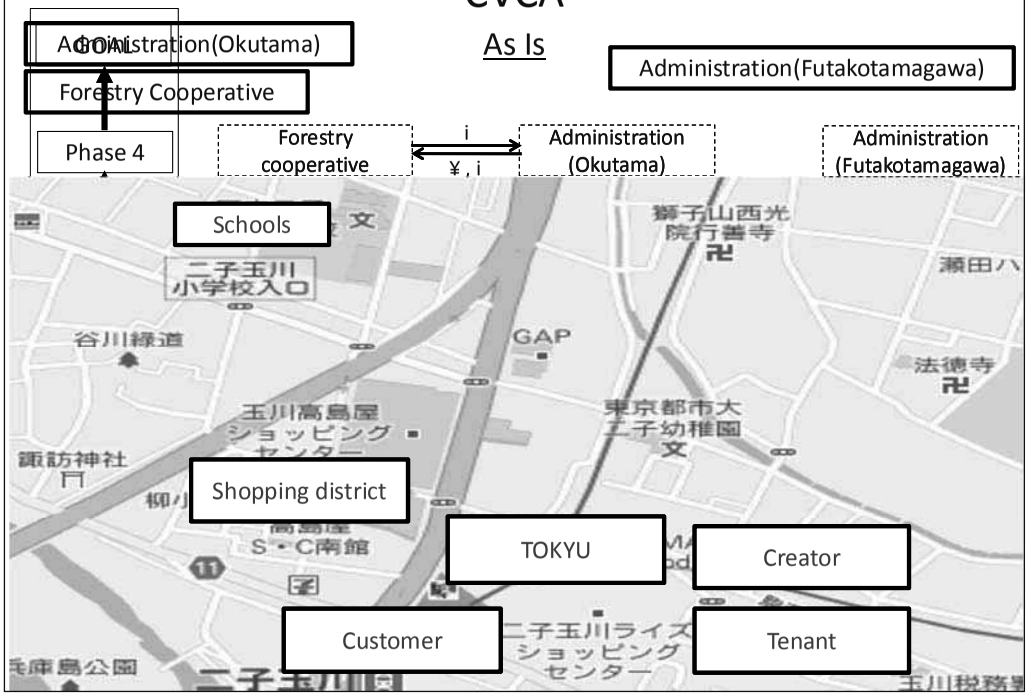
Title:Money		TIME / Phase			
Stakeholders	As Is	Phase1	Phase 2	Phase 3	Phase 4
1. Forestry Cooperative	D	+	+	++	++
2. Administration(Okutama)		+	+	++	++
3. Administration(Futakotamagawa)	A	+	+	++	+
4. Schools					
5. TOKYU	T	-	-	-	++
6. Creator		+	+	++	++
7. Shopping District	U	-	+	++	++
8. Customer		-	-		
9. Tenant	M	+	+	++	++

Concept Influence Analysis

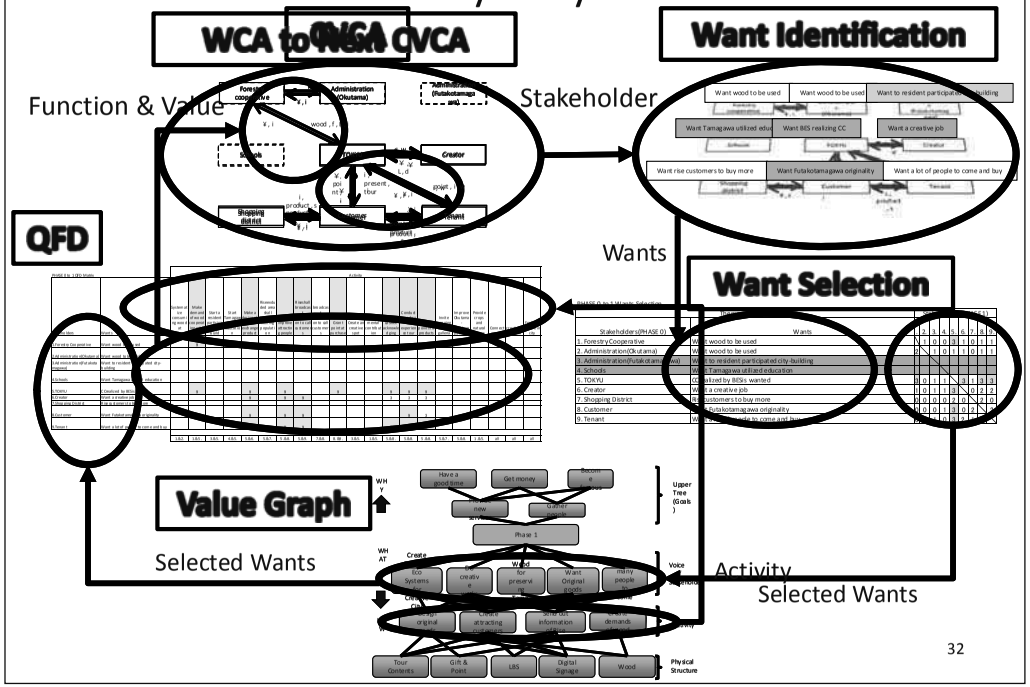
Title:Wants		TIME / Phase			
Stakeholders	As Is	Phase1	Phase 2	Phase 3	Phase 4
1. Forestry Cooperative	D	+	+	++	++
2. Administration(Okutama)		+	+	++	++
3. Administration(Futakotamagawa)	A				++
4. Schools					++
5. TOKYU	T	+	+	++	++
6. Creator		+	+	++	++
7. Shopping District	U		+	++	++
8. Customer		+	+	++	++
9. Tenant	M	+		++	++

CVCA

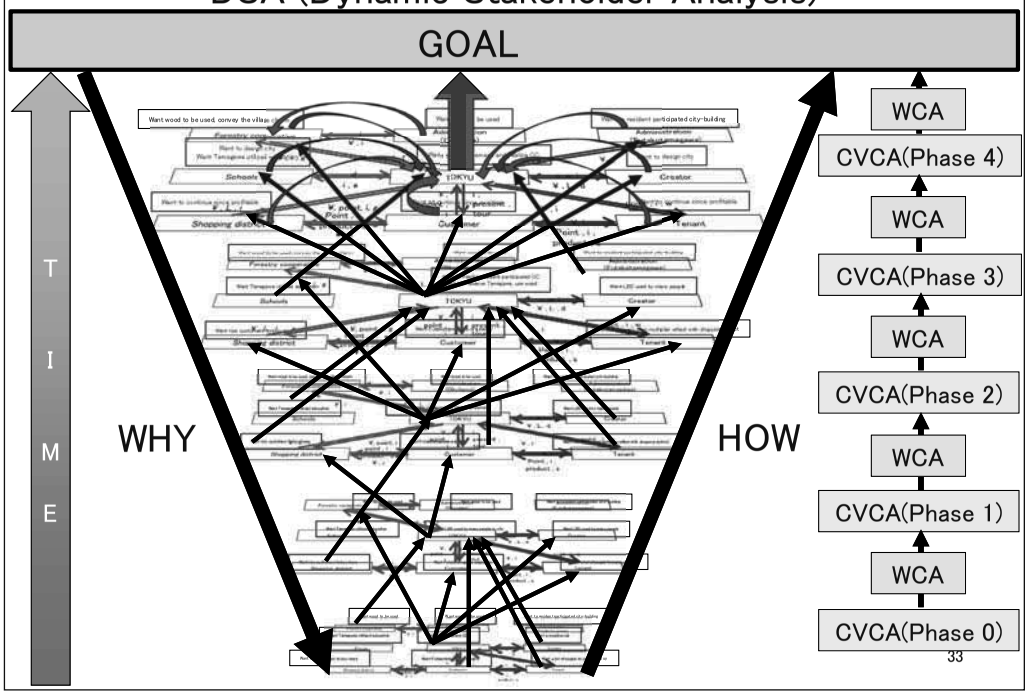
As Is



Analysis Cycle



DSA (Dynamic Stakeholder Analysis)



33

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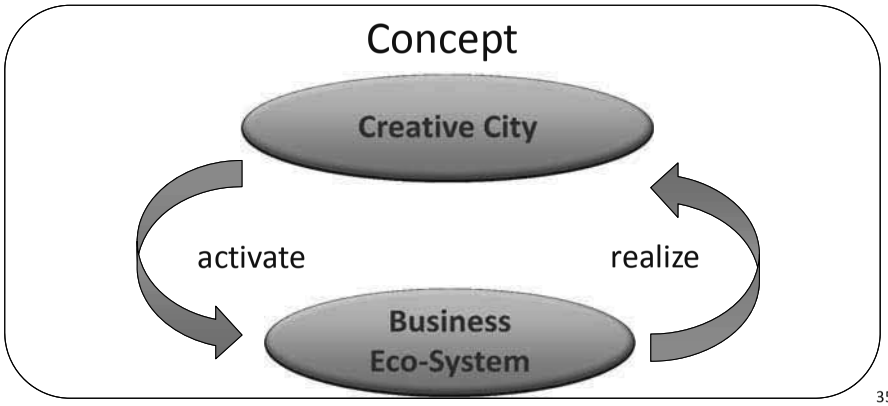
Concept and Goal

[TO] : Realize <Creative City>

[BY] : Business Eco-System

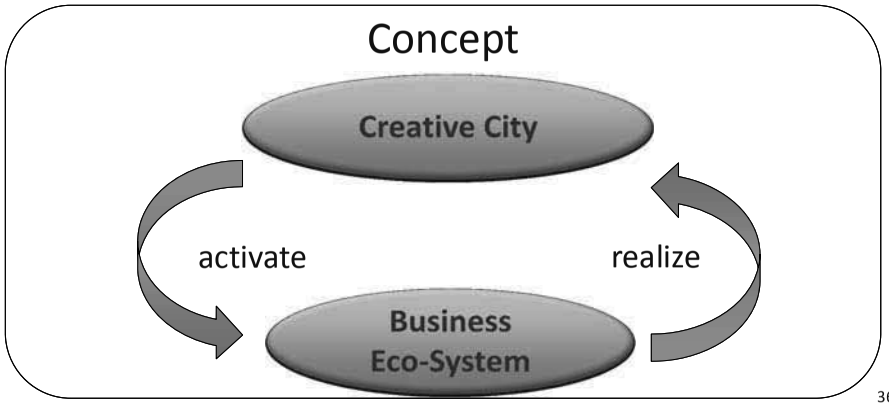
[USING] : 1. Acknowledge -> 2. Expand -> 3. Establish -> 4. Develop



35

Concept and Goal

GOAL
- People gather, and communication arise
- Increase Futakotamagawa attractiveness
- Job development



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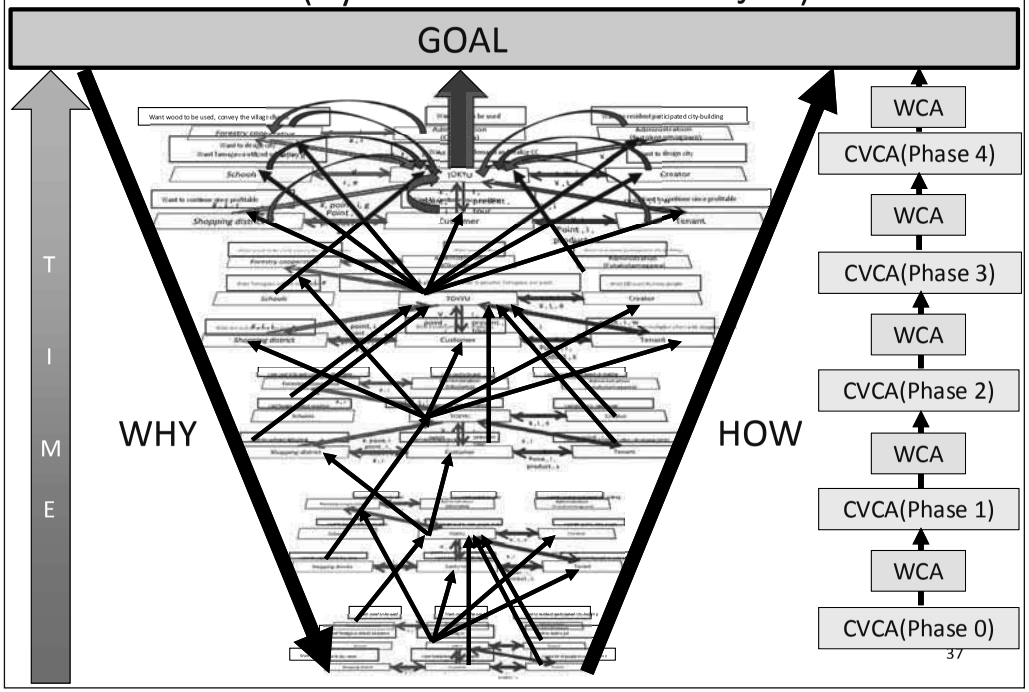
DSA (Dynamic Stakeholder Analysis)



37

Pugh Concept Selection

[+] ... Positive Impact
[-] ... Negative Impact
[blank] ... No Impact

Concept Influence Analysis

Title:Money	Theme				
Stakeholders	As Is	Theme1	Theme2	Theme3	Theme4
1. Forestry Cooperative	D	+	+	+	++
2. Administration(Okutama)		+	+	+	++
3. Administration(Futakotamagawa)	A	+	+	+	-
4. Schools					
5. TOKYU	T	-	-	-	++
6. Creator		+	+	+	+
7. Shopping District	U	-	+	+	+
8. Customer		-	-	-	-
9. Tenant	M	+	-	+	+

Concept Influence Analysis

Title:Wants	Theme				
Stakeholders	As Is	Theme1	Theme2	Theme3	Theme4
1. Forestry Cooperative	D	+	+	+	++
2. Administration(Okutama)		+	+	+	++
3. Administration(Futakotamagawa)	A				+
4. Schools					+
5. TOKYU	T	+	+	+	++
6. Creator		+	+	+	+
7. Shopping District	U		+	+	+
8. Customer		+	+	+	+
9. Tenant	M	+		+	+

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Pugh Concept Selection

[+] ... Positive Impact
[-] ... Negative Impact
[blank] ... No Impact

Concept Influence Analysis

Title:Money	T I M E Phase				
Stakeholders	As Is	Phase1	Phase 2	Phase 3	Phase 4
1. Forestry Cooperative	D	+	+	++	++
2. Administration(Okutama)		+	+	++	++
3. Administration(Futakotamagawa)	A	+	+	++	+
4. Schools					
5. TOKYU	T	-	-	-	++
6. Creator		+	+	++	++
7. Shopping District	U	-	+	++	++
8. Customer		-	-	++	++
9. Tenant	M	+	+	++	++

Concept Influence Analysis

Title:Wants	T I M E Phase				
Stakeholders	As Is	Phase1	Phase 2	Phase 3	Phase 4
1. Forestry Cooperative	D	+	+	++	++
2. Administration(Okutama)		+	+	++	++
3. Administration(Futakotamagawa)	A				++
4. Schools					++
5. TOKYU	T	+	+	++	+++
6. Creator		+	+	++	++
7. Shopping District	U		+	++	++
8. Customer		+	+	++	++
9. Tenant	M	+	+	++	++

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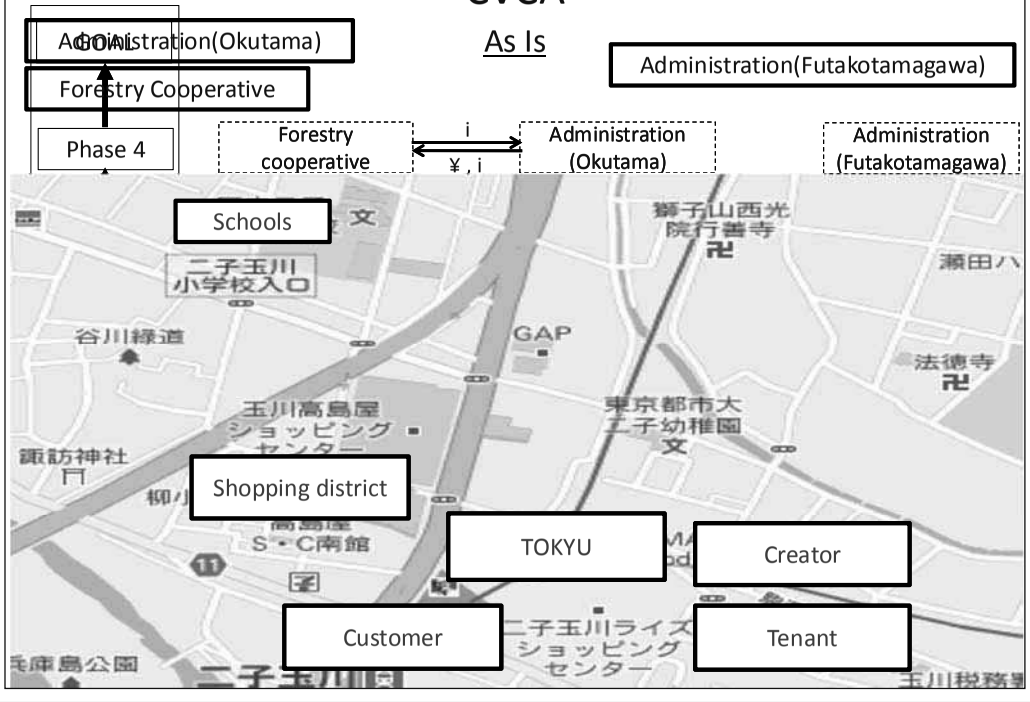
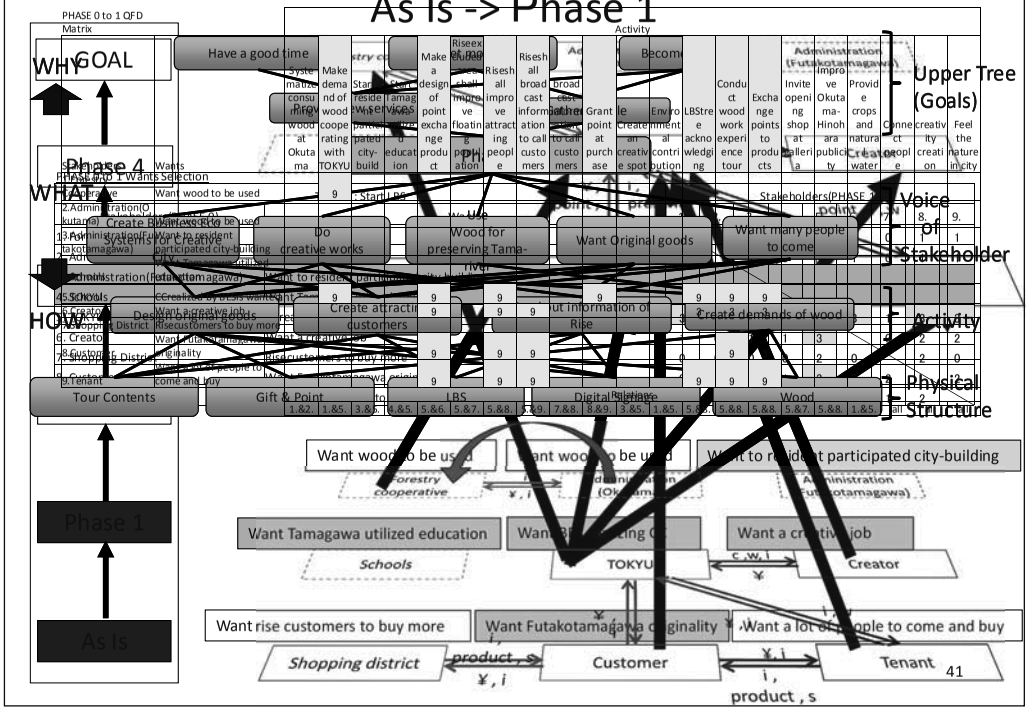
CVCA

As Is

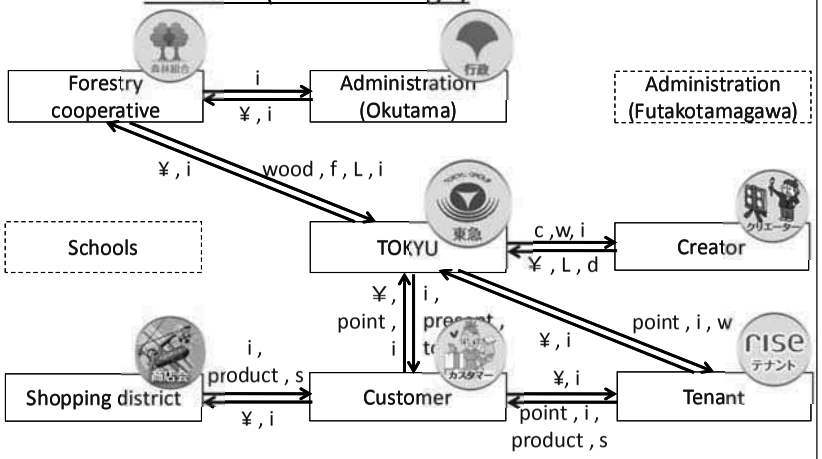


As Is -> Phase 1

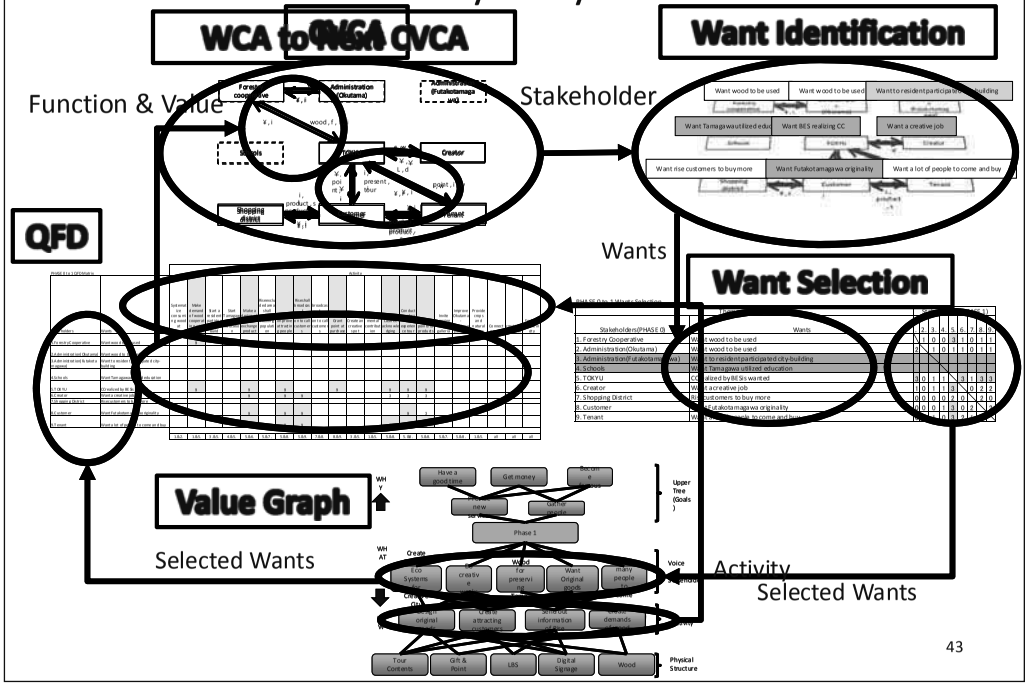


CVCA

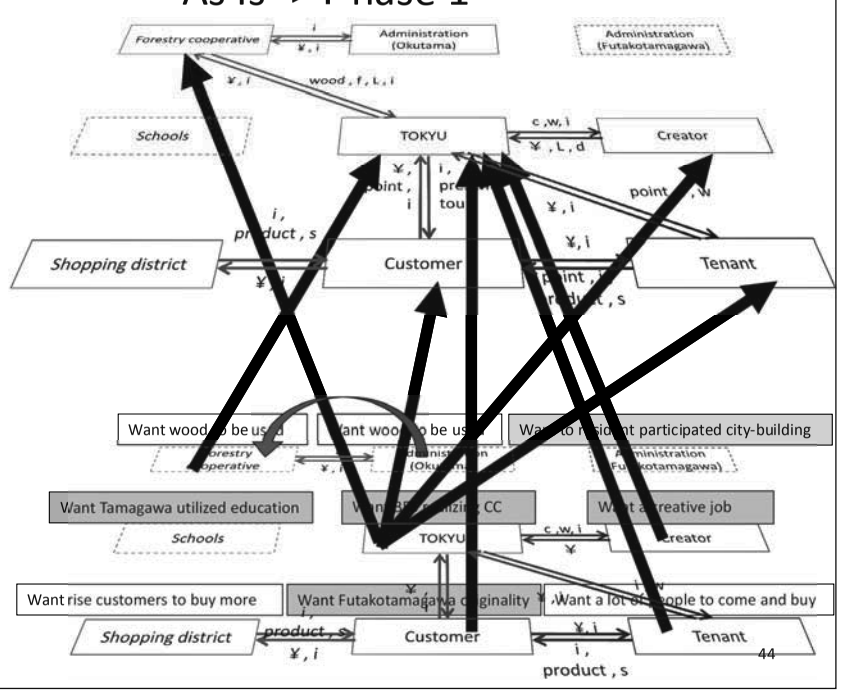
PHASE 1(Acknowledge)



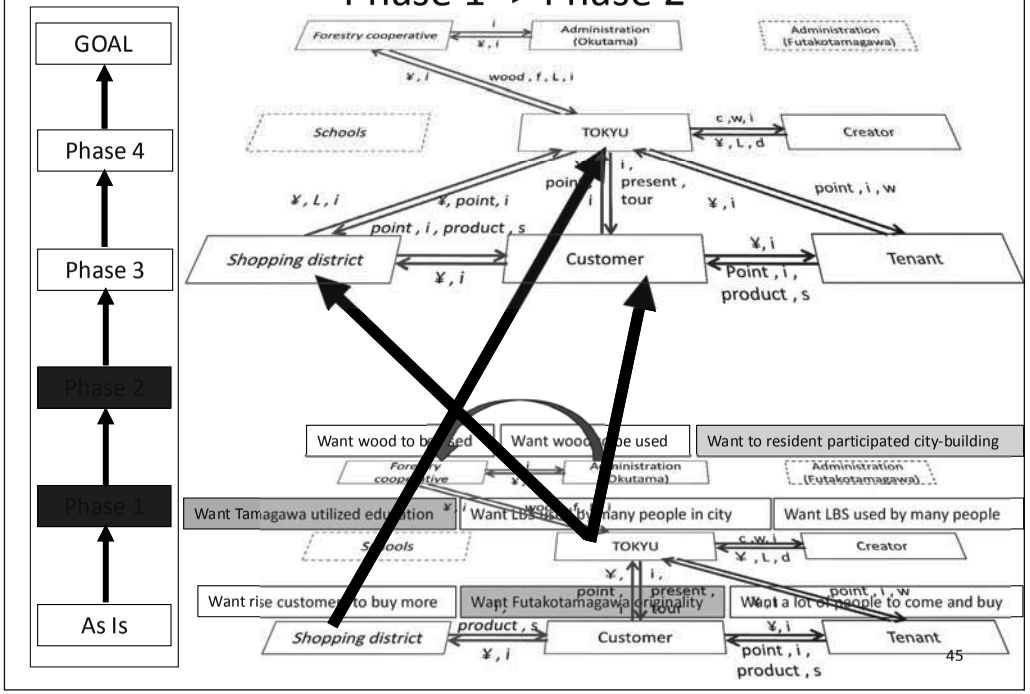
Analysis Cycle



As Is -> Phase 1

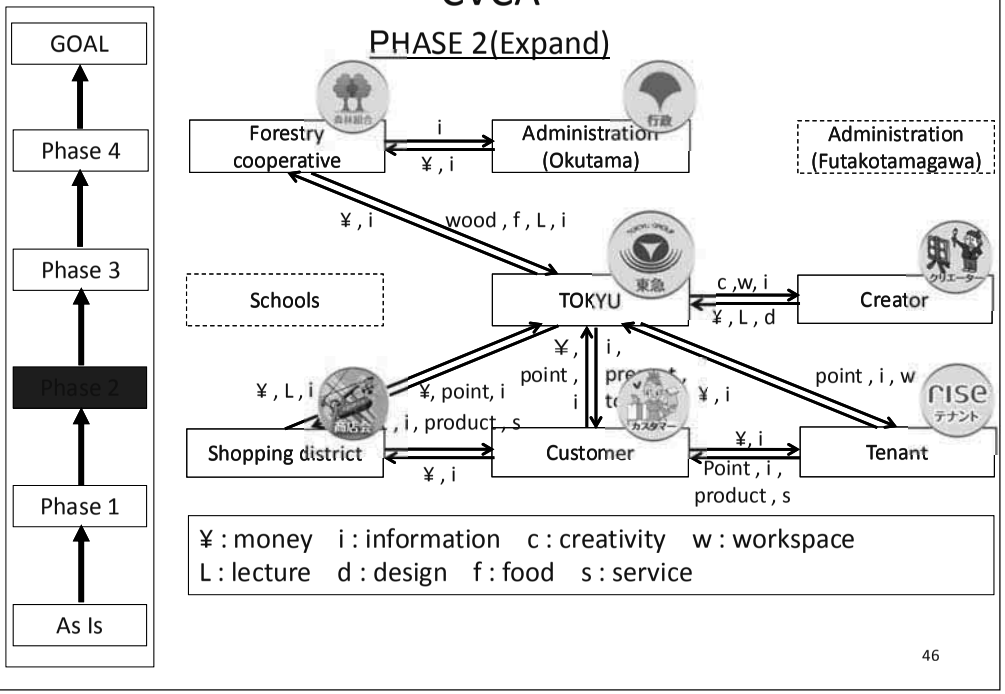


Phase 1 -> Phase 2

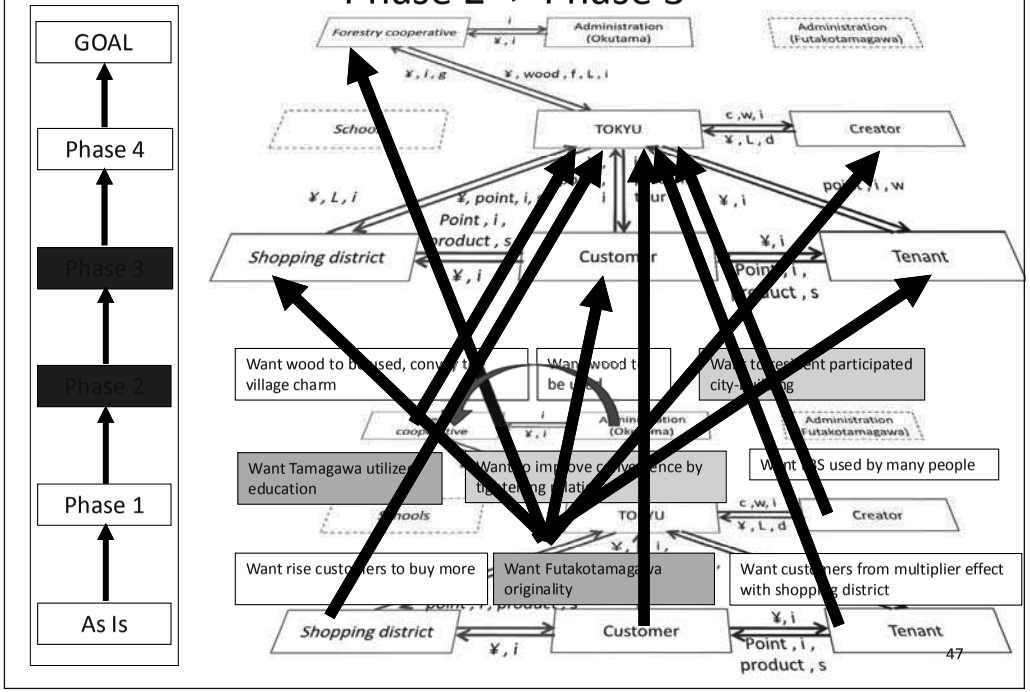


CVCA

PHASE 2(Expand)

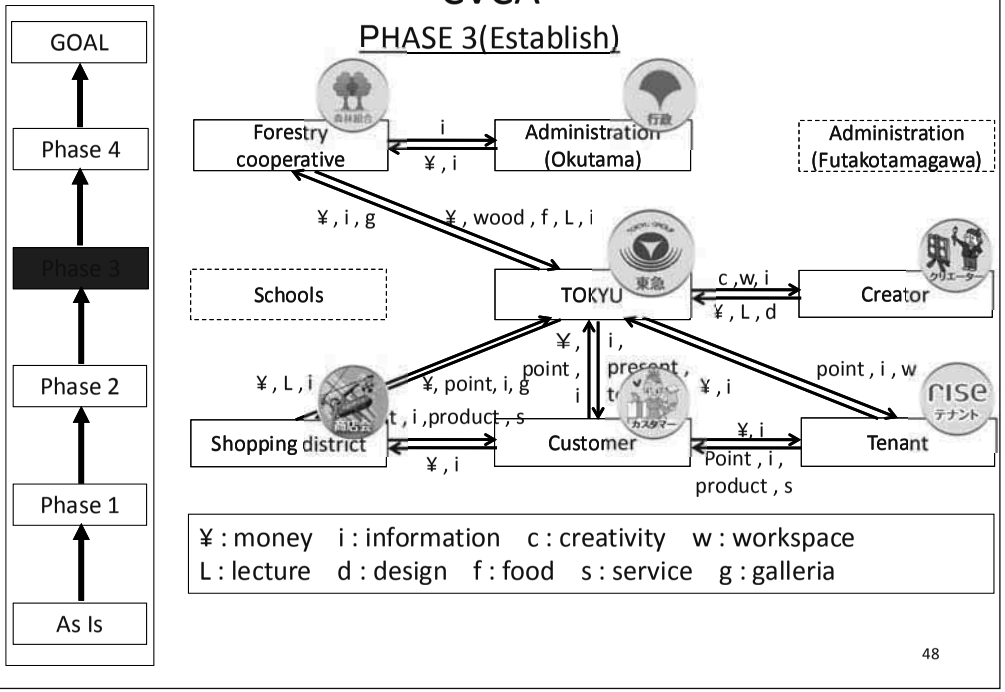


Phase 2 -> Phase 3

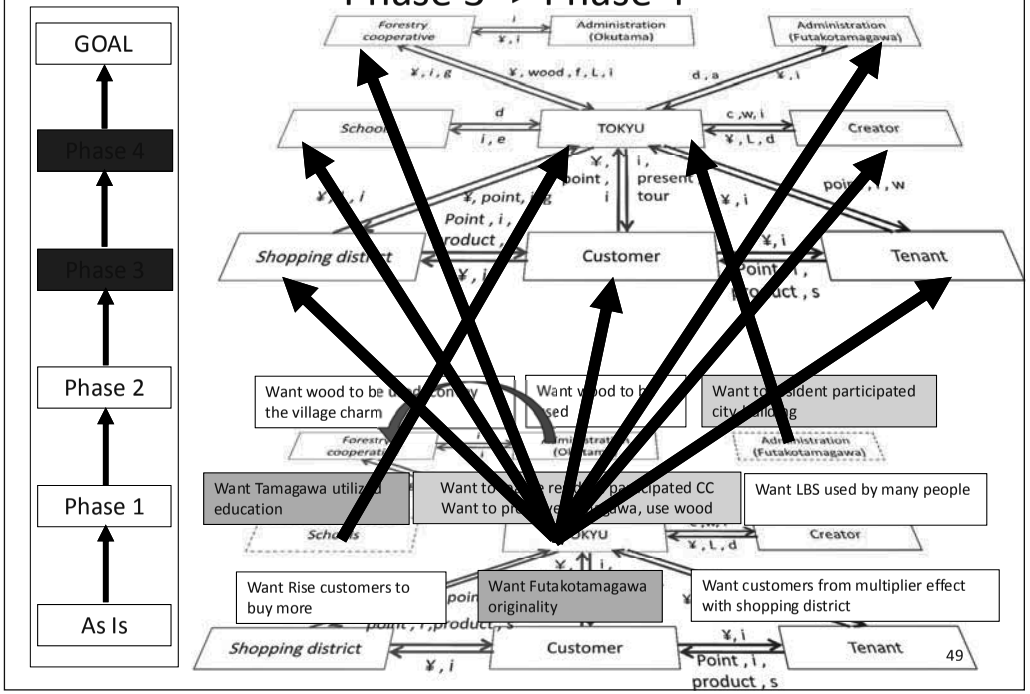


CVCA

PHASE 3(Establish)



Phase 3 -> Phase 4



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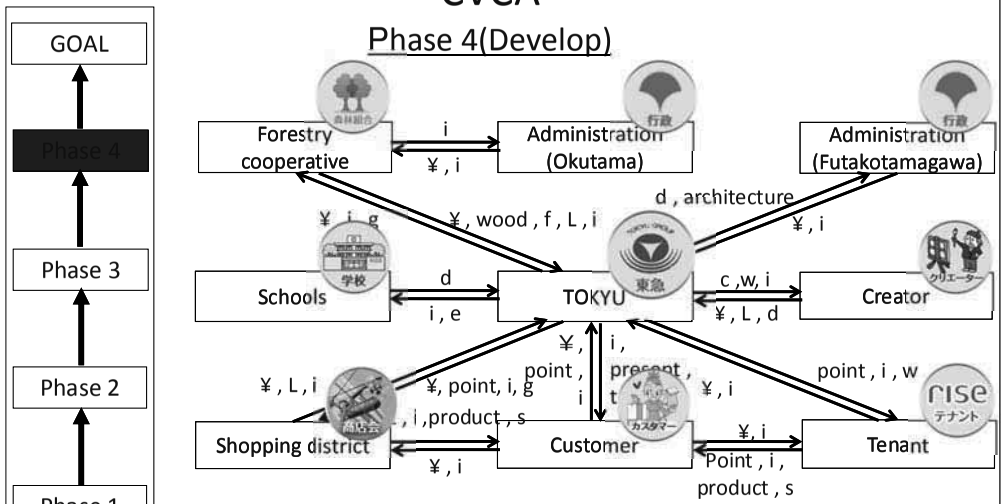
CVCA

Phase 4(Develop)



¥ : money i : information c : creativity w : workspace
L : lecture d : design f : food s : service g : galleria
e : education

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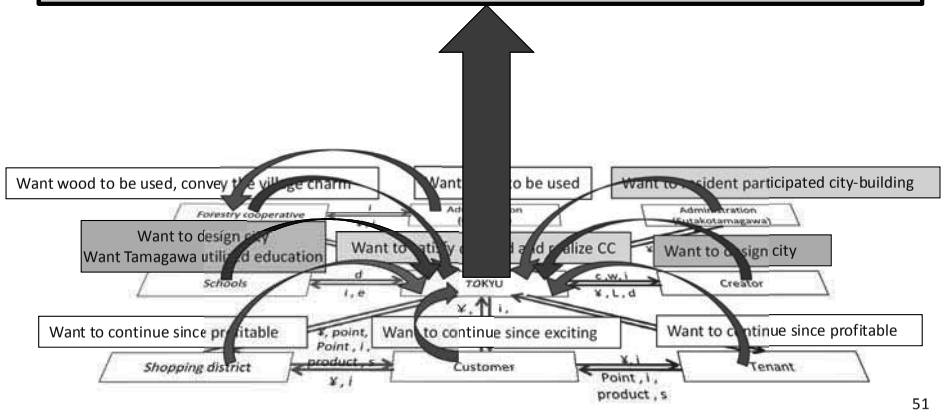
GOAL

GOAL
- People gather, and communication arise
- Increase Futakotamagawa attractiveness
- Job development



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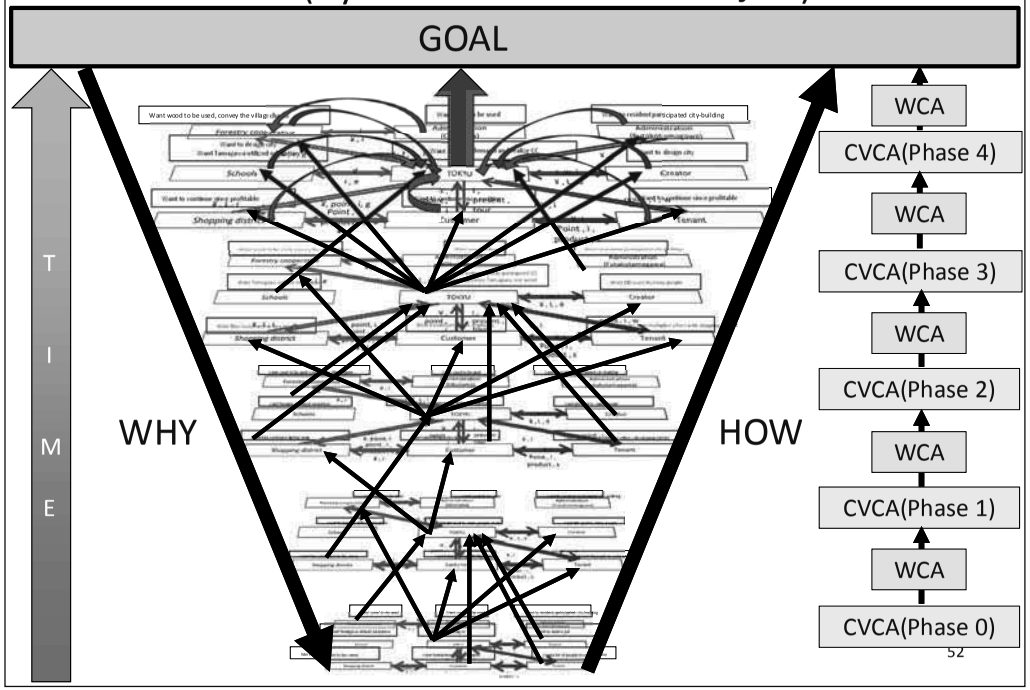
DSA (Dynamic Stakeholder Analysis)



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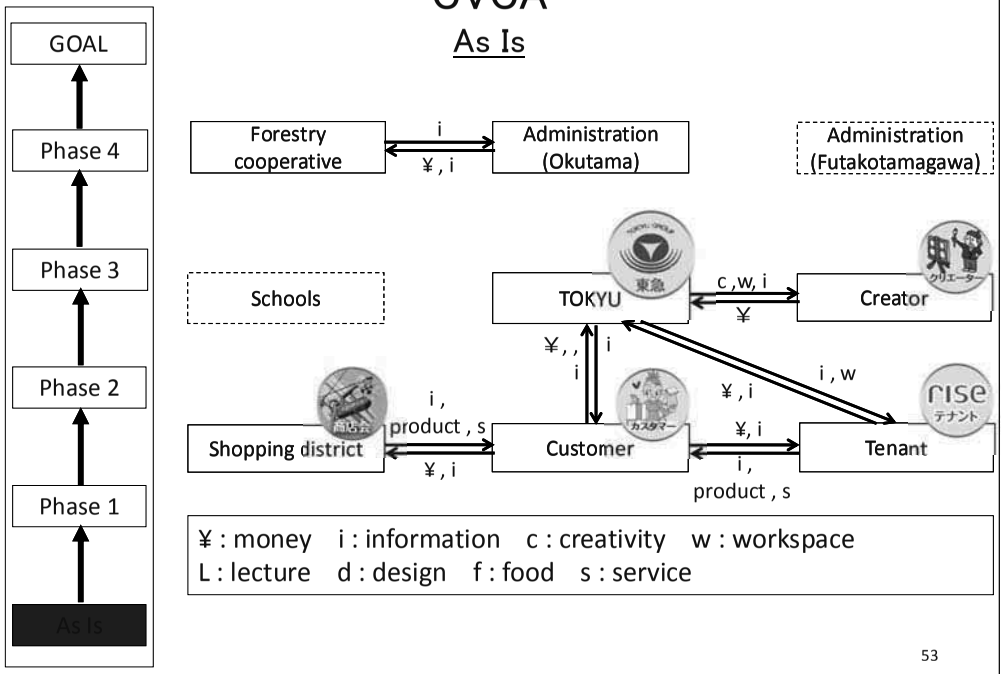
CVCA

As Is



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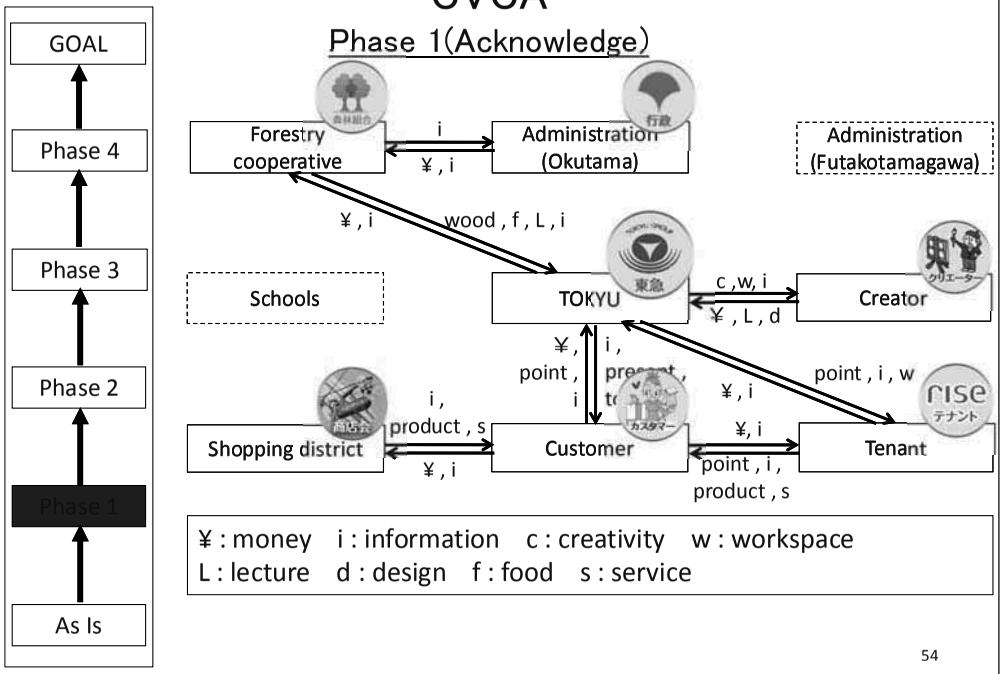
CVCA

Phase 1(Acknowledge)



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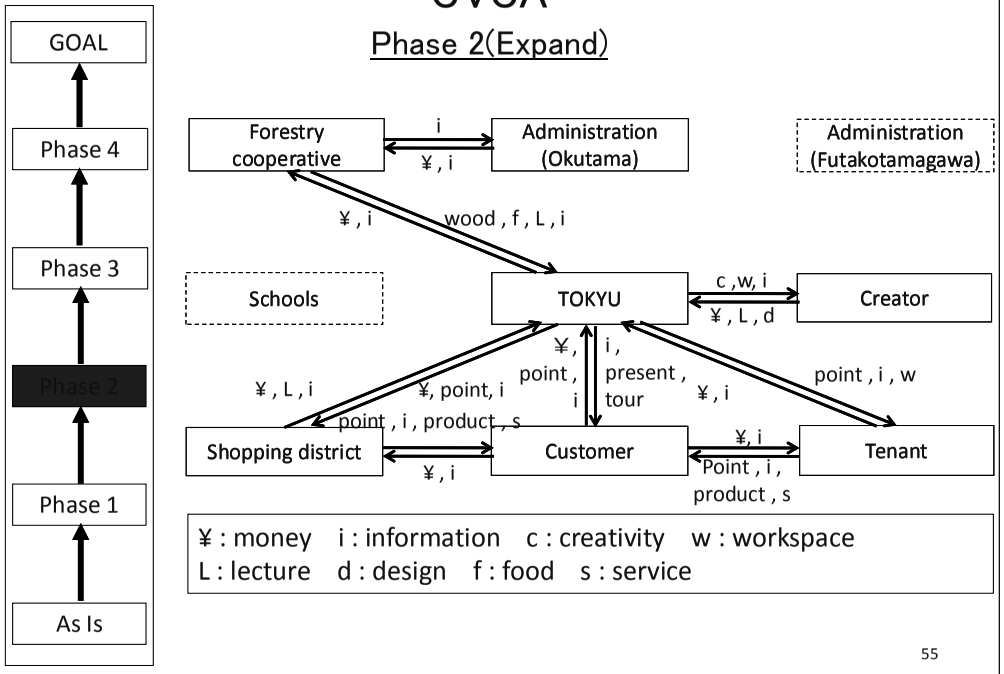
CVCA

Phase 2(Expand)



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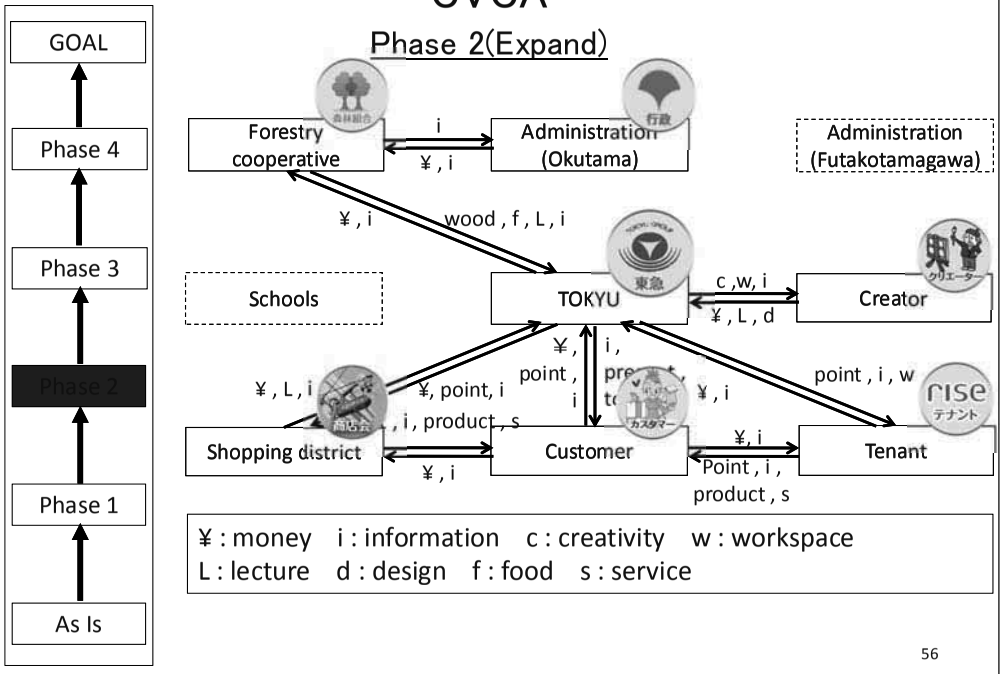
CVCA

Phase 2(Expand)



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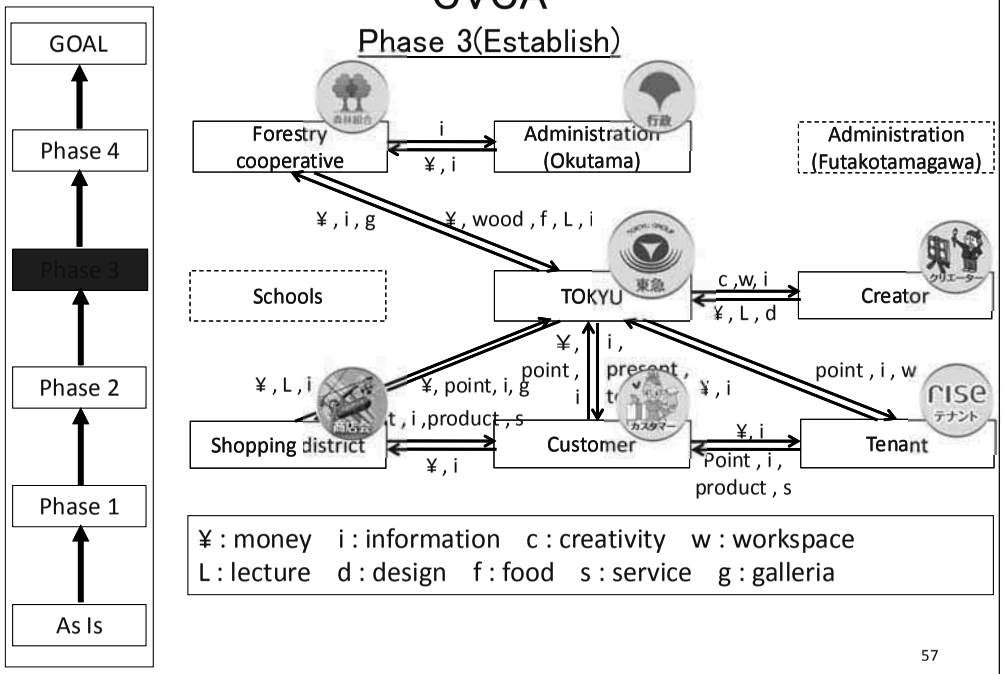
CVCA

Phase 3(Establish)



¥ : money i : information c : creativity w : workspace
L : lecture d : design f : food s : service g : galleria

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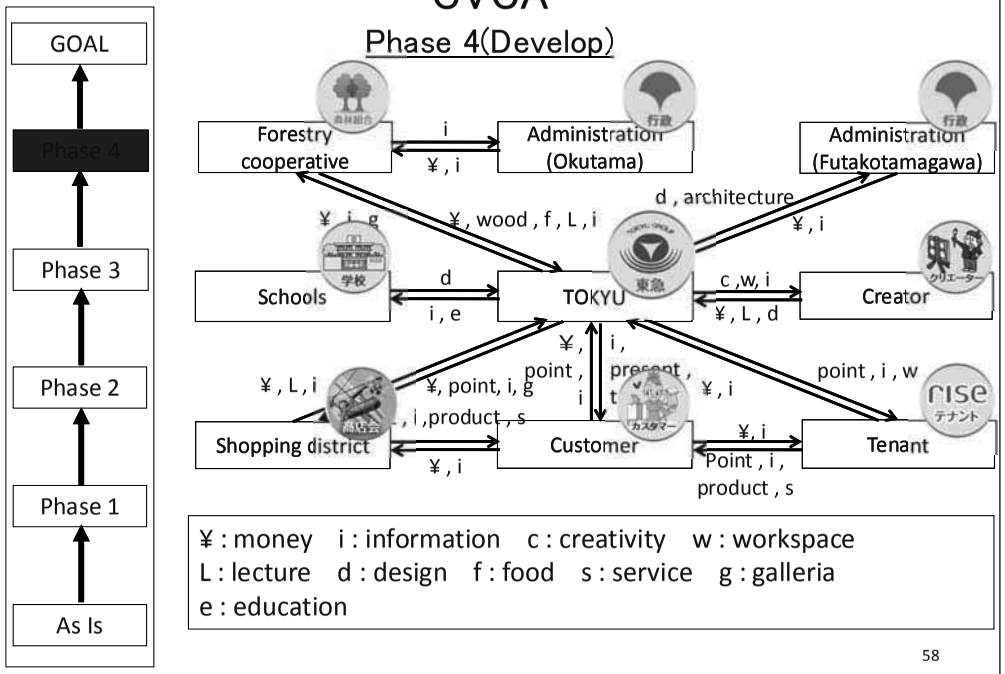
CVCA

Phase 4(Develop)



¥ : money i : information c : creativity w : workspace
L : lecture d : design f : food s : service g : galleria
e : education

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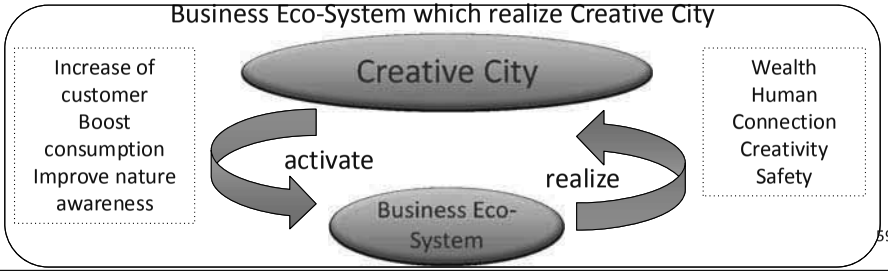
Goal of Concept

GOAL
- City * Rich Mother Nature
- Preserving Tama-river by CSR investment
- Actuating CRM by Location-Based Service
- People gathering to "Creative Spot", and communication arise
- Elementry students, residents, designers, creates the city actively
- employment grow
- Education of Tama-river penetrates
- Shopping district's publicity increases
- Increase Futakotamagawa attractivness

A sustainale Business-Eco system and Creative City realized by conducting the items countinously

Business Eco-System which realize Creative City



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