

Workforce Agility- the Holy Grail

Ranjana Mary Varghese ^a, Reuben Thomas Bini ^b

^a Assistant Dean, Xavier Institute of Management & Entrepreneurship, Kochi

^b Associate Consultant, Designs In Change

Abstract

The competitive market, where rapid change and continuous innovation for customers are requirements for survival, has indeed forced all manufacturers in all sectors to find a new production model, one of which is known as agile manufacturing. Agile manufacturing includes different aspects where workforce agility is an important component. This current discussion on workforce agility and the contribution of the same to agile manufacturing has been focused upon very much by growing organizations these days. Agility means different to different organizations under different contexts. The elements that capture its essential concepts are cooperativeness and synergism, strategic vision that can thrive in the dynamic and unpredictable changes, high quality mass customized products, nimbleness and intellectual and empowered workforce as well. Firms who stay ahead of times adopt these practices to integrate horizontally, to actively interact with customers and to operate in a peer-to-peer mode with an ideology of enablement. These new management practices, which include Scrum, Kanban, and Lean, is often referred to by the umbrella label, "Agile." This study tries to find out the various ways in which organizations can have an agile workforce, with special reference to manufacturing sector.

Keywords: Agility, manufacturing, organizations, growing

Introduction

With today's rapid demographic, technological, political, economic, and social shifts, talent shortages are widespread as compression of business cycles affects skills cycles. Employers are waking up to the fact that talent shortages limit their ability to compete, yet they are frustrated by the lack of a simple solution. Now more than ever, companies require an agile workforce whose skills can adapt to meet evolving needs, and to ensure maximum productivity in an unpredictable business environment. Change in business environment and uncertainty have entered management studies and research for a long time. One of the most important tasks for organizations is to manage uncertainties. The concept of entrepreneurial task is the search for change, response to change, and exploiting change as an opportunity. There is nothing new about change. Richard Beckhard as a pioneer in the field of organizational changes says that: "People do not resist against changes but they resist against applying changes" (Sangeh and et al., 2007). However, today's changes are increasingly made faster than ever. Changes and uncertainty in business

environment have become the main reason for failure in the MSMEs. In today's world, agility is imperative because of two major elements. One is that the forces that are on companies come fast and relatively unexpected. So the forces like competition which is global and the shortening of product life cycles and service offerings, it's requiring something very fast. The other factor is that companies are now in an environment of potentially more compressed cycles, more interruptions economically, so the hesitation in the hiring trends are a symptom of these compressed cycles.

The concept of agility was first introduced in a report from the Iacocca Institute . As business environments have become increasingly dynamic, this concept has captured the attention of many manufacturers. Manufacturing firms have realized the importance of being able to respond quickly to demands from the environment in a cost-effective manner. However, it is difficult to determine precisely whether an organization is agile or not and its relative level of agility. Agility is an organizational ability to sense, perceive ,analyze and respond to the changes that occur in the environment that is turbulent Globalization of markets, development of information technology, computer networks etc., made fundamental changes in public organizations and technical environments which have led to the appearance of new ways of economic and social competition and management of emerging organizations. "Agility" is suggested as a strategy to make active production companies to maintain their position in the contemporary age by using their competitive advantages It is the ability of of dealing with unexpected challenges against unprecedented threats of business environment and achieving advantage and profit resulting from changes in opportunities. Agile production is a new production model resulting from changes in environment which links innovations in production, information technology and communication by fundamental organizational redesigning and new marketing strategies. Agile methodologies as per Harvard Business Review involve new values, principles, practices, and benefits and are a radical alternative to command-and-control-style management. They are also spreading across a broad range of industries and functions and even into the C-suite. McKinsey & Company organized a large-scale Agility Hackathon, which is again an evidence of the acceptance of agility. Agility metrics are difficult to define due to the multidimensionality and vagueness of the concept of agility itself. Nevertheless, there are an increasing number of studies proposing various measures and techniques for assessing agility. While the concept of agility has become widely known, it is a very difficult construct to measure. Based on the review of literature regarding agility as a concept in management, it was understood that there does not exist a standardized measurement tool to measure workforce agility.

Following table shows the agility attributes across various literature reviews.

Research	Agility Attribute
Plonka (1997)	positive attitude towards learning and self-development; good problem-solving ability; comfortable with change, new ideas, and new technologies; ability to generate innovative ideas, and always ready to accept new responsibilities
Gunasekaran (1999)	Knowledge in team working, negotiation, advanced manufacturing strategies, technologies, empowered employees, multifunctional workforce, multilingual workforce and self-directed teams
Breu et al. (2002)	Responsiveness to external change, benchmark for skill assessment, speed of skill development, speed of adaptation to new work environments, speed of information access, speed of IT change, use of mobile technologies, workplace independence, mobile information access, collaborative Page 29 technologies, virtual team, knowledge sharing and employee empowerment.
Dyer & Shafer (2003)	Proactive (initiate and improvise), adaptive and generative
Ashutosh Muduli (2013)	Adaptive, Flexible, Developmental, Speed, Collaborative, Competent and

Table I: Agility attributes across various literature reviews

Source: Authors

How to build an agile workforce?

By surveying various literatures on workforce agility, it was also found that most of the research on this topic yielded different sets of attributes as components of Workforce Agility. Moreover the authors could infer that the research on workforce agility is still in nascent stage as well. As observed above there is an absence of systematic studies on the concept of workforce agility, however (Gunasekaran, 1999; Muduli, 2009; Sherehiy & Karwowski, 2014). Research on agility has mainly focused on the operational perspectives of speed and flexibility (Muduli, 2013). Little attention has been devoted to identifying the organizational characteristics that are conducive to the agile employee performance (Sherehiy & Karwowski, 2014).

As per The World Economic Forum “*The Future of Jobs report recently predicted that by 2020 more than one third of the skills that will be required are not yet considered critical and are not being taught in universities and colleges today.*” In order to create an agile workforce, there are various ways by which things have to be worked upon. One is the actual structure of how work gets done, and the other is the behaviour of people. In an agile workforce, there will be less rules and hence the work should be done with more positive intention, especially when part of a large organization. If it is a start-up, they are agile by definition. There’s a myth that agile working can disrupt collaboration. Using the right technology will ensure work communities can share ideas and work easily. Video conferencing over the web enables customers to work on documents together when they are working remotely, reducing travel time and expense, while retaining human relationships through high quality sight and sound. It is clear that agile working is building momentum in businesses of all sizes, and so now is the time for all businesses to capitalize on this opportunity in the drive for speed, competitiveness and long-term survival. Organizational practices can influence workforce agility. Specifically, an organization’s culture, methods of collaboration, information systems, and other competencies can determine its level of agility (Chonko & Jones, 2005). Agility cannot be achieved without leveraging employees’ knowledge and skills (Hopp & Van Oyen, 2004; Plonka, 1997). Found to promote workforce agility, an organizational focus on teamwork entails attention to the internal, external, intragroup, and cross-functional team working environments (Breu et al., 2001). The synergy generated from cross-sector collaboration can help organizations in the timely completion of projects.

Few ways in which an agile workforce can be made are

- **Empower the employee:** Involve the entire team during initial discussions and planning. Encourage research and discussions on possibilities. Glinska M., Carr S.D. & Halliday A. (2012) states that power sharing with individuals and teams with respect to important decision making is crucial.
- **Imparting of knowledge:** Being Agile is a mindset, and therefore, work must be done to propagate the same, first to managers, and to the larger organization.
- **Use of non-traditional compensation systems:** Research by Sumukdas and Sawney (2004), and quoted by Ashutosh Muduli (2013) showed that non-traditional-based compensation systems (improvement-based incentives, non-monetary rewards, skill-based pay systems etc) are better suited to promoting workforce agility than traditional systems (profit-sharing, gain sharing, and Employee Stock Ownership Plans).
- **Emphasis on continuous learning:** The ever changing business environment will lead to ever increasing skill gap. A continuous learning culture is required to ensure the workforce is able to keep up to speed with the ever changing business environment. An added advantage of such a learning culture is its ties to the behaviours that promote agility.

- **Aligning the organization:** In their book, *Agile Talent*, Younger and Smallwood suggest Strategic, Performance, Relationship and Administrative Alignment in organizations for agility.
- **Nimble and Flexible Workforce Planning.** Given the uncertain nature of prevailing business environments, expanding or contracting workforces in response to every data point ends up creating new challenges, much complex challenges in the long run, under the guise of being a short term solution. Being open to contract, intern, part-time, and virtual workers are increasingly the norm, and this allows for flexibility in workforce planning and allocation.

Hence the various levels of being Agile can be classified as per the following figure.

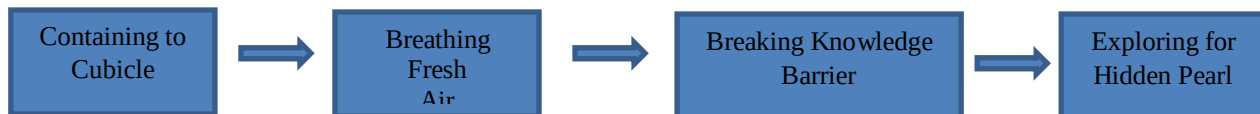


Figure 1: Workforce Agility Levels
Source: Authors

The process driven culture to exploit the individual capability to the maximum is followed by agile seamless communication with user and product in mind. Crowd thinking and Exploratory thinking with agility enables intra-group to inter-group to intra-organization to inter-organization creativity. Hence, the human resource characteristics in agility models are that they should be motivated, flexible, knowledgeable, and multilingual and empowered. Moreover, the top management support is very much important. Open sharing communication is another characteristic for an agile workforce. In most situations, agile people show initiative behaviour while multiple tasks are about adaptive behaviour. Three aspects of the adaptive performance -proactivity, adaptability and resilience have to be considered. This is explained in the Workforce Agility model below.

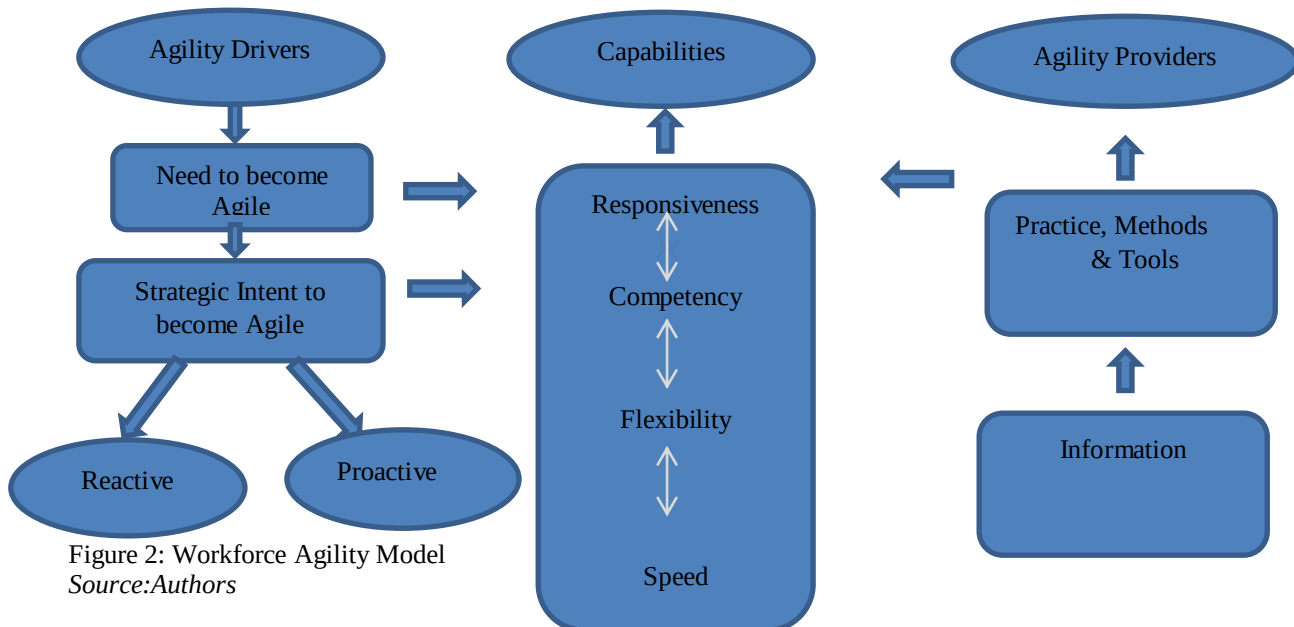


Figure 2: Workforce Agility Model
Source: Authors

There are plenty of work models – adhoc teams, crowdsourcing, outsourcing, contractors, offshoring etc. But unless the muscles are built up to operate in a multi work model environment, the company doesn't

seem to have agility. Should it be individual or organizations agility that we should be focusing on is the question here? So what's happening currently is that is either companies will reject the non-agile people or the non-agile people will destroy the agility of a company. So the individual plays as much of a part of this as the company, but yet the two are definitely co-interdependent. There is no doubt about it. It is a co-strategy. Workforce agility needs to be embraced for business performance. For an organization to be agile, senior management will have to lead the way. It should go beyond peer-to-peer to have an interconnection of the entire workforce. This connectivity is the underlying force that fosters agility. Agile organizations view themselves as resilient, welcome change as an opportunity and invite change capacities at individual, team and organization levels and engage in strategies to improve change management.

How can agile workers transform the manufacturing sector?

The manufacturing and the logistics industry is driven by technological innovations and heightened level of customer expectations. This fact is rooted in the emergence of a new business era that has "change" as one of its major characteristics. The need of the hour forces the organizations to remain competitive. Agile work arrangements could give workers a greater work-life balance, career options and job security. For the manufacturing sector, by 2025 it is assumed that more people will be working as agile workers than permanent traditional employees. The employers will have to equip their business operationally, culturally and strategically. 89% of the manufacturing companies by 2025 that are adept in managing both traditional and non-traditional talents will be the most successful as the organizations will be more committed to building an agile workforce. One of the major goals of agile manufacturing is to produce customized products in a short time at low cost (Liao & Liao, 2008). Agility in manufacturing helps to reduce material costs, maximize expenditures for human resources, minimize idle inventory, and improve facility or machine utilization (Anuziene & Bargelis, 2007). Flexibility is the key to productivity in reconfigurable agile manufacturing systems compared to previous designed manufacturing systems (Calvo, Domingo & Sebastian, 2008). An agile manufacturing firm needs information systems that inherently support agile business processes as well as agile manufacturing systems. According a report by the Economist Intelligence Unit (2009), nearly 90% of senior executives surveyed across the world believe that organizational agility (ability to anticipate and address the forces affecting the business) is critical for business success.

It is also observed that employee's autonomy is one of the most important determinants of workforce agility. Moreover cooperative relationships promote workforce agility. Contributing to both management theory and practice, the findings show that an environment that encourages teamwork has the most influence in promoting agility, followed by programs that address reward systems, employee involvement, organizational learning and training, and information systems. In addition, (Muduli, 2017), in his study found that agility is fostered by the psychological empowerment variable of impact, followed by self-determination, meaning, and competence. Considering an agile organization from a talent perspective, it is one which listens and learns. These organizations characteristically derive actionable insight from talent data to create an empowerment agenda. The Agile organizations has to deploy teams, establish or join networks and ecosystems of people, many of them working outside the firm, who are coordinated horizontally and who deliver new value to customers in an interactive fashion. While some firms have embraced Agile with enthusiasm, others have had reservations, seeing Agile as playing a limited role, mainly in simple software activities in small units or organizations where reliability is not an issue, and then only for a portion of a firm's activities. Even where Agile is seen as a better approach in theory, some have asked whether older firms with entrenched hierarchical bureaucracy have the capability to transform themselves and embrace the new Agile management practices. The manufacturing firms should emphasize on new priorities of business such as time, where they can deliver things at a faster pace and with faster lead time and flexibility, deploying new technologies (AMT, etc.) and

methods, tools and techniques. utilization of information system/technology and data interchange facilities, more concern on organizational issues and people (knowledgeable and empowered workers), integration of whole business process, enhancing innovation all over the company, virtual organization and cooperation, production based on customer order (mass-customization), etc., These can definitely increase the ability of an organization in responding to change and maintaining the competitive advantage.

Conclusion

Despite the importance of workforce agility little focus has been given to. Also if a manufacturing firm decides to be agile, it should be agile in all parts. The final gap of knowledge which exists about the matter is study about the individual factors which affect agility a person. Exploring individual factors which encourage agility can be useful for managers to employee new people. Agile is found to be a mindset characterizing managers seeing themselves as enablers, goals being set ,team being set, coordination done keeping in mind customer and with open and conversational communication. Though implementation of agile is never smooth it is being taken as a challenges by many organizations and it definitely requires a courage, brave leadership to get through the setbacks that occur particularly in the early stages.

References

- Alavi, Somaieh & Abd Wahab, Dzuraidah. (2013). A Review on Workforce Agility. *Research Journal of Applied Sciences, Engineering and Technology*. 5.4195-4199. 10.19026/rjaset.5.4647.
- Anuziene,L. and Bargelis,A., “Decision Support System Framework for Agile Manufacturing of Mechanical Products”.*Mechanics*, Kaunas University of Technology, Vol.65,No.3(2007)
- Breu, K., C.J. Hemingway, M. Strathern and D. Bridger, 2002. Workforce agility: The new employee strategy for the knowledge economy. *Journal of Information and Technology*, 17(1): 21-31.
- Calvo R,Domingo,R,Sebastian,M.A., “A systemic criterion of sustainability in agile manufacturing.” *International Journal of Production Research*, Taylor Francis,2008,46(12), pp.3345-3358.
- Delbecq A., & Van De Ven A.H. (1971), “A Group Process Model for Problem Identification and Program Planning”, *The Journal of Applied Behavioral Science*, Vol 7, No. 4, pp 466-492
- Dyer, L. and R.A. Shafer, 2003. *Dynamic Organizations: Achieving Marketplace and Organizational Agility with People*. Center for Advanced Human Resource Studies, NY, pp: 39.
- Glinska M., Carr S.D. & Halliday A. (2012), “Workforce Agility: An Executive Briefing”, *Batten Briefing Innovators’ Roundtable Series*, (Retrieved from <https://search.proquest.com/docview/1315731890?accountid=188388>)
- Gunasekaran, A., 1999. Agile manufacturing: A framework for research and development. *International Journal of Production Economics* 62(1-2): 87-105.
- Gunasekaran,A.and Yusuf,Y. Agile manufacturing: A taxonomy of strategic and technological imperatives, *International Journal of Production Research*, 40, 6, (1357), (2002).
- Jafarnejad A. & Shahaie B. (2008), “Evaluating and Improving Organizational Agility”, *Delhi Business Review*, Vol 9, No 1
- Liao, H., & Chuang, A. (2007). Transforming service employees and climate: A multilevel, multisource and examination of transformational leadership in building long-term service relationships. *Journal of Applied Psychology*, 92(4), 1006–1019.
- Muduli, A.,2013. Workforce Agility: A Review of Literature. *The IUP Journal of Management Research*, Vol. XII, No. 3, pp 55-65

- Plonka, F.S., 1997. Developing a lean and agile work force. *Human Factors and Ergonomics in Manufacturing and Service Industries*, 7(1): 11-20.
- Rasouli, E., Soodi, S., and Jafarzadeh, Z. (2006), "Studying the relationship between organizational intelligence and organizational agility of employees of Payame Noor University of Sari", *International Journal of Organizational Leadership* 5(2016), pp 426-432
- Rigby, D.K., Sutherland, J., and Takeuchi, H. (2016a, May), "Embracing Agile", (Retrieved from <https://hbr.org/2016/05/embracing-agile>)
- Sherehiy, B., W. Karwowski and J.K. Layer, 2007. A review of enterprise agility: Concepts, frameworks and attributes. *International Journal Of Industrial Ergonomics*, 37(5): 445-460.
- Stephen Denning (2016), "How to make the whole organization Agile", *Strategy & Leadership*, Vol. 44., No. 4, pp 10-17
- Stephen Denning (2016), "How to make the whole organization Agile", *Strategy & Leadership*, Vol. 44., No. 4, pp 10-17)
- Sumukadas N and Sawhney R (2004), "Workforce Agility Through Employee Involvement", *IIE Transactions*, Vol. 36, No. 10, pp. 1011-1021