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Creative Cities and the LERP-PEARL Transition Model

Abstract

This paper introduces three Unesco nominated creative cities to illustrate large scale city innovation. Since building a world-recognised creative city is a long process, transition management concepts were adopted. A two-stage transition model of 'LERP to PEARL' is then proposed. LERP — leader, execution, resources and partners are required to test run the vision in the initial triggering stage to increase awareness and attract the attention of the relevant parties. 'PEARL' — partners, execution, activation, resources and leadership of multiple constituents are required at the second self-organising stage for making the creative city sustainable. At the second stage, partners need to be enlarged, which enhances execution power, helps activate more participation and brings in a larger amount of resources than at the first stage. With more stakeholder involvement, multiple leaders will be nurtured and, hopefully, a self-organising system will be established to sustain the transformation.

Key words: *creative cities, regional innovation systems, networks in innovation, societal innovation, transition model*

Introduction

The motivation for this study comes from the increasing reports of successful city revitalisation projects that have transformed and integrated various systems for a sustainable society. The announcement of various rankings, such as creative cities (Cabrita and Cabrita, 2010[1]; Hospers, 2003[2]), innovation cities (2thinknow, 2011)[3], smart cities (Rodrigues and Tomé, 2011)[4] and liveable cities (Donald, 2001)[5] helped to disseminate the successful models of those awarded cities, leading to a wave of city rejuvenation worldwide. The United Nations Educational, Scientific and Cultural Organisation (Unesco) launched a 'Creative Cities Network' in 2004, facilitating international cooperation among cities for cultural diversity and sustainable urban development.

By studying three Unesco nominated creative cities, this paper presents a transition model that depicts the process and key success factors of their transformation. In the following sections, we first explain transition management; introduce the three cities; present our transition model supported by the three-city revitalisation measures; and lastly, finalise the paper with a conclusion.

Transition management

City rejuvenation is a long process; it needs the involvement of many players, supported by a variety of resources at different stages. Rotmans (2005) [6] explained that:

'Transition management is designed to encourage and stimulate societal innovation towards a sustainable society. This is based on the realisation that this cannot be done by force or in a top-down manner, but requires a subtle co-evolutionary approach, by means of a visionary process of agenda building, learning, instrumenting and experimenting.'

It is an attempt to tackle persistent problems by steering them in a more sustainable direction, through clever, subtle changes and adjustments at several levels concurrently. At the core of transition management is the challenge of orientating long-term changes in large socio-technical systems. Transitions are understood as processes of structural change in major societal sub-systems. They involve a shift in the dominant rules of the game, a transformation of established technologies and societal practices and a movement from one dynamic equilibrium to another (Meadowcroft, 2009) [7].

Rotmans (2005) [6] also described how such new ways of thinking or change in perspective should be further translated within various networks, organisations and institutions. A transition towards a sustainable society requires a different type of steering. That is, it is necessary to create room for innovation processes and to facilitate the circumstances and conditions in which these processes can strengthen each other, especially for a scaling up effect to take place. To achieve this goal, all relevant parties — the government, knowledge institutes, non-governmental organisations, companies and intermediaries — must combine their efforts to create the conditions that make the transition to a sustainable society possible. In other words, these actors have to take on new roles, acquire new competencies, develop new practices and work together in a new way during the transition process.

Above all, a transition towards a sustainable society requires a new knowledge infrastructure. Often, the current knowledge infrastructure is inadequate in tackling the issues raised. Thus, a new interdisciplinary and trans-disciplinary knowledge infrastructure is required for effective development, distribution and utilisation of the new knowledge to successfully implement system innovations.

Unesco Creative Cities Network

The rationale behind choosing 'city' as the level of analysis is because the formation of free global economy and the convenience of the Internet have blurred the boundary of national borders. As a result, cities are the uprising competitive units, leading to intensified competition at this particular level. In addition, half of the world population lives in cities (Rodrigues and Tomé, 2011[4]) and cities have been recognised as centres for the production of knowledge, culture, information and innovation (Navarro, Ruiz and Peña, 2012[8]). City Mayors (an international think tank for urban affairs) believes that metropolitan areas, rather than nation states, will shape the world's social, cultural, technological and economic agendas in this century (Thite, 2011[9]). In such context, cities all over the world devote a large amount of work encouraging and cultivating their collective knowledge to shape future competitiveness (Cabrita and Cabrita, 2010[1]). However, cities are also struggling with cooperation and competition for the ultimate goal of attracting talent, knowledge, capital for wealth creation and quality of life.

With the need for cultural recognition that affirms a city's identity in the increasingly competitive globalised world, Unesco launched the Creative Cities Network in October 2004. According to the Unesco website, its goal is to bring together public and private partners as well as civil societies to contribute towards the development of creative industries and generate new forms of international cooperation.

Creative industries are defined by Unesco as industries that combine the creation, production and commercialisation of contents which are intangible and cultural in nature, such as creative, artistic and cultural goods. These activities are promising in terms of growth and are vehicles for cultural identity and diversity. They also offer the potential for increased employment through the generation and use of intellectual property and represent around 2.6 % of the GDP of the European Union (The Greater Lyon, 2014[10]). Each Unesco-nominated creative city must be unique in its cultural profile in a chosen theme out of seven ⁽¹⁾, and be able to cooperate with the creative and economic institutions in the society. Also, it must act as a model and partner with other cities and communities, both close by and around the world within and outside the Creative Cities Network – (Hartman, Gulliksson and Brannlund, 2010[11]).

¹ The seven Creative Cities Network themes include literature, film, crafts and folk art, design, media arts, gastronomy and music.

We report three Unesco-nominated creative cities, namely Kanazawa in Japan, Lyon in France and Östersund in Sweden for their outstanding displays in crafts and folk art, media arts and gastronomy respectively. From the application document of each city and relevant literature, the characteristics of each city were analysed based on the conditions of transition management introduced earlier. In addition, the author had the pleasure of personally interviewing the female entrepreneur who initiated and drove the city government to apply for the Unesco City of Gastronomy in Östersund, Sweden.

Background of the Three Creative Cities*

Kanazawa (Japan), founded as a castle town in 1583, has had a peaceful existence ever since. Having avoided serious natural disasters and war-time destruction, various kinds of crafts have been developed and preserved along with the city's distinctive samurai culture and lifestyle. During the Edo Period (1603-1868), the Maeda Clan abandoned military confrontation with the Edo in favour of civil administration, promoting and popularising scholarship, craftwork and the arts. Prominent scholars and craft artists were invited to the city to teach such skills. During the Meiji Restoration (1868-1912), the population of Kanazawa rapidly declined from 130 000 to 80 000 and the city needed revitalisation. In the 1890s, the textile industry transformed the city; centred on silk exports, and the development of the textile machinery. In June 1995, Kanazawa Mayor Tamotsu Yamade proposed the Kanazawa World City Concept, which was accepted as a long-term plan in 1996. Its basic theme was to strengthen Kanazawa's pride through developing its uniqueness cultivated over 400 years as a city of peace and taking responsibility for its preservation of traditional Japanese crafts and arts. After 13 years of transformation, Kanazawa was awarded as a Unesco city of crafts and folk art in 2009.

In *Lyon (France)*, the Lumière Brothers invented cinematography and shot the first film in the history of the cinema in 1895. In the 19th century, Lyon witnessed important architectural developments with construction of the Opera House, the Court House, the stock exchange, the Tête d'Or Urban Park and the Fourvière Basilica. It leverages its geo-strategic position as the crossroads of Northern and Southern Europe and its faithful preservation of the old city. In the old city of 'The Roman', 'The Renaissance', 'The Silk' and 'The Architecture' districts, nothing has been destroyed (Trousse, 2011[12]). As a result, Lyon was listed on the Unesco world heritage of humanity list in December 1998. In order not to be overshadowed by Paris, the Greater Lyon Authority has a policy of economic development dedicated to the creative industries. This policy aims to support and increase the

visibility of sectors that have a large creative component (design, fashion, the moving image). It accelerated the process of innovation through creativity and cross fertilisation between the various sectors. Branding 'ONLYLYON' in January 2007 is another endeavour, attempting to position Lyon as a creative conurbation, networking all economic, academic and artistic players. These measures illustrate the city's desire to assert its difference, its values, its identity, its personality and its exclusivity. In 2008, Lyon was awarded as a Unesco city of media arts.

Östersund (Sweden), founded as a trading centre in 1786, had a population of about 45 000 in 2010 and is the only town in the region of Jämtland (about 126 000 inhabitants). Between 2000 and 2004 the region went through a turbulent structural change, several regiments were closed down in *Östersund* and the effect was a massive loss of jobs. This seeming economic disaster turned out to open opportunities for developments of new industries, the creation of new markets and the chance to build a new identity. The region's clean air and fresh water provide unique conditions for superb produce. In addition, the *Östersund* municipality has an attractive rural area with very good quality of life. Activities such as down-hill biking, running and cross country skiing are examples of other activities that attract tourists in every season. Continuous sporting events and various types of festivals, combined with gastronomy have become a co-branding that attracts visitors. With the joint efforts of entrepreneurs, city governments and food producers among others, this rural, sparsely populated region in Sweden is now appreciated for its gastronomic culture, based on locally produced food and traditional culinary. In 2010, *Östersund* region was named a Unesco city of gastronomy.

Transition management in Three Creative Cities

For a large-scale city innovation to take effect, transition management such as the one proposed by Rotmans (2005) [6] needs to be implemented. From the literature, we have extracted seven important elements for a successful societal innovation. They are: clear vision, involving multiple players, developing new competencies and new practices, installing new knowledge infrastructure, changing structures of societal sub-systems, co-evolving and scaling up.

The evolution of each city has shown the above-stated seven elements. Due to space limitation, we explain each key element using one city as an example. In general, each city pronounced its *vision* (such as the preservation of traditional crafts in Kanazawa), followed with matching policies and

resources. During the city transformation process, there were *multiple players* that passionately joined the efforts for a large-scale system change. For example, to promote *Östersund* as a city of gastronomy based on organic food with traditional culinary, the entrepreneur 'Fia' used 80 % of organic food in her own restaurant and persuaded the chefs and owners of other restaurants to increase the percentage of their organic food, helping the organic farmers and artisan food producers become sustainable. To reduce the cost, Fia negotiated with several distributors to pick up organic food from different farms free of charge, on their way back sending necessities to those sparsely populated farms. During the transformation process, city government and politicians provided their support by allocating required resources. Food academies and food training centres were placed to nurture a new generation of Swedish food processors. Furthermore, gastronomes and cultural workers published their experience with the fine food, which helped the marketing and the scaling up of the food industry in the *Östersund* region.

In developing *new competencies and new practices*, artisans in Kanazawa were not only trained in traditional Japanese crafts and arts but were also sent to other countries to learn advanced techniques aiming to combine the traditional with contemporary arts in order to stimulate innovation. For *new knowledge infrastructure*, Lyon created the 'Imaginove' cluster to nurture synergies between the different image sectors (video games, cinema, audiovisual, animation and multimedia) to increase their engagement and facilitate the competitiveness of product design, production and distribution. These efforts result in the advancement of various technologies and are the backbone of its well-known Festival of Lights. For *changing the structure of societal sub-systems*, the multiple constituents' involvement in *Östersund's* food industry explains the societal-level structural change of farming, food producing and distribution sub-systems. *Östersund* also provides a good example of *co-evolving*, as its food, culture, sports, festivals and tourism projects jointly created an arena for sustainable organic food production with a gastronomic profile for the region, as well as the growth of the above mentioned industries. For *scaling up*, the 2013 Festival of Lights in Lyon has attracted around 4 million visitors, 80 light projects, 8 million small candles sold in Greater Lyon, 400 000 programmes broadcast and more than 250 newspaper articles. In addition, the city hotels were full during the 4-day festival, three times the turnover for the city bars and restaurants compared to normal periods, with 47 public and private partners (Fête des lumières, 2013[13]).

Proposed transition model — from LERP to PEARL

City transformation is a long process and is much more complicated than a private company's organisational change. It requires vision, good leadership, multiple players' commitment, tangible resources, effective execution and a self-organising system.

Generally, it goes through at least two stages — the initial triggering stage and the self-organising stage. Without the self-organisation of interdependent sub-systems, the transformation would not be sustainable. Therefore, we propose a two-stage 'LERP to PEARL' transition model as shown in *Figure 1* for a large-scale city transformation.

Figure 1:



LERP' — leader, execution, resources, and partners are the crucial elements in the initial triggering stage. Literally, 'lerp' is a special kind of honey produced by a type of Australian insect. It is a nutrient that facilitates growth, symbolising the fact that nurturing environments are very important at the initial stage of city transformation. 'PEARL' — partners, execution, activation, resources and leadership of multiple constituents is required at the second, self-organising, stage for making the creative city sustainable. Literally, 'pearl' is precious and desirable jewellery that catches people's eyes. Applied to city transformation, once the initial transformation is successful, it has to become desirable and attract relevant parties' attention to involve more partners. Thus, enlarged partners enable effective execution at relevant sub-systems. Then, proper activation for more participation can solicit required resources and commitment. With active participation of enlarged partners, supported by effective execution, proper activation and larger amount of resources, it is more likely that self-initiated leadership of relevant sub-systems can be established for self-organising a sustainable system. The final goal is that each sub-system can initiate and manage its own sustainable eco-system,

at the same time harmonise with other sub-systems for building and maintaining a self-organising holistic system. *Table 1* briefly presents the key elements of LERP and PEARL model. The concept is further illustrated by real events of the three creative cities in *Table 2* for LERP and *Table 3* for PEARL.

In what follows, we use *Östersund* to illustrate the key elements of LERP, *Kanazawa* the *PEARL elements* and *Lyon* the *full model*. In the initial triggering LERP stage, Ms. Fia Gulliksson is the most distinctive *leader* who drove for the transformation of the city and the food industries in *Östersund* region (Jamtland). Her initial *execution* was to practice what she preached by using 80 % organic food in her own restaurant and persuaded other restaurants to increase the percentage of organic and artisan food. The initial *resources* she acquired include the support of the *Östersund* municipality for a small budget that she used to interview unique food producers and shoot films for the 'Gastronomy' magazine in preparing for the Unesco creative city application. As a result, she has been able to solicit joint efforts from some partners, such as farmers, artisan food producers, chefs and cultural workers.

As mentioned earlier, the self-organising (PEARL) stage will be illustrated by the events in Kanazawa. Various *partners* including businessmen, city government, associations, artists, art colleges, universities, training centres and philanthropists all became active partners in Kanazawa city's efforts in preserving traditional Japanese crafts and folk art. Its multi-constituent *execution* resulted in the city artisans mastering in 22 kinds of traditional crafts. Because the city successfully pushed the roots of traditional crafts into the lives of Kanazawa citizens, they were *activated* and developed with high levels of culture appreciation. As a result, the local market has a good share of the arts Kanazawa produced, without totally relying on exports. In addition, with such appreciation and the urge for passing traditional crafts and folk arts to the younger generation, Kanazawa Children's Arts and Crafts School was opened in 2008. With the pride of preserving traditional Japanese crafts and art, more and more *resources* were made available in the city. For example, Kanazawa established the fund for traditional techniques and arts training. A foundation for children's arts and crafts school was also set up. In addition, the city supports study abroad for the acquisition of knowledge and technology related to craftwork. Philanthropic organisations also donated money for this endeavour. To sustain such vision, initiation of different organisations has been observed in Kanazawa. For example, Kanazawa Drama Network was formed by the artists themselves in the Citizens' Art Village to have a national tour of locally created dramas. New applications of the craft technology have been implemented to new products and new designs, thus new styles of silk dyeing, textiles and craftwork were invented leading to the announcement of the Kanazawa Fashion Industry City Declaration in June 2004 (Unesco, 2009[14]). Furthermore, new performances were staged, including collaborations between contemporary music and the style of traditional Noh drama. This type of organic connection between professions in the region not only provides a synergistic effect, but has also led to the emergence of *multiple leaders* in new field, a diversification of the industry structure, and even the stability of the region's economy (Unesco, 2009[14]). In other words, citizens as well as the city government join together in their efforts to make Kanazawa a better known creative city. Thus, an inter-dependent sub-systems change has forged a self-organising total system that adds value to the city.

The LERP-PEARL two-stage model can be further explained with the case of Lyon. The Greater Lyon Authority took the lead in planning for its city development (leader). With the goal of attracting worldwide attention, the city has a policy to 'develop its creative industries, taking the advantage of its

cinematography invented by the Lumière Brothers'. After setting this clear vision, universities and research institutes were provided with resources to advance the relevant technologies (execution and resources). This initial move has attracted image artists, high-tech researchers and cultural workers to the city (partners). Gradually, the clustering effect took place. Therefore, it is not a totally top-down system.

As the second-largest University City in France, Lyon has sufficient supply of talent in the creative industries. With the overall living quality improvement, more and more talent chooses to stay in the city. In the second stage of the transformation, event planners, fashion designers, video game players, festival project managers and so on contributed their expertise to the same goal (enlarged partners). Each profession as a sub-system initiates its own activities, at the same time inter-connected with others such as Institut Lumiere with event planners (effective execution). To help activate the creative industries, the Greater Lyon Authority did one more thing — creating the 'Imaginove' cluster to facilitate synergies between the different image sectors, such as video games, cinema, audiovisual, animation and multimedia (activation). With increasing partners and technology advancement, more and more resources were poured into Lyon. For example, the European ICT Network set up The World Digital Solidarity Agency in Lyon (European ICT, 2014[15]) to capitalise on its technical support for raising awareness and overcoming the lack of information concerning the effective use of ICT for energy saving (more resources). The above transformation process has strengthened relevant sub-systems in media arts. With their inter-dependence, multiple leaders are also evident. For example, the well-known Festival of Lights needs support from image, fashion, design, animation and multimedia. Apparently, the media arts industry in Lyon has become self-organising in that businessmen and other stakeholders all join their efforts to sustain Lyon as a city of media arts for everybody's benefit.

In other words, during the process, the starting leader needs to nurture multiple leaders, the execution power needs to be enhanced in the second stage, the initial resources gathered by the starting leader needs to be expanded to multi-sources or self-generation, and the vision needs to be activated to involve more participation, so that a self-initiated collective leadership can be achieved for constructing a self-organising system.

Three cities, each with a different profile. The population of Östersund city is less than 50 000 and the region is only 126 000. Therefore, it is easier for Ms. Fia Gulliksson to be a distinctive driver in

building a city of gastronomy. Kanazawa has about 450 000 citizens, a proper size to instil with Japanese spirit and call for the preservation of traditional crafts and arts. The arousal of national pride with the two stages development has successfully transformed the city. Lyon city has about half million and the Greater Lyon area about 1.5 million people and is more densely populated. That is, city

development needs to be more diversified to meet different people's needs. Therefore, Lyon is also known for its biotechnologies, architecture, textile and gastronomy in addition to media arts. However, the two-stage transition model can still be observed during the process of its transformation to a Unesco city of media arts.

Table 1: Illustrations of the “LERP to PEARL” transition model

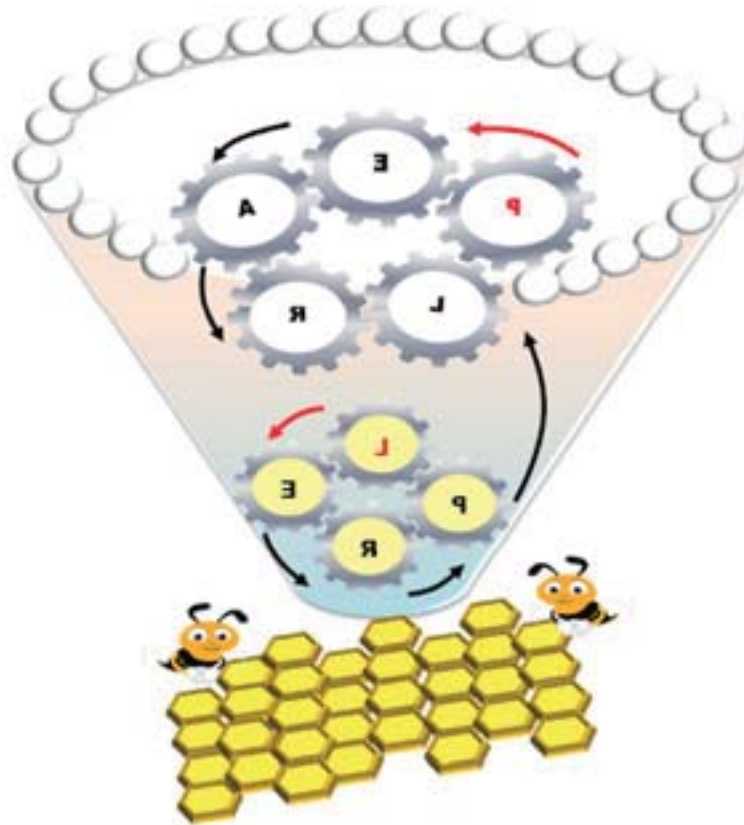
LERP - Triggering stage		PEARL - Self-organizing stage	
Leader	Starting leadership is required to get things moving	Partners	The enlarged and motivated partners become the advocates for the vision
Execution	Starting leader needs to have strong execution capability to step forward	Execution	The partners are the major force for effective execution, either individually or collaboratively
Resources	Starting leader acquires initial key resources to attract partners	Activation	Activation is required to solicit more participation and critical resources
Partners	Partners commit to the vision and join the efforts	Resources	Mass amount of resources are assembled from various sources or the sub-systems can self-generate required resources
		Leadership	Collective leadership is achieved

Table 2: Sample events of triggering stage (LERP) in three creative cities

Triggering stage	Kanazawa – crafts and folk art	Lyon – media arts	Ostersund – gastronomy
Leader	Mayor Yamade promoted the “World City” concept in 1995	Greater Lyon Authority committed to making Lyon a place of innovation, wealth and job creation.	Ms. Fia Gulliksson (a chef and restaurant owner) saw the benefits of developing Ostersund as a city of gastronomy
Execution	In 1996, the Kanazawa Institute of Traditional Crafts was set up	Supporting local SMEs, universities and research centers to achieve fields of excellence through offering high-quality business support services	Fia's restaurant used 80% organic food. She also persuaded other restaurants to increase the percentage of organic food to support those food producers.
Resources	Kanazawa provided subsidies to artists in silk dyeing, ceramics, and lacquerware to develop new products and to expand to new markets.	Lyon Program for an Information Society (PLSI) was created in 2001 to help improve public access to internet, electronic administration, digital education and economic development.	Fia asked the mayor for some resources to promote the “city of gastronomy” idea to the farmers and artisan food producers and to prepare for the UNESCO creative city application.
Partners (initial)	Craftsmen, artisans, Kanazawa College of Art and Kanazawa Institute of Technology	Technological researchers, academia and artists, and multimedia content providers	The mayor assigned Mr. Dag Hartman as the UNESCO Project Coordinator and Mr. Tore Brannlund as the Managing Director to provide Fia with necessary support.

Table 3: Sample events of self-organizing stage (PEARL) in three creative cities

Self-organizing stage	Kanazawa	Lyon	Ostersund
"Partners (enlarged)"	"Business men City government Associations Artists Art colleges Training centers Philanthropies"	"City government Event planners and entrepreneurs R&D centers Software developer Game designers Fashion designers Image sector Animation sector Audio-video sector"	"Entrepreneurs Chefs and restaurants owners Farmers Artisan food producers Distributors Food academy Politicians Event and tourism entrepreneurs Gastronomes Cultural workers"
Execution (effective and large scale)	Kanazawa artisans mastered 22 kinds of traditional crafts. They also explored new ways of preserving and developing its traditional industries.	To support image related companies, the Imaginove was set up in 2005. It aims to provide technological R&D, sales, international exposure and employment. With the synergy, the execution capability of each player is enhanced.	Each partner applies "city of gastronomy" concept in his/her realm of work. For example, the tourist brochures introduce gastronomy in the Ostersund region.
Activation	Successfully pushed the roots of traditional crafts into the lives of Kanazawa citizens. Consequently, they developed with high a level of culture appreciation. In addition, Kanazawa's artisan spirit encourages continuous innovations not only of traditional crafts but also of new industries, creating high-value products in various fields, such as combining traditional with contemporary arts.	The Imaginove develops cross fertilization and synergies between the different image sectors (video games, cinema, audio-visual, animation and multimedia) to increase the competitiveness of product design, production and distribution. As a result, there are around 17,000 people in the creative industries in Lyon Urban Area, second after Paris. For deeper influence, branding "ONLYLYON" was launched in 2007 to position Lyon as a creative conurbation.	Through involving in the city transformation, the whole city has been activated to join the efforts. For example, the politicians approved relevant budget. The music festivals, the sport events and the tourism industry all work together and help promote gastronomy.
Resources	Kanazawa City has established the Fund for Training in Traditional Techniques and Arts. Its Children's Arts and Crafts School was opened in 2008 and a Foundation was founded to support this school. The City of Kanazawa also supports study abroad for the acquisition of advanced knowledge and technology related to craftwork. In addition, the City's budget for craftwork continues to increase.	Host international competitions for relevant companies in Greater Lyon to reach their full potential in terms of innovation. Offering a range of innovative, coherent and efficient services to Greater Lyon residents to enhance digital applications. In addition, the Lyon urban area offers world-class training and research potential in a variety of sectors. Such infrastructure has attracted World Digital Solidarity Agency (DSA) to base in Lyon.	Resources from multiple sources (partners) were provided. For example, to reduce the cost of organic food, the distributors provide free transportation. Eldrimner, the Swedish National Centre for Small-scale Artisan Food Processing, is situated at the outskirts of Ostersund. Close to the city center, Midsweden University has over 7000 students doing research in environmental sciences, tourism, sports and event technology.
"Leaders/Leadership (multiple)"	"-Artists organized their own Drama Network to have a national tour of locally created dramas -Crafts and folk art education has been extended to children by various institutes -The City supports overseas shows and private exhibitions to help young craftsmen and artisans -Kanazawa Life and Fashion Industry is The new application from The craftwork technology"	Media arts have become part of Lyon's city life. As a result, economic stakeholders, local authorities or public utilities, artists and designers all contribute to the development of these tools and methods on a daily basis. Many public events that celebrate media arts in the city are becoming more and more famous.	There are about 500 companies and 2300 employees within the creative industry in the Ostersund region. A couple of hundred of project nomads and free cultural workers also participate in different projects. The younger generation is rediscovering the heritage of Swedish traditional culinary in Ostersund.



Conclusion

Developing into a creative city, innovation city or liveable city has attracted the attention of city governments worldwide as cities are becoming the competitive unit rather than nations. Since building a world-recognised creative city requires a long process, benchmarking successful cities ensures an effective way to revitalise a city with unique or hidden features. This article depicts three Unesco creative cities, namely Kanazawa in Japan, Lyon in France and Östersund in Sweden for the categories of crafts and folk art, media arts and gastronomy. For successful city transformations, we have observed a two-stage 'LERP to PEARL' transition model that requires visionary leaders, strong execution power, critical resources and the involvement of key partners in the first triggering stage. In the second self-organising stage, enlarged and committed partners enhance the execution power, which activates general public thus brings in mass amount of resources, and then multiple leaders initiate their own eco-system and harmonise with other sub-systems for a sustainable total system.

In responding to Rotmans' (2005) comment that, 'Sustainable development is an intrinsically normative, subjective and ambiguous concept and is therefore difficult to operationalise', the proposed two-stage 'LERP to PEARL' transition model tries to

uncover the critical operations for cities that need rejuvenation on a scale.

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