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Organizational Health Index and Organizational Agility Maturity Criteria as Measurement Tools of Organizational Transformation Effectiveness

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Abstract. *As a response to negative growth in the mobile legacy projection - which supports 50% of Telkom revenue, and a positive high growth projection in the ICT and digital business revenue, Telkom decides to shift the business to digital. To be a successful digital company, Telkom has created strategic initiatives, including organizational transformation adopting Customer Facing Unit (CFU) concept that has been done for several months but there still no evaluation method for the success. This paper purpose is to evaluate the implementation of one human capital management strategic initiatives - CFU transformation implementation success, through Organizational Health Index and Organizational Agility Maturity model and formulate a recommendation for Telkom to create a more healthy and agile organization. This research using 11 synthetized dimension of Organization Health Index and Organizational Agility Maturity Model method as tools. Questionnaire consist of 53 practices that represented by 55 questions that asks about respondents extent to which they agree (satisfaction) and whether it meet respondents expectation. Survey result shows that Telkom already in a healthy condition and agile as an organization. This result concluded that by methods used in this research, the transformation could be stated as a success. However, according to the result, maintain and improvement of current health and agility still needed, especially improvement regarding innovation and learning.*

Keywords: *Organization, organizational agility, organizational health index, telecommunication, transformation*

Abstrak. *Dalam merespon proyeksi pertumbuhan negatif dalam bisnis mobile – yang menjadi 50% sumber pendapatan Telkom, dan pertumbuhan positif yang tinggi di bidang ICT dan bisnis digital, Telkom harus masuk ke dalam bisnis digital. Untuk itu Telkom telah membuat beberapa strategi, termasuk transformasi organisasi yang mengadopsi konsep Customer Facing Unit (CFU). Transformasi ini sudah dilakukan selama beberapa bulan namun belum pernah dievaluasi kesuksesannya. Tujuan dari penelitian adalah untuk mengevaluasi kesuksesan transformasi melalui metode Organizational Health Index dan model Organizational Agility Maturity. Penelitian ini juga merumukan rekomendasi bagi Telkom untuk menciptakan kondisi organisasi yang lebih sehat dan mampu bergerak cepat. Penelitian ini menggunakan sintesa dimensi Organization Health Index dan model Organizational Agility Maturity. 53 indikator dari hasil sintesa diwakili oleh 55 pertanyaan yang menunjukkan kepuasan dan ekspektasi responden. Hasil survey menunjukkan bahwa Telkom memiliki organisasi yang sehat dan mampu bergerak cepat. Kesimpulan dari penelitian ini adalah berdasarkan metode yang digunakan, proses transformasi dapat dikatakan sukses. Namun, usaha-usaha untuk mempertahankan dan meningkatkan kondisi saat ini masih diperlukan, terutama peningkatan terkait inovasi dan pembelajaran.*

Keywords: *Organisasi, organizational agility, organizational health index, telekomunikasi, transformasi,*

Introduction

PT Telkom Indonesia Tbk (Persero), or referred to as "Telkom," is the largest telecommunications services company in Indonesia. Telkom continues to innovate in other sectors than telecommunications. In 2012, it transforms its business portfolio into TIMES (Telecommunication, Information, Media and Edutainment & Service). Telkom has a wide portfolio but highly relying on telco core businesses. 50% of Telkom consolidated revenue supported by the mobile industry which internally also face negative growth from the 2015 to 2021 projection.

In the global and Indonesia projection, while there is a negative growth in the mobile legacy projection, there is a positive high growth projection in the ICT and digital business revenue. Accordingly, digital transformation – namely, the integration of digital technologies into business processes – has become increasingly imperative for contemporary organizations seeking to survive and attain competitive advantages in a digital economy (Bharadwaj, 2000). Telkom has lower scale presence in the media and ICT spaces. In the ICT business, Telkom only gain 7% shares in the market, which mostly came from system integration and the followed by hardware & support and contact centers. In the digital service, Telkom gain 6% market share which mostly came from digital advertising and VAS, though it only supports 0,5% each from the total consolidated revenue.

In addition, SOE Ministry has declared in their Strategic Plan 2015-2019, that Telkom with several other SOE have been targeted to get into the Fortune Global 500 in 2019. According to internal data, to attain that mandate Telkom need to achieve at least Rp 336 Tn of revenue in 2019, while relying on to current performance is not enough. Therefore, shifting to digital business should be taken by Telkom in order to prevent future loss due to the slowing growth of telco core business, acquire the potential revenue and achieve the target set by SOE Ministry.

As Telkom decided to grow more on digital business and as a follow-up of corporate strategic initiatives, human capital management directorate has created strategic initiatives to build leader and people, build culture and system, build organization and build human capital function. One of the most important strategic innitiatives is to transform the organization. Digital transformation strategies have certain elements in common. These elements can be ascribed to four essential dimensions: use of technologies, changes in value creation, structural changes, and financial aspects, which stated by Matt, Hess, and Benlian (2015). Transformation in Telkom is adopting Customer Facing Unit (CFU) concept. CFU concept basically is grouping of several business process into a certain portfolio, and this is applied to the Telkom Group as well. The benefit implies the application of CFU concept is to ease the coordination, direction, and control through a closer working relationship within Telkom Group as a 'product factories'.

The CFU transformation in Telkom is very important for the achievement of the target in increasing the revenues and enter the Fortune Global 500, but Telkom not yet have tools to measure the success of transformation. For the purpose of analyzing the effectiveness of transformation, Organizational Health Index (OHI) and Organizational Agility Maturitymodel as a proposed tools. Organizational health is very important to be assessed because there is a relationship between organizational health and organizational commitment with positive attitude toward change and the member of organization have relatively high emotional attachment to their organization and are loyal to it Nabipour, Pour, and Rahmani (2014). Study of Tofiqi, Jaqeri, Ameriun, and KarimiZarchi (2010), also showed that organizational efficiency had positive, meaningful and straight relationship with indices of organizational health.

According to OHI theory (Keller & Price, 2011), there are 3 clusters of organizational health :

- Internal alignment : Shows whether organization has a compelling vision and a well-articulated strategy that is supported by its culture and climate
- Quality of execution : The way organization demonstrates excellence in executing its strategy and delivering its services
- Capacity for renewal : Shows whether organization is effective at understanding, interacting with, adapting to and shaping is situation and external environment

From those clusters, OHI divided its dimension into 9 items and 37 practice indicator. Leaders can select the recipe that enables the company to drive health in a way that reflects their core beliefs about value creation. Therefore, an organization should understand the type of organization in order to choose the most suitable strategy. The archetype of organization are :

1. Leadership-Driven, leader are the catalysts for performance, setting high expectations and supporting the organization in achieving them
2. Execution-Edge, discipline, sound execution, and continuous improvement are the foundation for great performance
3. Market-Focus, shaping market trends and building a portfolio of strong and innovative brands keep the organization ahead of the pack
4. Knowledge-Core, the organization treats its pool of talent and knowledge as its most important asset and develops and deploys it effectively.

According to transformation and effectiveness, organizational agility should be measured to complete the organizational health measurement. Organization agility is an important concept where starting with a quick response to change and uncertainty in an environment, where organizations must act to overcome obstacles or gain and win opportunities.

There is a strong relationship exists between organizational agility and organizational performance (Alhadid, 2016). To understand the agility of organization, organizational agility maturity model (Wendler, 2014) used. The principle of agility broadened into the wider business context, evolving notions of 'the agile competitor' and 'agile business relationships', 'agile enterprises', as said by Goldman, Nagel, and Preiss (1995), 'agile supply chains' (Christopher, 2000), and, most recently, stated by Van Oyen, Gel, and Hopp (2001), the 'agile workforce'. There are 3 dimension of organizational agility maturity model:

1. Agility Prerequisites are the degree to which the people of an organization share agile values and to what extent the organization establishes the required technological prerequisites to support agility.
2. Agility of People summarizes all necessary capabilities of the members of an organization to translate the agile values into actions which further distinguished into the capabilities of the workforce and the capabilities of managers to cope with change.
3. Structures Enhancing Agility describes the ability of an organization to flexibly adopt and change itself combined with an organizational culture that supports collaboration and cooperation on every level.

Due to the lack of measurement tools in the the organizational transformation effectiveness, this research wants to evaluate the CFU transformation implementation success through organizational health index and organizational agility maturity model, and formulate recommendation for Telkom to create a more healthy and agile organization.

Research Methodology

Conceptual Framework
For the purpose of evaluating CFU transformation implementation and formulate recommendation to create a more healthy and agile organization, organizational health index and organizational agility maturity model used in this research. Detail of the process shown in Figure 1.

This research started with the process of finding general issue in PT. Telkom through internal document review and interview with HC senior leader. Next is literature review related to the tools used. According to Palmer (2009) assessing success of innovative practices is an inherently complex and ambiguous challenge.

Organizational Health Index (OHI) assessment added with Organizational Agility criteria as an insight to assess leanness of Telkom's new organization is chosen as tools. Dimension for the CFU transformation's success will synthetized through the mixture of OHI and organizational agility dimensions.

Afterward, the success transformation's dimension will be assess using OHI survey and organizational agility model that invite respondents from Directorate of Enterprise and Business Service as a sample. The last part is mapped the results to Importance Performance Analysis (IPA) matrix. analyzing the results and formulate several proposal of business solution for improvement.
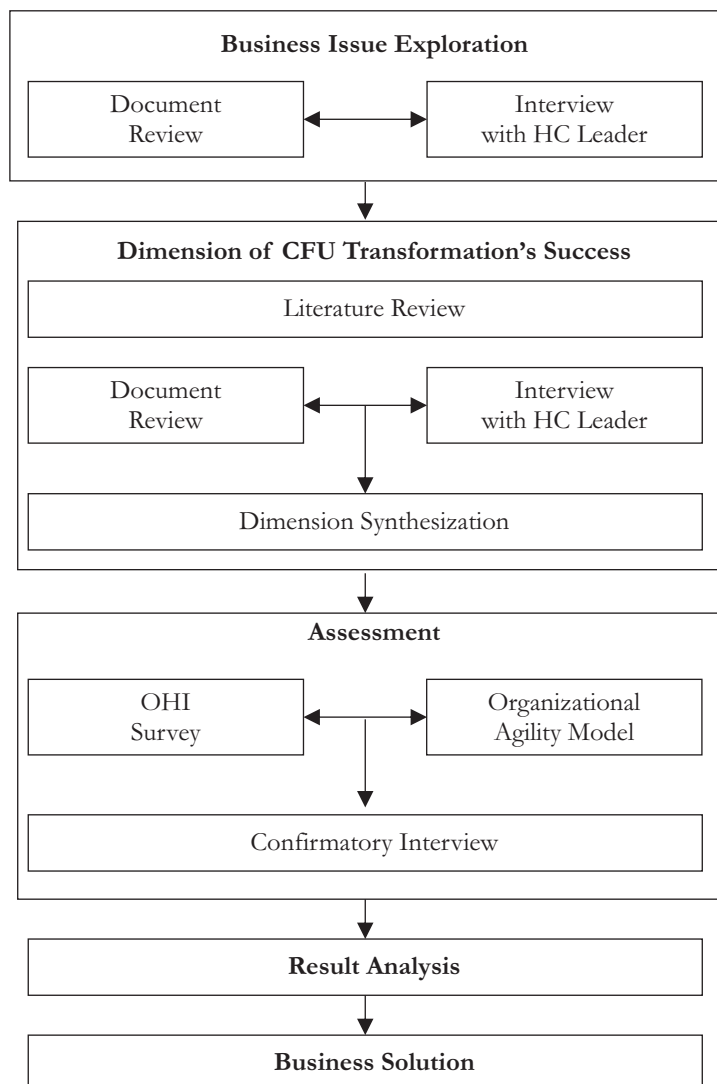
Business Issue Exploration

| Document Review | ↔ | Interview with HC Leader |

Dimension of CFU Transformation's Success

Literature Review

| Document Review | ↔ | Interview with HC Leader |

Dimension Synthesization

Assessment

| OHI Survey | ↔ | Organizational Agility Model |

Confirmatory Interview

Result Analysis

Business Solution

Figure 1. Conceptual Framework

Methodology

Methodology used in this research is a mixture of qualitative and quantitative methodology. Data collected through online survey with the collection period From 25 October 2016 to 31 October 2016. Respondents are employees in Telkom CFU Enterprise from Directorate of Enterprise and Business Service (EBS), Division of Business Service (DBS), Division of Enterprise Service (DES), and Division of Government Service (DGS). Telkom CFU Enterprise chosen as an object of research due to several reasons :

1. One of global leading telco's five key strategy focuses on emphasizing enterprise digital business. It also become Telkom's strategic initiative : Grow the Digital Enterprise Ecosystem.

2. DES, which serve B2B customers is Telkom unconsolidated revenue generator, followed by DGS which serve government, and DBS that serve SME customers.

3. CFU Enterprise consist most of Telkom's subsidiaries, and Dit EBS become the integration leader between Telkom Internal unit in CFU Enterprise and all subsidiaries under CFU Enterprise.

Sampling design for this research using probability sampling with stratified random sampling, which population is first divided into meaningful segments; thereafter subjects are drawn in proportion to their original numbers in the population (Sekaran & Bougie, 2010).

The minimum sample required is determined by using Slovin's formula with confidence level 90% is 90 sample. For the purpose of acquiring information, this research use questionnaire consist of 55 questions. The questionnaire asks about respondents extent to which they agree (satisfaction) and whether it meet respondents expectation. For the satisfaction, represented by 1-4 scale of intensity degree, while for the expectation represented by 1-4 scale of importance degree as shown in Table 1.

There is no midpoint for the scale to prevent respondents' desires to please the interviewer or appear helpful or not be seen to give what they perceive to be a socially unacceptable answer (Garland, 1991). The calculation of each item is calculated from the average score while for the organizational agility maturity, the average score is calculated for every sub-dimension, which later divided into 4 range and then compared between perception and expectation.

Table 1.

Response Scale Definition

Scale	Satisfaction (By Intensity)	Expectation (By Importance)
1	Never	Very Not Important
2	Seldom	Not Important
3	Sometimes	Important
4	Always	Very Important

Table 2.

OHI and Organizational Agility Range

Range	OHI	Organizational Agility
3-4	Top Quartile	Organizational Agility
2-2.99	Second Quartile	Agility Transition
1-1.99	Third Quartile	Agility Basics
0-0.99	Bottom Quartile	Non-Agile

Results and Discussion

Validity & Reliability Testing
In one week of survey period, 183 responses received. 42 responses abandoned due to incomplete information and resulted to 141 complete response. Validity test method used is bivariate Pearson. The statement/model valid if R count ≥ R table (two tailed, sig 5%) = 0.2163. All indicator in all dimension show R count ≥ 0.2163 and Sig 0.000. This means that all indicator is valid and truly measuring the measurement intention. For the reliability testing, Cronbach's Alpha is used as a tools. According to Nunally (1978), the range of reliability level are :

- Alpha < 0.7 : Inadequate
- Alpha ≥ 0.7 : Good
- Alpha ≥ 0.8 : Excellent

The output of SPSS show result of the reliability coefficient is 0.974. This means the method/tools used already show an excellent reliability.

Survey Results Analysis
According to the collected responses, result for each dimension are stated in Figure 2.
All Direction indicator shows mean more than 3, which means already in the top quartile of OHI or already in the Organizational Agility stage. Employees in the units of study already feels that Management has formulate and clearly communicate corporate vision throughout the organization. Management also has been provides direction, clarity and elaboration strategies which relates to the implementation of vision in the working unit. Employees are given the opportunity to engage and contribute to the achievement of the vision and programs of the company. Management also concern of IT investment in the pursuance of the vision achievement.

In the Leadership indicator, employees feel that the senior leader in their unit has been carrying out its role very well as a supervisor in various situations (situational leadership). Despite authoritative leadership indicator which has perception mean 2.929, other indicator shows mean result higher than 3 or already in the top quartile.

Differences among perception mean and importance mean rather high on the Supportive Leadership, 0.361 score gap exist means there is an expectation for a leader whom more authoritative in the working atmosphere.

Culture & Climate indicator shows that employees feel the implementation already executed well. It is shown through the openness and trust between employee, internal competition that encourage employees to give their best performance, operation procedure manuals that guide the employees in the way employees do their works, creativity and entrepreneurial on works, and the usage of the continuous change to achieve the competitive advantage.

From 3 out of 4 Accountability dimension's indicator, perception mean already higher than 3, and all indicator's importance mean higher than 3. Indicator of role clarity, performance contracts and personal ownership already give a good result. Low score exist on the Consequence Management (2.837), this indicator also shows a high score gap (0.688). A high score gap means employee in the research object unit feels a slight differences of reward among a high performers and low performers.

All indicators in the Coordination & Control dimension, relates to operational management, finance management, professional standard and risk management already executed well. The mean for the perception mean and importance mean already in the top quartile, and there is no significant gap between the perception and the expectation.

From the Capabilities dimension, 6 out of 7 indicators already in the top quartile execution. Only outsourced expertise indicator which show a low perception mean score (2.915), means employee not yet feel the organization use external professional service for the expertise job. Yet, higher score gap among perception mean and importance mean found in indicator of Talent Acquisition (gap 0.404) and Talent Development (gap 0.567).
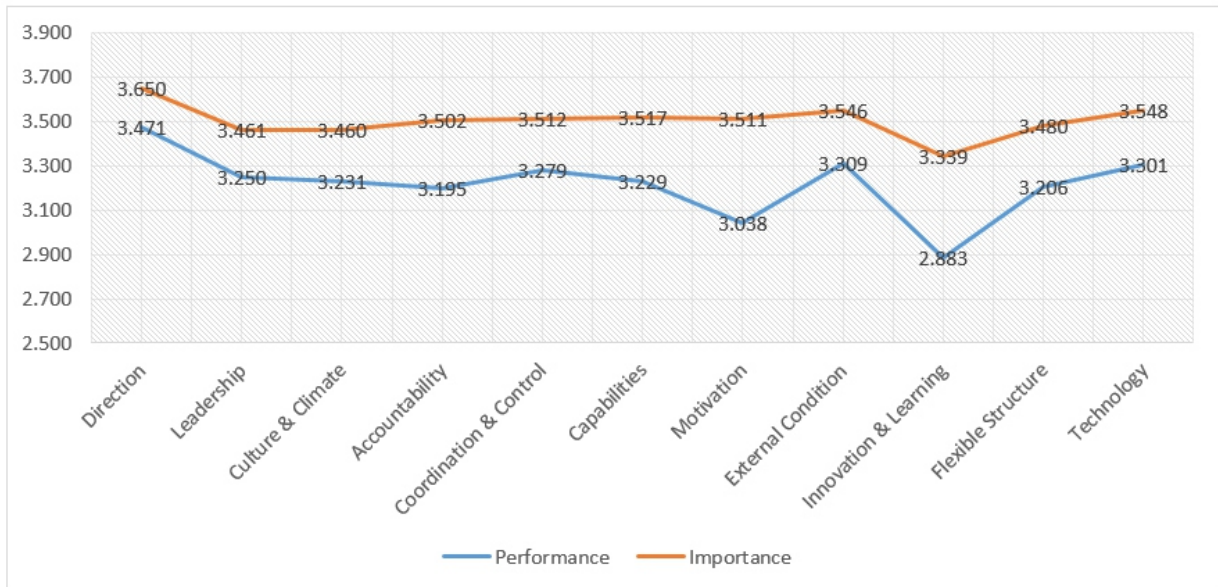
Figure 2. Survey Result

Employee in the research object unit currently have a higher expectation for employees with a fit competence in a certain position and wishing for more competence development opportunities to increase their performance.

2 out of 5 indicators in Motivation dimension has perception mean score higher than 3. Career opportunities, financial incentives, and rewards & recognition indicator shows a less than 3 perception mean score and high score gap between perception and importance mean. With the score gap 0.581 for Career Opportunites, 0.539 for Financial Incentives, and 0.666 for Rewards & Recognition, employee found that the implementation of these three indicator has not yet fulfill their high expectation as the source of higher working motivation.

Execution of all External Orientation indicator has been well. From the perspective of employees in the research object unit, Telkom has a good customer service, use a suitable external information as a reference for the decision-making, and build a good partnership networking with third parties.

All score is in Innovation & Learning dimension is in the second quartile. There is also a high score gap between perception and importance mean. Score gap 0.504 for Top-down Innovation, 0.489 for knowledge sharing, 0.418 for Bottom-up innovation, and 0.411 for Capturing external ideas. Employees in the research object unit has a higher expectation for new ideas to be developed from all level and shared thoroughly inside their working unit.

All indicator of Flexible Structures dimension already well executed. Employees found that their working unit respond quickly for change through the adjustment of business strategy, working process, authority and also make a quick decision toward change relates to customers.

Execution of all Technology indicator has been well. From the perspective of employees, Telkom has been used integrated technology for disseminating information, maintain competitiveness and decentralization of decision making in the purpose of continuous improvement.

Organizational Health Index
By only considering OHI dimensions and indicators, according to the results, healthiness level of each OHI dimensions already in the Elite level except for the Innovation and learning dimension. Telkom's first dominant archetype is in the Market Focus. This is relate to the the business nature of Telkom that is a service company which have to focus on the market. Then followed by Leadership Driven, Knowledge Core, and Execution Edge.

Organizational Agility Maturity Model
After the assessment, the results could show the agility level of organization. By only considering organizational agility model dimensions and indicators, according to the results, agility level of each organizational agility maturity model dimensions already in the organizational agility level.

Telkom (represented by the research object unit) have overcome the partial weaknesses of the transition phase. It manage to establish a sufficient technological basis throughout the complete organization, and agile values are shared and accepted completely, too.

All employees and managers have the capabilities to successfully work in an agile and changing environment. Collaboration and Cooperation are important aspects of everyday work and the structure is flexible enough to quickly and constantly react to upcoming changes. Therefore, these organizations achieve complete organizational agility. The score results shown in Table 4.

Table 3.

Healthiness Level from OHI Indicator

Dimension	Perception Mean	Current Level	Definition
Direction	3.520	Elite	Telkom has been provides propose, engaging people around the vision
Leadership	3.250	Elite	Telkom has been sets stretch goals and inspires employees to work at their full potential (high challenge)
Culture & climate	3.230	Elite	Telkom has been creates a strong, adaptable organisation-wide performance culture
Accountability	3.195	Elite	Telkom has been encourages an ownership mindset at all levels
Coordination	3.283	Elite	Telkom has been measures and captures the value from working collaboratively across organisational boundaries
Capabilities	3.117	Elite	Telkom has been builds distinctive capabilities that create long-term competitive advantage
Motivation	3.038	Elite	Telkom has been taps into employees' sense of meaning and identity to harness extraordinary effort
External orientation	3.309	Elite	Telkom has been focuses on creating value for all stakeholders
Innovation & learning	2.883	Able	Telkom has been able to capture ideas and convert them into value incrementally and through special initiatives

Table 4.

Organizational Agility Maturity Level

Dimension	Sub Dimension	Perception Mean		Current Level
Agility Prerequisites	Values	3.252	3.293	Organizational
	Technology	3.333		Agility
Agility of People	Workforce	3.208	3.258	Organizational
	Management of Change	3.307		Agility
Structures Enhancing Agility	Collaboration & Cooperation	3.348	3.348	Organizational Agility
	Flexible Structures	3.190		

ImportancePerformance Analysis

Importance-Performance Analysis was first proposed and introduced by Martilla and James (1977). The IPA approach recognizes satisfaction as the function of two components; the importance and the performance. The combined respondent ratings for those two components then provide an overall view of satisfaction with clear directives for management and where to focus. The IPA consists of importance axis (y-axis) which represented by "importance" and performance axis (x-axis) which represented by "perception". Each of the quadrants combines the importance and the performance assigned by the customers/user given element of the service and possesses a different value in terms of management and the respective mean of self-stated raw importance and attribute performance data is the original point of this IPA matrix (Silva and Fernandez, 2011).

IPA Matrix Mapping

Based on the mean score of factors, 11 synthetized dimension from OHI and OA indicator could be mapped in IPA Matrix in quadrant B. This could be seen in Table 5.

In the IPA Matrix mapping in Figure 3, Quadrant B shows that current condition is already Satisfying. There is an indication of Telkom opportunities for achieving or maintaining current competitive advantage.

Table 5.

OHI and Organizational Agility Dimension Result

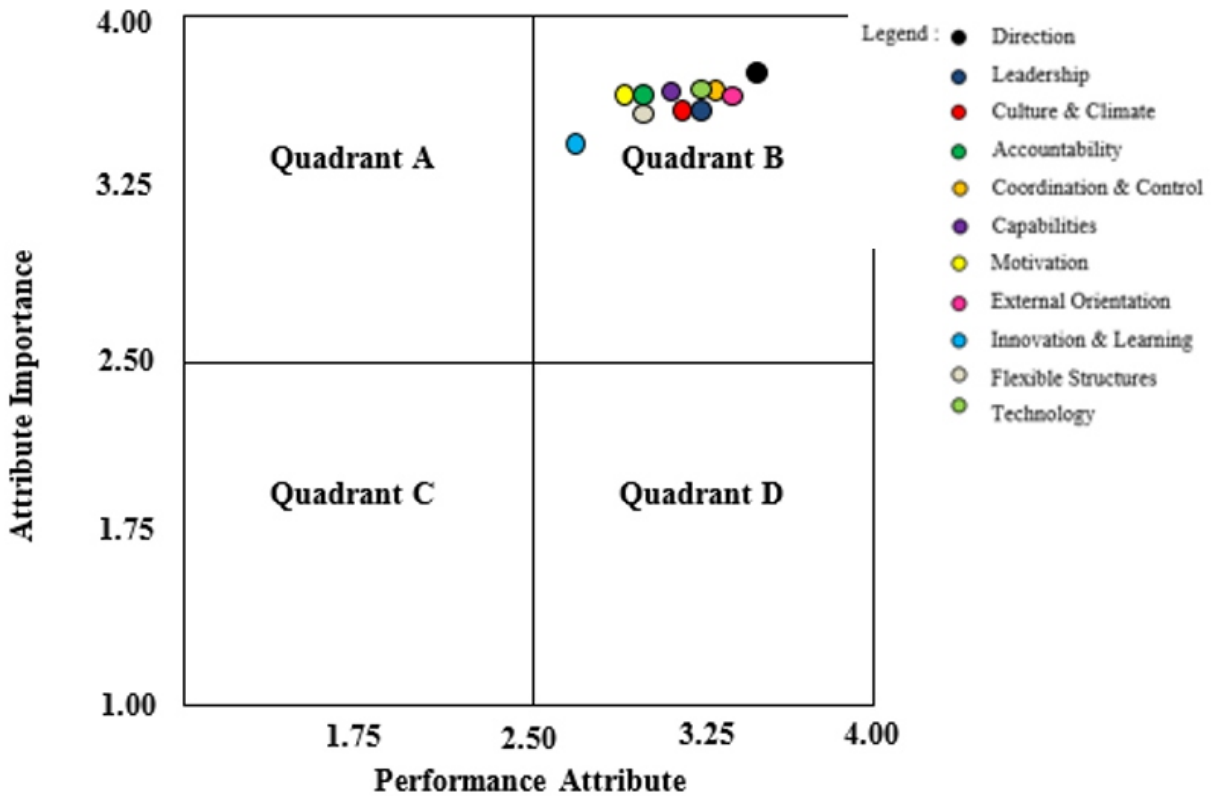| Dimension	Perception Mean	Importance Mean	Quadrant
Direction	3.4709	3.6496	B
Leadership	3.2500	3.4610	B
Culture & Climate	3.2312	3.4596	B
Accountability	3.1950	3.5018	B
Coordination & Control	3.2793	3.5124	B
Capabilities	3.2290	3.5167	B
Motivation	3.0383	3.5106	B
External orientation	3.3085	3.5461	B
Innovation & Learning	2.8830	3.3387	B
Flexible Structures	3.2057	3.4805	B
Technology	3.3007	3.5475	B

Figure 3. IPA Matrix Mapping

Based on the survey results, research object unit (Dit-EBS, DES, DBS, and DGS) could be classified as a healthy and agile organization. This statement come from 10 of 11 synthesized dimension of OHI and Organizational Agility give a mean score more than 3 and could be mapped to the quadrant B which show that Telkom should keep up what it has been doing. After the breakdown, 8 of 9 OHI dimension already in top quartile level and all Organizational Agility dimension already in the Organization Agility level. Dimension Innovation and Learning become the only dimension that has OHI score in the Second Quartile.

Results of Innovation and Learning then breakdown for every research object unit and found that only DGS that have all Innovation and Learning indicator score in the top quartile. Lowest score in indicator top-down innovation, bottom-up innovation, and capturing external ideas come from Dit EBS, while the lowest score of capturing external ideas come from DBS.

Table 6.

Innovation and Learning Dimension Results per Unit

Indicator	Dit EBS	Div DES	Div DGS	Div DBS
Top-down innovation	2.630	3.000	3.100	2.833
Bottom-up innovation	2.630	2.974	3.100	2.833
Knowledge sharing	2.704	2.803	3.100	2.667
Capturing external ideas	2.704	2.961	3.050	2.722

According to the interview results, DES, DGS and DBS unit encourage the innovation based on the internal unit's need or by project during the process of serving customer needs. The type of DES, DGS, and DBS innovation usually relate to the service solution and improvement of daily process. Dit EBS which has job nature on making a business plan for CFU Enterprise and not directly serving customer mostly make innovation on business model, yet, Dit EBS not actively documented the business model and not join the innovation activity. Capturing external ideas usually come from the needs to fulfill customer order, learning by doing, and strengthen by studying literature. Benchmarking from external source is rare to be done.

In DES, DGS, and DBS, the potential ideas selected by the sub unit and then rank by through boot camp event which held 1-3 days until 1 week. Internal satgas innovation team, which consists of senior leader/leader from several sub units give advice for the ideas presented by the selected innovation team.

Best ideas then registered as participants in Telkom Innovation Award and further assessed until the nominees for best innovator is found.

In Telkom Innovation Festival, innovation could be classified into 3 types:

1. Core Innovation : to keep current market and customer for the purpose of increasing current business performance.
2. Adjacent Innovation : to acquire new customer and increasing revenue (Value for Money).
3. Transformational : to create product / process / new technique to serve a new market or new needs of the customer (internal or external).

Currently, most of innovation classified to Core (19) followed with Adjacent (15) and Transformational (8).

Table 7.

Innovation Classification (2016)

Unit	Core	Adjacent	Transformational	Total
Dit EBS	0	0	0	0
Div DES	9	8	3	20
Div DGS	2	2	2	6
Div DBS	8	5	3	16
Total	19	15	8	

Discussion

Examination current condition of Telkom-represent by CFU Enterprise results are in line with Tofiqi, et al (2010) and Matt, et al (2015) regarding positive relationship between organizational health on attitude toward the potential success of change. Results also in line with Alhadid (2016) that there is a strong relationship between organizational agility and organizational performance. Despite the positive attitude that comes from a healthy organization will make the transformation success, results show innovation is also very important to be improved.

An organization with a culture of innovation is one that goes beyond a propensity for change. A culture of innovation implies that an organization is constantly evaluating the systems, structures, procedures, teams, and other organizational components already in place Harraf, Wanasika, Tate, and Talbot (2015).

To assure the innovation process, Telkom need an innovation model that could assure the process well develop and executed until a certain goal achieved.

In Curry and Hodgson (2008) from the book of The Alchemy of Growth by Baghai, Coley, and White (1999) there are 3 horizon that become a framework for company leadership to think about how to do more than just manage the existing product line or existing business :

Horizon 1 : are mature business with the focus to defend, extend, and increase profitability of existing business.

Horizon 2 : are rapidly growing business with the focus is resourcing initiatives to build new businesses.

Horizon 3 : are emerging businesses with the focus uncovering options for future opportunities and placing bets on selected options.

According to Lean Analytics Association there are 4 building blocks, each comprising of 3 enablers. The 4 building blocks are : Strategy & Performance, Skilled People and Collaboration, Efficient Process and Knowledge Based Environment, and Continuous improvement and Change that enable integrated way to start (or continue) lean innovation journey and is applicable across different business streams that are directly or indirectly involved in the development of new products or services. The model ensure consistency and organized way to achieve business success, quick wins where needed, and a continuous deployment of the different practices that can be implemented under each of the enablers.
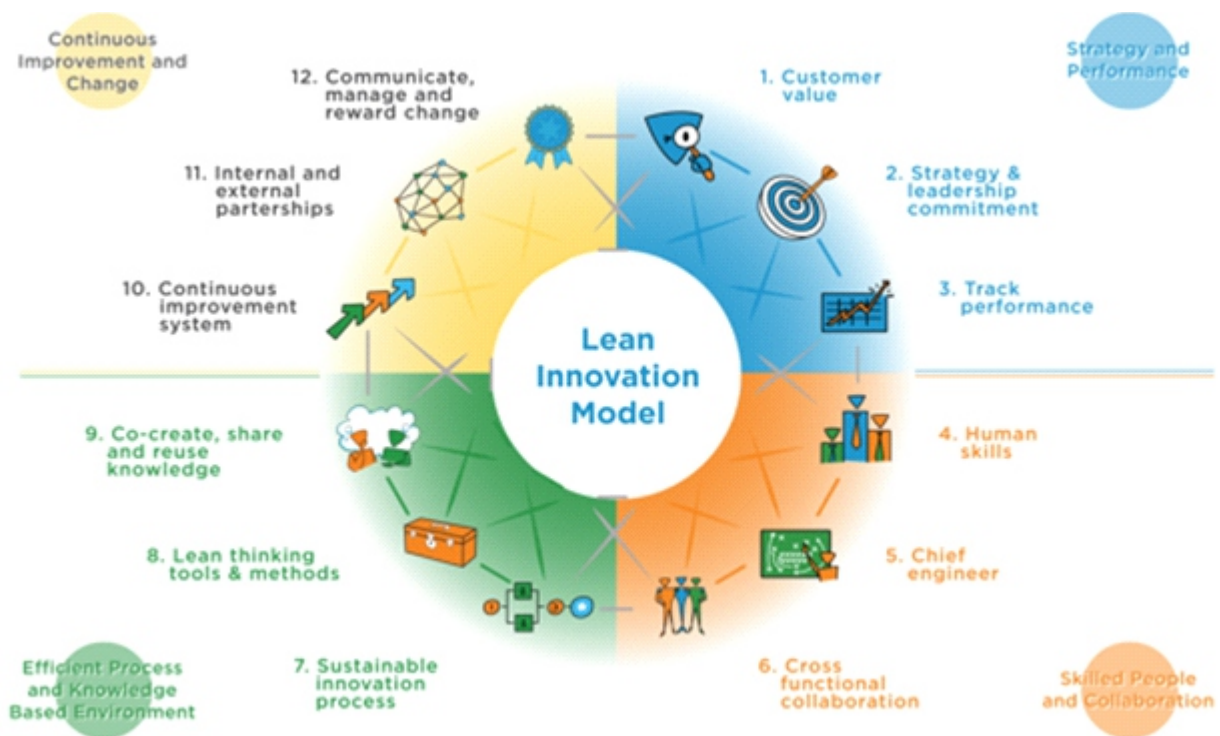

Figure 3. Lean Innovation Model
(Source : Lean Analytics Association)

In implementing 12 enablers of innovation adopted from Lean Innovation Model. source based on internal data and interview with the results:

1. Customer Value

   In lean innovation, according to Schuh, et al (2008), the substantial challenge for innovation and development projects is the exact exploitation of market potentials with products that are precisely aligned to customer needs. These process requirements have to be defined as well as product requirements, to provide a common target for all participants in the development process.

2. Strategy & Leadership Commitment

   Leadership commitment to encourage innovation, is rather low, especially for the transformational innovation. It is shown by the low number for this type of innovation and current Management Contract and SKI that not state about knowledge management anymore.

3. Track Performance

   From CFU Enterprise business plan, large Enterprise segment will remain dominant in share, reach Rp. 138 T in 2020 and CAGR 9 % during 2015-2020, but SME segment would reach the highest CAGR 41% with value reach Rp. 77 T. Digital Content & Cloud would reach the highest CAGR 35% with value reach Rp. 13 T.

4. Human Skills

   There is a lot of young potential in the unit, with a proper educational level to innovate and giving ideas that would be very meaningful for Telkom nowadays or the future. But, development program from Telkom has not yet meet the need of the employees. Type and delivery process of training program also has not meet the need of the unit and employees.

5. Chief Engineer

   In Telkom's internal document in 2007, Chief Knowledge Officer in Telkom assigned to HR Policy, Organization Development Unit, Industrial Relation Unit, and Business Performance Evaluation unit. After several structure transformation, there is no relates to the chief knowledge officer for current structure and what their current responsibilities.

6. Cross Functional Collaboration

   The collaboration is very good through a certain level of SLG and SLA, good communication and powerful IT System. Consideration for more intense collaboration with the specialist innovation unit is very important. In Hoppmann (2009), in lean organization, there is needed a specialist career path for engineer to gather more experience in their particular functional domain.

7. Sustainable Innovation Process

   Sustainability of innovation process should be based on a routine and continuous evaluation. The evaluation done within unit but there is still no formal evaluation mechanism, no other criteria to evaluate the sustainability of innovation implementation and lack of evaluation method that show the core innovation to improve daily work.

8. Lean & Thinking Tools & Methods

   Lean & thinking tools such as IT systems and procedures of standard works already implemented very well and continuously used in all unit in CFU Enterprise. Standard procedures also executed very well, especially procedures relate to serving customers.

9. Co-create, Share and Reuse Knowledge

   Process of share knowledge done through formal and informal media. Formal media used is Kampiun (digital library) and informal media through messenger and routine sharing forum. Ideas shared usually relate to innovation of solution or service to a certain customer.

10. Continuous Improvement System

    Important element on continuous improvement is people, process, IT tools, policies, and partnership with external parties. In lean innovation, specifications relate to the customer needs have to be precise but still left a space for a dynamic changes. Consequent documentation also needed to review and learn for the previous project.

11. Internal & External Partnership

Internal partnership come from collaboration within internal Telkom and external partnership classified as supplier partnership, solution partnership, business partnership and reseller partnership. The role of external partnership is increasing the value of solution to the customer and involved in the solution design. Standard and target of the unit need to be socialized to external parties so there is a same view on the working process.

12. Communicate, Manage, and Reward Change

Communication between external parties, within Telkom, and customers which relate to a project done through a Join Planning Session. In that forum, problems or any need for change will be discussed, and process further. Reward for innovation not given by each unit, but given by Telkom Innovation Award team. Reward only given by the champion from three innovation category.

There are several solution that Telkom could implement for the successful in improving their innovation and learning dimension and acquiring new market based on the concept of lean innovation through Lean Organization roadmap. The major phases of the Lean Innovation Roadmap – planning organization, integrated organization, responsible organization and learning organization (Hoppmann, 2009) used for the formulation of following

1. Planning Organization.

Parameter implementation of the systematic mechanism of innovationand continuous improvement process should define clearly within the units. By making a hierarchy target prioritization, each parties would understand what to do and when to finish certain objective. The important role of Chief Engineer is also needed. Chief engineer must exhibit behaviours that not only demonstrate support for the initiative but also the behaviours that they wish all employees to emulate. Commitment of leader related to innovation and learning could be strengthen by becoming ng of best practices and lessons learned.

role model or mentor of any innovation ideas from the bottom line. The number of innovation generated or sustainable innovation implementation should also embedded to the KPI of chief engineer.

2. Integrated Organization

To achieve the first goal of enhancing internal design capabilities, standardized tools and procedures for design tasks should be developed. Collaboration with several parties already held through Join Planning Session, yet, the defining of a more detail and clear target to achieved, including the development opportunities also needed to be done in this session. Considering external collaboration to build more innovative ideas also could be done. The first step is here to have an internal 'innovation community' which interacts using a platform and a group of external 'innovation community' (clients, startups, developers, researchers, students, suppliers, and other large companies or small business), which is moderated and can be called upon to propose ideas or offer feedback. The coordination with internal and external parties should be done by the strong project manager with the full support by the chief engineer that leads the product development project from concept to market. The product development resources ought to be planned on a cross-project basis and measures through cycle plan with time scheduling

Another points is related the capabilities of the human resource. CFU Enterprise should make a Training Need Analysis for all employee of the unit. In addition, to assure the training would deliver on a suitable way by TCU, the learning delivery should be stated in this stage. CFU Enterprise and TCU also should held a routine discussion relate to the quality and quantity of training and target to achieved. Also, a mentoring system should be established to ensure that junior engineers are supported by more experienced employees, this will also help the sharing knowledge process. Standardized documents should be developed which are suited to support the capturi

3. Responsible Organization

Quick feedback for each progress made by the member of the team should be made. Quick feedback will make the improvement process could be done in a shorter period if there is any lack and encourage them to give more performance if they are praised by their current performance. Each unit should also make a mini "Innovation Award" within unit, to encourage employees in making innovation. Currently, reward that relates to innovation only given to the winner of Telkom Innovation Award. By making a mini award and giving reward, employees within unit would be motivated to explore new ideas. In addition, for the innovation that continuously used within unit, the owner of the ideas would get benefit from the copyright of innovation. The best practices and lesson learned should be reviewed and reuse in subsequent project. Continuous partnership also should be maintain through held informal event. Through informal event, the collaboration within parties would be closer and could trigger a more innovative ideas for the current and future projects.

4. Learning Organization

After the first through third phase held successfully, the last phase for the implementation of lean innovation roadmap is learning organization. Continuous improvement of a company's knowledge base by capturing, reusing and updating knowledge is likely to be one of the key components of a lean innovation system. In order to maximizing learning organization, Kampiun, as Telkom online database of knowledge management should be used. Chief engineer have responsibilities to encourage project manager to documented the overall process, including the success stories in each steps and the failure to be a lesson learned for previous innovation ideas in this online media. Therefore, employees throughout Telkom would get a new knowledge and probably could use the success stories or lesson learn for their own case. The documentation should be organized in a clear manner and logical way to ensure the ease of access.

Sharing offline also should be held for the already success innovation throughroutine sharing session, especially within unit in CFU Enterprise. Transfering teams between projects should also be considered as a knowledge sharing activities. Benefit from this activity is each team will be able to leverage the experience of the specialists and reuse some knowledge that gathered from older programs.

Limitation & Further Research

Selecting CFU Enterprise as an object of study give a deeper analysis for transformation success especially in enterprise business portfolio. Yet, it does not capture the overall function, which means that further research that also assessing a wider function in Telkom Group would give a better understanding of transformation success. Further research related to the evaluation of transformation success using other methods also needed to complement the result in this method. And due to time limitation and research, the success of business solution still not evaluated, therefore further research regarding to the success of business solution is needed.

Conclusion

Based on the assessment and analysis, it can be concluded that according to organizational health index and organizational agility maturity model, Telkom organization transformation is success and could be considered as a healthy and agile organization. As the opportunity for Telkom improvement is relate to innovation & learning, with the proposed program: Culture Activation for Lean Management and Innovation Management System.

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