



ORGANIZATIONAL DNA OF THE MASTER'S PROGRAMME EUROMPM

Carsten Wolff

Dortmund University of Applied Sciences and Arts, Germany

Abstract

Organizational DNA (or corporate DNA) is proposed to phrase and codify the philosophy, structure, believes and capabilities of an organization. It forms a description of an organization which can be used for communication, strategy development and as a tool for management. The application of the concept of organizational DNA to a Master's programme in Project Management (as the European Master in Project Management - EuroMPM) follows the idea to view Master's programmes as a kind of learning or self-optimizing organization. Considering the concept of the DNA can lead to a new analysis of the capabilities and therefore of the goal of academic Master's programmes in a very practical domain like project management. It can help to answer the question: what can we achieve with a Master's programme in project management? Furthermore, it can be a tool to analyse and plan the development options for such study programmes: how can we develop the capabilities? How can it be more effective and more efficient? Finally, forming a consensus on the DNA of the EuroMPM can be a common ground for the members of the EuroMPM consortium.

Keywords: Organizational DNA, European Master in Project Management

JEL code: O22

Introduction

The European Master in Project Management (EuroMPM) is a study programme which was initially conducted at the University of the Basque Country (UPV), Bilbao, Spain, the NTNU Trondheim, Norway, and the Dortmund University of Applied Sciences and Arts (FH Dortmund), Germany. It is based on a joint curriculum and didactic model. The programme is taught in 3 or 4 semesters with two "teaching semesters" which deliver a set of modules and one or two "project semesters" which are devoted to projects and Master's thesis.



Semester	Module	ECTS	Delivery
1	Project Management Core Module 1	6	Theory Teaching & homework
	Project Management Core Module 2	6	Block workshop
	Technical Skills Module 1	6	Tool Training
	Leadership and Team Module 1	6	Workshop
	Scientific Methodology & Research	6	Seminar
2	Project Context Management 1	6	Theory Teaching & homework
	Technical Skills Module 2	6	Professional Certificate Training
	Leadership and Team Module 2	6	International workshop
	Project Case Study	6	Summer School
	Elective 1	6	
3	Elective 2 (Specialisation)	6	
	Elective 3 (e.g. research seminar)	6	Publication for student conference
	Research Project (thesis)	18	Own research
4	Master Thesis	30	Own research

Fig 1: EuroMPM model – curriculum design

Source: Wolff, C.; Otegi, J.R.; Bushuyev, S.; Sachenko, A.; Ciutene, R.; Hussein, B.; Torvatn, T.A.; Arras, P.; Reimann, C.; Dechange, A.; Toledo, N.; Nuseibeh, A.; Mikhieieva, O., 2017.

Meanwhile, the EuroMPM has expanded to a consortium of eight European universities (in addition to the initial three partners: KTU Kaunas, KU Leuven, TNEU Ternopil, KNUCA Kiev and ZNTU Zaporizhia). This opens unique options for cooperation, joint research and curriculum development and for exchange of lecturers and students in various educational formats. The cooperation of the programmes in a virtual, cross-border Master School (Wolff, C.; Mikhieieva, O.; Dechange, A, 2017) has become a core concept of the education in project management.

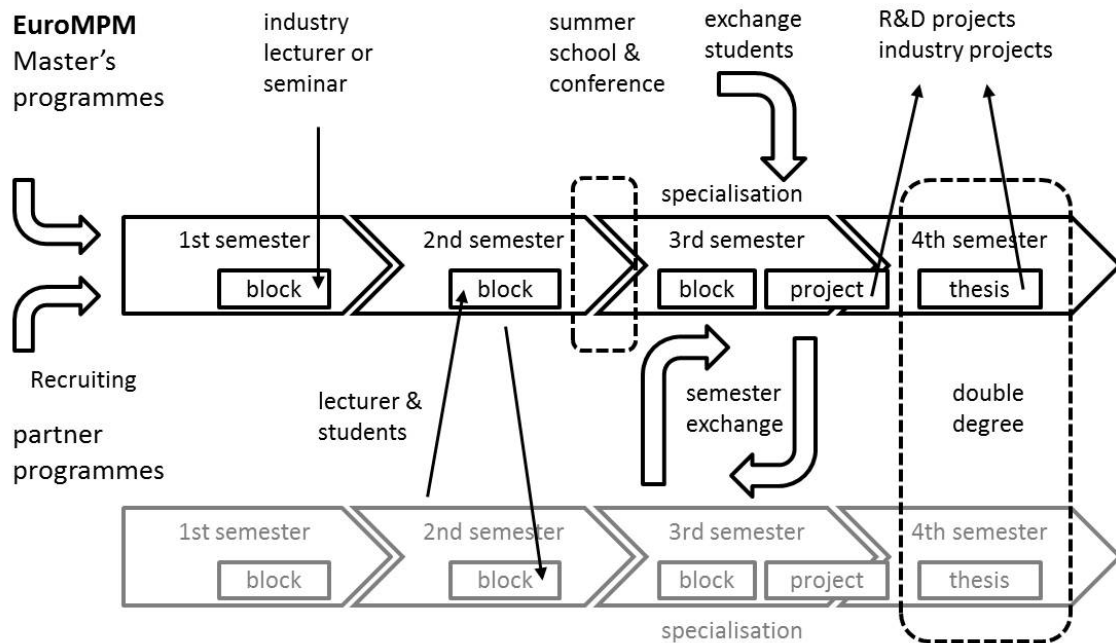


Fig. 2 EuroMPM model – exchange concept.

Source: Wolff, C.; Otegi, J.R.; Bushuyev, S.; Sachenko, A.; Ciutene, R.; Hussein, B.; Torvatn, T.A.; Arras, P.; Reimann, C.; Dechange, A.; Toledo, N.; Nuseibeh, A.; Mikhieieva, O., 2017.

The EuroMPM and the joint efforts of the consortium are a major contributor with a high impact in the European project management community. The activities form a cumulating point for researchers, practitioners, lecturers and students. The graduates from the cooperating Master's programmes (150-200 p.a.) are driving the community.

Master's education in project management is facing a dilemma. Project management (PM) is rather perceived as a practical skillset (even a soft skill) than a science. Students expect to be trained for DOING project management while academic programmes educate for REASONING about project management. Project managers are trained in projects, not necessarily in academia. Such project managers do projects. They rather do not research about projects and the underlying scientific aspects. The PM community believes in life-long development of PM competencies (Mikhieieva, O.V, 2016) with contributions from various elements like training, education and project experience. In this competence development path the area and scope of Master's programme in project management can only form a certain part (Wolff, C.; Otegi, J.R.; Bushuyev, S.; Sachenko, A.; Ciutene, R.; Hussein, B.; Torvatn, T.A.; Arras, P.; Reimann, C.; Dechange, A.; Toledo, N.; Nuseibeh, A.; Mikhieieva, O., 2017).



The EuroMPM consortium believes in the benefit of Master's education in project management. The goal is the combination of three aspects:

- Students should learn the necessary knowledge about processes, methods and tools for project management. They learn about relevant side aspects like leadership, business administration and IT. This knowledge is at the edge of the advancement of the body of knowledge in project management. It comes from the latest research in project management.
- Students are using and practicing processes, tools and methods as much as possible during the semesters. By doing this and by being trained and coached they develop the required skills. Therefore, they are exposed to project situations. This is only possible to a certain extent since academia cannot provide a full real world project scenario. Nevertheless, providing as many real world project management experiences as possible is an important goal in EuroMPM. The international classroom, the industry cooperation and the projectized didactic approach support this goal.
- Students and researchers jointly work on analysing, interpreting and discussing the observations during the participation in the EuroMPM programmes. Students are introduced to scientific methodology and ongoing research. By doing so, they develop the attitude and ability to perform a scientific reflection of project management and to develop new scientific findings. Graduates from the Master's programmes can continue the scientific working into doing a Doctorate at several of the partner universities.

Therefore, Master's education in project management is filling a very relevant gap in the development of excellent project management experts. It bridges the gap between practitioners and researchers, between industry and academia, and between scientific theory and practical application. It defines a focal point connecting the two parallel paths of doing project management and reasoning about project management.

For the EuroMPM consortium, it is very important to understand and to find a consensus on what is the role within the international project management community. It is important to understand the role of Master's programmes in project management and to know the capabilities of such programmes. We need to know what we can do and what we cannot do. Apart from the work in project management research and education the consortium wants to find answers to the following questions:

- What is a Master's programme in project management? What competencies can be delivered by conducting it? Why Master's?
- Why should we do Master's education in project management? Where does it help?
- How can it contribute to better project management? What can be achieved in education? What can be achieved in research?
- What are the capabilities of the programmes and of the consortium?
- Which outputs can be delivered? Which outcomes can be achieved? And what impact does it have?
- What other things can be delivered apart from educating students? How can it contribute to the body of knowledge?



Answering these questions leads to the core questions: What are the capabilities of the EuroMPM consortium? How does it work? What can be achieved by the consortium? How is it organized? It is the question for the organizational DNA of the EuroMPM.

Organizational DNA

The concept of the organizational (or corporate) DNA was developed to find a description (or a coding/phrasing) of the core characteristics, capabilities, behaviours, structures and motivations of an organisation. The idea of the DNA is to separate what an organisation is learning (like a brain) and what is already inherent or embedded into an organisation (like a gene or DNA).

Neilson, Pasternack & Mendes came up with the concept of an organizational DNA which is using four bases: structure, decision rights, motivating factors, and information (Neilson, G.; Pasternack, B. A.; Mendes, D, 2003).

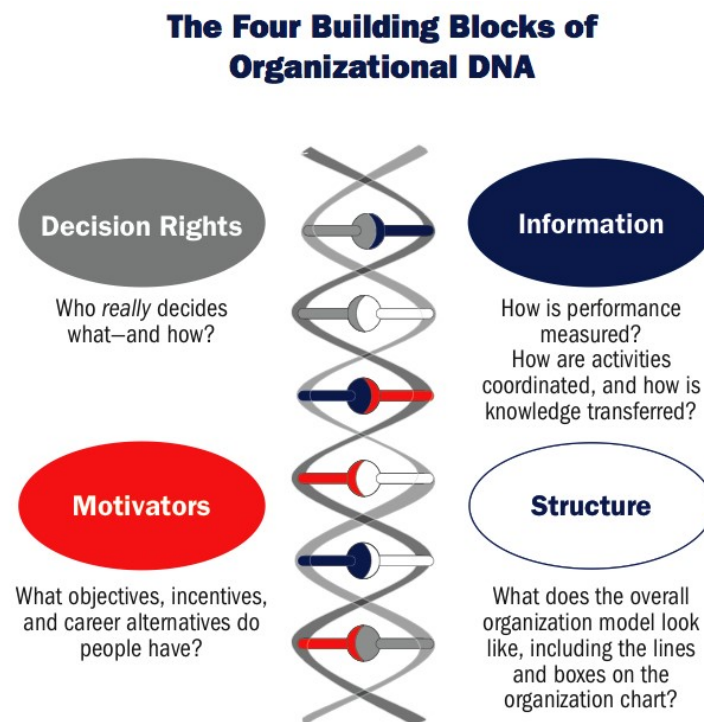


Fig. 3: Model published by Booz & Company

Source: Neilson, G.; Pasternack, B. A.; Mendes, D., 2003



The idea is to describe the basic processes and principles embedded into an organization by grouping them into four areas which describe a stable core causing the behaviour and capabilities of the organization. In addition to the four “formal” bases (building blocks of the DNA) the four “informal” bases are added: norms, commitments, mindsets and networks. They correspond to the “formal” bases in pairs: decision rights – norms, motivators – commitments, information – mindsets, and structures – networks.

This forms a comprehensive model describing the underlying cause-and-effect mechanisms embedded into an organisation.

- Denervaud & Chatin re-phrased the four organizational bases for innovative organizations (Denervaud, I.; Chatin, O, 2011). The initial concept of Neilson, Pasternack & Mendes did not reflect the dynamics of an innovative company since it was focussed on stable and longer-lasting aspects. For the innovative company, the four organizational bases are:
- Actors are the people involved in the innovation process in an innovative company.
- Ideation is the process of idea generation and communication.
- Emotion is a broader concept than the motivators proposed by Neilson, Pasternack & Mendes.
- Collaboration describes how people work together in the innovation process.

Denervaud & Chatin added factors that may mutate organizational DNA (innovation as change):

- Discontinuity is a very important driver for new ideas since really new ideas describe the end of a continuous development process and the start of a new process.
- Traditional (or historic) playing fields are the environment where the organizational DNA is developed and coded.
- New lands describe the factor of disruption by defining horizons which introduce completely new findings. Reaching a horizon opens the path for something innovative.
- Finally, individuals may alter the organizational DNA by bringing in their own, new DNA.

Neilson, Pasternack & Mendes as well as Denervaud & Chatin focus in companies as a specific type of organisations. Nevertheless, some of the aspects apply to other organizations, too. Christensen & Eyring used the concept of organizational DNA to characterize innovative universities (Christensen, C.M.; Eyring, H.J, 2011). The description helped them to understand and to communicate how two American universities developed themselves into very successful higher education institutions by leveraging on the strength incorporated into their DNA. By understanding the competitive advantage coming from their past organizational development, the two universities were able to develop their own profile and to position themselves as successful players within the higher education system.

The European Qualification Framework - EQF describes the competencies and qualifications connected to eight standardized competence levels. With the description of competencies based on knowledge, skills, abilities and attitudes, the EQF provides a code for competence profiles. A competence profile on a certain EQF level can be considered as a part of the DNA of the respective person. The DNA of a higher education institution (HEI) has to reflect the



competence profiles of the people which are educated. The DNA of a Master's programme has to be aligned with the DNA of the graduate (in terms of competence profile).

Competencies are a big topic within project management education. They form foundations of the respective PM standards and they are the basis of PM certifications and study programme accreditations. The competencies connected to the EuroMPM have been a research topic for the consortium for many years (Wolff, C.; Otegi, J.R.; Bushuyev, S.; Sachenko, A.; Ciutene, R.; Hussein, B.; Torvatn, T.A.; Arras, P.; Reimann, C.; Dechange, A.; Toledo, N.; Nuseibeh, A.; Mikhieieva, O., 2017). Therefore, the competence profiles are based on a consensus of the consortium and form a part of the DNA of the EuroMPM.

In the context of accreditation and re-accreditation of the Master's programmes of the EuroMPM consortium and in connection with funding applications (e.g. Erasmus+), the effectivity and efficiency of the programmes and the work of the consortium is researched and analysed. The analysis considers the direct outputs delivered by conducting the Master's programmes (e.g. modules which are evaluated with surveys amongst students), the outcomes of the completed programmes (e.g. graduate point of view) and the impact of Master's education in project management for industry and society. Connected with the input to the programmes (e.g. teaching hours) in cause-and-effect chains, this forms a result-oriented monitoring (RoM) based on the iooi method (input-output-outcome-impact) (Wolff, C.; Mikhieieva, O.; Dechange, A., 2017). Reviewing the iooi of the EuroMPM gives further information for the description of the DNA of the EuroMPM.

Proposing the EuroMPM DNA

Thinking about the DNA of EuroMPM means to develop a conceptual model for the DNA of a Master's programme in project management and to apply it to EuroMPM.

The starting point should be the definition of the "bases" of the DNA. These are the categories with which the EuroMPM can be described or defined. A proposal inspired by the different existing models could be the following:

1. **Educate & Teach PM:** The core motivation of the Master's programmes of the EuroMPM is to educate students to become competent and successful graduates according to the requirements of EQF level 7. Graduates should have some of the competencies defined in the different PM standards in order to do project management. In addition, they should be competent to use scientific methods to reason about project management and to develop new scientific findings. Apart from the students (and graduates), the actors of the EuroMPM are the teachers and scientists. The way how and what we teach and how and what we learn is part of the DNA of EuroMPM. The didactic model and the learning and teaching formats are part of the DNA, too. New lecturers, scientists and students (but also new industry lecturers, visitors, etc.) are the individuals which innovate and develop the DNA of EuroMPM. The people who learn and teach are committed to the programme and community. They share the vision and values of EuroMPM.
2. **Research about PM:** the scientific work in the field of project management is an important part of EuroMPM. The consortium members intend to contribute significantly to the



development of the scientific body of knowledge which forms the basis of their teaching and education. To offer students access to scientific work, they need to get involved into scientific work. Furthermore, in addition to the Master's students and as a path for continuation, the work of the PhD students of the EuroMPM consortium is an integral part of the overall concept and the DNA. The research activities form the link and information flow about project management within the community. The joint work forms the common mindset about project management and how Master's education in project management has to be delivered. This forms the ideation process of the EuroMPM consortium. New lands are (for example) discovered by researching about the impact of the digital transformation, sustainability or new PM paradigms like agility. The ability for own scientific work is a distinguishing factor for EuroMPM compared to the efforts of associations, professional bodies, training centres and industry practitioners. EuroMPM contributes to the world-wide PM community by bridging the gap between science and application.

3. **Build a PM expert community (internal view):** The EuroMPM consortium with its lecturers, scientists (including PhD students), students, graduates and industry practitioners forms a large and influential expert community. The model of the virtual, cross-border Master School with the exchange of students and lecturers, the education and collaboration formats, and the intensive interaction due to the annual events forms a kind of structure for this community. Double degrees and recognition of credits, curriculum alignment for accreditation, agreements on the syllabus and the body of knowledge, a joint language of PM science, and (last but not least) a common sense about how to collaborate and interact are important ingredients for the DNA of EuroMPM. This community is the playing field where the EuroMPM is developed, discussed, challenged and brought to life. Understanding the power of the consortium and playing to its strength will be a key to the success.
4. **Shape the PM world in Europe (external/ impact view):** For a quite informal and self-organizing community it is probably most difficult to describe the own philosophy, the values and the ultimate goal. Nevertheless, this kind of reflection is an important part of the definition of the EuroMPM DNA. Since the consortium is not a formalized organizational structure (with even no formal membership), the decision rights and norms are not codified. Decisions and norms are based on a common sense, agreement and understanding amongst the members of the consortium. It is based on a common view on PM and EuroMPM which is derived from a similar view on underlying principles. EuroMPM has the word "Europe" in its name. The consortium members come from (or to) the cultural space of Europe. Their efforts are driven by beliefs and motivations – meaning by their emotion. This emotion about how things are or should be is the basis for many informal organisations. People share the same view and strive for impacting reality by joining forces. The EuroMPM consortium wants to transmit its view on project management in the 21st century and in Europe. The common ground is a belief in fact based decisions, in equality and humanity, into the philosophy of enlightenment, in the rule of law, into European values, into international and transnational cooperation, into the European principles of higher education, and into the principles of science. This view is not based on the assumption of superiority (since European values include the responsibility for colonialism and imperialism, for example) but on openness and curiosity towards others. Such values are important for the EuroMPM consortium in terms to be able to describe the impact which the EuroMPM wants to have on the PM community, on industry and society, and on Europe and the world. Shaping the PM world in Europe means to innovate, to change (which involves discontinuity), to steer and to



influence. To tell others where to go, the EuroMPM people need to know where to go for themselves first.

Implications for the development of the EuroMPM

A joint formulation of a EuroMPM DNA can help to derive decisions and strategies from it. This can form the basis for the further development of the EuroMPM in a goal driven, structured process. Taking into account that the EuroMPM consortium is not a formal organization but a self-organizing system of independent (and sometimes contradicting) organizational units (the Master's programmes and universities), it is difficult to set up formal decision processes. Therefore, a joint strategy has to be based very much on joint views which have to emerge in discussions and which have to arrive at a kind of consensus. With a consensus about what the EuroMPM is and what it should be, a strategical analysis can identify the relevant areas for action. Connected with the different bases of the DNA and the description of the respective characteristics, a SWOT (strengths, weaknesses, opportunities and risks) analysis can be formulated. It is the basis for the further steps. Goals are derived from the opportunities, taking the strengths and weaknesses into account. For the risks, counter measures and mitigation measures can be defined.

With an action plan based on the SWOT the consortium can work on the implementation of the actions. This involves (for example):

- Working on the Master's and PhD programmes at the partner universities.
- Developing exchange and interaction.
- Defining projects for implementation of the actions and acquiring funding.
- Attracting the right people and partners.
- Increasing the scientific impact of EuroMPM.
- Building networks and strategic partnerships.
- Communicating and marketing the EuroMPM.
- Positioning with in the universities, the HEI system and the PM community.

Working on these items is about setting up projects. Driving the development of EuroMPM is project management. Identifying the areas for development is research about project management. Therefore, thinking about the EuroMPM is a kind of meta-research about us and our work. Something, universities and scientists are very good in.

Conclusions

Thinking about the DNA of EuroMPM can be an important step for the further development and for achieving success. Furthermore, discussing and thinking about us is a motivating team experience where a consensus is an experience of success. Such a discussion forms a team spirit and leaves the consortium members with a feeling of strength. Coming back to their home institutions, they can convince others and communicate what their work is good for. Coming from a strong consortium their position is strengthened, too. This is the reason why



organizations like to talk about themselves. It's about self-assurance. It should not distract people from doing their work in delivering education and doing science on project management. Instead, it should help to become better, to have better outcomes and a bigger impact on how project management is done in the 21st century in Europe.

Acknowledgement

The EuroMPM model is based on the ideas and the work of our friend and colleague Prof. Dr. Dr. h.c. mult. Peter A. Reusch, the founder of the EuroMPM. Unfortunately, Peter passed away in October 31, 2016. His legacy is the motivation for our joint efforts to continue and to fulfil his vision.

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References

- Christensen, C.M.; Eyring, H.J. (2011): The Innovative University: Changing the DNA of Higher Education from the Inside Out, The Jossey-Bass Higher and Adult Education Series, 1st edition
- Denervaud, I.; Chatin, O. (2011). DNA Profiling: The Innovative Company: How to Increase Creative Ability in Business, Pearson Education France, ISBN 9782744075032.
- European Qualification Framework (EQF): <https://ec.europa.eu/ploteus/content/descriptors-page>, last accessed Mar 2017
- Mikhieieva, O.V. (2016): Life-long perspective in development of a project manager. Management of Development of Complex Systems, Issue 28, pp. 6-10
- Neilson, G.; Pasternack, B. A.; Mendes, D. (2003): The Four Bases of Organizational DNA, Strategy+Business, Booz & Company (33)
- Reusch, P.; Khushnood, M.; Kaufmann, S.V. (2011): Concepts on Competences in Project Management. Proceedings of the 6th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, Prague, Czech Republic, pp. 884-889.
- Wolff, C.; Mikhieieva, O.; Dechange, A.: European Master in Project Management (EuroMPM) – Joint Approach for Master Education, Proceedings of the 30th IPMA World Congress "Breakthrough Competences for Managing Change", Astana, Kazakhstan, 2017
- Wolff, C.; Otegi, J.R.; Bushuyev, S.; Sachenko, A.; Ciutene, R.; Hussein, B.; Torvatn, T.A.; Arras, P.; Reimann, C.; Dechange, A.; Toledo, N.; Nuseibeh, A.; Mikhieieva, O. (2017): Master level education in Project Management – the EuroMPM model, 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, Bukarest, Romania.