

Explaining and designing model of the intellectual capital management enablers

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Abstract: The goal of this research is to analyze the explanation and design of intellectual capital management enablers. The research adopts a descriptive – survey approach. The statistical population included all faculty members of Islamic Azad Universities in Mazandaran province, (N=1700), of whom 313 people were selected as the sample using Cochran' v formula and stratified sampling method. Data collection and information gathering tools in this study is a researcher made questionnaire. Data were analyzed using through LISERL software. Confirming the generality of the model, the confirmatory factor analysis results showed that 12 components including organizational learning, trust, and team-work, engagement in work, organic structure, fluidity, social networks, reward system, idealized influence, inspiration motivation, intellectual stimulation and individual consideration are explained for the intellectual capital management enablers in Islamic Azad Universities in Mazandaran province.

Key words: Enablers: Intellectual capital management

1. Introduction

In this super-competitive age, when the organizations moved from the industrial-oriented economy towards knowledge-oriented economy, they faced huge challenges like dynamism, unreliability, complexion, rapid transformations and increasing competition and rapid scientific and technological advancements (Kong, 2007). This phenomenon is generally true about all organizations and in the universities, in particular. In modern knowledge-oriented economy, knowledge is recognized as the main source of power and every organization's success depends more on the organization's intellectual capital rather than physical resources, tangible and objective capital and assets (Walczak, 2005). The intellectual capital is defined as the thinking material, knowledge, information and also the intellectual ownership that the organization can use in creating knowledge. Although, no universally-accepted definition of intellectual capital has been presented yet, there is a consensus among the majority of the researchers and authorities in the intellectual capital field about the intellectual capital definition in terms of its constituents (Bart, 2001). That is, they agree that the intellectual capital consists of human capital, structural capital and relational capital and they assume that it is the interaction among them that results in the organizations' competitive success (Engstrom, 2003; BorneMann, 2007).

Regarding the fact that the corporate capabilities are based on the intellectual capital (Sudarsanam,

2008), the management of this strategic capital has turned into this critical issue for the organizations' competitiveness (Marr, 2003). The intellectual capital management is the process of strategic planning and control related to identifying the direction appropriate with the external environment's features (Herrmann and Keline, 2010). The strategic planning and control processes in an organization are the tools to direct behavior and develop capabilities and daily routines of the staff (Merchant, 2007). An appropriate combination of the formal and informal planning and control can provide the suitable ground for producing wealth through the intellectual capitals and the suitable control can bring about the required accuracy, discision in the long run and leads to coordination, responsiveness and productivity (Morris, 2006). Besides, the appropriate planning and controlling systems can develop the intellectual capitals which are generally classified into three dimensions: human, structural and relational capitals (Edvinsson and Malone, 1997; Stewart, 1997; Roos, 2001). Although the intellectual capital being valuable for many organizations has converted it into an inevitable issue, its management is so tough. Since the intellectual capital is made up of various unobservable factors making its observation, control and management difficult, some unobservable factors such as principles, culture, behavioral patterns, capability, competencies, communication and processes would lead to knowledge that do not have the potential for buying and selling unlike the physical assets (Khavandkar and Mottaqi 2009). In addition, diverse factors like the goals, resources and individuals influence the intellectual capital management; for

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this reason, many frameworks, tools, methods and guidelines have been devised to support the challenging task known as the intellectual capital management (Kujansivu and Lonnqvist, 2008). The tool that can help the managers in this respect is the enablers of the intellectual capital management. The enablers are the factors making the organization capable in getting the excellent results and the results indicate the achievements resulting from appropriately implementing the enablers (Douglass, 2003). The factors such as the corporate culture, leadership, technology, the corporate structure, the organizational compatibility, the knowledge-based assets management activities evaluation, knowledge-based activities directing and leadership and the personnel's motivation are the external factors (Joshi, 2000) allowing the corporate knowledge grow simultaneously and systematically via creating the necessary background and infrastructures. They not only assist the generating knowledge in the organization but also provide the motivation for the group to share their knowledge and experiences (Alvani et al., 2009; Theriou and Chatzoglou, 2010). Thus, it's better to consider the results with critical sensitivity and to identify all of the factors influencing or being affected by them in a way and to plan, organize, control and direct them (Khabiri, 2004). The studies revealed that the intellectual capital management is under the influence of the corporate structure (Wong and Ahmed, 2003). Vogt (2005) emphasizes that working environment has to be organized through the correct structures so that it allows the employees to develop their human potentials. Shivers and Blackwell (2006) also point out that for acting in unpredictable and unreliable environments, organic structures would be more effective. The organic structures can motivate the intellectual capital management through unofficial control, encourage innovation and focus more on expertise, autonomous working teams and support creativity (Isaac et al., 2010). Isaac, Hermans and Keline (2010) also in their research have studied the intellectual capital management enablers through the structural equations. Their research results denoted that in a linear relation, there is a positive and meaningful effect between the organic structure, the interactive behavior and mutual trust. On the one hand, knowledge-oriented organizations including universities need to get rid of the separating borders' constraints and a kind of shared thinking framework by which they create their organizational identity and trust-based relations. Such conditions enable the staff to access the information without official controlling and structures and the knowledge flow throughout the organization (Farhangi, 2004). Moreover, these organizations need a set of special communication among a certain group of individuals. This set of communication in their generality can express its member's social behaviors. Working communities involve the groups of individuals constantly sharing the available knowledge and experience in an organized interaction for solving the common problems and

difficulties in the organization so that they can obtain the results beneficial both for the group stakeholders leading to the individual's improvement and learning (Liedtka, 2000).

The management of the intellectual capital also can be affected by the corporate culture and increasingly influence the organization's intellectual capitals (Hollsoopleand and Joshi, 2001). In a paper entitled as "the enablers of corporate knowledge management, process and performance", Lee and Choi (2003) showed that the components of the information technology, corporate culture and organizational structure are of the knowledge management enablers' components and creating implicit knowledge has a positive relationship with the individuals' creativity in the organizations and enhancing the intellectual capital.

As Laycock (2005) states, the corporate culture plays a more effective role in sharing the knowledge in the organization. The organization that supports sharing information and creating knowledge is more able to adopt more effective and efficient processes. Stephenson (2005) also asserts that sharing the implicit knowledge depends on a moral environment and mutual respect encouraging trust. High trust in social relations makes up positive outputs such as cooperation, information and knowledge exchange (Levin and Cross, 2004). Besides, the organizations require an environment with a continuous learning culture (Ned et al., 2001). According to Bounties (2004), the knowledge getting through the corporate learning channel prevails in all intellectual capital components. Therefore, we can view the corporate learning effectiveness scope both on human capital and structural capital and on the relational capital.

Being engaged in work (partnership) is highly significant in shaping the staff's capabilities (Wiseman, 2006). The high level of engagement in work and partnership results in ownership and responsibility sense of the work. This sense of ownership brings about commitment to the organization and increased capabilities related to the staff's performance under uncertain conditions. Their result is the staff's boosted commitment to the organization that decreases requiring official controlling systems and increases the staff's performance (Denison et al., 2005). The values resulting from high levels of engagement have a special corporate position in team orientation in exchange for the individual performance and the individuals' ownership sense in the organization (Wiseman, 2006). The studies suggest that the staff being allowed to cooperate with their own certain methods for realizing the corporate goals compared with those whose tasks are defined in advance and announced to them have more productivity (Kordrostami and Eshkenati, 2009).

In the modern world, to cope with an uncertain environment and constant transformation, it is critical to have managers playing the role of leaders (Eslamipor, 1995). Having the responsibility of the leader, the manager has to measure the individuals' potential and willingness and regarding his/her own

authority, he/she has to select one of the leadership styles having communications with them (MirKamali and Khorshidi, 2007). The leadership style symbolizes the thinking style, ideology and personality trait of the leaders. If the leadership style is selected in the wrong manner, on the one hand, it causes the individuals' and the organizations reduced efficiency and, on the other hand, it is considered as a factor wasting the organization's capitals such as knowledge-oriented capitals and intellectual ones. Amabile et al. (1996) also believe that the behavior of the organization's director or president undertaking the role of leadership influences the thoughts, feelings and the wishes of the staff under supervision and generates motivation and enhances the human capitals of the organization. Thus, the leadership style as the facilitator and motivator of the staff directly or indirectly has effects on their work efficiency. In the recent years, the executive academics and directors have increasingly focused on the leadership sensational and symbolic dimensions, these dimensions are about the kind of leadership known as neo-charismatic or simply put transformation creating theories. These new leadership theories emphasize the charismatic leaders' role whose followers have a significant sensational drive toward them (Ergenelia, Goharb and Temirbekoravac, 2007). In the transformation creating leadership, the relationship between the leadership with its followers is beyond the etiquettes and generates inspiring thoughts in the followers in order to do their best more than what is expected for achieving their goals with maximum potential. The transformation creating leaders have influence and charisma and create motivation in the individuals by observing the individual considerations (Garvin, 2002). Besides, Northouse (2001) also asserts that such leaders usually have high ethical and spiritual codes and act correctly, they are deeply respected by their followers, are reliable and lead their followers in line with realizing the insight and mission and by

expressing their values and beliefs, and they encourage the other ones to observe the organization's perspective. In practice, they utilize their sensational symbols for the group members' efforts to achieve something beyond their personal benefits and this way. In addition, they boost their followers' spirit for getting their objectives and create a supporting atmosphere where they listen to the individual followers' needs and act as trainer or councilor through taking the various individuals' perspectives and their fundamental suggestions into account; they are making efforts to help their followers to flourish.

Pooper, Masiles and Castelno (2000) in their research demonstrated that the transformation creating leaders provide the essential motivation via showing optimism and unanimity, proposing new ways on how to view doing the job, engaging the followers in presenting future perspectives and having high expectations in running the affairs seriously and enthusiastically. In addition, Stone, Russell, Patterson (2004) assumes that such leaders do not criticize the personnel's mistakes and encourage them to try hard for proposing fresh ideas. Thus, with respect to the aforementioned issues, despite broad studies in identifying, measuring and managing the intellectual capitals and expressing various viewpoints for perceiving the intellectual capitals in the organizations, in general, and Islamic Azad universities, in particular, no certain model has yet been presented on how to develop the intellectual capital and on how the management processes of the intellectual capital (planning and control) results in the intangible assets' growth and development and the intellectual capitals. Thus, based on the literature review and the research background related to the intellectual capital management enablers and their summing up (Table 1), the research theoretical model has been provided (Fig. 1).

Table1: Explain the components of intellectual capital management enablers and intellectual capital management process

Components	Number of items	Resources utilized
Organizational learning	7	-bounties,2004; Alvani,kiakojori,hosseinzadeh and rodgarnzhad,2009; Ned Lela and Toit, 2001
Trust	3	-Alalavi et al,2009; Isaac, Hermans and Kine,2010; Levin and Cross, 2003
Teamwork	3	-Denison,2005; Laycock, 2005
Engagement	3	-Weizmann, 2006; Denison, 2005;Kordrostami and Eshkenati, 2009
Organic structure	3	-Wong and Ahmed,2003; Isaac, Hermans and Kline,2010;Walzak,2005
Reward system	3	-Alalavi et al,2009;
Social networks	3	-Farhangi, 2004; lidtka, 2000
Fluidity	3	-Walzak,2005; Wong and Ahmed,2003;
Idealized influence	3	-North house,2001; Garvin, 2002
Inspiration motivation	3	-North house, 2001; Pooper, Masiles and Kastelno, 2000.
Individual consideration	3	-North house,2001
Intellectual stimulation	3	-Pooper, Masiles and Kestelno, 2000; Stone et al, 2004
Planning and control	6	-Isaac, Hermans and Kline, 2010; Merchant and Vanderstade, 2007; Morris, 2006; Edvinson andMalone, 1997; Stewart, 1997; Bounties, 2004

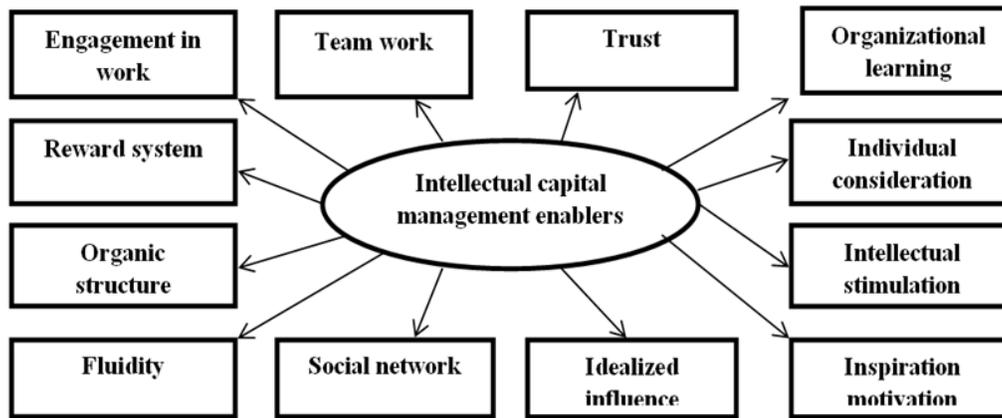


Fig. 1: the theoretical model of research

According to table and figure 1, the main research hypothesis can be stated as follows: The variables of organizational learning, trust, and team work, engagement in work, reward system, social network, organic structure, fluidity, idealized influence, inspiration motivation, intellectual stimulation and individual consideration explain the intellectual capital management enablers in Islamic Azad Universities in Mazandaran province.

2. Methodology

The current research adopts a descriptive – survey approach and the statistical population of research includes all full – time faculty members in Islamic Azad Universities of Mazandaran province who are 1700 people. 313 people were selected based on Cochran's formula and based on multi – stage stratified sampling. Accordingly, the Islamic Azad Universities in Mazandaran province were divided into different classes based on their size and then through the floor random and proportional to the size of university, the sample was selected by stratified sampling proportional to the desired sample size. Data collection tool was the researcher made questionnaire with 47 questions which was arranged in two sections including demographic characteristics of respondents (7 items) and components of the intellectual capital management enablers (organizational learning with 7 items, trust, team work, engagement, reward system, organic structure, fluidity, social networks, idealized influence, inspiration motivation, intellectual stimulation and individual consideration all with 3 distinct items). Related components were measured on scale of 1 to 10. Face and content validity of the survey instrument was determined using the views of management professional's and the number of faculty members of Islamic Azad Universities, Mazandaran province. In order to determine the questionnaire reliability, the internal consistency was used and was calculated as 0.82 using Cronbach's coefficient. To review and analyze the data confirmatory factor analysis (measurement model) with LISREL 8.80 was used.

3. Results

3.1. Description of research samples:

The demographic percentages are based on the questionnaires. More than half of the respondents in the study were between the ages of 41 to 50 years representing a relatively young population of studied samples. Nearly, 68% of cases were male. More than half of the subjects in the study had doctoral education and in this regard, as well as 80/3 percent of the samples were professional faculty members and more than half of the samples had between 6 to 10 years of work experience showing less-experienced people. Also, half of the study samples were assistant professors.

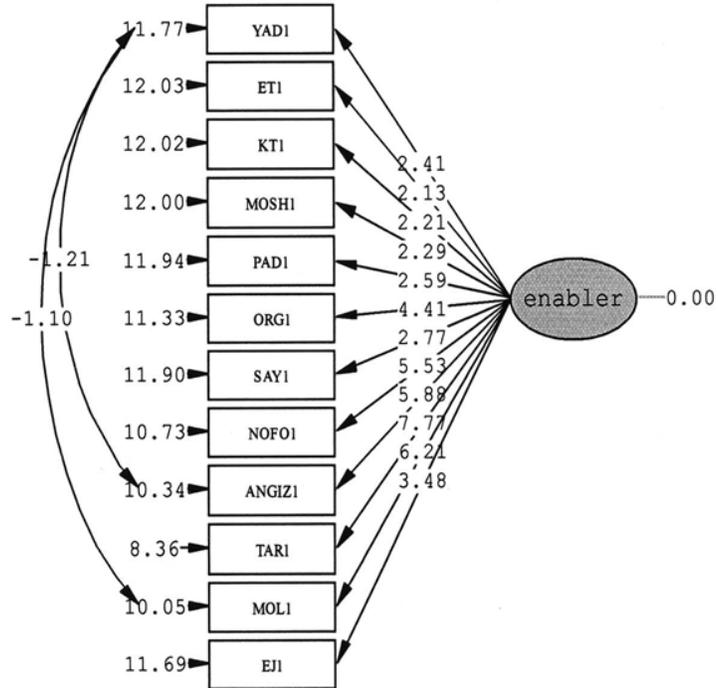
3.2. Explanatory model of intellectual capital management enablers:

In this section, according to the theoretical framework, the measurement model (confirmatory factor analysis) of the 12 main variables that explain the intellectual capital management enablers in the population of the study based on LISREL output is presented. The result of confirmatory factor analysis is shown in figure 2 and 3. In figure 2, T-value coefficient of relationship between variables and intellectual capital management enablers are provided.

As shown in Fig.2, all of variables have the explanatory direct effect of enablers. All coefficients are significant at the 5% error because their individual significance test will not be in the interval (-1.96, 1.96).

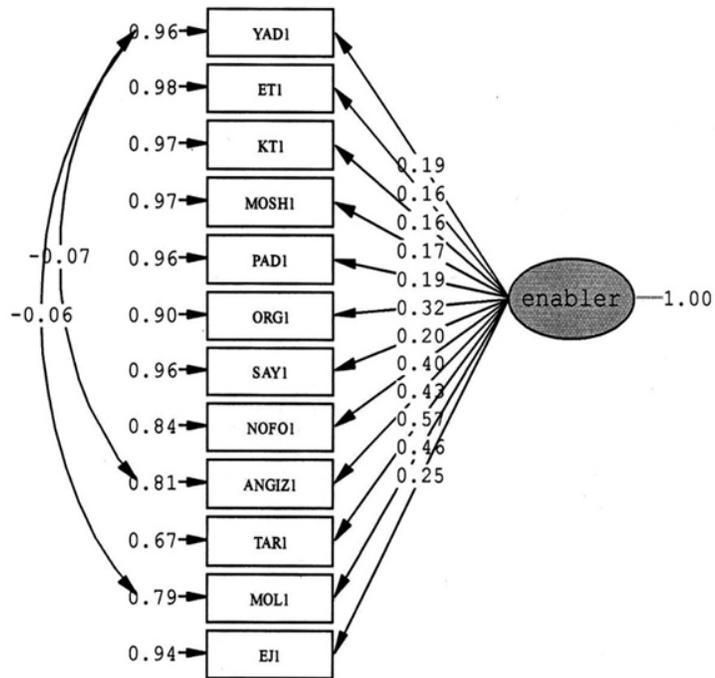
So, we can say 12 components including organizational learning, trust, teamwork, engagement in work, reward system, social networks, fluidity, organic structure, idealized influence, inspiration motivation, intellectual stimulation and individual consideration explain the intellectual capital management enablers. Fig. 3 also presents the intellectual stimulation with the standard coefficient (0.57) which has the greatest impact on intellectual capital management enablers.

Table 2 shows further details about obvious coefficient and T-value. variables (tangible) and latent (intangible), standard



Chi-Square=169.95, df=52, P-value=0.00000, RMSEA=0.087

Fig. 2: T-value coefficient of relationship between variables and intellectual capital management enablers



Chi-Square=169.95, df=52, P-value=0.00000, RMSEA=0.087

Fig. 3: direct standard coefficient of relationship between variables and intellectual capital management enablers

Table2: Variables and direct coefficients of the measurement model of intellectual capital management enablers

Tangible variable	Intangible variable					Intellectual capital management enablers						
	Organizational learning	trust	Team work	engagement	Reward system	fluidity	Social networks	Organic structure	Intellectual stimulation	Individual consideration	Idealized influence	Inspiration motivation
t-value	2.41	2.13	2.21	2.29	2.59	2.77	2.60	4.41	7.77	6.21	5.53	5.88
Approved /rejected	approved	approved	approved	approved	Approved	approved	approved	approved	approved	approved	approved	approved
Direct impact coefficient	0.19	0.16	0.16	0.17	0.19	0.20	0.25	0.32	0.57	0.46	0.40	0.43
Rating of effectiveness	3	1	1	2	3	4	5	6	10	9	7	8

As witnessed in table 2, it has been approved that direct relationship existed between components of organizational learning (2.41), trust (2.13), and team work (2.21), engagement in work (2.29), reward system (2.59), fluidity (2.77), organic structure (4.41), social networks (2.60), idealized influence (5.53), inspiration motivation (5.88), individual consideration (6.21) and intellectual stimulation (7.77) with the intellectual capital management enablers. According to the standard coefficients of the measurement model, the greatest impact on the intellectual capital management enablers is directly related to the variable of intellectual stimulation with the load factor of (0.57). It should be noted that the various indicators and multiple of suitability determination of a measurement model, RMSEA and GFI indicators have been the best and the most famous of which is adequately necessary to determine the suitability of a measurement model (confirmatory factor analysis) (table 3).

Table 3: Model fit indices

Indices	Reported value	Acceptable value
Chi-square	151.35	The frequency difference between the expected and observed
df	73	Greater than zero
p-value	0.000	0.000
RMSEA	0.060	under 0.1
RMR	0.06	Close to zero
CFI	0.83	Close to 0.9
IFI	0.84	Close to 0.9
GFI	0.94	Greater than 0.9
AGFI	0.74	Close to 0.9
NFI	0.90	Equal or greater 0.9

As can be seen, all the reported indicators have an acceptable value for the overall fit of model. So the research model has fitness required and totality is approved.

4. Discussion and conclusion

The purpose of this study is to define and design the model of intellectual capital management enablers in Islamic Azad University in Mazandaran province. In order to access the stated purpose of the present study, documented in the research literature review related to intellectual capital management enablers and confirmatory factor analysis results, are 12 variables such as organizational learning, trust, team work, engagement in work, organic structure, fluidity, reward system, social networks, idealized influence, intellectual stimulation, inspiration motivation and individual consideration which explain the intellectual capital management enablers. The results correspond with findings by Isaac, Herman and Kline (2010) which showed in linear relationship, there is a positive and significant impact between organic structure, interactive behavior and trust with the component of intellectual capital, also with findings of Lilleoere and Hansen (2011) showing that the indicators of social networks and communications, physical proximity to work together, informal meetings and individuals interested in participating in the work are the enablers of knowledge sharing; moreover, the findings of the study is in line with the findings by Denison (2005) with an emphasis on learning effectiveness, engagement in the work and team-oriented; also, the results of this study is consistent with findings by Bounties (2004) with an emphasis on the effects of organizational learning on intellectual capital. Likewise, this study goes in line with the findings by Alvani et al. (2009) with an emphasis on the explanatory effects of direct and indirect of cooperation, trust and organizational learning as knowledge management enablers.

The results of confirmatory factor analysis (measurement model), while confirming the direct relationship between the variables with the intellectual capital management enablers, have

indicated that the most influential and important factor is related to intellectual stimulation variable. Among the factors related to intellectual stimulation variable, encouraging employees to strive to provide a new perspective, encouraging managers to provide new approaches and creative things to do and challenging thoughts and ideas of employees by managers in the Islamic Azad University in Mazandaran province have the most important role in the intellectual capital management enablers. In our attempt to provide the debate in the literature, we introduced 12 components of intellectual capital management enablers in the Islamic Azad University in Mazandaran province. Accordingly, to promote a culture of organizational learning, it is necessary to encourage employees to learn from others and teach them the exchange of information and knowledge to others and highlight the huge benefits that organizations can gain thereby, establishing a database to identify experts' faculty and plans regarding the development of employees' and managers' capacity by systematic seminars and conferences and avoid moving towards cultural points with only reward feature. It is also necessary to strengthen the trust between employees by creating an atmosphere of cooperation and mutual empathy in the organization so that employees can put their experiences with each other, at the same time, to ensure that their position is not undermined. Managers' slogan "power is distributed knowledge and not speculation", and to have faith and to practice it, can provide background knowledge sharing. In building a culture of participation, the organizational goals should be empowering employees to develop capabilities and create safe conditions for the expression of views and opinions without fear of punishment and reprimand which weaken the position. Also, to deal with the willingness of knowledge workers and intellectual capitals to individual work, it is essential to actively develop learning systems and engage knowledge workers in projects and challenging plans, and also create team meeting and seminars with scholars and experts to exchange ideas and learn from each other. For fluidity, it is also necessary that managers establish two-way communication channel for flowing of ideas and access to information without unimpeded structures and formal control which prevent the segmentation and boundaries. Managers by providing encouragement and appreciation in the aggregate and impressive awards, give employees the reputation and placement in organizational and professional networks, and finally the managers design a reward systems based on individuals' abilities and capabilities to enhance the intellectual capital of the organization.

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