



Strategy for Developing Organisational Culture in the Public Organisation of Research and Development in Indonesia

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ABSTRACT

This Paper focuses on the strategy of developing organizational culture in the public Research and Development Organization. The aim of the research is to know the strategy for developing organisational culture in R & D organisation in Indonesia. The study uses qualitative approach. It starts exploring the topic of organisational culture, collecting the data, then describes the phenomenon occurs in the organisations, analyses based on the theory and makes conclusion. Informants of this study were the stakeholders involved in the organization of R & D in the Ministry, University, Pure Research and Development Organization, and Local Government Research and Development. The primary data were obtained through observation, interviews to the informants and discussion with the stake holders involved in the organisation of Research and Development. Secondary data were obtained from written documents of the organisations. The data is collected from 2 prominent Higher Education Research and Development, 2 Local Government Research and Development, 2 Ministry Research and Development, and 2 Pure Research and Development organisations in Indonesia. The Strategy for developing the value, norm and belief of the organization is developing, instilling and sharing to the members through the activities of the main business of the organization to obtain the realization of the organization vision and mission. The process of instilling and making habit working culture in the public R and D in Indonesia is based on regulation.

Key Words: Strategy, Developing, organizational culture, research, and development.

INTRODUCTION

The Indonesian Research and Development (R & D) organizations have several types consisting of Higher Education Research and Development, Research and Development of the Ministry, non-Ministry Research and Development, Local Government Research and Development, and pure Research and Development Organisation. Each of the organisation has different orientations and characteristics that influences organizational culture types.

The R & D organizations have four key activities consisting of (1) Research, (2) Development (3) Innovation and (4) Supporting to reduce product costs, to solve process and to make product modifications (Nu Angle, 2014). To obtain the target of the R & D organizations, they should develop effective culture. The culture of R & D organisation which is formed by members in the organization is a set of shared values and norms those control organizational member's interactions with each other inside and outside people of the organization (Gareth Jones, 2004). Organizational culture is shared values, beliefs and norms which influence the members of the

organisation in thinking, feeling and acting towards others inside and outside the organization. (David A. Buchanan and Andrzej A.Huczynski, 2017)

To enhance optimal performance in the research and development organisation, a strong and positive organizational culture is needed so that all values within the organisation can support obtaining the achievement and goals. The culture has a role to strengthen integration among internal members and strengthen adaptation to the external environment. They worked well enough to be considered and taught properly to new members of organization as a way of being perceived, thought, and felt correctly in relation to the culture. (Schein, 1997).

R & D Organizational culture plays an important role in achieving the organization's vision, mission, goals, and targets. The culture is developed based on the vision, mission, product and target of the organisation. To maintain and instill strong and effective culture, an organisation of R & D needs a strategy. Strategy is needed to determine the activities those should be done and how to do the activities so that the targets and purposes of instilling organizational culture can be reached.

The strategy should be in accordance to the characteristics of the culture those are innovation and risk taking, attention to detail, outcome orientation, people orientation, team orientation, aggressiveness, stability and collaboration (Robbins, 2007).

R & D organizational culture can be developed, influenced, and controlled on deeply rooted beliefs by the top management. The organizational culture should be in accordance to each institutions' characteristics, vision, and mission. This research is focused on the organisation of Research and Development in University, Ministry, Local Government Organisation and Pure Research Development Organisation.

Based on the explanation above the researcher affords the question of "How is the strategy to develop and instill organizational culture in R & D organisation? The aims of the research is to know the strategy for developing organisational culture in R & D organisation in Indonesia.

THEORY AND HYPOTHESIS

Theory

Cultural Organization

Organisational culture is a system of shared meaning held by members that distinguishes the organisation from other organisations (Robbins ,2007). Besides that, culture in R & D organisation is also defined as a pattern of basic assumptions found and developed by the members of the organisation. The culture of organisation was influenced externally for adaptation and internally for integration, it will be properly considered and taught to new members of organsation in such a way of being perceived, thought and felt correctly in relation to the culture. (Schein, 1997).

Organisational culture is the shared values, beliefs, and norms, which influence the way employees think, feel and act towards others inside and outside the organisation. (David A. Buchanan and Andrzej A.Huczynski, 2017) (Schein, 2004). They have three levels, namely: artefacts and behaviors level, espoused values level, and assumptions level.

Artefacts and behaviors consist of patterns of behavior and manifestations of outward culture, which are observable, the people can see, hear, and feel such as dress codes, customs, technological tools, and physical layout of the workspace. (David A. Buchanan and Andrzej A.Huczynski, 2017) (Schein, 2004).

Espoused values or organisational values are the accumulated beliefs held about how work to do, determine behavior, but not directly observable as existing behaviors, which represent something explicitly or implicitly desirable to an individual or group in the organisation; Values are said to provide a common direction for all employees, and to guide their behaviour. 'People way down the line knows what they are supposed to do in most situations because the handful of guiding values is crystal clear' (Peters and Waterman, 1982). (David A. Buchanan and Andrzej A.Huczynski, 2017) (Schein, 2004). (Adler and Gundersen, 2008). Values distinguish one organization from another, the source of values is the views of the original founder, as modified by the company's current senior management (Schein, 1983). The organizational values are always the values of the current company elite (senior managers). This is similar to the way that organizational goals actually represent the preferred aims of chief executives and their management teams (David A. Buchanan and Andrzej A.Huczynski, 2017)

Basic assumptions derived from values, they occur automatically and are out of their consciousness. People may be unconscious or unable to convey the beliefs and assumptions that make up their deepest level of culture. They are all the alternatives those are still visible in the culture, and any given member of the culture could behave from time to time according to variant as well as dominant orientations. Basic assumptions have become so taken for granted that one finds little variation within a social unit. This degree of consensus results from repeated success in implementing certain beliefs and values, when a basic assumption comes to be strongly held in a group, members will find behaviours based on any other premise inconceivable. it is a taken-for-granted assumption that things should be safe. (Schein,Edger H, 2004) (Stanford, 2007)

R & D organisational culture can be developed by the reinforcement of the top management, influenced on deeply rooted beliefs by the management, and controlled. It should be accordance with institutions' idea, or the reason to build the organisation. Organisational culture can be thought of as the personality of an organisation. It is also often referred to as corporate culture. Organisational culture affects not only task issues – how well or badly an organisation performs, but also emotional issues – how workers feel about their work and their companies. (David A. Buchanan and Andrzej A.Huczynski, 2017).

The R & D organisational culture has characteristics in line to the main business of the organisation in achieving vision and mission of the organisation. It plays an important role in achieving the achievement of the organisation's vision, mission, goals, and targets. In order that R&D institutions become advanced institutions and have role in developing innovation, technology, and welfare for the nation, it is necessarily to strengthen and develop the organizational culture.

The R & D organisation's members should have the characteristics of innovative, risk taking, the accuracy of analysis and attention to details; while the management focusses on result rather than technique and process to achieve result, management decisions take into account

the effects of results on people in the organisation, work activities which are organized around teams not individuals, more aggressive and competitive, and organisational activities emphasize maintaining the status quo which contrasts with growth. (Robbins, 2007). Organisational culture in research and development institutions have several indicators determined as a basis for analysis. There are seven elements of organisational culture characteristics, namely (1) Innovation, a level where people are expected to be creative and generate new ideas; (2) Stability, which respects a stable, predictable and regulatory-oriented environment; (3) People-oriented (orientation toward people), is an orientation to be honest, supportive and show respect for individual rights; (4) Result-orientation, putting its strength on its care to achieve the expected results; (5) Paths as they are (Easygoingness), a situation in which a relaxed working climate is created; (6) Attention to details (Attention to detail), intended with an interest in being analytical and thorough and; (7) Collaborative orientation, an orientation that emphasizes working in teams as opposed to working individually. (Greenberg and Baron, 1997).

To develop and empower research and development institutions in the business, governmental, educational, and pure research institutions, it is necessary to instill the culture that is consistent with the character, vision, and mission of the institution

Research and Development Organization

Developing a strong R&D structure will drive company growth to meet new business targets. Organisations are looking for new solutions that can bring them additional revenue streams. Business, public and universities R & D have their own characteristics and culture of organisations. An efficient R&D organisation can be a major source of this new growth based on their business. It can help companies to deliver innovative products and new technologies and support operational improvements that increase productivity. Product of R & D organisations are different from one and others based on the core activities. The R & D government organisations have activities to make policies. R & D of producer organisations have activities to make innovation and technology for their product. Universities and Research organisation have activities to make journal or prototypes. The first thing to recognize is that R&D in business should serve many purposes and if well managed it can provide sustained growth and market differentiation.

To develop and empower research and development organisations in the business, governmental, educational, and pure research, it is necessary to instill an organisational culture that is consistent with the character and vision / mission of the institution.

Research and development (R&D) organisation has activities of (1) research to reduce uncertainty, to explore future in advance of business needs (foresight), to build competencies for the future, to proof of principle new technologies from outside; (2) Development to create new products efficiently, to improve processes to enhance performance, to current product modifications; (3) Innovation to launch smart ideas, to look for ways to disrupt in target markets, to create new markets, and to solve problems in new ways; (4) Support to reduce product costs, to solve process and line problems, and to current product modifications (Nu Angle, 2014)

Research and Development is a series of linear and sequential stages that consists of Basic Research, Applied Research and Development. The R&D model assumes that science has a monopoly over knowledge, technology is an outcome of science, and economic development is due to technology development. The R&D model confines innovation to technology and then technology to R&D. (Mahdjoubi, Darius, 2009)

The R & D strategy has a function to help the company developing its innovation efforts internally and externally. R&D process has a function to ensure that the right inputs and outputs are available to support the functions of product development, research, technical service, marketing, and manufacture. There is also a balance to be struck between process bureaucracy and responsiveness. Resources of R & D are developing the capabilities to encourage innovation; includes tools, people, techniques, and facilities. Structures of R & D organisation can be based on competencies, products, services, or disciplines. R&D culture is the values and behaviours that contribute to the unique social and psychological environment of an organisation. Change of R & D can be consolidated with management tools, such as role definitions, measurement, and control systems. Information systems has a function to ensure that the right information is collected, sifted, analysed, and communicated. R&D Key Performance Indicators are part of the Research & Development Dashboard (Nu Angle White Paper, Growth, 2014)

Strategy

Strategy is the direction in which the organisation is going to develop and grow activities to reach the targets or purposes. It is set so that people in the organisation know how they should be guiding their own behaviour. Strategy is also important way to determine and make choices for activities. That is, the organisation needs to decide what it's going to do and what it's not going to do because it has limited resources (Galbrith , 2014)

Strategy consists of three pieces: what to do, where to play, and how to win. What to do refers to goals and objectives. Where to play is literally about the question, "Where in the world are we going to be present and do business?" There is a choice of countries in which to be present and a choice of products. The where to play decision is made continuously over time as the organisation seeks out its growth objectives. *How to win*, is all about competitive advantage: What is our recipe for success? What's our formula to compete? This is a harder decision yet an important one, and it has a lot to do with the distribution of power in the organisation. (Galbraith, 2014).

To instil organisational culture in Research and Development organization, strategy is needed. Strategy is needed to determine what activities those should be done and how to do the activities so that the targets and purposes of instilling organisational culture can be reached.

The organisational culture is aligned with the organisational strategy (Chatman & O'Reilly, 2016). The discrepancy between organisational culture and strategy is part of the mission statement. To avoid the discrepancy between a thoroughly designed concept and its application in practice, business leaders are called to take responsibility and to adjust organisational culture to the circumstances (Canato, et al., 2013). Organisational culture is highly influenced by the most powerful social groups within an organisation. Hence, the possibility to change the way of decision-making, work operations, prioritizing, and interaction with colleagues,

suppliers, and customers depends on examples by role models (Chatman & Cha, 2003). The shared norms those characterize organisational culture, act as social control system to form employees way of thinking and behavior (Chatman & O'Reilly, 2016), (Bishop, 2017).

According to Alvesson & Sveningsson, there are different approaches to organisational culture, he identified roughly three directions that exist for organisational change in academic literature: 1. Organisational culture can be changed by the reinforcement of the top management, 2. Organisational culture is difficult to change due to the lack of influence on deeply rooted beliefs by the management, 3. Organisational culture is uncontrollable. (Alvesson & Sveningsson, 2016).

Siehl (1985) found that the efforts to change cultural values had little visible effect, except for the manifestation of values. The issues of organisational culture change are the values and beliefs of organisational members those are not directly visible, but linked to behaviour and actions, which require interpretation. These behaviours cannot always be solely linked to organisational change mechanisms. Alvesson and Sveningsson (2016) remark, they are more common to observe the impact of organisational change on exhibited practices rather than underlying values. Often the change in practice is triggered by structural organisational changes that go together with an organisational culture modification (Alvesson & Sveningsson, 2016). (Bishop, 2017)

Organisational culture change and preservation ask for a differentiated point of view. The degree of change or continuity needs to be three-fold: degree of modifications in the content of organisational culture, degree of modifications in the shared cultural identity consensus and the degree of intensity of exhibited culture.

The written modification of value statements might not lead to actual change. However, the changes made in the content of documents and communication do not differ tremendously from previous presentations. Hence, the deviation is only slightly visible now, but might have larger impact in the future.

The cultural consensus and lived identity of employees does not comply to full extend with formalized expressions. This could be due to the shift of organisational values to the brand, where organisational values serve as branding strategy. This became apparent in the recruiting approach where the organisational values are communicated to attract future employees.

Alvesson (2013), who claims that organisational culture is rarely reinforced with a true reach by the management, confirms this observation. The one-fits all or broad-brush approach that large organisations apply to satisfy different employee needs, does not go deep enough to impact behaviour and thinking, but only scratches on the surfaces such as the written documents. Even though, employees seem open for change and have a generally positive attitude towards the modification, they are highlighting something that has existed for a long time, instead of setting out for something new and unknown. The same observation is true for the written, reinvigorated key-values, for which the emphasis is on the reconnection to the Testament of a Furniture Dealer instead of creating a new cultural direction. Still, there is some dissonance in the communication and perception of the value modification. It is still expressed

and experienced in the same way that it has been for many years despite attempts to reinvigorate it. (Bishop, 2017)

Hypothesis

Organisational culture of R &D is shared meaning of value, belief and norm held by members that distinguishes one organisation from others influenced by the most powerful social groups that needs strategy to develop and instil organisational culture for achieving effective activities and their vision and mission.

RESEARCH DESIGN

The study uses qualitative approach. It starts exploring the topic of organisational culture in R & D organisation, collecting the data, then describes the phenomenon occurs in the organisations, analyses based on the theory and makes conclusion. The research goal is formulated more precise questions that future research can answer "(Neuman, 1997). This research collects data from observations, discussion among stakeholders and collecting organisational documents. (Bischoff, 2017)

To assess the quality of research, measurement criteria are applied. These criteria are validity, the degree to which findings can be generalized and reliability the degree of the study's reliability (Bryman & Bell, 2011). Denzin and Lincoln (2017) suggest the use of appropriate strategies in accordance with the research purpose.

The Object of Research

The object of this research is cultural organization of Research and Development Organisation in the University, the Government, Regional Government and Pure Research Development Organization.

The research informant

Informants of this study were the stakeholders involved in the organisation of R & D in government organisation, in University and Pure Research and Development Organisation in Higher Education Research and Development organisation, Local Government Research and Development organisation, Ministry Research and Development organisation, and Pure Research and Development organisation in Indonesia.

Data

The primary data were obtained through observation, interviews to the informants and discussion with the stake holders involved in the organisation of Research and Development. Secondary data were obtained from written documents of the organisations. The data is collected from 2 prominent Higher Education Research and Development, 2 Local Government Research and Development, 2 Ministry Research and Development, and 2 Pure Research and Development organisations in Indonesia.

Research Procedures

The research was carried out through several stages: it begins determining the topic of research, object of research, then collecting, editing, reducing, classifying, and analyzing data, interpreting, and concluding and ends with research report. Before the implementation phase,

research was begun with various activities such as administration to the technical preparations and the activities associated with the substance.

Data Analyses

The process of qualitative analysis consisted of three lines of activities occurring simultaneously, namely the reduction, testing information and conclusion (Miles,1992). From the results of the analysis through the reduction process, test of information it will describes the conclusion and further formulation to design a strategy for developing organization culture in R & D Organization. To ensure the validity and feasibility of the data being analysed was carried triangulation process.

Triangulation is a technique that utilizes data validity checking something else from outside the data for checking purposes or as a comparison to data (Moleong, Lexy J, 2010). To check the validity of this data was carried by triangulation 1) comparing the observed data with data from interviews, 2) comparing what is said the related informant, 3) compare the results of interviews with the contents of a document; Checking through triangulation process was conducted from the beginning of data collection to the implementation of data analysis and always be checked against the collected data.

DISCUSSION AND FINDING

The research shows that the organisation of Research & Development in public organisation has the characteristics those are founded and built in the organisation. The Rresearch and Development (R&D) organisation has activities of (1) research to reduce uncertainty, to explore future in advance of business needs (foresight), to build competencies for the future, to proof of principle new technologies from outside; (2) Development to create new products efficiently, to improve processes to enhance performance, to current product modifications; (3) Innovation to launch smart ideas, to look for ways to disrupt in target markets, to create new markets, and to solve problems in new ways; (4) Support to reduce product costs, to solve process and line problems, and to current product modifications (Nu Angle, 2014).

The Public research and development organisation's orientations and characteristics have impact on organisational culture. Public research and development organisations consist of Higher Education. Government, Local Government, and Pure Research and Development. These organisations have their own value, norms, and belief as a system of shared meaning held by members that distinguishes the organisation from other organizations (Robbins (2007).

Organizational has a system of shared meaning held by members (Robbins ,2007) that is called as a culture. It is defined as a pattern of basic assumptions. The culture was influenced externally for adaptation and internally for integration in the organisation. it is being perceived, thought, and felt correctly in relation to the culture. (Schein, 1997).

University's research and development organisation has activities focussing on education, research, innovation, and community services. The research mission of the R & D organisation is taking active role in the development of science and technology through the activities of research based on the institution competences.

The Indonesian Government supports to make policy and develop their competency. The Government institution has a reference of policy Research & Development based on their owned competences to meet the achievement of their vision and mission. They conduct research of policy and development for mastering technology and innovation based on their own competences.

Regional Government R & D has some activities based on the vision and mission. The vision is the realization of research and development as well as studies those are implemented effectively and professionally in the province and their mission is to formulate research and development programs and policies based on regional needs, to carry out research and development as well as implementation of effective studies in the fields of government, economics and finance, natural resources, and technology as well as society.

Pure Research and Development organization has a vision to become superior research and to develop institution on generating technology, accelerating transfer of technology, developing capacity of resources, and improving services competences.

The activities of Research & Development organisation have to increase because of regulatory changes driven by legislation, disruptive technology which create dramatic shifts in the competitive environment, mergers and acquisitions, collaborative research. They emphasised on open innovation and R&D collaboration, and shareholder frustration due to the lack of new products and services those drive R&D creating pressure for a restructure. (Nu Angle, 2014).

Public research and development organisation has shared values, beliefs, and norms, which influence the way employees think, feel and act towards others inside and outside the organisation called organisational culture. (David A. Buchanan and Andrzej A. Huczynski, 2017).

Shared Value, belief, and norms

R & D organisation in a university develops the values and norms for research, innovation and development of science. The values and norms of R & D of university should be shared to all stakeholders. The values of University Research and Development (R & D) organisation in a university develops the values and norms for research, innovation and development of science. The members of R & D in a university have to do innovative and research, use the result for developing technology. The universities have developed science and technology. The R&D model assumes that science has a monopoly over knowledge, technology is an outcome of science, and economic development is due to technology development. The value of culture in R & D of the university has been stated in the vision and mission of the university.

The values and work culture of The Ministry Research & Development institution are expected to accelerate the application of bureaucratic reform, especially related to the efforts to create a clean and accountable, effective, and efficient bureaucracy and to have quality of public services. Ministry of Industry as the sample of this research has five work values and culture those are set as a reference for the employees, consisting of integrity, professional, innovative, productive, and competitive. These five values which must be known, understood, and practiced by all officials in working, acting and contributing to the development of national industries. Integrity is defined as thinking, saying, behaving, and acting properly and correctly and upholding the code of ethics and moral principles. Professional officers are those who work

thoroughly and accurately based on the best competence, full responsibility, and high commitment. Employees are expected to strive to make various improvements that have added value to implement ideas as alternative solutions to facilitate work processes that are better, faster and more precise. Employees are also expected to have productive value in working, that is by managing resources effectively and efficiently to provide useful and appropriate work results in accordance with the targets set. Every employee is expected to be the best, to have competitiveness and excellence as well as useful for himself, society, nation, and country.

Regional Government Research & Development has an effort to encourage researchers / supporting organs to be innovative and dare to take risks. Regional Government R & D has a vision and mission in the realization of research and development as well as studies those are implemented effectively and professionally in the province. The vision and mission are the reference for the formulation of research and development programs and policies of region needs. The value of Regional R & D organization describe in the vision, mission and implemented in the program activities.

Pure Research and Development organisation's employees can develop themselves to be competent researchers and encourage them by developing the spirit of entrepreneurship.

Regarding the culture in the research center there is a value that is held in high esteem, this can be seen from the existence of people who personally show good things in their work or activities. There seems to be a commitment to themselves. They have a high commitment to the development of institution in any condition of the institution, they continue to work for the development of institution. These conditions are indirectly to become role models for us at work. However, the important thing to underline is that we cannot only rely on the goodness of the individual but must also be supported by various policies that are conducive to the development of the research center.

Strategy for developing Research & Development organisational culture

To instil the value of organisational culture needs strategy so that the organisation is able to obtain vision and mission that have been stated. The vision and mission can be obtained by doing the activities. The organisational culture has important role to move stakeholders based on the regulation and ideas that have been instilled and developed by the founder. Strategy is important to determines the choice of activities concerning what it's going to do and what it's not going to do (Galbrith , 2014).

Public Research & Development organizational culture of the Ministry, Regional Government, University and Pure Research & Development have their own strategies to develop organisational culture based on the environment and characteristics of the institution.

Strategy to instil organization culture of public research and development institution consists of doing research, development , innovation and application the result to achieve the organization vision and mission (Nu Angle, 2014).

Universities

What strategy can be applied by the university in developing and instilling organisational culture. The process of instilling and making habit working culture in the university is based on

regulation, so that the value, belief, and norms are shared to the stake holders in organisations. The organisation culture of Research and Development should be shared to the personnel of the organisation as the actors of the activities. In universities research and development organisations the personnel consist of researchers, laboratorians, laboratorian assistants, and staffs.

Values provide a common direction for all employees, and to guide their behaviour. 'People way down the line knows what they are supposed to do in most situations because the handful of guiding values is crystal clear' (Peters and Waterman, 1982). Organisational values are the accumulated beliefs held about how work should be done, and situations dealt with, that guide employee behaviour. (David A. Buchanan and Andrzej A. Huczynski, 2017).

The value, belief, and norm as organisational culture those are shared to the stake holders of the organisation should be developed in order that the vision and mission of the organisation can be obtained (Schein, 1983). To get good result for the development of culture in the organisation, it needs strategy. The culture should be instilled to the members of the organisation to achieve the end goals, vision, and mission of the organisation.

University has main activities called TRIDHARMA (Three Services), they are education, research, and community services. The three services link one each other. In the Organization of University's Research and Development, the focus of the organisational culture related to the research. To improve the competence of researchers, laboratory personnel and staff, the university should provide professional training related to the competence of the profession.

In an effort to gain optimum result in R & D, the University has also organized a number of research groups to implement strategic research topics, so that the culture of collaboration and working together can be developed. These research groups are established based on the Rector's Decree and the research topics were developed based on the strategic research. The research group consists of researchers from various disciplines who have the same interests and competences in their fields.

Based on the research the Universities have conducted Three Services (*Tri dharma*) of higher education. In focusing on results / outcomes, as an institution that bases itself on the *tri darma* of higher education, The University realizes that teaching, research, and community service through the application of the results of research should be carried out. For this reason, the university emphasizes that (a) Research carried out, both inside university themselves and in the form of cooperation that must be able to contribute to the community. The preamble of the University statute such as UGM has 4 priorities of research direction, namely handling vulnerable communities, handling critical environments, strengthening local culture, strengthening national sovereignty. (b) Then to achieve this, the important things that UGM continues to do is to collect research results that have an indigenous nature (Indonesia). The results of this indigenous research need to be systematic so that they can be communicated to become knowledge that is appropriate to the local needs of the community. (c) In addition, for the utilization of research results the university is directed to have sovereignty. The governance has been strengthened for the utilization of research results. Unit of ethical committee was established. Most of research and development of university focus their product on article of journal. All lecturers have to publish journal as performance of research activities. All of these

are concerned to the value of university which are developed to be culture of the institution that should be shared by all the members.

How the institutional strategy and tools used in forming team work, the university has several things, such as: a) The development of science and technology through research activities should be able to contribute to the community / towards solving national problems, the university encourages culture to interact among Researchers are carried out systematically by requiring collaboration among researchers in the internal research design scheme, b) Directing research activities, such as: handling vulnerable communities, handling critical environments, strengthening local culture, strengthening national sovereignty.

In obtaining the outcomes of teaching and research, University also serves community service through the application of research results that have been carried out. Based on this, the strategy used in the development of science and technology is through a synergy approach, the results of research are expected to be useful innovations for users / the public. Synergy is carried out both internally and externally, such as ITS want to be the university leader in marine, energy, and settlement. The lecturer, staffs and laboratorian have learned and focused their activities for innovating and developing marine, energy and settlement. The lecturers support to join the research project nationally and internationally. ((Nu Angle, 2014)

The universities conducted collaboration with the regional government through Research and Development network activities related to the development of Regional Innovation System (SIDA). The universities conducted joint research with other universities. Lecturers and students are involved to solve the big problems and create new inventions. (Galbrith , 2014)

The strategy carried out by the university for developing and instilling organisational culture is forming teamwork, working collaboratively to achieve goals to emphasize an orientation towards research that is useful / can be used by industry, government, and the community. For this reason, University developed synergies by: (a) Establishing institutions, such as the Agency for Innovation and Business Cooperation, and the Management and Protection Agency in the development of research, (b) Developing the specificity of research by combining the scientific fields in research activities, (c) Conducting research with a multi-disciplinary approach, in addition to the scientific fields of technology that are the specialty of research, also involves the field of social humanities science especially in the aspect of developing application of research results in the community. (d) organizing a number of research groups to implement strategic research topics, so that the culture of collaboration and working together can be developed.

Government research and development Organisation

To develop and empower research and development organisations in government, it is necessary to instill an organisational culture that is consistent with the character and vision / mission of the institution. In the vision and mission of the organisation contain the value, belief and norms and the culture of the organisation.

Most of Indonesian government Research and Development organisation have activities in supporting the institution in making policy and developing their competence. They carried out research and development activities based on their owned core business to meet the achievement of their vision and mission, such as Industrial Research and Standardization

Centre one of R and D Institution of The Ministry of Industry, has conducted research and mastery of technology in the field of research and testing for food products and agroindustry. The institution conducted training on technology to support the growth of the industrial sector. The institution improved the capacity of more authority to enter the industry, the institution encourages existing functional personnel to understand / explore needs technology required by industry / customers.

The institution had developed human resources to be creative, open and integrated, several things can be seen as follows: (a) Determination of the achievement target of technical services, demanding all human resources in institutional units to be able to provide services from a variety of customer / industry needs. Creative ideas are driven by encouraging existing human resources to interact with industry through direct visits to industrial factories to listen to suggestions, understand the needs and problems faced in the field, (b) Researchers' creativity is required to produce research that can be sold to customers, carried out through an evaluation of proposals submitted from economic aspects, applicative, and updating / whether the research will be conducted, (c) Openness within the institution can be seen from the existence of a link in the implementation of activities between structural elements and functional elements. Structural institutions conduct evaluation and monitoring of research and testing activities carried out by researchers and engineers. Likewise, for example, structural elements try to provide initial data needed for research and testing activities, (d) Fostering the integrity of human resources is done by encouraging all units to be able to provide technical services in accordance with the duties of the institution by working professionally, with specifications on research and industry standardization.

Research and development (R&D) organisation has activities of (1) research to reduce uncertainty, to explore future in advance of business needs (foresight), to build competencies for the future, to proof of principle new technologies from outside; (2) Development to create new products efficiently, to improve processes to enhance performance, to current product modifications; (3) Innovation to launch smart ideas, to look for ways to disrupt in target markets, to create new markets, and to solve problems in new ways; (4) Support to reduce product costs, to solve process and line problems, and to current product modifications (Nu Angle, 2014)

In connection with the implementation of the strategy, among others, it is carried out through: (a) Establishing institutions to support the development of research innovation, namely the Innovation Development Agency and IPR Protection Agency, (b) Encouraging ABG synergy by becoming part of the R&D network activities initiated by the Ministry of Research and Technology, (c) Initiating the formation of ABG synergy outside Java Island (Kalimantan to Papua) through research collaboration with existing State Universities. If the research patterns are carried out individually, not collaborated, and there is no dissemination, Indonesia will experience stagnation in the development of science and tech. At present what needs to be developed is not high technology and large but that is indeed in accordance with needs (Industry, government, and society).

Based on the activities conducted in the government R and D institution, the government has strategy to instill and develop the value, belief and norm by developing human resource,

training, collaborating among Academic, Community, Government and business, and developing research activities based on the needs of the institution competences.

Local Government Research and Development Agency

Based on how the institution focuses on the results, it can be seen from the duties of the Local Government Research and Development Agency to formulate research and development programs and policies and to study according to the regional needs. The researchers prepared a recommendation for the Governor in making decisions or policies.

The Local Government Research and Development Agency conducted research, development and studies that are implemented for community development, the Agency has carried out several activities, namely: conducting research according to community needs, initiating intertwined communication between innovators in the community, communicating research results to various parties through journal / proceeding media, assisting the district / city government in carrying out research.

The institution develops researchers and employees to be creative, open and integrated, a number of things are done: (a) Encouraging civil servants in the structural (supporting organs) potential to become researchers, (b) Including supporting organs in the research process (data collection, monitoring research activities), both research in collaboration with universities and self-management research, publishing research results through journal media as a form of scientific communication, (c) Carrying out scientific meetings with universities, (d) Involving researchers in research methods training activities carried out by tertiary institutions.

The Agency developed team works those worked through a synergy approach between the elements of existing human resources in research activities. Some of the activities are carried out by the organs in supporting research activities include data collection, monitoring, and publication of research results. Then, in building collaborative work, it is seen that the strategy with the Academic, Business, and Government innovation / synergy system development approach is the basis for collaborating / building networks outside the institution.

In other words, the activities carried out with various parties are in the context of developing science and technology so that they are useful / beneficial for technology users (industry, government, and society). A collaborative effort was carried out by agency in (a) Research collaboration with tertiary institutions, (b) Being part of the Province Research and Development forum initiated by the Ministry of Research and Technology, (c) Building a R&D network forum, by forming a government R&D consortium regencies / cities in the Province, to support the development pilot pilots, (d) Initiate preparations for the development of the program by awarding technological innovations in the community followed by Innovator Meetings as an effort to build interactions (information exchange) among innovators.

From these activities it can be seen that the strategy of developing and instilling organizational culture in Local Government Research and Development are support the stake holder to do research, community development, communicating result of research, doing research collaboration among Academicians, business, and Government, making team work and team work forum.

Pure Research and Development Center

Strategic steps in the institutionalization of science and technology in the organisation of Pure Research Development conducts a collective work agreement that is established democratically, involving management elements and trade unions:

- The center develops the competence of researchers and encourage developing the spirit of entrepreneurship.
- The center develops the value of culture of research center in high esteem, the center supported the existence of people who personally show good performance in their work. They have a high commitment to the development the center any time and condition. These conditions have developed becoming role models for the members at work. The system of works in the center is supported by various conducive policies to develop research center.
- The Center developed Working environment, atmosphere, and values those are warmth and family instilled by founders and leaders. Among values those are instilled are work ethics and academic honesty, the spirit of entrepreneurship to employees, and networking and togetherness. In instilling the values of the organization, the leaders put the pioneers as the driving force.
- The center developed the values those are built up at the center and have an impact on the success of achieving organizational goals becoming good character in the organization.

The center has an effective organisational culture in supporting successful implementation of its activities. The essence of the study is that organisational culture in R&D institutions is a significant factor in encouraging or realizing the successful achievement of performance and objectives of R&D institutions. Based on this background, it is assumed that the center of pure research has an effective organisational culture in supporting the successful implementation of its activities.

In the center of pure research, the activities of research and innovation have been carried out by a research team, through procedures established by the institution. The innovation is developed based on market needs and indeed from management program that directs researchers to innovate according to a predetermined theme. The Center has already got a road map. The centers give an award to the researchers who have good performance and discipline in work, they will get an award in the form of bonuses and / or promotions.

The center provides opportunities for all employees to pursue higher education according to the field and to support the implementation of their work. The center also provided opportunities to the employees to joint training and seminars. The research activities are carried out by research groups by involving multidiscipline of knowledge. The members of the research team have similar opportunity to develop their competence.

The Strategy used to develop and instil the organisational culture in the organisation of Pure Research Development is to conduct a collective work agreement that is established democratically and involving management elements The center develop the competence of researchers and encourage developing the spirit of entrepreneurship. The center develops the value of culture of research center in high esteem, by supporting the existence of people and developing the environment, atmosphere and values of the center those are warmth and family instilled by founders and leaders

Based on the discussion above it can be summarize that the Strategy for developing organisation culture in the Public R & D Organisation begin from the value, norm and belief of the organisation those are developed and instilled and shared to the members through the activities of the main business of the organisation to obtain the realization of the organisation vision and mission.

CONCLUSSION

Based on the discussion above it can be concluded that the strategy for developing organisational culture of Public Research and Development is that organisational culture is value, norm and belief shared to the members stated in the vision and mission of the organisation that can be realized through the activities programmed by the organization.

The University organized several research groups to implement strategic research topics, The University had developed culture of collaboration and working together. The strategy carried out by the university for developing and instilling organisational culture is forming teamwork, working collaboratively and developing synergy to achieve goals to emphasize an orientation towards research that can be used by industry, government, and the community. The University focused their activities of TRIDHARMA (Three Services), they are education, research, and community services.

The government R and D institution has strategy to instill and develop the value, belief and norm by developing human resource, training, collaborating among Academic, Community, Government and business, and developing research activities based on the needs of the institution competences and policy.

The Local Government Research and Development support the stake holders to do research, community development, communicating result of research, doing research collaboration among Academicians, Business, and Government, making teamwork and teamwork forum in fulfilling the need of policy and innovation of the region.

The center developed the values those are built up by the founder and leaders at the center and have an impact on the success of achieving organisational goals becoming good character in the organisation.

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