

# PLEASE NOTE! THIS IS PARALLEL PUBLISHED VERSION / SELF-ARCHIVED VERSION OF THE OF THE ORIGINAL ARTICLE

This is an electronic reprint of the original article. This version *may* differ from the original in pagination and typographic detail.

Author(s): Eskola, Anne; Goubier, Vincent; Kakko, Anneli; Pons, Christophe; Trenvouez, Arnaud

Title: Processing Complexity with Sensorial, Emotional and Spiritual Capacities

Year: 2021

Version: Published version

Copyright: © 2021 Mate Ltd, Zagreb, Croatia

Rights: In Copyright

Rights url: <a href="http://rightsstatements.org/page/InC/1.0/?language=en">http://rightsstatements.org/page/InC/1.0/?language=en</a>

### Please cite the original version:

Eskola, A., Goubier, V., Kakko, A., Pons, C., Trenvouez, A. (2021). Processing Complexity with Sensorial, Emotional and Spiritual Capacities. In: Virtual 9th Higher Education Institutions Conference Proceedings, 19-29.

URL: https://www.heic.hr/wp-content/uploads/2022/04/HEIC-2021 proceedings.pdf

# Processing Complexity with Sensorial, Emotional and Spiritual Capacities

# Anne Eskola<sup>1</sup>, Vincent Goubier<sup>2</sup>, Anneli Kakko<sup>3</sup>, Christophe Pons<sup>4</sup> and Arnaud Trenvouez<sup>5</sup>

1JAMK University of Applied Sciences, Jyväskylä, Finland, anne.eskola@jamk.fi 2 The Catholic University of Lyon, Lyon, France, vgoubier@univ-catholyon.fr 3JAMK University of Applied Sciences, Jyväskylä, Finland, anne.eskola@jamk.fi 4The Catholic University of Lyon, Lyon, France, cpons@univ-catholyon.fr 5 PerformanSe, Nantes, France, arnaud.trenvouez@performanse.com

#### Abstract

Today's business environment is best described as VUCA – Volatile, Uncertain, Complex, and Ambiguous. VUCA is the expression of the fact that the rate of change is outpacing our capability to adapt. As a result, businesses, industries, and careers are being disrupted faster than ever before. Within any company, association, or entity, whether public or private, the situations to be managed have become more complex. The obligation to decide on issues characterised by uncertainty and unpredictability, for which the recycling of old schemes or the use of traditional tools based on rational analysis are not sufficiently operational, leads to the weakening of managerial staff. This has a direct impact on people: staff turnover, absenteeism, addiction, and even an increase in burnouts. This increases the frequency of reorganisations and change management practices. Having to constantly deal with ambiguity can lead to anxiety and doubts and can decrease the level of trust in organizations. We must seriously rethink how we lead ourselves, others, and our organisations. An EU-financed project called ProCESS aims at tackling these problems. ProCESS addresses the lack of training in the field of complexity management in higher education. The lack of training leads to the underperformance of many organisations. ProCESS aims at developing new ways of training future managers, the main lever being the development of so-called SES (Sensorial/Emotional/Spiritual) skills on an equal basis with hard skills to train managers to sense and to feel, as well as to understand.

Keywords: complexity, higher education, management, VUCA

#### 1. Introduction

Traditional management research considers organizations as machine-like mechanisms that can be controlled [1] and that need some hierarchical management. These kinds of management models functioned well in the context of physical production [2], but in today's VUCA environment they do not work. There has been a change from traditional management theories towards the complexity theory in defining the context of organizations [3].

The complexity theory suggests that organizations tend to self-organize themselves to a state where they regulate themselves. Any complex systems have emergent properties that cannot be reduced to the mere properties of their parts. The behaviour of these systems is unpredictable and uncontrollable, and it cannot be described in any complete manner. [4] The complexity theory posits that systems begin as collections of individual actors who organize themselves and new structures and behaviours emerge as the actors act and react to each other creating value because of individual interactions. The emergent result is often more than, or qualitatively different from, the sum of individual actions [5]. In sum, a complex system is unstable and open. It is a conjunction of order and disorder where antagonistic logics exist, which evolves by bifurcations, and which is the seat of multiple and diversified interactions [6].

Many authors [6], [7] have raised the question of the management of complexity, agreeing that the apprehension of complex problems presupposes not remaining within a rational approach, but rather benefits from other approaches such as art, religion, or philosophy, and hence, assumes the mobilisation of various human capacities other than exclusively rational thought. However, few companies take these new approaches into account. The solutions that have been provided by so far can almost exclusively considered as a mere means of support in stress reduction and in helping an individual find balance, rather than as a real performance factor and a response to dealing with complexity. There is thus a need to engineer the mobilisation of all kinds of capacities, emotional, sensorial and spiritual, so that they may be implemented in organisations and in management training as vital factor affecting performance.

ProCESS (Processing Complexity with Emotional, Sensorial and Spiritual capacities) is an educational project that will invent new ways of training both students and current managers on how to address complexity, with the main lever being the development of "SES (Sensorial / Emotional / Spiritual) skills", on an equal basis with hard skills. ProCESS project aims at tackling the challenge of decision making in organizations because decision making based on facts and rational approaches is no longer sustainable in the VUCA world. Indeed, the more complex decisions become, the less executives can rely on rational approaches only [8]. In this context it is appropriate that higher education institutions' curricula continue to evolve and explore different ways to better equip students as future leaders, perhaps in radical ways.

Another challenge is the underperformance of organizations. The lack of decisiveness and the occurrence of delays have a cost. The correlation between the quality of work-life and economic performance is largely established [9]. These pitfalls have an indirect impact on companies' attractiveness, leading to difficulties in recruiting young managers since the younger generation considers well-being at work an essential criterion when making a career choice. Thus, ProCESS aims at developing a methodology to deal with complex management cases through alternating sequences of mobilisation of Sensory, Emotional, and Spiritual (SES) skills, in addition to rational capacities and to test this methodology on real business cases. In addition, ProCESS aims at training new types of trainers such as philosophers, artists, architects, etc., in SES skills and develop a new niche of activity for them.

### 2. Literature review

Simple problems can be solved with common analytic methods like data collection and analysis by defining the problems more precisely or by breaking them into smaller parts that can be solved in isolation by different people. Partial solutions to a bigger problem can be integrated into an overall solution, because there are no significant interconnections between the parts and all participants share the same values and targets. [10] [11].

Complex problems are the opposite of simple problems that can be laborious but are always solvable. Complex problems involve many parties that have their own needs, values, and priorities. It is very hard to find a solution for complex problems because the problem changes every time it is tried to be solved. There are no prior solutions that could be utilized when solving a new problem because problems tend to be unique. It is also very hard to estimate how the attempt to solve the problem has succeeded. [12] When it is not possible to solve problems in isolation, it becomes difficult to deal with differing assumptions and values of people. Systemic problems get in touch with misunderstandings, assumptions, and beliefs. Just improving communication or trust is not enough. [11]

Organizations encounter complex problems usually in situations where they face continuous change or unforeseen challenges. This can happen anywhere: in strategic development, in product management, in design, etc. [12] [13] In complex environment, the parties lack common world view, common values or common ethics, and people are looking at the problem from different perspective and planning strategies [14].

It is possible that the reason lying behind the problems linked with learning and innovation is eventually the fact that complex problems connected with the improvement of operations have traditionally been solved using thinking, tools, techniques, and action patterns that were based on expertise and considered adequate at some point of time in the past. [15] Though the challenges met by the companies have changed, the thinking patterns, the ways of working or the styles of management have not necessarily evolved in the same pace [16], and there is still a tendency to solve complex problems with thinking patters, tools and methods that used to work for simple problems. [10], [12], [17].

Why then organizations tend to stick to procedures that used to work in the past? This phenomenon is psychological: human mind tends to perceive things that support prevailing conceptions, which, in turn, strengthens prior conceptions. When contradictory signals are omitted, organizations lean on procedures that have become outdated. [18], [19]

Usually, organizations try to solve problems using an authoritarian strategy by letting few people solve the problem. These experts have the power to define the problem and its solution [20]. This is a way to tame the problem. Instead of facing its wickedness, it is simplified to make it more manageable. [17] However, organizations must learn how to solve or cope with challenges from different perspectives that represent different stakeholders. In practice it is about the organizational ability to handle different paradoxical situations in daily life in a productive way. [21], [22], [23], [24], [25]



The new ways of working demand self-guidance from the employees. Ability to selforganizing is expected both from individuals and from teams. However, this is not possible without an even closer interaction between the employees and management. This is called the paradox of self-guidance. Self-guidance does not mean the quantitative diminishing of managerial work but, instead, its development in terms of quality. [25], [26] The paradox of learning means that a lot of old information must be removed before new information can be adopted. The paradox of organizing means that both creativity and discipline must be present at once. The paradox of belonging means that collaboration requires both cohesion and difference. [22] The paradox of innovation and effectiveness [28], [9] refers to the fact that organizations must be able to generate new know-how while simultaneously utilize the existing know-how. Understanding paradox situations and problems helps to find many possible solutions instead of one right solution.

Redefining organizational practices means moving away from mass production efficiencies, hierarchical organisation, and central control, and introducing flexible, learning organizations that constantly change and solve problems through interconnected, self-organizing processes. [3] Organizations process information in three situations: to understand their environment, to create new information and to take decisions. A common denominator for problem solving methods based on co-operation is shared understanding and sensemaking. It is possible that people in the organization do not agree on everything, but they share a common view on issues that are meaningful for the organization. [30] Shared understanding means that stakeholders understand each other's position so that they can use collective wisdom when solving problems. It helps individuals in the network to work independently to achieve common targets. The empowerment of individuals helps them create innovations and adapt to turbulent conditions. [13]

It is impossible to find an optimal solution for a complex problem, but it is possible for organizations to learn to handle them. Simple techniques are the best. Involving stakeholders, documenting opinions, and communicating helps organizations to handle complex problems by using social planning processes instead of systematic ones. Emphasizing action and experiment and adopting proactive orientation is important even though results are uncertain. [12]

As the complexity of context increases, organizations must increase their own complexity to correspond the complexity level of their environment, because it takes complexity to defeat complexity [2]. Organizations in complex environments have consciously given up pursuing order and control and this is reflected in the ways of working and managing. They are operating at the "edge of chaos", which is the balance necessary for adaptation and self-organization to occur. There are a many positive features, such as flexibility, autonomy and robustness, that traditional mechanistic organizations lack. The positive qualities are aspects of the process of self-organization, where order is created out of disorder. These kinds of systems organize themselves to the state where they want to be and where they regulate themselves as to better cope with internal and external conflicts and this allows them to adapt to a constantly changing environment. [4]

In a complex environment, the employees must try to collaborate. Thus, flatter hierarchies, decentralization of decision-making, self-organization, emergence, the empowerment of employees and the creation of new order are key characteristics of complex systems [3], [31] In complex environment there is a need for other kinds of ways of working and ways of managing. The probe, sense and respond model becomes useful for the management [32].

### 3. Data and method

There are four higher education institution partners and four company partners in the project. One partner in the project is a soft-skills evaluation company whose task is to develop new assessment tools for SES Skills. The higher education partners' goals are to ensure the employability of graduates and make the graduates more efficient in a complex working environment by helping them to become creative and innovative individuals.

Thus, ProCESS intends to enhance individual potential and equip graduates with the knowledge and core competences they need to succeed in high-skill occupations.

ProCESS will involve 192 students from France, Romania, Finland, and Latvia, who will be coached by academic and company coaches from four universities and four companies, and by a varying number of SES skills trainers. Exploitability and replicability of ProCESS will be verified in private and public sectors such as health, public service, media, and consulting. The development of ProCESS' training modules is planned in cooperation with companies and thus, the project outcomes will improve the quality and efficiency of education by matching learned skills with the requirements of working life.

The companies in the project are Sanofi, which has explored the fields of emotional intelligence, positive psychology and mindfulness (400 employees took part in Sanofi's "Positive Leadership Program"), DE Klausen, the owner of which believes that new skills, particularly emotional and spiritual, are required for managers to succeed in the current constantly changing business environment, Keskisuomalainen, which is a media company in a very disruptive organizational environment where digitalization is challenging its traditional business model, and Latvia's National Post that is seeking levers to expand its modern high standard customer service through new management practices and innovative experiences.

ProCESS will deliver a methodology (Figure 1) to respond to changing needs in the wider economy and shape the careers of tomorrow; prepare individuals for today's varied and unpredictable career paths, training them in skills such as the ability to think critically, take initiative, solve problems, and work collaboratively. It is necessary to improve the correspondence between the training of managers and the reality of managing within complexity.



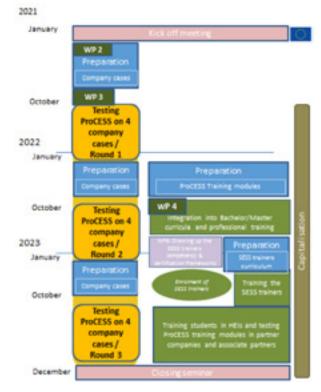


FIGURE 1. Global architecture of the project

ProCESS has four operational objectives: 1) Develop an original and innovative method of dealing with complex problems by mobilising the SES skills, and four training modules targeting the development of SES Skills. 2) Test the method in real situations with students under the supervision of both academics and practicing managers to ensure its operability and to assess its efficiency. 3) Deploy the four developed training modules both in higher education institutions and in professional education programmes. 4) Set up a pool of trainers in SES skills, "SESS trainers", and integrate them into a global network of change makers.

Higher education institutions will lead ProCESS's innovative HEI-company model, involving students, current managers, and SESS trainers (Figure 2). In practice HEIs will contribute to the organisation and co-coaching of 12 transnational groups of students including: 1) The provision of an adequate academic framework mobilizing 1 academic coach per HEI. 2) The organisation of 3 winter schools. 3) The setting up of a new model for management training that will be tested, evaluated, improved, and disseminated. 4) The modelling of ProCESS methodology by the release of articles and publications. 5) The setting up of quality assurance criteria and evaluation criteria that are common to all partners. 6) The harmonisation of a grading system providing 5 ECTS credits to each participating student. 7) Common arrangements for mobilities.

Enterprises are the centrepiece of ProCESS. They will provide complex situations in which ProCESS methodology can be experimented and ProCESS training modules can be tested. Each enterprise will contribute to the: 1) Definition of 3 complex management cases (1 per year) and their presentation to students. 2) Co-coaching of 12 transnational groups of students mobilising 1 coach per enterprise. 3) Leading of the winter school jury which will evaluate the quality of the action plans proposed by the students. 4) Testing of the four SESS training modules to provide valuable feedback for their improvement. 5) Reviewing of all tools and materials developed by the HEIs.

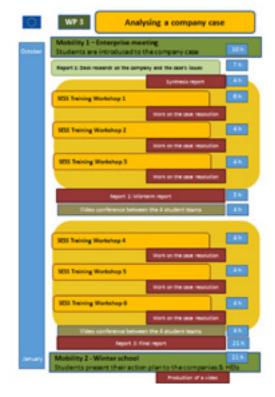


Figure 2 Details of testing ProCESS



To evaluate ProCESS results and impacts one of the challenges is to develop a new tool to assess SES skills. The objectives related to the development of assessment method are 1) The fostering of a personal transformation of the students related to SES skills and the enhancement of these skills in complex problem resolution 2) The Impact of ProCESS's methodology on the case resolution and 3) The ability to be a SES trainer. This means that the assessment must measure soft skills to improve self-awareness of students and to develop a questionnaire to assess the potential transformation of students' SES skills.

### 4. Expected findings

The expected results and achievements following the implementation of the project are: 1) A validated methodology for the treatment of complex management cases. 2) Training modules included in the curricula of HEIs and offered as HR development tools in companies. 3) Trainers who are trained to develop SES Skills. 4) Current and future managers capable of further mobilizing their SES Skills.

By bringing together various disciplines and by verifying the applicability of ProCESS method, ProCESS intends to increase the global performance of current and future managers while improving their well-being, as well as that of their collaborators. It is this deficit which ProCESS aims to treat by granting "sensing" and "feeling" the importance they deserve, developing a method of training these skills in different contexts and in relation to different business issues, and equipping the managers of today and tomorrow to understand and deal with complexity.

The innovative nature of ProCESS reveals itself through systematically combining non rational and rational skills, fostering a holistic approach, giving a real place to SES skills in management training and in businesses, convening standardized workshops which summon, in turn, the sensory, the emotional and the spiritual, to address real complex cases and filling a void in management training which entails a lack of trainers (SESS trainers).

The aim of ProCESS is to teach current and future managers to break out of traditional thought patterns, complement traditional methods of analysis, upset their established intellectual order, broaden their perspectives, and aid them in the ability to de-centre themselves. ProCESS offers an openness that national or regional approaches would not allow in such a complex area. Indeed, ProCESS has multicultural inputs, approaches and heterogeneity that lead to the analysis of situations from different points of view and sensitivities, and therefore a proliferation of ideas and the restitution of a broad range of solutions which will infuse companies from various sectors.

## 5. Conclusions

The project challenges sixteen international student teams every year to solve complex management cases. This will spur innovation and the discovery of novel solutions and tests the ProCESS methodology on a European scale. ProCESS' new training approach will improve agility in decision making of current and future managers for more performance, give rise to new teaching profiles and fields, and lead to sustainable changes in management habits and improved well-being at work.

Benefits for higher education institutions in short term are the development of the SES Skills of the students, the readiness to use SESS training modules to be exploited in bachelor and master programmes, the ability to gather a SESS trainer workforce, the readiness to offer expertise in dealing with complex cases, and the ability to provide standard cases that are reusable in academic contexts. Long term benefits include the attraction of new students, the reinforcement of links with companies, the mobility of SESS trainers between partner higher education institutions, and the provision of general and/or tailored training for companies.

Benefits for enterprises in the short term are action plans for 12 cases (4 companies x 3 cases), testing the ProCESS methodology and assessing whether they want to import it to their HR development, challenging their managers with new training methods, gaining new management skills, identifying potential new employees (future leaders) among participating students, valuable new contacts and impulses for further cooperation, and getting exposure through the re-utilisation of their cases by the academic world. Long term benefits include contribution to the social responsibility of enterprises, well-being at work and better relations between managers and staff, less staff turnover, attractiveness for millennials, and visibility through ProCESS outputs.

#### Acknowledgements

This paper was developed with the support of the Erasmus+ programme of the European Union under project Processing Complexity with Emotional, Sensorial and Spiritual capacities (ProCESS).

ISBN 978-953-246-413-9

#### References

[1] Morgan, G. (1996) Images of Organization. Thousand Oaks, California: SAGE Publications.

[2] Uhl-Bien, M., Marion, R. & McKelvey, B. (2007) Complexity Leadership Theory: Shifting leadership from the industrial age to the knowledge era. The Leadership Quarterly 18(4), 298-318.

[3] Daft, R. L. & Lewin, A. Y. (1993) Where are the theories for the "new" organizational forms? An editorial essay. Organization Science 4(4).

[4] Heylighen, F. (2009) Complexity and Self-Organization. In Bates, M. J. & Maack, M. N. (Eds.) Encyclopedia of Library and Information Sciences. Taylor & Francis.

[5] Haffeld, J. (2012) Facilitative governance: Transforming global health through complexity theory. Global Public Health: An International Journal for Research, Policy and Practice 7(5), (pp. 452-464).

[6] Edgar. Morin (2014) Complex Thinking for a Complex World – About Reductionism, Disjunction and Systemism. Systema Volume 2 Issue 1 | 14–22. Retrieved 31 August 2021 from ComplexThinkingforaComplexWorldAboutReductionismDisjunctionandSystemismEdg arMorin257-1036-1-PB (3).pdf.

[7] Boulton, Jean G., Allen, Peter M. & Bowman Cliff. (2015) Embracing Complexity – Strategic Perspectives for an Age of Turbulence. by Jean Boulton Peter Allen Cliff Bowman. Oxford University Press, United Kingdom.

[8] Becker, Christoph (2021). Only Human: The Emotional Logic of Business Decisions. Gyro. Retrieved 31 of August 2021 from https://www.gyro.com/gyro-thinking/only-human-theemotional-logic-of-business-decisions/.

[9] Krekel, Christian Ward, George Ward & De Neve Jan-Emmanuel (2019) Happy employees and their impact on firm performance. Retrieved 31 August 2021 from https://blogs.lse.ac.uk/ businessreview/2019/07/15/happy-employees-and-their-impact-on-firm-performance/.

[10] Rittel, H. W. J. & Webber, M. M. (1973) Dilemmas in a General Theory of Planning. Policy Sciences 4, 155- 169. Scotland: Elsevier.

[11] Roth, G. L., & Senge, P. M. (1996) From theory to practice: research territory, processes and structure at an organizational learning centre. Journal of Organizational Change Management 9(1), 92-106.

[12] Camillus, J. C. (2008) Strategy as a Wicked Problem. Harvard Business Review 86(5), 98-106.

[13] Christensen, K. (2009) Building Shared Understanding of Wicked Problems - Interview of Jeff Conklin. Rotman Magazine, Winter, 17-20.

[14] Geertz, C. (1973) The Interpretation of Cultures: Selected Essays. New York: Basic Books.

[15] Raisio, H. 2010. Embracing the Wickedness of Health Care. Essays on Reforms, Wicked Problems and Public Deliberation. Acta Wasaensia No 228. Social and Health Management 5.

[16] Jantunen, S. (2012) Making Sense of Software Product Requirements. Acta Universitatis Lappeenrataensis 470. Lappeenranta: Lappeenranta University of Technology.

[17] Conklin, J. (2005) Wicked Problems & Social Complexity. In Dialogue Mapping: Building Shared Understanding of Wicked Problems. New York: John Wiley & Sons.

[18] Couger, J. D. (1996). Creativity & Innovation. Contemporary Issues in Information Systems. Danvers, Massachusetts: Boyd & Fraser Publishing Company.

[19] Harrison, J. C. (1994). Do you suffer from paradigm paralysis?

[20] Roberts, N. (2000). Wicked Problems and Network Approaches to Resolution. The International Public Management Review 1 (1).

[21] Cameron, K. S. & Quinn, R. E. (1988) Organizational Paradox and Transformation. In R.
E. Quinn & K. S. Cameron (eds.) Paradox and Transformation. Toward a Theory of Change in Organization and Management. Cambridge, Mass: Ballinger, 1-18.

[22] Lewis, M. W. (2000) Exploring paradox: Toward a more comprehensive guide. Academy of Management Review 25(4), 760-776.

[23] Lewis, M. W. & Dehler, G. E. (2000) Learning through paradox: A pedagogical strategy for exploring contradictions and complexity. Journal of Management Education 24(6), 708-725.

[24] Andriopoulos, C. & Lewis, M. W. (2009) Exploitation-Exploration Tensions and Organizational Ambidexterity: Managing Paradoxes of Innovation. Organization Science 20(4), 696-717.

[25] Czarniawska, B. (2005) On Gorgon Sisters: Organizational Action in the Face of Paradox. In D. Seidl & K. H. Becker (eds.) Niklas Luhmann and Organization Studies. Kristianstand: Liber & Copenhagen Business School Press, 127-142.

[26] Zemke, R., Raines, C. & Filipczak, B. (2000) Generations at work: managing the clash of veterans, boomers, xers and nexters in your workplace. New York: Amacom.

[27] Gennamo, L. & Gardner, D. (2008) Generational differences in work values, outcomes and person-organisation values fit. Journal of Managerial Psychology 23(8), 891-906.

[28] March, J. G. (1991) Exploration and Exploitation in Organizational Learning. Organization Science 2(1), 71-87.

[29] Andriopoulos, C. & Lewis, M. W. (2009) Exploitation-Exploration Tensions and Organizational Ambidexterity: Managing Paradoxes of Innovation. Organization Science 20(4), 696-717.

[30] Choo, C. W. (2002) Sensemaking, Knowledge Creation, and Decision Making. In C. W. Choo and N. Bontis (eds.) The Strategic Management of Intellectual Capital and Organizational Knowledge. Oxford: Oxford University Press, 79-88.

[31] Mitleton-Kelly, E., (ed.) (2003) Complex Systems and Evolutionary Perspectives on Organisations: The Application of Complexity Theory to Organisations. Oxford: Pergamon.

[32] Kurtz, C. & Snowden, D. (2003) The new dynamics of strategy: Sense-making in a complex and complicated world. IBM Systems Journal 42(3), 462-483).