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SOFT SYSTEM METHODOLOGY AND HUMAN RESOURCE MANAGEMENT IN DESIGNING PUBLIC PARK

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ABSTRACT

In DKI Jakarta, the quantity and quality of public parks need to be increased since they are not well cared of as most public spaces which resulted in the absence of visitors. Hypotheses arise that this condition may be related to inaccurate public park management. This paper is an attempt to acquire a conceptual framework related to competency requirements needed in designing public parks that focus on Soft System Methodology and Resource Management. This is a literature study coupled with interviews with those who are involved in the provision and use of public parks. Through Delphi's analysis, it reveales that a successful design of public park entails non-technical competency requirements related to "building relationships" involved with all parties integrated.

Keyword: Project Human Resource Management, Public Park Design, Soft System Methodology

INTRODUCTION

Population growth accelerates economic growth, which in turn requires the availability of urban infrastructure and facilities. This situation increases the need for land resources to provide supporting facilities (Sitorus, R.P., Aurelia, W., Panuju, 2011) that have caused changes in the urban landscape. The amount of green open space is decreasing. This situation needs change as it is declared on the Decree No. 26 of 2007 concerning Spatial Planning (Kementerian Pekerjaan Umum Republik Indonesia, 2007), precisely article 29 which states that urban areas must have green open space with a minimum proportion of 30% of the total area, consisting of 20% public green open space and 10% private green open space, encouraging the city government to increase the quantity of green space, especially those of a public nature, which until 2018 were still under 10%. Until recently, the Jakarta Provincial Government has not issued the achievement figures on the number of public green space owned and managed officially by the city government (Setiowati, R., Hasibuan, H.S., Koestoer, 2018).

The target to reach the ideal green space area of 30% by 2030, as determined by law, causes the Jakarta City Government to increase green space areas, such as public parks, so that the community can use them as a forum for interaction and activities (Ali Anwar, 2019). In the era of Governor Basuki Tjahaja Purnama, procurement efforts were more directed to the Child-Friendly Integrated Public Space (*Ruang Publik Terbuka Ramah Anak*), which was based on the Governor Regulation No. 196 of 2015 (Jakarta, 2015) concerning Guidelines for Management of Child-Friendly Integrated Public Space, focusing on meeting the needs of children. However, it is important to note that not all Child-Friendly Integrated Public Space locations are child-dense locations which can function optimally and sustainably. Several of the children's playgrounds of Taman Utama Raya located in Cengkareng Barat Village, Cengkareng show a decrease in physical quality (Permana, 2019). There are also

some graffiti on the garden facilities (lights and chairs) with less maintenance.

Related to the solution of the problem above, the precedent studies have been conducted. Herzele (Van Herzele, A., Collins, K., Tyrväinen, 2005) administered research on local resources towards urban park planning in Belgium, which states that the involvement of local community members of the overall park management process is needed in every stage of planning, designing, and managing.

Sugiama (2013) highlights that the city's public parks should improve the quality of the city's environment (climate, groundwater preservation, containment and filtering of solid particles from the air/pollution, puddles and waste management, the quality of mental stress of the residents) in order to increase tourist visits, as well as preserve the biodiversity of city's environment.

Nasir at al. (2012) affirms that the management of public parks should consist of planning, designing, and maintenance stages. Although in the process of implementation, the public has limitations and obstacles in terms of managing the involvement, the quality of their capacity in interacting between the involved parties, and transparency in decision making. This will greatly affect the final results of the design of public parks. Therefore, the government, landscape architects and other professionals should have sufficient knowledge about the design and its results which are determined by their profiles as human resources who share important roles in every step of the process, technically and economically. Other researchers reveal (Koskela, L., Ballard, G., and Tanhuanpaa, 1997; Formosa, C., Tzortzopoulos, P., Jobim, M., and Liedtke, 1998) that the idea of the owner and designer must agree in the process of document design (drawings and work plan requirements, technical specifications and budget plans), which will be applied on the physical work. Therefore, it is necessary to avoid poor communication; lack of adequate documentation, insufficient or non-existent information; uneven allocation of resources; lack of interdisciplinary coordination; as well as inaccuracy in decision making (Formosa, C., Tzortzopoulos, P., Jobim, M., and Liedtke, 1998).

In the public parks design process, determining the human resource competency profile is expected to refer to the Human Resource Management Project (Sanchez, 2017), including the planning process of human resources management, gathering teams, developing teams, and managing the project team. In the planning process of human resource management, the process of identifying and documenting the scope of project work is necessary.

Several studies focused on the role of Human Resources, conducted by 1) Mcevoy (2005), who reveals the implementation of a basic curriculum for human resources management in the design framework, including the ability to communicate the collaboration and coordination; the knowledge of human resources planning, assignment, management, and development; the adaptable, confident, responsible, integrity and mutual respect attitudes; 2) Girard & Vincent (2006) reveal that the design process requires new interactions among the involved stakeholders which can be applied by sharing experiences and knowledge; 3) Cosby (2014) states that in the work development of human resource management, the leadership ability needs to prepare the prospective leaders. As credible human resources, they need to improve the stability of business strategy organizations as well as to manage the high quality in saving and processing information.

This paper is intended to review a conceptual framework of Soft System Methodology connected to the requirements of Human Resources using precedent research results. Both of the concepts are used to evaluate the samples of public parks in Jakarta. In addition, the result of this study can be utilized for developing the knowledge of

landscape management which can be applied to solve the problem in designing open space.

METHODS

This literature review was conducted by using the Soft Systems Methodology and Human Resources. The review is inspired by the real phenomena, that obtained through field studies, which show the problem of dysfunctional public park management on Taman Utama Raya located in Cengkareng Barat Village, Cengkareng and Taman Mataram Merah in Selong Village, Kebayoran Baru in Jakarta. The conceptual framework developed as the result of integration between Soft Systems Methodology and Human Resources. The framework was then used to evaluate factors affected the dysfunction of the abovementioned public parks.

DISCUSSION

Soft Systems Methodology

Soft Systems Methodology is a process developed rapidly by Checkland's contributions (Checkland, P. and Scholes, 2000).Yet, this methodology does not provide a strong foothold in the management thinking or the practice of human resource management. Research related to project management usually focuses on the hard systems approach, emphasising more on quantitative techniques in planning, scheduling, and controling. Therefore, project management tends to adopt problem-solving rather than problem structuring approach.

This is following the statement of Cicmil, S., and Hodgson (2006) that research in project management maintains a functionalist and instrumental view of projects and organizations for the scientific achievements of operational research. According to Checkland (1999), the difference between the two systems of thinking lies in the systems that are considered to be the world of soft systems or to be the world of transcending processes of thought. Thus, the fundamental difference between hard system thinking and soft system thinking is that hard system thinking assumes the researcher as a passive observer of the system, by promoting the goal of optimizing the system based on well-defined specifications.

Soft systems thinking assumes that people actively build and interpret system elements. It reflects epistemological philosophy (i.e. processes people know and understand), that focuses on improving systems to solve unclear specifications and unstructured problems through participant's self-reflective investigation (Campbell, Svendsen, Sonti, & Johnson, 2015).

Soft Systems Methodology was modified during the period of 1981 to 1990, namely the separation of the two main contributions of Checkland. The original "seven-stage" model of Soft Systems Methodology is abstracted in Figure 1.

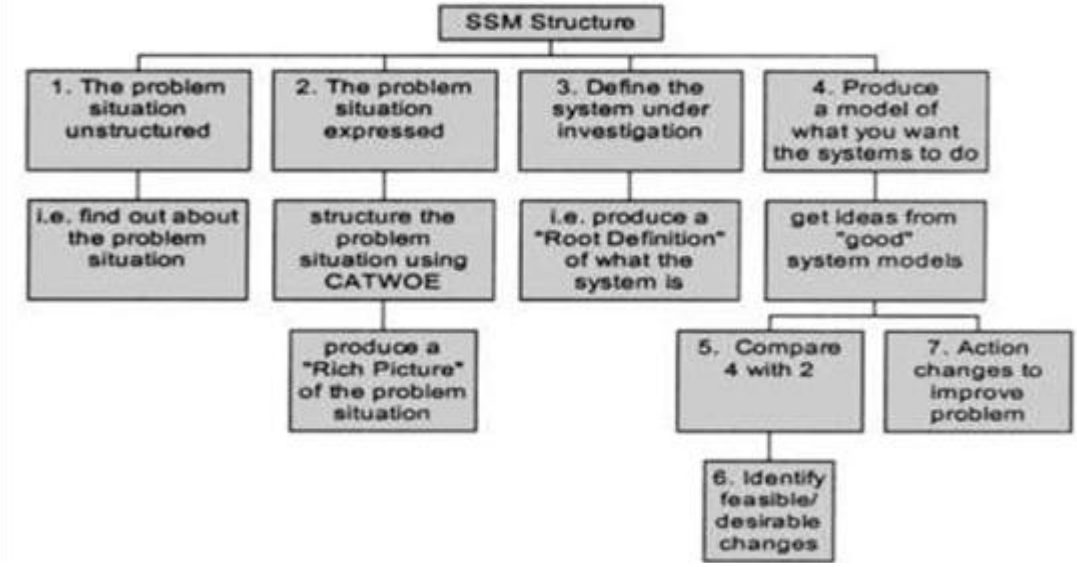

Figure 1. Soft System Methodology, Seven Stage Model
Source: Checkland,1990.

Application of Soft Systems Methodology to identify the Requirements of Human Resources Competency

Practically, each step of the system is reciprocal. Phases 1 and 2 in traditional Soft Systems Methodology are the "find out" stage, the results are expressed in the "Rich Image" of the problem situation. Rich Pictures are presented in the form of pictures (Figure 2). It illustrates the variations of explicit perspectives of the problems, conflicts, and difficulties, which are usually related to cultural and political aspects. "Rich Picture" also describes an attempt to provide a complete picture of what happened and to capture a number of main themes related to the responsibility of consultants. It highlights a variety of issues including; the problem of not facilitating community needs in the design of public parks, the difficulty in handling conflicting responsibilities, and the complexity of the relationship between consultants, the government, and the community.

The themes that can be identified by Rich Picture are restated as a depiction of the system in step 3. Here CATWOE (Customer, Actor, Transformation, Worldview, Owner, and Environmental Constraints) is used as a guide to produce the Root Definition of this system. Root Definition explicitly explains in full as written in Table 1.

Table 1. Forming Elements of CATWOE to Produce Root Definition

Customers (beneficiaries or consequences of the system/transformation process)	**Public**
Actors (people who carry out the transformation process)	Human Resources in Consultants
Transformation (conversion from input to output)	Ineffective Project Human Resource Management System → Effective Project Human Resource Management System
Weltanschauung / World View (perspective/perspective that makes transformation meaningful)	An effective Project Human Resource Management system can increase the success of public parks design
Owner (responsible person/group who can stop the transformation)	Government
Environment Constrain (environment outside the limiting system)	Regulations, Standards, Funds, Time, Community and Environmental Needs

Stage 4 builds conceptual models/ conceptual methods according to system requirements. This model consists of related activities that show the main dependencies. These activities, describing what can be concluded logically must occur in the system as defined in RD. In this way, every activity in the conceptual model can be examined in detail.

After the conceptual model is believed to be quite coherent, internally consistent, and meaningful in the "world view" by the groups involved, it can be continued into step 5 which will utilize the model as a template to carry out further investigations into the real-world system. This is intended to identify the desired changes. Stage 6 is an evaluation of the political and cultural feasibility of the changes identified in stage 5 and, finally, stage 7 develops further agenda to deal with the current situation.

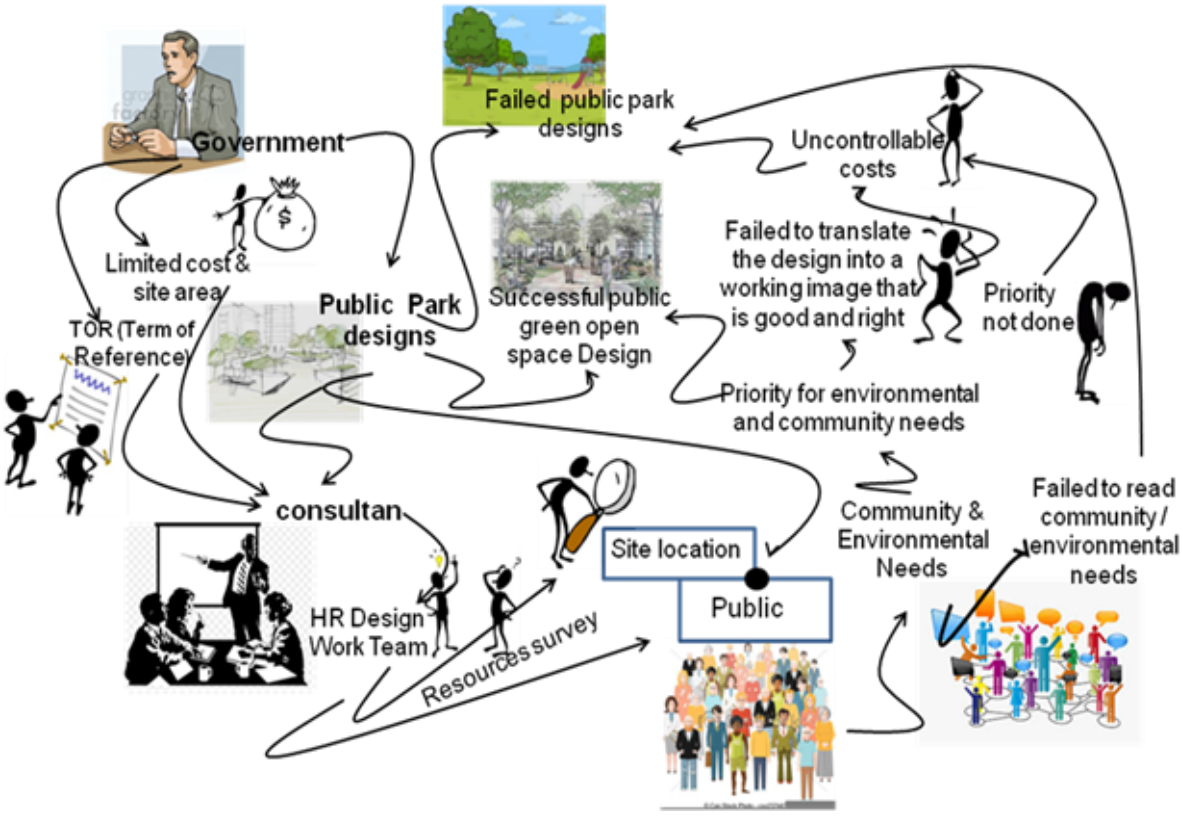

Figure 2: "Rich Picture" of Problem Situations in the Design Process of Public Parks

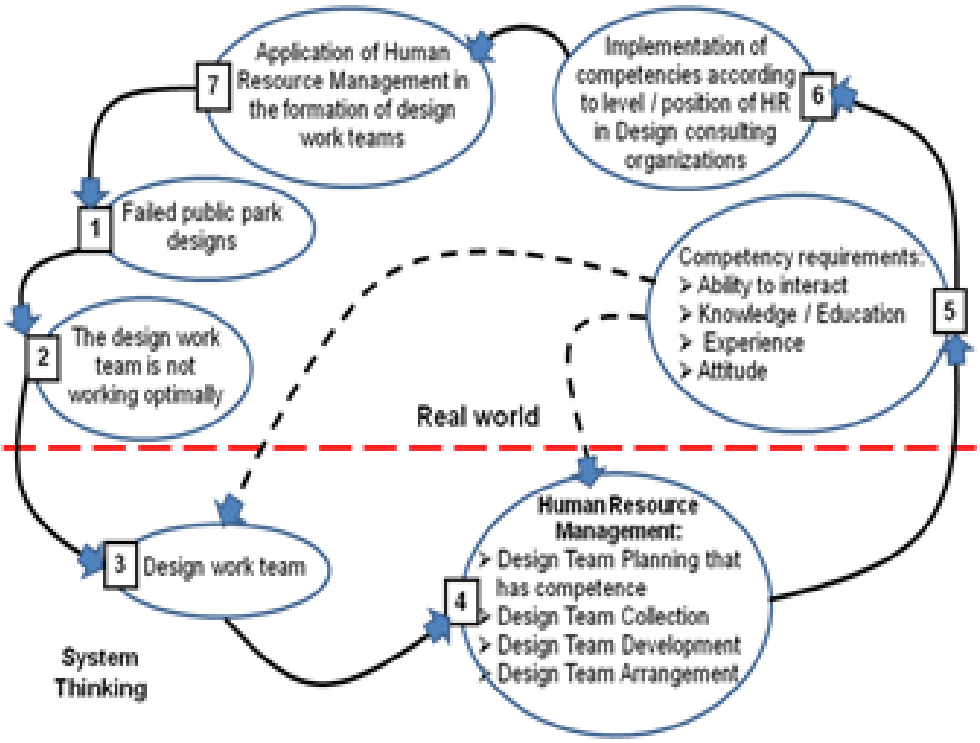

Figure 3. Seven Stages of Soft System Methodology

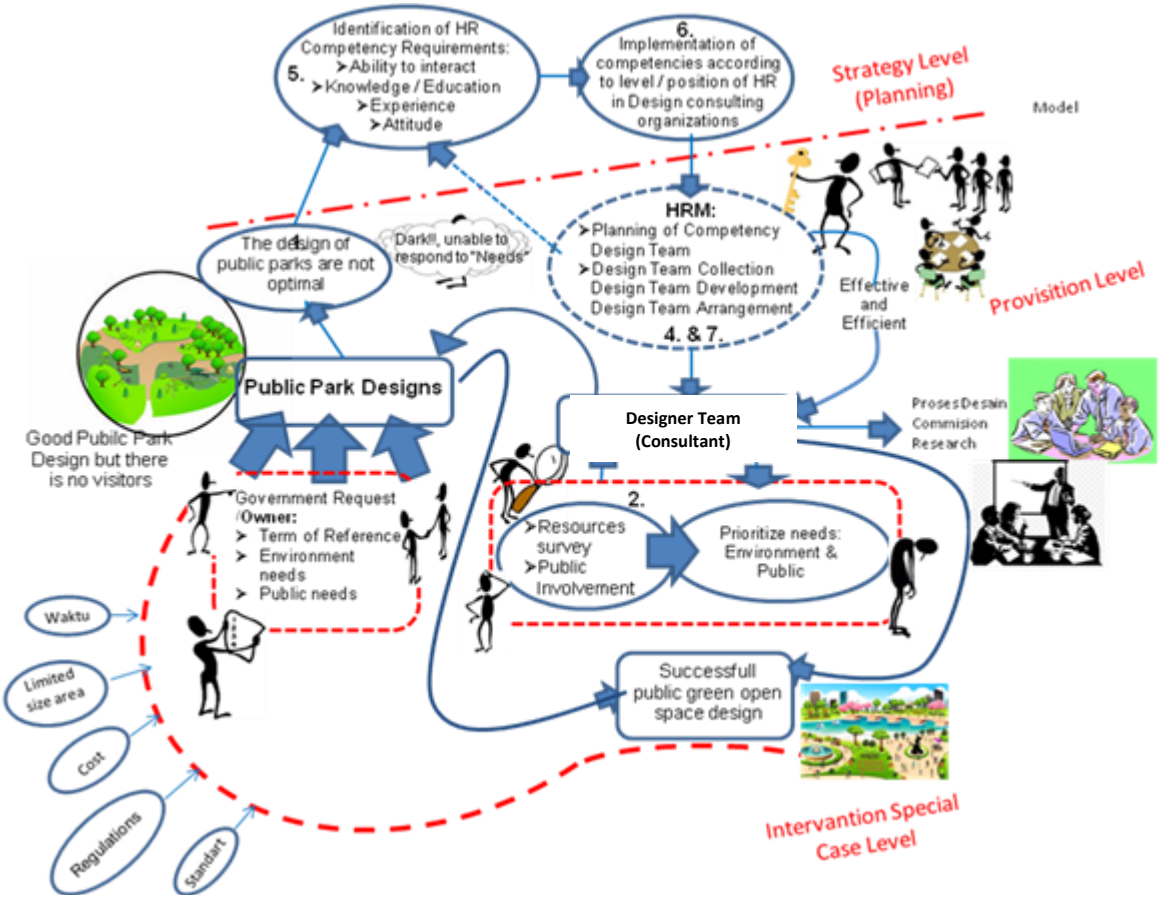

Figure 4. "Rich Picture" related to Illustration of the Seven Stages of Soft System Methodology as Conceptual Framework of Systems Thinking

Basic Assumptions of Soft System Methodology related to Human Resource Management

Soft System Methodology seeks to involve individuals in participatory dialogue to accommodate various perspectives on problems and objectives, to get a full description of the situation. Human Resource Management often assumes that the overall design process has been carried out optimally without the need for a serious investigation or reflection on the honesty of the perspective of the problem situation at hand. In addition, it is often seen that analyzing the requirements needed for a job is not problematic. For some this may be true. There are basic skills related to design work that is fundamentally specific. However, in reality, in addition to technical competence, the realm of attitudes, values, and behavior, as the requirements are also needed. Traditionally in many consultants, the steps to prepare a job description and profile of the "ideal Human Resouce candidates" is based more on technical competence. Nowadays, this is becoming less precise. A more volatile work environment than before, causing each Human Resource now required to be able to take personal initiative to respond quickly to local needs, which often occur in unexpected circumstances. Here, strict job descriptions become dysfunction. Competence related to anticipating various environmental and community needs, encouraging more appropriate decision making and accommodating customer needs.

In the situation like the one above, planning and recruiting someone in accordance with a detailed and objective competency profile becomes less noticeable. As a result, it becomes difficult to evaluate aspects of a person's performance against criteria that are similar in the way certain jobs are performed. Soft System Management contributes to remind that the process of finding competent human resource is not a purely rational problem in the real world. Based on research conducted by Girard & Vincent (2006) and Mcevoy, Glenn (2005), the design process requires the ability to collaborate and communicate with various involved parties for the realization of good design results. In addition, leadership skills are also needed in the design process to organize work programs for the design, consolidation, and division of labor (Cosby, 2014).

The process of identifying and learning from different perspectives is not a simple matter to be negotiated, and using Soft System Methodology also does not guarantee a succeeded result. However, this methodology provides a structure that increases the chances in improving the quality of public park designs.

Soft System Methodology as a Means of Learning and Creative Insights

The Soft System Methodology process is designed as a learning tool and broadens insights through comparative studies between system development and the real world. The traditional way to ask people directly about work and their competency requirements also needs to be done. As in Brocklesby's (1995) study, in the first Soft System Methodology cycle, participants tended to focus their attention on the main tasks that were known. Almost all the root definitions and activity models identified were related to the position of the project manager, relevant to the main tasks related to their work.

If the competency implications of the activity model have been worked out at this stage, the results will have been similar to formal criteria, especially the technical criteria used previously. Candidates are asked to have a degree related to the required field, be able to translate Term of Reference and user needs into a design work program, be able to conduct group discussions with related parties. However, so far the degree competencies associated with the required fields are the main competencies to be a good project design manager. This technical criterion has limitations.

When the process of creating root definitions, building models can be compared with problem situations, then individuals gradually begin to identify aspects of problem situations that have

not been addressed. "Rich Image" becomes a presentation of new insightful information. Although some problems arise in this way, one problem will be very important. Design project managers often complain about the uncertain nature of translating community needs for public parks, which in turn gives birth to sub-optimal public park designs.

Other competencies that arise are related to the efforts to balance the needs that must be met by the budget. To avoid possessive attitudes towards project owners and users, and to maintain good relations with various internal and external stakeholders whose demands are often deemed unreasonable, competencies other than technical competencies are needed so that cooperation can continue to be built and work can run smoothly.

In the case of Taman Utama Raya located in Cengkareng Barat Village, Cengkareng, the park is not consistently maintained. It is because the design of the public park does not facilitate the needs of the local community. Another case is Taman Mataram Merah in Selong Village, Kebayoran Baru. The design of the park was carried out by a team of Landscape Architecture experts from Trisakti University at the cost of sponsorship from Corporate Social Responsibility of Prudential. The park is designed as a thematic park with the theme of Financial Literacy Park. The park was built in 2017 and is currently maintained by Prudential. Maintenance goes well, so the condition of the park is consistently nurtured. However, the park experiences less visitors. The theme of financial literacy is not appropriately applied to parks, because the facilities placed in parks are financial literacy games for children. Meanwhile, the local community is a community with a high economic level equipped with a relatively large house area. Characteristics of the community, basically do not need active public parks. The environment around the park does not need this literacy park, because there are offices around the park. Vocational high schools located around that park does not need playing facilities under the theme of financial literacy.

Thus, if the maintenance contract with Prudential expires in 2019, the park will have been predicted not to be optimally maintained. This proves that the human resources who designed the park was not able to accommodate the needs of the local community.

Gradually, individuals begin to see that having or being able to obtain other competencies outside of technical competence is as important as having technical competence. The process of completing the Soft System Methodology cycle provides encouragement to each individual involved in the public park design process. They began to consider that competencies are important pre-requirement abilities.

This idea has implications that go beyond placing activities and problems in a broader context in the "Rich Image" of Soft System Methodology. The problem is most visible when a group of individuals is asked to share ideas of the competencies needed in their work or illustrate the difference between good and bad performers. Difficulties arise when such beliefs are based on broader patterns of ideas and worldviews. In Soft System Methodology, the emphasis on wholeness and the underlying worldview is a priority. From the results of the Delphi analysis (based on the results of previous studies), interviews and thoughts of the individual involved in the process of public park design, new thoughts are generated that being able to work in teams is always considered a very important requirement.

The non-technical abilities related to the individual's capacity to build interaction relationships, maintain individual attitudes, emphasize a broader range of skills, work in more strategic roles with owners and users, able to handle some ordinary and repetitive tasks related to producing reports, and to build communication and information systems through the use of computer and telecommunications technology.

Soft System Methodology's main concern is helping individuals deal with real-world problem situations and providing the concepts, instruments, and techniques

designed to facilitate data collection and structure of the research process. The hierarchy explains "compatibility" between individuals as job agents and employers can occur at any level from the ability needed to fulfill the task requirements to the compatibility of individual values and the consulting firm's ethos for design success.

The quality of the Soft System Methodology hierarchy is based on the idea that any system needed to be discussed/investigated and be conceptualized as part of a hierarchy of systems and sub-systems. Therefore, the investigation model can be applied at any level of assignment, through work, to departments, to organizations and individuals. Conceptual models at any level can be elaborated and modified as needed. In this study, this capability enables models to be used to identify competencies needed by human resources in the design process, ranging from very specific abilities to broader characteristics.

Future orientation

The planning, recruitment, development, and design of the project design team will always be oriented to the competency needs in the future. This situation requires a proactive approach to obtain scenarios that might occur in the future. Soft System Methodology has been proven capable of making a transition from now to the future (Galliers, 1992). This change occurs throughout the methodological cycle. The possibility of the future is reflected in the picture models and activities in "Rich Picture". The possibility of various scenarios will be evaluated. If, at any given time, specific competencies become a general requirement, then in future scenarios it will be prioritized. If at other times, competency only applies to one scenario, then the competency is given a lower priority

CONCLUSION and RECOMMENDATION

The integration of Soft System Methodology with Human Resource for the needs of the public park design process requires the following: 1) the ability to build interactions, including building systems for communication, coordination, decision making/priorities related to meeting the needs of the community and government, as a conveyor of information/government mediators; 2) the abilities related to attitude, including openness, responsibility, acting as a listener, this competency mentor is needed in the process of designing public parks, so it is expected that the needs of the government as the owner, the local community as users, and the needs of the environment around the park can be facilitated. Soft System Methodology is an instrument to develop the conceptual framework of thinking in evaluating the steps and refinement of Human Resource competencies needed in the public park design process in order to optimize its function.

REFERENCES

Ali Anwar. (2019, April 20). *DKI Menambah RTH dengan Membangun 53 Taman Maju Bersama*.

Brocklesby, J. (1995). Using soft systems methodology to identify competency requirements in HRM. *International Journal of Manpower*, *16*(5/6), 70–84.

Campbell, L. K., Svendsen, E. S., Sonti, N. F., & Johnson, M. L. (2015). A social assessment of urban parkland: Analyzing park use and meaning to inform management and resilience planning. *Environmental Science and Policy*, *62*. https://doi.org/10.1016/j.envsci.2016.01.014

Checkland, P. and Scholes, J. (2000). *Soft Systems Methodology in Action*. Chichester: John Wiley & Sons.

Checkland, P. (1999). *Systems Thinking, Systems Practice*. Chichester: Wiley.

Cicmil, S. and Hodgson, D. (2006). New possibilities for project management theory: a critical engagement. *Project Management Institute*, *37*(3), 111–

122.

Cosby, D. M. (2014). Sustainability program leadership for human resource development professionals: a competency model. *Journal of Organizational Culture, Communications and Conflict*, *18*(2), 79–86.

Formosa, C., Tzortzopoulos, P., Jobim, M., and Liedtke, R. (1998). Developing a protocol for managing the design process in the building industry. *6th Annual Coef. Group for Lean Construction*. Retrieved from http://www.ce.berkeley.edu/-tommelein//IGLC6/FormosaTzortzopoulosJobimLiedtke. pdf

Galliers, R. (1992). Soft systems scenarios, and the planning and development of information systems. *Systemist*, *14*(3), 146–159.

Girard, P., & Vincent, R. (2006). Analysis Of Collaboration For Project Design Management. *Elsevier*, *8*(9), 816–827. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/s0166361506000789.

Jakarta, P. D. *Peraturan Gubernur No. 196 Tahun 2015 tentang Pedoman Pengelolaan Ruang Publik Terpadu Ramah Anak (RPTRA)*. , (2015).

Kementerian Pekerjaan Umum Republik Indonesia. *Undang-Undang Nomor 26 Tahun 2007 tentang Penataan Ruang*. , (2007).

Koskela, L., Ballard, G., and Tanhuanpaa, V. P. (1997). Toward Leam Design Management. *Proc., 5th. Annual Conf. The Int. Group for Lean Construction, International Group for Lean Construction*, 1–12. Retrieved from http://www.web.bham.ac.id.uk/d.j.crook/lean/igle5/lauri /lauri.htm

Mcevoy, Glenn, et. al. (2005). A Competency-Based Model For Developing Human Resource Professionals.

Nasir, Mohamed Ikhwan, Mohamed Anuar, and M. S. (2012). Barriers of User's Involvement in the Design Process of Public Parks as Perceived by Landscape Architects. *Journal Procedia - Social and Behavioral Sciences, Elsevier*, *3*, 253–259.

Permana, L. (2019). No Title. Retrieved from Berita Foto Menengok Taman Utama Raya di Cengkareng, Sejumlah Fasilitas Rusak website: https://jakarta.tribunnews.com/2019/03/28/berita-foto-menengok-taman-utama-raya-di-cengkareng-sejumlah-fasilitas-rusak

Sanchez, J. D. F. (2017). *A guide to the project management body of knowledge (PMBOK guide). Sixth edition. Newtown Square*. Pennsylvania: Project Management Institute, Inc.

Setiowati, R., Hasibuan, H.S., Koestoer, R. H. (2018). Green open space masterplan at Jakarta Capital City, Indonesia for climate change mitigation. *IOP Conf. Series: Earth and Environmental Science*.

Sitorus, R.P., Aurelia,W., Panuju, D. R. (2011). Analisis Perubahan Luas Ruang Terbuka Hijau dan Faktor-Faktor yang mempengaruhinya di Jakarta Selatan. *Jurnal Lanskap Indonesia*, *2*(1).

Sugiama, G. (2013). The Synergistic Model of Quality Service Design of Green Open Space Asset Through Qfd. *Sustainable Competitive Advantage (SCA)*, *2*(1).

Van Herzele, A., Collins, K., Tyrväinen, L. (2005). *Involving people in urban forestry a discussion of participatory practices throughout Europe In: Konijnendijk, C. C., Nilsson, K., Randrup, T.B., Schipperijn, J. (Eds.), Urban Forest and Trees*. Berlin: Springer.