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# Agile Management Education for the Future: The Role of Social Capital & Trust

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## Abstract

*Forecasting the future trends in any area becomes more and more frustrating in view of the accelerating pace of change in all components of reality resulting in unprecedented complexity of possible impacts. Hard times call for unstandardized solutions as to how to stay accountable for numerous stakeholders in the business roadmap to the future when the value of traditional management theories and concepts in turbulent environment is undermined and performance is endangered. Common rationality gives two practical solutions: building resistance to shocks and agility to take advantage of perceived opportunities and available resources. When interviewing managers on their strategic imagination and trust factors one can find too limited perspectives, reduced creativity and real capability to respond to problems on time. This paper is aimed at showing the role of soft factors such as social capital and trust as the base for meaningful moves allowing for integrated actions. To properly address the future challenges and use the proper tools in defining goals, strategies and execution a whole new set of management competences and new forms of managerial education with more team-based business-driven action learning and design thinking are needed.*

## 1. Introduction

Agile becomes one of the hottest words reflecting the deep need to adjust the mindset and activities of people to the accelerating pace and complexity of change in the relative task environment in order to achieve expected results.

The origins of the agile movement are routed in the software development failures caused by the use of traditional iterative models of IT project management assuming that the proper execution of plan would eliminate the need for change. Alongside with the increase of uncertainty new project management life cycle models were elaborated: agile, adaptive, incremental, and extreme (Wysocki 2012). Agile family of tools addressed the situations where not only the process was uncertain but even the goals were vaguely imagined (Cobb 2011).

The breakthrough came in 2001 with the Agile Manifesto declaration, whose 17 authors proclaimed four key values, and 12 principles for software development. Those values put individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation and responding to change over following a plan. The 12 principles were recommended:

1. Satisfying 'customers' through early and continuous delivery of valuable work.
2. Breaking big work down into smaller components that can be completed quickly.
3. Recognizing that the best work emerges from self-organizing teams.
4. Providing motivated individuals with the environment and support they need and trust them to get the job done.
5. Creating processes that promote sustainable efforts.
6. Maintaining a constant pace for completed work.
7. Welcoming changing requirements, even late into a project.
8. Assembling the project team and business owners on a daily basis throughout the project.
9. At regular intervals, having the team reflect upon how to become more effective, then tuning and adjusting behavior accordingly.
10. Measuring progress by the amount of completed work.
11. Continually seeking excellence.
12. Harnessing change for competitive advantage (Beck et al. 2001).

Due to their universal and common sense logic they constituted the framework for agile thinking not only in IT projects but also in general applications including agile management in business, building agile organizations and providing agile education for managing and creating the future.

In particular, the stress should be placed on the continuous process of value creation for clients and all other stakeholders in every venture with the acceptance only of excellent quality. The acting agents are freely organized teams supported by decision-makers at different levels, who also provide necessary resources. The constraining factors stem from the novelty of problems, need for innovative approach and numerous changes to deliver results in the proper time frame when it makes competitive sense. For such requirements the adequate communication and controls—as an investment in building relations—social capital, are needed to keep the discipline in time and cost management relative to value created. It does not mean the reduced trust and empowerment, just the opposite—the more time invested in building social capital, the higher the trust (Bochniarz, et al 2016). Moreover, every new venture becomes an experiment and platform for action-reflection learning. It allows for climbing up to higher performance levels and achieving maturity in undertaking any new opportunity or eliminating any threat.

As defined by Aaron De Smet: “Agility is the ability of an organization to renew itself, adapt, change quickly, and succeed in a rapidly changing, ambiguous, turbulent environment. Agility is not incompatible with stability—quite the contrary. Agility requires stability for most companies” (De Smet et al. 2017). Agility is typical for great, creative companies with cutting-edge technologies. The research of McKinsey Company shows that: agile companies are numerous; they are of all sizes, in all industries, even very traditional (McKinsey 2017).

In this article the stress will be on social capital and trust as prerequisites for successful work-out of the ventures as components of long-term strategies and continuous delivery of expected results taking into account emerging risks. To prepare cadres for these new challenges managerial education should also change from well-structured areas of knowledge, to a discovery-type of process in defining strategy and its agile execution based on design thinking creative approach and a new set of competences. The key success factors are trust and collaboration in teams when defining challenges and problems or searching for feasible solutions. They should be followed with the responsible decisions of managers aimed at meeting expectations of diverse stakeholders, building resistance to crises and capabilities of fast responses to profit from identified temporary opportunities.

## 2. Challenge to Business Management: The Role of Projects

The contemporary world permanently creates pressures on management on how to transform an ephemerid situation into valuable and sometimes durable results in the form of products, services, and solutions we need to sustain and grow. What tools help us achieve success when we operate in more and more open systems where uncertainty reigns?

According to Harold Kerzner it is Project Management (PM), which for a long time was not essential for the organizational survival, so the needed prerequisites of the PM success, such as real commitment, empowerment, teamwork and trust were evidently lacking and cannot be substituted by mastering technology. In the mid-1990s two recessions made it clear: that change was inevitable. It altered the perceptions: change may be good, conflicts—stimulating, projects—are not an internal issue but a strategic weapon. Change management through projects resulted in fundamental shifts on the map of excellent and admired companies (Kerzner 2000).

Traditionally, alongside the growth of organizational size and complexity, more standardization was introduced and centralization of major decisions to provide coordination, integrity and control of separate units. Although ICT allows for deep decentralization without losing control of the overall performance, and communication among separate units, still human resources as soft factors are the key players in designing and navigating roadmaps to the desired future.

Projects can respond to the challenges organizations have to face in order to survive in a strongly competitive and turbulent environment. Some of the challenges are: accelerated innovation streams, internationalization and globalization with respect to local and regional differences, fast pace of technology advances, ICT platforms, cloud computing, powerful search engines, connection and cooperation solutions, the emergence of new generations with their specific behaviors and skills, shortening of the product- and the whole industry cycles, a scale-based competition adversary affecting the existence and profitability of numerous businesses, and finally the transient competitive advantages. All these challenges require very effective and efficient projects and processes, which enable the successful execution of any attractive initiative included into the strategic portfolio.

Another emerging trend gaining momentum is sustainability, which calls for intelligent solutions in integrating business, environment and social issues with the support of smart institutions. According to Hoffman (2017), a shift is needed from the reduction of unsustainability (enterprise integration concept) to creating sustainability (market transformation). Responsible and streamlined actions of diverse stakeholders with political support are needed to effectively resolve identified problems and conflicts in this large arena. (op.cit.).

## 3. Agile Business Response

In general two types of responses have been developed to situations going beyond business as usual: building resistance and resilience to shocks and unavoidable crises, and working with agility to profit from transient opportunities and available resources. There are two stimulating motivations: pessimistic (fear of failure) and optimistic (hope of success). In between them, there is a vast space for creative solutions.

Many of them are already present as organizations moving towards flexibility, innovation and uniqueness vital for competitive battles, networking (clusters) and partnering (alliances, collaborative innovation), getting back to the direct and carefully modeled businesses, customer relationship management (CRM), customer experience management (CEM), integrating the strategy with projects, modern ICT systems, platforms and solutions as well as smart manufacturing. Marketing communication campaigns became a must for market presence. Knowledge became strategic in responding to challenges. The question is whether the above mentioned progress is sufficient to successfully address New Economy rules. Are businesses really agile? What is the road ahead and how to coordinate the pace of business agility with the external impacts of change?

## 4. Agile Organization

Agile, developed for software team project management, is an empirical control method with transparency in all activities of involved team members, frequent inspections after every iteration (called sprint in SCRUM, the agile method of project management), measurement and evaluation of progress and—in case of problems—immediate adaptation to meet requirements. (Ambler, Lines 2017).

What is feasible for small teams may not be suited to manage large organizations with their strategies, hierarchical structures, rigid processes and rules. The transition to agility for large corporations requires the multistep shift starting from projects and followed by adjustments in other organizational units. Steve Denning (2010) developed the agile way of thinking and acting for radical management. Organizations should build and respect 7 basic inter-locking principles for continuous innovation:

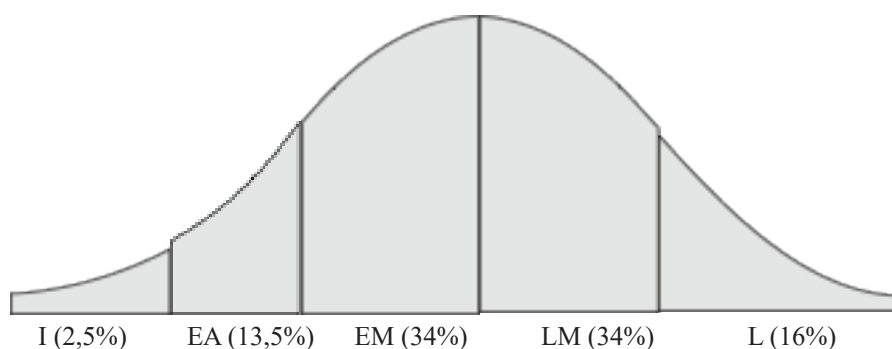
1. The goal of work is to delight clients. The whole organization should focus on it, not just the marketing department.
2. Work is conducted in self-organizing teams. It is the best way to generate continuous innovation.
3. Teams operate in client-driven iterations, because delighting clients can only be approached by successive approximations.
4. Each iteration delivers value to clients. Client-driven iterations focus on delivering value to clients by the end of every iteration. They force closure and enable frequent client feedback.
5. Managers foster radical transparency. Self-organizing teams—working in an iterative fashion—in turn both enable and require radical transparency so that the teams go on improving of their own accord.
6. Managers nurture continuous self-improvement which means having the entire work force find ever better ways to give more value to clients.
7. Managers communicate interactively through stories, questions and conversations using authentic narratives, open-ended questions and deep listening, rather than treating people as things to be manipulated (Denning, 2010). According to Denning, the recorded organizational gains in productivity are 2 to 4 times higher than before, referring to customers' and employees' satisfaction as well as to innovation streams (op. cit.).

Leading companies who usually employ aspiring best cadres and have developed vibrant business ecosystems, started to pursue the radical management and borderless organization concept in the same league as startups striving for growth and stabilization based on innovative concepts. For example, business driven global action learning programs launched by General Electric (GE) helped them to totally rebuild the company strategy and structure, which resulted in their moving from an engineering company to knowledge based creative infrastructural company harnessing innovation from all the resources they possess. The most valuable ones are knowledge, entrepreneurial and determined cadres, and their competences built on broad business experience from global operations.

However, as pointed out by M. Moreira, “adopting Agile is not just the matter of learning skills or understanding the procedure, it is about adopting a set of values and principles that require change in people’s behavior and the culture of an organization” (Moreira 2013). For any cultural change it takes time to change peoples’ values and behavior so it should be perceived as a journey towards new ways of thinking and acting. The reference is change must be endorsed, internalized and believed to be beneficial. This is the way of institutionalizing the change.

As in the case of technology adaptation lifecycle (Adler, Shenhar 1990) and also in shifting towards agile one can distinguish five types of behaviors: innovators (I), early adopters (EA), early majority (EM), late majority (LM), and laggards (L). Agile still stays a domain of innovators and early adopters, who according to the authors of the classic technology diffusion model, sociologists Joe M. Bohlen and George M. Beal (Bohlen, Beal 1957), respectively in their demographic and psychological features, present specific patterns of behavior. It is illustrated below with respective shares in the whole population of engaging companies (Fig.1).

Fig.1. Attitudes in Adopting Agile (Based on Moreira, op. cit.)



Innovators are educated persons willing to try out new ideas, enjoying innovation, accepting the risk and tolerant of mistakes, paving the way to get innovation to work. They require little guidance.

Early adopters operate on a broader scale; from experiments they move to organized actions as the educated community leaders searching for improvements and interested in visibility and credibility. They accept some level of risk.

Both groups represent a positive attitude to cultural change and fight for adapting innovation.

The biggest progress in accelerating the adaptation of agile in this model refers to an early majority group that is described as being more pragmatic, still open to new ideas but more focused on the controlled way of change management to become successful, while the late majority and laggards rely on the experiences of previous groups and they are least interested in changing their culture.

There are two critical moments in the innovation diffusion process related to agile. As in the case of disruptive innovation there is a radical change of culture (mindset, values and behavior) in two stages of the process. In the case of agile it is between early and late adopters. Next critical moment is when implementers dominate innovators, converting the innovation into a commodity type of product or solution, thus losing its competitive power. There is no clarity as to what will be the next big idea.

Taking into consideration the necessity of sorting out potentially profitable projects to provide decent returns to shareholders and benefits to other stakeholders, more initiatives should be tested, all of them creating the business strategic portfolio. Agile business strategy means applying the SCRUM approach where a set of projects and programs share company resources. The other side of this logic is the rise of internal competition for scarce resources. In the next stage only those stay that at best strengthen a company's mission of delivering value and performance (Sutherland 2014).

Nowadays, when “software has eaten the world” (Gothelf 2014) and is transforming the way of doing business, every company is in “a software business”. It does not mean being agile until all organizational subsystems are not able to support the logic of instant solutions and continuous delivery based on communication and learning from customers. It refers to marketing, logistics, manufacturing, finance and human resources management. All of them should create networks of value creation and may require a deep change (Denning 2015). Special focus should be on HR recruiting practices, building necessary skills and competences, fair motivation systems and environment enhancing collaboration and ambitions of doing something meaningful.

## 5. Agile Education for Business Management

Apart from the different academic and practical backgrounds special demands arise for complementary soft competences enabling cooperation of multidisciplinary teams. Acquiring such competences is possible only with the use of agile forms and methods combining creative thinking with the discovery process in any application. There are numerous tools to navigate the discovery process. One of them is Compass (Young 2016), the tool to navigate unfolding opportunities when moving:

- From prescriptive to iterative cycles of learning which makes intentions explicit and fosters partnerships, meaningful and relevant education;
- From content to culture, where learning starts with “why” and real lessons are gained from experience;
- From evaluation to visible feedback and reflection, nurturing the love for lifelong learning, partnering for continuous growth, and ownership;
- From control to trust: valuing the freedom of discovery, diversity increases agency and self-direction;
- From competition to collaboration: revealing the power of social intelligence when sharing individual perspectives which helps solve problems, effectively communicate and better understand.

Agile education in management has already been included into the curricula of renowned universities as well as in a variety of dedicated small organizations. For example: the University of California Berkeley Extension (UCBX) Agile Management Program (AMP) “integrates experiential, team-based learning which emphasizes the use of values and principles to understand, apply, and adapt Agile methods and practices to specific situations” (being-agile-management-curriculum 2017). Among other active organizations in agile education the following ones can be mentioned: Agile classrooms, Agora Roermond, Agile Learning Centers, Eduscrum, Blueprint education, MH Willeke agile learning, and Mike Vizdos scruminschool.ORG. (Agile in education.pdf. 2017).

Agile in higher education is believed to respond to a visible misfit between priorities. Teachers-students relationship is more important than administration and infrastructure, competence and collaboration is highly valued than compliance and competition, employability and marketability tower over the syllabus and marks, and finally the attitude and learning skills are more worthy compared to aptitude and formal degrees.\*

## 6. Social Capital and Trust

Fostering the use of agile methods becomes the key issue in acquiring new competences for employability. Regardless of digital competences, attention should be paid to soft skills related to people—be it a client, employee, co-worker, business partner or manager. They need to embrace intellectual capital, knowledge, capabilities, professional competences, energy, emotions and motivations.

Trust as the prerequisite of cooperation can substitute the control if it is based on positive attitudes and experience. Moreover, trust has always been considered in social sciences as a key issue in explaining human and organizational expectations related to communication, team processes improvement, more effective goal attainments due to new initiatives, overcoming barriers, and better risk management. Trust deficit often results in dysfunctional patterns of behavior and pathologies (ILM 2014).

According to Piotr Sztompka, trust is “an assumption on uncertain future actions of other people” (Sztompka 2016). In his opinion expectation of rationality and competences is the minimum level and the least risky in professional relationships. In a mature market economy and society there are institutions watching the legality of people and organizations' behavior, and institutions enforcing responsibility. They represent the formalized system solutions, while the culture of trust embraces the informal set of accepted standards of behavior and credibility.

\* [www.towards\\_agile\\_education\\_model\\_jasmina\\_nkolic.pdf](http://www.towards_agile_education_model_jasmina_nkolic.pdf). (12.08.2017)

Trust is a product of social capital—the capital resulting from investment in building relations with other people and/or organizations. This is a critical factor to integrate networks, speed up spreading innovations and strengthen communities. In a broader context of organizations and society the sources of continuous progress could be attributed to the social capital. Social capital producing trust is critical during joint actions, which are indispensable for innovations, collaboration and shared responsibility for results.

There are many definitions of social capital. As defined by Francis Fukuyama, social capital is a set of informal norms and rules as well as ethical values shared by individuals and social groups that enable them to cooperate effectively (1999, 2002). From the point of view of ownership of capital Robert Putnam's definition is remarkable, as in his opinion it does not belong to anybody. It is a public good representing a set of social norms and civic attitudes, which support common actions and trust for both interpersonal and public institutions.

Social capital represented by such virtues as trust, loyalty, reciprocity, solidarity, respect and justice results in the feeling of safety in view of anticipated reactions of others, openness, creativity and innovativeness. P. Sztompka also defines the trust culture and concludes from international research that societies of high trust usually have a high level of economic welfare, effective democratic governance and satisfaction of citizens (Sztompka 2016). However, it is not rational to trust people with doubtful credibility.

Moreover, shaping the culture of trust and social capital is a difficult multi-step process with numerous crisis situations due to trust fragility and multiple destructive impacts. Nevertheless, anticipated benefits from the trust culture are so attractive that it is worth taking efforts to elevate its level. In business the trust ladder metaphor is used for describing the subsequent stages of progress enabling higher benefits from all shared resources of the engaged parties together with additional values, e.g. loyalty, mutual respect, and appreciation.

The process starts from the position of a simple seller. In case of positive experience the seller may become the accepted supplier, then the preferred supplier. Next levels require the increased responsibility of supplier for the benefits of the buyer. The supplier becomes the solution advisor, strategic partner, and trusted partner. It has an immense impact on the strategic success based on value creation, where above these levels a new one is emerging i.e. the digital platform enabling the large scale benefits if followed by efficient operations (Lesniak-Lebkowska 2017).

The platform innovations go beyond traditional industries, change the rules of competitive game, and erode profits of traditional suppliers. The community with its resources becomes the most valuable assets of platforms. Platforms do not control resources but create architecture and enable flows and interactions between clients and suppliers. The higher the value of the whole business ecosystem, the higher the benefits of individual client. The platform owner controls its intellectual capital (Alstynne et al. 2016). All virtual organizations require people-driven trust and specific tools for its securing (Grudzewski, Hejduk 2007).

Despite the transient nature of competitive advantages caused by a turbulent environment, social capital and trust established on all levels of cooperation provide a stable and safe ground for building value to a broad range of stakeholders. The shortage of social capital may have an adverse impact on individuals and their trust level, organizations and society in all its aspects including lack of solidarity, low contributions, corruption, terrorism, appropriation of benefits, discrimination, high number of divorces, drug consumption, suicides, crime level, and legal suits (Fukuyama 1995).

International organizations such as the UN, IMF, World Bank and OECD, focusing on international development, point out the role of factors facilitating cooperation, such as social capital, trust, institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development (Grootaert & van Bestelaer).

Summing up the role of social capital in agile management, it is necessary to turn to economists for defining in economics terminology this type of capital. One of the first and most comprehensive definitions was offered by Nan Lin who defines social capital as “investment in social relations with expected returns in the marketplace” (2002, 19). Lin was also critical of many authors identifying social capital with its “products” such as trust, shared value, and norms. This idea was further developed by Zbigniew Bochniarz and his team (2016) who concluded that social capital is defined as a special type of capital resulting from investments in building relations, institutions and networks that produce collaborative attitudes, shared norms and values, mutual understanding and trust. These are critical factors for cooperation with other types of capital and thus contribute to sustainable development. (op. cit.) The next part of this article presents an application of such defined social capital in action research on aerospace clusters in Poland and the USA.

## **7. Cluster Development as a Case for Successful Regional and Cadre Development – Research Evidence**

Based on the assumption that social capital and trust facilitate development of industrial clusters, as well as improve their performance and increase positive impact on regional economies, a comparative research project “Effective Cluster—the Base for Innovation and Sustainable Regional Development” was conducted in aerospace clusters in the Podkarpackie Region of Poland and in Washington State in the U.S. in 2013-2015. The project was led by Barbara Sienko-Kulakowska (Rzeszow School of Business, Poland) and Zbigniew Bochniarz (Evans School of Public Affairs, University of Washington, Seattle, USA) with other scholars from American, Dutch, Polish and Swedish universities.

Their research showed how the growth and accumulation of social capital positively impacts cluster performance, producing synergetic effects (i.e. positive externalities) resulting from better cooperation and trust among major actors within the cluster. In

order to examine this theory, measurements of social capital—its monetization—were proposed and verified through the 2013-2015 period proving the progress in sustainability of the regional economies and their prosperity in both clusters. Although the Aviation Valley in Poland hosts such global manufacturers as Airbus, Boeing, GE, Goodrich, Sikorsky, Whitney & Pratt and is regarded as the regional flagship it is still not reaching the necessary level of synergy to realize its full potential. The Washington State Aerospace Cluster—the world largest commercial aerospace cluster dominated by The Boeing Company—despite its 100 years tradition, still has opportunities and reserves to optimize its potential. Climbing up from the level of functional cluster through clumps and weakly integrated cluster to the high level of its integration will require further investment in social capital to improve internal communication, management, and innovation (Bochniarz, Andreoli, 2008). Both clusters are not yet operating at optimal levels as expected by their major stakeholders.

Nevertheless, their research confirmed that intensive investments in education—in both human and social capital—of present and future cadres starting from the primary schools, secondary and higher education will help build the culture of trust, envision future prospects for individual careers and decent living for the local and regional population.

## 8. Conclusions

1. Economic progress alone cannot guarantee the state of social welfare and its sustainability, increased social capital and trust also help towards its achievement.
2. When social capital is well anchored in a society, it creates a culture of trust, which strengthens positive incentives for the emergence or reinforcement of individual trust, which in turn could be invested in diverse institutions and development ventures, including business enterprises thus allowing its further multiplication.
3. Social capital and its product—trust—significantly reduce transaction costs and risk, even under uncertainty.
4. Responsible risk management in a turbulent environment requires new set of competences. These competences should guarantee creativity in designing new products, services, processes and solutions. An approach based on empathy, imagination and knowledge can fuel whole new streams of innovations.
5. To be prepared for streamlining innovations for the future, and for a new type of relationships, actions and educational activities are needed, which fit into the concept of Agile. They should be initiated and facilitated in educational institutions, business and social institutions at an adequate level.
6. Regional clusters, networks and partnerships as collaborative structures are more likely to enhance economic and social progress due to trust culture, communication and integrative efforts. Experiential learning allows for the development of cadres capable of entrepreneurial problem solving on a relevant scale. However, the results are still strongly dependent on the macro environmental impacts: political, legal, economic, social, technological, and environmental.

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