
Journal of Business Strategies

DOI:10.54155/jbs.38.2.73-94

Fostering Innovation Through Humble Leadership and Humble Organizational Culture

Tiffany Maldonado^a, Lila Carden^b, Carol Brace^c, Marie Myers^d

^a Department of Management, Marketing, and Information Systems, Sam Houston State University, Huntsville TX 77341. tmaldonado@shsu.edu (Corresponding author).

^b Construction Management Department, University of Houston, 312 Technology Building, Houston TX 77204. lcarden@uh.edu.

^c Marilyn Davies College of Business, UHD Northwest Campus at LSC - University Park, 20515 State Hwy 249, Houston TX 77077. bracec@uhd.edu.

^d CFO of Hewlett Packard, 1501 Page Mill Road, Palo Alto, CA 94303. marie.myers@hp.com.

Key Words

Humble Leadership;
Organizational Culture;
Robotic Process
Automation

Abstract

Companies understand they need to innovate to stay competitive, but innovation is not as simple as thinking of a great idea and then implementing it. Successful innovation requires supportive actions from leaders and the firm especially when the innovation is complex. In order to foster complex technological innovations, such as robotic process automation (“RPA”), we propose that firms benefit from having (1) humble leadership actions and (2) a humble organizational culture. We share what we learned about our propositions after reviewing the Finance Controllershship division within a major multinational technology organization that develops hardware and other computer-related support items.

1. Introduction

Companies are well aware that they need to innovate to stay competitive in the ever-changing business environment, but innovation is not as simple as thinking of a great idea and then implementing it. Successful innovation requires supportive actions from leaders and the firm especially when the innovation is as complex as implementing new technology (Aronson *et al.*, 2014). One type of complex technology that more firms are implementing is the use of robots to perform repetitive manual processes via robotic process automation (Seasongood, 2016). In robotic process automation (“RPA”), the tools and techniques drive process automations using existing work packages, freeing up human intervention to focus more on complex analytical skills that are unable to be handled by robotics (Lacity & Willcocks, 2016; Seasongood, 2016). In light of a radical change such as RPA, it is expected that firms would face numerous challenges as more complex innovation initiatives are conducted however, such initiatives usually yield greater value than non-complex technological projects (Torugsa & Arundel, 2016).

To foster such complex innovations, we propose that firms benefit from humble leadership behaviors and a humble organizational culture based on what we learned in a case study of the Finance Controllershship division within a major multinational technology organization (called “Tech Inc” in this paper) that develops hardware including computers, printers, keyboards, headphones, and other computer-related support items. We define humble leaders as those leaders who are willing to learn, aware of their strengths and weaknesses, appreciative of the contributions of others, and invest in self transcendent pursuits (Aziz, 2019; Owens & Hekman, 2012; Vera & Rodriguez-Lopez, 2004). A humble organizational culture is a culture that nurtures the virtue of humility through six dimensions: employee development, mistake-tolerance, transparency, accurate awareness, recognition, and openness (Maldonado *et al.*, 2018).

Our paper details our propositions that (1) innovation is supported through leadership behaviors, in particular humble leadership behaviors, and (2) innovation is supported through a culture primed for innovation, in particular humble corporate culture. To illustrate our proposal and provide recommendations and implications to managers, we examined a large company, referred to as “Tech Inc”, that has won several awards due to its innovation. Through this case study, we show that organizations cannot

successfully foster innovation with just humble leadership behaviors or just a humble organizational culture alone, but organizations need the combination of both humble leadership behaviors and humble organizational culture to ensure dynamic innovation.

2. Review of Literature of Innovation, Humble Leadership and Humble Organizational Culture

Our paper examines the impact of humble leadership and humble organizational culture on innovation. Before we can begin, we must first make note that even though there is an abundance of studies that examine not only the antecedents of innovation but also the benefits, results are unclear as researchers have not agreed on a consistent definition of “innovation” nor a consistent tool or measurement of innovation (Calik *et al.*, 2020; Collins *et al.*, 1988; Hage, 1999). This is not uncommon, and we expect that innovation will continue to have different interpretations. One common definition is that innovation depends mostly on competence and leadership (Chapman, 2006). Researchers have noted that workplace innovation flourishes in environments in which key leadership activities are conducted (Chapman, 2007; Moussa *et al.*, 2018) and leaders are a critical factor in the promotion of innovation and creativity (Aronson *et al.*, 2014; Montes *et al.*, 2005; Mumford *et al.*, 2002). More specifically, innovation is supported in humble leadership environments (Ye *et al.*, 2020) that embrace personal faults and mistakes as well as recognizes contributions and positive performances as employees sometimes transition into new roles and responsibilities.

Through the examination of our case study on Tech Inc, the company has focused on Robotic Process Automation (RPA) which is a process automation that uses software robots or artificial intelligence as a business tool (Madakan *et al.*, 2019). The vision for the use of RPA is to reduce the time of repetitive work by automation, which allows organizations such as Tech Inc to re-imagine their strategic implementations including their financial allocations (Fluss, 2018). This technology innovation is used to automate business functions that were mostly conducted by humans including integrating data from various sources such as email and enterprise systems. Because RPA has this type of capability, the future of work will require innovative thoughts from the leadership teams to implement these solutions with the assistance of new hardware, software, and smart devices. These innovative thoughts will include

opportunities to increase productivity and innovation which is fueled by the need for retooled and reskilled workers (Fluss, 2018). The work environments that are conducive to automation initiatives such as RPA include environments in which company leadership is attuned to the re-imagining of work including priorities that are focused on quickly embracing the new technologies. This re-imagining of work will include an assessment of the business functions that are appropriate for automation such as business functions that follow a frequent, structured process. This re-imagining also includes readying the organization for the change (Uzkurt *et al.*, 2013) and needs to include considerations related to humble leadership, humble organizational culture, and innovation.

While research exists that suggests the various mechanisms in which leadership supports innovation (Back & Bausch, 2019; Ye *et al.*, 2020), there is still a research gap in identifying which leadership behaviors can influence the innovation of individuals and subunits (Khalili *et al.*, 2015). Moussa and colleagues (2018) have identified an exhaustive list of key leadership behaviors. They also identified that one challenge of the firm is to develop systems, processes, and climates that promote and demonstrate innovation and creativity. Meanwhile, Chen and colleagues (2020) propose that leader humility impacts the creativity of the team through leader-leader exchange. We propose that the unique style of humble leadership combined with humble corporate culture can promote and foster technological innovation in firms.

According to upper echelon theory, the characteristics of the upper echelons in the organization influence the decisions made and the performance of the firm. One such characteristic that upper echelons can have is humility. Humble leaders are open to new information and ideas, willing to correct their mistakes, appreciative of the contributions of others, and eager to learn from others (Aziz, 2019; Owens & Hekman, 2012; Vera & Rodriguez-Lopez, 2004). Humility is not a dichotomous virtue where individuals are either humble or they are not humble. Instead, humility can be thought of as a continuum, where individuals possess different levels of humility ranging from low to high levels of humility.

Leaders who are open to new ideas tend to have a learning orientation and leaders with learning orientations often use experiences to develop new routines to change the way the organization operates, which helps the organization to function better than it did in the past. The learning orientation

innate in humble leaders also influences them to make decisions that enhance the innovation of the firm such as making small and continuous changes rather than large, infrequent changes (Owens & Hekman, 2012; Vroom & Jago, 2007).

Leaders of innovation are those who possess certain characteristics that influence and stimulate others to work collaboratively to achieve new and significant results (Prasad & Junni, 2017; Vroom & Jago, 2007). Humble leaders have this ability by steadfastly recognizing the contribution of others and modeling how to be willing to correct mistakes (Owens & Hekman, 2012). Research has also shown that there is a positive relationship between creativity and innovation and transformational leadership behaviors (Cheung & Wong, 2011; Eisenbeiss & Boerner, 2013; Engelen *et al.*, 2014) much like those behaviors of humble leaders (Cheung, *et al.*, 2020; Ye *et al.*, 2020).

In addition to directly influencing innovation in the firm, humble leaders also influence the culture of the organization. Organizational cultures are systems of shared beliefs, cognitions and values that produce norms of behavior (Cheung & Wong, 2011; Eisenbeiß & Boerner, 2013; Engelen *et al.*, 2014). If there is a strong coherence between the strategy and culture, the culture of the organization can facilitate the adoption and implementation of strategy, on the other side, the organizational culture can also serve as a barrier that hinders change (Fernandez *et al.*, 2003) and stifles innovation if it is not aligned with strategy. Organizations are struggling to innovate for various reasons; thus, practitioners have the challenge to develop cultures that promote innovation and creativity (Moussa *et al.*, 2018; Uzhurt *et al.*, 2013). One culture that supports innovation is a corporate culture of humility. A culture of humility influences how individuals think and act, and how the firm performs and is built and maintained by policies, processes, routines, and practices that are nurtured by strategic leaders (Cameron, 2010). A culture of humility has six dimensions (see Table 1): employee development, mistake-tolerance, transparency, accurate awareness, recognition, and openness (Maldonado *et al.*, 2018). The combination of these dimensions of the humble organizational culture further the company's ability to continuously innovate in the changing environment.

Based on our research we propose that it is not only through humble leadership behaviors that companies are able to foster innovation, but also through humble organizational culture. We also propose that it is the humble

Table 1. Impact of Dimensions of Humble Organizational Culture

Humble Organizational Culture Dimension	Impact
Employee Development	Cultivates the strengths and abilities of organizational members and the increased knowledge of the members is shared and eventually encoded in organizational routines (Maldonado <i>et al.</i> , 2018).
Mistake-Tolerance	Ensures that members can make decisions without fear of negative retaliation, embarrassment or humiliation which encourages members to take more risks and creative decisions which enable the firm to continuously innovate as new discoveries are made (Rego <i>et al.</i> , 2020).
Transparency	Encourages individuals to be honest about their limitations and accept responsibility for mistakes (Maldonado <i>et al.</i> , 2018). This non-biased self-awareness of employees encourages collaboration which increases innovation.
Accurate Awareness	Supports the organization in making non-biased, accurate assessments of its strengths and weaknesses and the threats and opportunities in the environment which allows the firm to make wise strategic decisions and to learn from its limitations (Maldonado <i>et al.</i> , 2018).
Recognition	Celebrates the successes of employees which encourages them to become more uninhibited in pursuing larger challenges (Maldonado <i>et al.</i> , 2018). Employees remain motivated knowing that their efforts are recognized and not abused or fraudulently promoted as belonging to upper management.
Openness	Considers ideas that are new or external which gives way to new learning within the organization as the absorptive capacity of the firm is increases as the external and new knowledge is integrated and used within the company to innovate (Maldonado <i>et al.</i> , 2018).

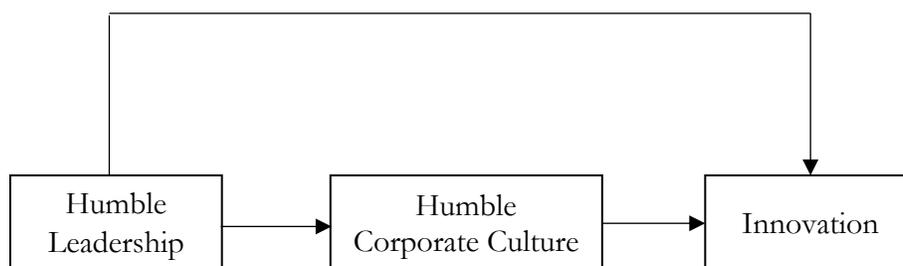


Figure 1. Fostering Innovation Through Humble Leadership and Humble Corporate Culture

leadership behaviors that can help facilitate and build this dynamic humble organizational culture (see Figure 1).

3. The Story of Tech Inc Fostering Innovation Through Humble Leadership Behaviors and Humble Organizational Culture

Tech Inc is a multinational technology organization with over 50,000 employees. Tech Inc has received many awards that recognize the firm's many successful innovations, such as (award details altered to protect identity of the firm) the STAR Award, which is one of the highest honors in the technology and services industry to recognize a firm's commitment to outstanding innovation, leadership, and excellence and the Design Award for the most innovative and cutting-edge industrial, product, and graphic designs.

The Finance Controllership Division of Tech Inc, and the focus of this article, won the prestigious Digital Award which spotlights companies that are on the cutting edge of digital transformation, including smart automation, robotic process automation, cognitive computing, and advanced analytics. The division was tasked with digitalizing the experience by enabling tools and processes that accelerate their employees' ability to imagine the future and inspire the team. The Finance Controllership division, led by Jane Doe, implemented robotic process automation (RPA), artificial intelligence, advanced analytics, and other emerging technologies to radically streamline financial tasks to improve accuracy and efficiency by 85% due to the ability of RPA to process 24/7 and reduce invoice cycle time by 87%. As a result, the team of 2000+ employees were able to use their time to work on generating new ideas and other higher value-added tasks. The innovations produced such radical change within the division that they were also adopted by other business units in Tech Inc. The RPA was used throughout the company to

focus on repetitive processes and tasks to automate invoicing processes, security checks, demand expansion, and auditing details for compliance reporting to name a few tasks. Through the story of Tech Inc, managers can learn how to foster innovation through humble leadership behaviors and humble organizational culture.

4. Innovation Is Supported Through Leadership Behaviors, In Particular Humble Leadership Behaviors

In Tech Inc, the Finance Controllershship division has been committed to building an innovative culture and developing skills of the future so much that that one award giver mentioned its “best-in-class culture creation”. The innovative culture promotes employees that are data savvy, strategic, creative, and innovative. The culture also includes developing skills for the future related to business acumen, relationship management, and agility for change orientation. The Finance Controllershship division of Tech Inc has been automating processes leveraging robotic process automation (RPA), advanced analytics, and artificial intelligence in addition to other emerging technologies. Tech Inc’s ability to support a culture of innovation is based on its “best-in-class culture creation” and leadership. The Finance Controllershship division of Tech Inc is currently focusing on digitalization as an innovative effort and the impacts to overall communication by initiating these types of efforts. This innovation approach includes starting with a strategy; connecting the dots; making the execution relevant, accessible, and mobile; and telling the story. More specifically, the message from the leaders includes “we nurture digitalization by delivering content and messaging that help employees connect the dots, stay on course and celebrate”. Evident in this message are the humble leadership behaviors of recognizing the contribution of others (“celebrate”) and prioritizing employee development (“help employees connect the dots”).

Tech Inc benefits from the humble leadership behaviors of its managers (see Table 2). These behaviors demonstrate that the leaders are open to new information and ideas and eager to learn from others, willing to correct their mistakes, appreciative of the contributions of others, and have an accurate awareness of self and others (Owens & Hekman, 2012; Vera & Rodriguez-Lopez, 2004). The leaders of Tech Inc enact several activities and humble behaviors that help to support and foster technological innovation. Jane Doe was aware of the strengths and weaknesses of the organization and supports

innovation through annual scoping and programming of projects in addition to providing clear strategic messaging. Jane Doe understood that they must be open to new ideas, hence Tech Inc has an internship program to help generate new innovative thoughts and an innovation advocate core team. Finally, these leaders understand that they are successful based on the contributions of others, so they ensure that they recognize and share employee success stories frequently.

Jane Doe saw that new ideas needed to be generated at a greater pace, so they launched a crowd sourcing platform for the entire team of 2500 employees, where every employee was able to go in and post an idea on something that could be improved. The group then used a crowd sourcing approach where employees would vote on the idea and the ideas were reviewed by process experts with the result being that the ideas that had the most votes were included on the implementation schedule for RPA. Jane Doe helped change the way in which the firm sought out transformation and instead turned it into a "people's transformation" by letting the people drive where things needed to be fixed and improved. This was a dramatic change in approach as normally this was a top-down driven process without a lot of stakeholder engagement. Additionally, the leaders at Tech Inc recognize that it is not just through humble leadership behaviors or a humble organizational culture that they are able to foster innovation, but it is through the combination of both. At Tech Inc, there are various coordination and integration mechanisms in place to ensure that the humble leader behaviors support the humble organizational culture and vice versa. This can be found in their dedication to building a culture of innovation program, formally supporting employees and being champions of innovation.

5. Innovation Is Supported Through A Culture Primed for Innovation, In Particular Humble Corporate Culture

The organizational culture of Tech Inc has the six dimensions of humble organizational culture (employee development, mistake-tolerance, transparency, accurate awareness, recognition, and openness) (Maldonado *et al.*, 2018). Tech Inc uses this culture to support innovations related to the collaboration of the digital and physical work environments that support their digital finance structure. This culture of humility is built and maintained by norms that are nurtured by strategic leaders (Cameron, 2010) which aligns with

Table 2. Key Humble Leadership Behaviors for Innovation

Leadership Support Activities	Leadership Support Applications within Tech Inc
Openness to new information and ideas from employees of all levels	Created a crowd sourcing platform for the entire team of 2500 employees, where every employee was able to go in and post an idea on something that could be improved
Eager to learn from others	Held monthly brown bags concerning innovation
Willingness to correct self-mistakes and humbly correct mistakes of others	Department realized that the current rewards programs was not sufficient to drive a culture of innovation, so changed the nature of rewards program Department was focused on drone technology for inventory scanning, after little progress, department moved to artificial intelligence
Is appreciative of the contributions of employees on all levels	Monthly awards to teams that created new bots or AI scripts
Has an accurate awareness of self and others	Understood the lack of skills and abilities of workforce skewed toward millennials Annually scopes and programs projects

current thought that innovative cultures need to focus on their structure, systems, and culture (Bennett & Parke, 2015; Mackey & Deng, 2016).

Tech Inc's culture focuses on employee development to foster innovation in the firm. This dimension of employee development is so valued that upon winning the Digital Award for work done in the Finance Controllershship division, Tech Inc made note that its employees had skills of the future and digital fluency and that the firm was committed to growing their people and cultivating their strengths. To increase the knowledge and strengths of employees Jane Doe helped to implement "Lessons in Leadership" training, roundtables focused on innovation and companywide brown bags that include sessions on diversity and inclusion, as well as learning paths. These activities helped to share the increased knowledge of the organizational members to the rest of the employees such that the firm's training focused on building out

digitally native skills that was aimed at the entire organization and not just the leadership team. Through accurate awareness of others, Jane Doe realized that with a workforce of 50% millennials, they needed to quickly increase the skills and awareness of the team. They prioritized the development of employees by quickly reskilling the entire workforce of the group through launching a training program focused on analytics and building RPA and digital skills; hosting competitions between key sites to encourage participation and awarded teams that competed and won. This training program and employee competition encoded the increased knowledge and skills of employees into organizational routines.

Tolerance of competent mistakes allows Tech Inc to support innovation. At Tech Inc, they have the motto of “keep reinventing with employee feedback” while continuing to “engage and communicate with experiences that amaze” to ensure that employees can make decisions without fear of embarrassment or negative retaliation. To facilitate this, employees are allowed to take bold risks as Tech Inc’s employees are taught to fail and fail fast. They are allowed to make many mistakes; but these mistakes never stopped the team, in fact they were constantly scanning the market looking for new technology and trying new ideas. When employees take more risks or creative decisions, such as during the employee technological competitions, the firm can continuously innovate. To encourage this, Tech Inc took the approach of many pharmaceutical firms, in which they planted a lot of seeds (ideas) and watched to see which might come to the top and which might grow. The firm invested people in these projects and when an investment did not pay off, they quickly cut off the program and then moved onto another. For example, Tech Inc was working on drones for inventory scanning for about one year, when they saw that little progress was made, they pivoted to AI instead.

Tech Inc prides itself on its transparent communications. The Finance Controllershship division has a dedicated team of employees whose sole focus is on supporting communications. The team has won several awards for their high-quality communications and Jane Doe continually monitors communications for effectiveness. Accurate awareness is a vital part of the culture of Tech Inc that allows it to successfully support innovation. A notable example is when Jane Doe realized that the current rewards programs, through welcomed by employees, were not sufficient to drive innovation, so they pivoted to a new program. During strategy planning at Tech Inc, they evaluate

the firm's SWOT and because of the analysis, use RPA to capitalize on the opportunity to automate operations to reduce costs and reengineer roles and responsibilities. Jane Doe made a non-biased, accurate assessment of its weaknesses by recognizing that with a workforce of 50% millennials, the group needed to reskill rapidly based on the changing environment. This allowed the group to make wise strategic decisions and to learn from its limitations. The group is so committed to rewarding transparency and honesty that they created a 3-year strategic plan centered around this dimension.

The culture of Tech Inc includes recognition which celebrates the successes of employees and encourages them to become more uninhibited in pursuing larger challenges. Upon receiving the Digital Award, Tech Inc made a point to recognize the efforts of employees by saying that "employees [were] an integral part of [their] journey" towards the award and innovation and Tech Inc makes it a point to regularly share employee success stories. The company makes an effort to ensure recognition programs are effective. For example, at one point, Jane Doe realized that the current rewards programs were not sufficient to drive innovation and pivoted such that each month the company scanned the division to highlight new technology, such as AI or bots. This new technology was implemented by the team and used a creative approach to inspire inventors.

Finally, Tech Inc demonstrates openness in its culture through maintaining open lines of communication. Part of the reason Tech Inc won the Digital Award; they were able to be so innovative was due to social media crowdsourcing and their commitment to innovating with employee feedback. Openness to new ideas was so valued that the Finance Controllershship group implemented a program in which employees could post ideas about areas of improvement before having the ideas vetted by an expert panel and implemented. This program allowed for new concepts to help guide learning and skill acclimation.

6. A Culture Primed for Innovation, In Particular Humble Corporate Culture, Must Be Maintained and Refined

This culture of humility at Tech Inc (see Table 3) supported an environment focused on strategic planning initiatives including the environment, operations, communications, and management. The goal of the strategic planning process was to

Table 3. Tech Inc's Humble Organizational Culture

Behavioral Norms	Actions at Tech Inc
Accurate awareness is promoted	Tech Inc <i>promotes an accurate awareness of the firm's SWOT</i> through in their strategy planning. The firm uses RPA to automate operations to reduce costs and reengineer roles and responsibilities
Competent mistakes are tolerated	Tech Inc <i>encourages healthy risk taking and creativity</i> by following a motto of "Keep reinventing with employee feedback" and a mission of "Engage and communicate with experiences that amaze"
Transparency and honesty are rewarded	Tech Inc <i>accepts blame, admits weakness, and actively seeks new ideas and feedback from multiple sources</i> through their culture of innovation program and by having an innovation advocate core team
Openness to the ideas of others is valued and modeled	
Employee development is prioritized	Tech Inc <i>focuses on employee training and encourages difficult goals</i> through its "Lessons in Leadership" training; Brown bag sessions which include learning paths and diversity and inclusion sessions; and its "Innovation, Design and Automation" Roundtable
Employee recognition is practiced regularly	Tech Inc has <i>effective recognition programs, is generous with kudos and spotlight the achievements of others</i> through sharing its employee success stories

execute projects that support implementations related to first adopters and design thinkers. The execution of the first adopters and design thinkers included a feedback loop stressing "keep inventing with employees" which indicated the humble leadership behaviors of remaining teachable and willing to learn from others. The environment focused on building a community of small teams that connect the dots and build a reward structure including learning and benefits for motivation which is indicative of the humble leader behaviors and humble organizational cultures that support innovation by encouraging collaboration.

To measure the success of the collaborative efforts of digital and physical work environments, there needs to be a system in place to measure the success of the projects (Bennett & Parke, 2015). This measurement of performance

supports the humble organizational culture of the firm in that it allows the firm to have an accurate awareness of its strengths and limitations. Tech Inc measured its success based on improvements in communications technology. This included automation of services to reduce human intervention and reduce costs. Other measurement systems included goal and target setting with innovation metrics such as workload, cost, and return analyses. Tech Inc strives to achieve operational excellence both internally and externally. Internally, Tech Inc has used an employee survey to assess operational excellence. To further engage the employees and prepare for the cultural changes associated with the innovation, Tech Inc conducted a survey to determine the overall perceptions of their employees about the innovative path forward for the organization. The survey was distributed to approximately 2000 employees and 179 responded to the survey which represented approximately 8%. The survey results included 89% of the employees approving the innovative path forward and 11% responded that no other path would be better for the organization. The survey respondents also noted that social media communications were not welcomed as much and that methods of communication needed to include videos, websites, email, and in-person communications.

The culture of the case organization included an internal work environment predicated on relatable communications and engagement for all employees. This includes modeling the future ahead by clarifying values and setting the example that includes imaging the future by providing relatable values. The culture is also embedded in an atmosphere to inspire the team by being inclusive and defining a vision and mission for everyone. After inspiring the team, there needs to be a structure to support making it happen (Ma, 2002) with a growth mindset which includes building relationships, capacity, and expertise across teams to find an avenue for promoting company values through lifestyles. This company support also includes training topics including finance and accounting tools and methods, innovation and automation tools and techniques, and technical software and hardware tools.

7. Discussion

Our paper has several implications for theory and practice. Our paper extends the field of knowledge on the implications of humility behaviors and humble organizational culture of the firm by examining how they impact innovation,

in particular a radical, complex innovation such as RPA. Further theoretical implications of our study include considerations for creating environments that will encourage, cultivate, and grow innovation. Specifically, the humble leadership will need to ready the organization for the innovative environment built around change. Building on the work of Kurt Lewin (1947) and Kotter (1996), a change management theoretical approach for innovation can include the 4-Rs below.

1. **Reimage** the organization's strategy including a new way of doing business that is more efficient and effective as well cost effective. This new way of strategy and forward-thinking includes relationship management that focusses on business demand using data analytics, restructured processes and procedures, and new tools and methodologies.
2. **Reinforce** humble leadership to communicate innovative business acumen and the applicable business factors. This innovative leadership provides resources to support strong interpersonal skills; social and emotional intelligence; and agility.
3. **Reignite** innovative leaders to support open collaborative environments that welcome change and embrace ambiguity with shifting priorities.
4. **Resource** a humble organizational culture with diverse humble leadership including creative ideas that are developed from curiosity and constructive criticism.

Our paper also provides several implications for practice by developing recommendations for managers to develop complex innovations through humble leadership behaviors and by building a humble organizational culture (see Table 3). These humble leadership behaviors are noted in Table 3 and applications of the leadership support activities for the Finance Controllershship division are also included herein. These leadership support applications can be implemented in organizations that use innovative technology as an operational strategic tool. Managers also need to know that successful technological innovations require employee engagement, valuation of employees, and employee development.

The management activities that promote employee engagement are focused on creating environments in which employees are committed at all levels of the organization. Some of the ways that managers can create a technological

innovation environment include providing challenging work, allowing opportunities for decision-making, creating career advancement opportunities, and supporting collaborative work environments where people work well in teams and have resources to get their job done (Bankar & Gankar, 2013). Managers need to also implement policies and practices that include valuing employees and is based on supporting personal and job resource goals as well as trust and transparency. For example, future job positions and career paths for technological innovations need to include roles that select and train employees on team building, networking, and tolerance of ambiguity due to uncertainty (Bankar & Gankar, 2013; Neves *et al.*, 2017). Additionally, managers also need to know that technological innovation implementations include elevating the educational training levels of employees so they can engage in more analytical-type jobs (Kesting & Ulhoi, 2010; Seasongood, 2016). This elevation would include providing employee development programs so that employees can transition into more high-end job functions.

Based on the mini case of Tech Inc and previous research, we propose that organizations need more than just a humble organizational culture that supports innovation, or leadership behaviors which support innovation. We propose that organizations need both a humble organizational culture and humble leadership behaviors in order to successfully foster innovation. Studies have shown that organizations vary in their degree of humble organizational culture and degree of humble leadership behaviors, thus we offer a matrix (see Figure 2) in which organizations can observe how the combination of culture and leadership impacts innovation. Our matrix simplifies the degree of organizational humble organizational culture and humble leadership behaviors into high and low for feasibility in applying the model to organizations.

Organizations can move within the matrix, but for complex innovations to thrive, an organization needs a high level of humble corporate culture and humble leadership behaviors. At this level, organizations will enjoy the success that comes along with being the first mover and innovation leader in their industry. When organizations have high levels of humble corporate culture and low levels of humble leadership behaviors, innovations are often birthed, but rarely survive due to the lack of leadership support to the employees behind the innovation. One way that firms can increase humble leadership behaviors is by ensuring that leaders give employees a voice and increasing the trust employees have in the leader when leaders act as moral role models.

		Humble Corporate Culture	
		High	Low
Quantity and Quality of Humble Leadership Actions	High	Complex innovations thrive	Innovations birthed, but rarely survive and thrive due to a lack of process/structure to support the innovation(s)
	Low	Innovations birthed, but rarely survive and thrive due to a lack of leadership support	Innovations rarely birthed, innovations that are birthed quickly die due to lack of support from leadership and organizational systems

Figure 2. Impact of Humble Leadership Actions and Humble Corporate Culture on Innovation

When organizations have low levels of humble corporate culture and high levels of humble leadership behaviors, innovations are often birthed, but rarely survive due to the lack of processes and structure to support the innovation. Firms can increase the process and structure to support innovation by increasing the quantity and quality of humble organizational culture actions (Maldonado *et al.*, 2018). Finally, when organizations have low levels of humble corporate culture and low levels of humble leadership behaviors, innovations that are birthed die very quickly and eventually, innovations stop being birthed. As a result, these firms risk becoming technologically locked-out of their industry and unable to meet the latest technology standards required to compete.

In the future, managers should not depend on their old batch of tricks as innovations take their organizations to new heights. To be on the forefront of the digital revolution, managers need to understand that in order to accommodate the implementation of AI and machine learning systems, such as RPA, they must employ high quality humble leadership behaviors, and a humble corporate culture through many of the actions and behaviors described in this paper.

References

- Aronson, Z. H., Shenhar, A. J., & Wenzhou, W. (2014). The effect of vision, artifacts, and leader values on contextual performance behavior and success in technology challenging projects: Qualitative evidence. *International Journal of Innovation and Technology Management*, 11(06). <https://doi.org/10.1142/S0219877014500400>
- Aziz, K. (2019). Why is humility so relevant for leaders and can it be developed through coaching? *Strategic HR Review*, 18(1), 30-33. <https://doi.org/10.1108/SHR-10-2018-0088>
- Back, P., & Bausch, A. (2019). Not if, but how CEOs affect product innovation: A systematic review and research agenda. *International Journal of Innovation and Technology Management*, 16(03). <https://doi.org/10.1142/S0219877019300015>
- Bankar, S., & Gankar, S. (2013). Employee engagement and change management. *Journal of Commerce and Management Thought*, 4(2), 313-321.
- Bennett, N., & Parke, J.M. (2015). Struggling to innovate? Examine your structure, systems, and culture. *Business Horizons*, 58(5), 563-569. <https://doi.org/10.1016/j.bushor.2015.05.009>
- Calik, E., Cetinguc, B., & Calisir, F. (2020). A Comprehensive Validated Model of Innovation and Performance: An Empirical Study of Turkish Companies. *International Journal of Innovation and Technology Management*, 17(03). <https://doi.org/10.1142/S0219877020500194>
- Cameron, K. (2010). Five keys to flourishing in trying times. *Leader to Leader*, 55, 45–51. <https://doi.org/10.1002/ltl.401>
- Chapman, M. (2006). Building an innovative organization: consistent business and technology integration. *Strategy & Leadership*, 34(4), 32-38. <https://doi.org/10.1108/10878570610700992>
- Chapman, W. R. (2007). How strategic innovation really gets started. *Strategy & Leadership*, 35(1), 21-29.
- Chen, C., Feng, J., Liu, X., & Yao, J. (2020). Leader humility, team job crafting and team creativity: The moderating role of leader-leader exchange. *Human Resource Management Journal*. <https://doi.org/10.1111/1748-8583.12306>
- Cheung, M., & Wong, C. (2011). Transformational leadership, leader support, and employee creativity. *Leadership & Organization Development Journal*, 32(7), 656-672. <https://doi.org/10.1108/01437731111169988>
- Cheung, S. Y., Huang, E. G., Chang, S., & Wei, L. (2020). Does being mindful make people more creative at work? The role of creative process engagement and perceived leader humility. *Organizational Behavior and*

Human Decision Processes, 159, 39-48.

<https://doi.org/10.1016/j.obhdp.2019.12.003>

Collins, P.D., Hage, J., & Hull, F.M. (1988). Organizational and technological predictors of change in automaticity. *Academy of Management Journal*, 31(3), 512-543. <https://www.jstor.org/stable/256458>

Eisenbeiß, S., & Boerner, S. (2013). A double-edged sword: Transformational leadership and individual creativity. *British Journal of Management*, 24(1), 54-68. <https://doi.org/10.1111/j.1467-8551.2011.00786.x>

Engelen, A., Schmidt, S., Strenger, L., & Brettel, M. (2014). Top management's transformational leader behaviors and innovation orientation: A cross-cultural perspective in eight countries. *Journal of International Management*, 20(2), 124-136.

<https://doi.org/10.1016/j.intman.2013.04.003>

Fernández, E., Junquera, B., & Ordiz, M. (2003). Organizational culture and human resources in the environmental issue: A review of the literature. *International Journal of Human Resource Management*, 14(4), 634-656.

<https://doi.org/10.1080/0958519032000057628>

Fluss, D. (2018). Smarter bots mean greater innovation, productivity, and value. Scouting Report. *Customer Relationship Management* (Malibu, Calif.), 22(10), 38-39.

Hage, J.T. (1999). Organizational innovation and organizational change. *Annual Review of Sociology*, 25(1), 597-622.

<https://doi.org/10.1146/annurev.soc.25.1.597>

Kesting, P., & Ulhoi, J. P. (2010). Employee-driven innovation: Extending the license to foster innovation. *Management Decision*, 48(1), 65-84.

<https://doi.org/10.1108/00251741011014463>

Khalili, A., Muenjohn, N., & McMurray, A. (2015), *Leadership behaviour, creativity and innovative behaviour: instrument development inquiry*. IABC Conference, Hawaii, USA, 2015, p. 322-326.

Kotter, J. P. (1996). *Leading Change*. Boston: Harvard Business School Press.

Lacity, M., & Willcocks, L. P. (2016) Robotic process automation at Telefonica 02. *MIS Q. Executive*, 15(1), 21-35.

Lewin, K. (1947). Frontiers in group dynamics. In Cartwright, D. (Ed.), *Field Theory in Social Science*. London: Social Science Paperbacks.

<https://doi.org/10.1177/001872674700100103>

Ma, H. (2002). Competitive advantage: What's luck got to do with it? *Management Decision*, 40(6), 525-536.

<https://doi.org/10.1108/00251740210433927>

- Mackey, J. T., & Deng, F. J. (2016). Examining the role of management control systems in the creation of an innovative culture. *International Journal of Innovation and Technology Management*, 13(03).
<https://doi.org/10.1142/S0219877016400022>
- Maldonado, T., Vera, D., & Ramos, N. (2018). How humble is your company culture? And, why does it matter? *Business Horizons*, 61(5), 745-753.
<https://doi.org/10.1016/j.bushor.2018.05.005>
- Madakam, S., Holmukhe, R.M., & Jaiswal, D.K. (2019). The future digital work force: Robotic process automation (RPA). *Journal of Information Systems and Technology Management*, 16. <https://doi.org/10.4301/S1807-1775201916001>
- Montes, F.J.L., Moreno, A.R., & Morales, V.G. (2005). Influence of support leadership and teamwork cohesion on organizational learning, innovation and performance: An empirical examination. *Technovation*, 25(10), 1159-1172. <https://doi.org/10.1016/j.technovation.2004.05.002>
- Moussa, M., McMurray, A., & Muenjohn, N. (2018). A conceptual framework of the factors influencing innovation in public sector organizations. *The Journal of Developing Areas*, 52(3), 231-240.
<http://doi.org/10.1353/jda.2018.0048>
- Mumford, M.D., Scott, G.M., Gaddis, B., & Strange, J.M. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly*, 13(6), 705-750. [https://doi.org/10.1016/S1048-9843\(02\)00158-3](https://doi.org/10.1016/S1048-9843(02)00158-3)
- Neves, P., Almeida, P., & Velez, M.J. (2018). Reducing intentions to resist future change: Combined effects of commitment-based H|R practices and ethical leadership. *Human Resource Management*, 57, 249-261.
<https://doi.org/10.1002/hrm.21830>
- Owens, B., & Hekman, D. (2012). Modeling how to grow: an inductive examination of humble leader behaviors, contingencies, and outcomes. *Academy of Management Journal*, 55(4), 787-818.
<https://doi.org/10.5465/amj.2010.0441>
- Prasad, B., & Junni, P. (2017). A contingency model of CEO characteristics and firm innovativeness: The moderating role of organizational size. *Management Decision*, 55(1), 156-177. <https://doi.org/10.1108/MD-02-2016-0071>
- Rego, A., Melo, A. I., Bluhm, D. J., e Cunha, M. P., & Júnior, D. R. (2020). Leader-expressed humility predicting team psychological safety: A personality dynamics lens. *Journal of Business Ethics*, 1-18.
<https://doi.org/10.1007/s10551-020-04622-1>

- Seasongood, S. (2016). Not just for the assembly line: A case for robotics in accounting and finance. *Financial Executive*, 32(1), 31-32.
- Torugsa, N., & Arundel, A. (2016). Complexity of Innovation in the public sector: a workgroup-level analysis of related factors and outcomes. *Public Management Review*, 18(3), 392-416.
<https://doi.org/10.1080/14719037.2014.984626>
- Uzkurt, C., Kumar, R., & Ensari, N. (2013). Assessing organizational readiness for innovation: an exploratory study on organizational characteristics of innovativeness. *International Journal of Innovation and Technology Management*, 10(04).
<https://doi.org/10.1142/S0219877013500181>
- Vera, D., & Rodriguez-Lopez, A. (2004). Strategic Virtues: Humility as a Source of Competitive Advantage. *Organizational Dynamics*, 33(4), 393-408.
<https://doi.org/10.1016/j.orgdyn.2004.09.006>
- Vroom, V.H., & Jago, A.G. (2007). The role of the situation in leadership. *American Psychologist*, 62(1), 17-24. <https://doi.org/10.1037/0003-066X.62.1.17>
- Ye, B. H., Tung, V. W. S., Li, J. J., & Zhu, H. (2020). Leader humility, team humility and employee creative performance: The moderating roles of task dependence and competitive climate. *Tourism Management*, 81.
<https://doi.org/10.1016/j.tourman.2020.104170>

