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RE-ACTING THE FUTURE

New Ways to Work: The Case of Reaktor

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1. INTRODUCTION

The future of work is a hot topic. We are constantly bombarded with news about production techniques, the development of artificial intelligence, robotics, and analytical methods that together promise to disrupt, and even destroy work in an unprecedented fashion. Medicine and biotechnology is helping us live longer, healthier lives, which contributes to the myriad of interactions linking globalisation, energy, environmental degradation, automation, consumption patterns, and economic growth into a complex system that is sure to be a source of profound changes to the foundations of our society[1]. However, what exactly should we expect, and even more importantly, what could we do now, is very difficult to point to. On a more experiential plane it seems as if work, for those who have it, is getting increasingly stressful and demanding, and taking up ever more time and resources. However, those versed for instance in longitudinal work-place satisfaction studies point out that in the light of statistics, no observable changes as regards perceptions about the uncertainty or the strenuousness of the work can be found. If anything, the working life seems to be getting more stable. A steady development of automation replacing rote tasks is just shifting the nature of work towards increasingly knowledge based, service oriented, and distributed models.[2]

In this contemporary landscape, what we do know about changes that have taken place is that 1) production teams have grown smaller at the same time as work profiles and working environments are becoming increasingly complex. 2) The role of the workers' personal skills grows in tandem with the continuous rise of quality requirements. 3) Technical qualifications have never aged so rapidly, and more and more, know-how resides in individual companies and processes. These factors together do challenge the basic principles of the way work has been organised since the industrialisation. In this situation, it seems inevitable that somehow we need new approaches and new forms of organizing that are better suited to the nature of work we have today, and if they can help in adapting to, and making sense of the potentially fundamental changes to come, that only adds to the reasons to take the challenge seriously.

In the HUVA-project we have investigated organizations that we think are the harbingers of a new way not only to survive, but flourish in this new era of work. Our main research case has been a Finnish IT-consulting company Reaktor that has pioneered a uniquely human-centric organization model. Their approach to organising has resulted from a conscious, systematic effort to break from old ways of running a business, in order to create ways of organizing that offer both high-level performance, quality in customer service, as well as worker satisfaction and fulfilment. It is due to these factors that Reaktor has been repeatedly chosen to be the best place to work, not only in Finland, but also in Europe[3].

In this report we present our study and its findings. First, as motivation for our study, we contextualize the on-going change into the historical shifts that have influenced organizations in the past, and

then try to give shape to the current emerging era with the demands, and opportunities that shape organising as a human endeavour. In chapters three to five we present our study in detail: the research settings, and the results we found, as well discuss our interpretations of them. At the end of the report we will conclude with recommendations to other organizations that would like to learn from Reaktor's way of operating.

The guiding ethos of our study has been to find solutions, and present options to the prevailing discourse on change. Instead of focusing on the threats posed by the technological advances to our way of life, we want to highlight the opportunities for more meaningful interactions between people, and a more direct relationship between the work and its contributions.

1.1   The Big Picture: What are organisations, and how are they changing?

An organisation is a concept that came to a wider usage at the beginning of 1900s, when modern organisations emerged. The term organisation refers to social systems that are sub-systems of a society, like corporations, churches, armies, and so forth. This way, organizing is often thought to be a derivative process of modern division of labour. There are several potential lenses through which to look at an organisation, but most of them are related to the benefits attained by organizing. These can be products or services produced by an organisation, or on a more abstract level, social functions such as belonging, membership, or the creation of order that follow as by-products of organising.[4]

Historically, the main phases of thinking about organisations can be illustrated by way of assigning them metaphors[5]. In the first wave of organising, the guiding metaphor was machine. This scientific management approached workers as machine parts, who each had a certain function in the overall machinery. It was crucial for the successful functioning of the organization that the workers were under control: that they did not stray away from the precise acts that constituted their tasks. A good worker did exactly what was asked, without mixing personal feelings, ideas, or human relations into the process. Monetary rewards in the form of salaries were thought of as the primary motivation to do the work.[6]

Of course, the machine metaphor was highly unrealistic in describing the actual processes by which organizations functioned. A more accurate picture started to emerge as a result of a series of studies, started in 1924 at the General Electrics' Hawthorne factory, where the effect of psychological factors on productivity increasingly became the main focus of investigation. The revolutionary findings that pointed to the importance of human factors first came about in a study that had as its goal to improve work efficiency by optimizing the lighting conditions in the factory. There were three conditions that were tested: at first the light was made brighter, then it was dimmed, and as a control the lighting was returned to the level where it was at the outset of the experiment. What at first puzzled the researchers was that with each modification, regardless of the direction, work efficiency improved. As the physical

conditions clearly did not explain the improvement, explanations had to be sought from the psychological effect of the researchers paying attention to the work being done. After this initial breakthrough, research continued to explore how the workers' experience of the organisation affected work. This line of research known as the Human Relations School, also revealed the intricate connections between workers, sometimes leading to an entire "shadow organisation" within the organisation to take shape. These unofficial organisations can have aims, processes, and social rules that are completely different, even contrary to the official ones. In the light of these studies, organisations increasingly became viewed as living organisms, formed and modified by the people inhabiting them. It became clear that mechanistic descriptions of an organisation lack explanatory power as they forego central elements of the reality.[7]

After the initial understanding that organisations need to be approached as systemic entities, this approach has proven fruitful in developing theories about how organisations could optimally function as learning, knowledge processing systems[8]. As human communities, they can also be perceived as cultures, which adjust to their environment by specialization of work and by passing on collective knowledge through values, beliefs, and customs.[9]

Different types of organisational structures have been developed to facilitate the implementation of these new ideas emerging from organisation theory. The problem, however, from the point of view of our study, has been that there is a mismatch between the theories encouraging self-organisation, empowerment, and emphasis on the individual capabilities and collective control, and industrial age organisational thinking. The issues new organisational logic is questioning include the hierarchically layered division of labour, centralized planning of activities, and a strict command-and-control –structure for implementing them, as well as the dominant understanding of work as an inherently un-motivating activity, requiring externally applied, individual motivators.

In new kinds of organisations that we have studied, employees are seen as capable, knowledgeable, and responsible individuals, whose aim is to perform their best at their work. Professional self-guidance is based on a basic human need to learn, develop own skills, and help the community to succeed. The difference between the two approaches is very close to what organisational scholar Douglas McGregor already in 1960s formulated as the main, mutually opposing worldviews in management: "Theory X" and "Theory Y". Theory X emphasises the importance of strict supervision and external rewards and penalties, while in Theory Y job satisfaction is seen as central motivator, and workers' creativity in approaching their tasks is encouraged.[10]

The change in attitudes towards work from theory X towards theory Y has started on a large scale in 1990. During the last ten years, a myriad of terms have spawned to cover new types and forms of organisations, as well as the type of leadership that is needed in to support them. These include the fractal organisation, low-hierarchy, self-organisation, cultural leadership, distributed leadership, narrative leadership, lean-philosophy, agile, lean, etc. What these new concepts are trying to express are

changes in our perceptions of work, ways in which we understand control, and our ways of communicating and interacting with our environment.

Typical of these new kinds of organisations is the tendency to replace top-down hierarchical management and control with social peer control. Practices, like giving way to titles, and replacing them with names is a symbolic manifestation of this. This more organic approach to organisational existence is also underlined by omitting the need to formulate a vision for the company. Instead, what novel organisations typically aim for is a purpose, an entirely different approach to direction setting. With the combination of purpose, and capable individuals in the organisation, relevant action is expected to follow as consequence of shared values and practices.[11] Organisational purpose is driven and guarded by its culture, which is the most valuable asset an organisation can have. A sign of this is that increasingly, the people that would be CEO's of modern organisations, see their primary role as culture guards, or coaches, and as their most important task to create an environment that the employees do not want to leave[12].

In a nutshell, the change has to do with the all the classical dimensions of management: control, direction setting, decision-making, and management of organisational activities. In addition, it takes on more fundamental relations like the relationship between the organisation and its surroundings, and its guiding principles are transparency, openness, human centeredness, and professional identity.

Table 1. Delineating the great paradigm shift.

Classic scientific management	New school of management
Focus on processes	Focus on people
Hierarchies	No formal hierarchies, meritocracy
Obsessed with success	Learning from failures
Using known remedies	Finding new remedies
Immediate action	Immediate reflection
Enforcing uniformal behavior	Encouraging different opinions
Bias towards experts	Empowering employees to use their experience
Future as projected visions and plans	Allowing room for self-organization
Control mechanisms, leaders and managers	Values, culture, collective control
Planning	Future as emergent, ever-present, multiple-ontology space
Motivation by external motivators	Internal motivation

What is self-organisation, and how does it work in practice?

A common feature to modern organisations is reliance on team based organising, where the entire organisation is divided into autonomous teams. A team is a small group of individuals with complementary skills, committed to a common goal and a shared way of working. A team considers itself jointly responsible for the outcome of the performance. A well working team enables a joint effort that exceeds the abilities of any individual in the team.

A team is considered to be self-managed when it possesses the ability to plan, perform, oversee, and assess its own functioning. A central requirement for self-management is that the team as a collective need to create a model for shared leadership, where the members of the team agree on being led by each other, and each member also commits to providing leadership to others. Groups create social rules that enable the organizing of work in the team

Sawyer[13] investigated factors related to the creative flow-mode in performance art groups. He lists the following elements as contributing to effective and creative problem solving:

- openness and flexibility
- being present in communication situations

- attention and concentrating on the task at hand - independence of working
- altruism and equality of team members
- knowing one's colleagues
- constant discussion
- carrying forward other team members' ideas
- permission to fail

As we can infer from the listing, creative group behaviour requires behaviour that is traditionally more typical in informal situations, e.g. in family relations, than in the working place.

The philosophy of continuous improvement (Kaizen) and lean management model

Kaizen is a Japanese approach to manufacturing, inspired by an American consultant William Edwards Deming´s work as part of post-war efforts to rekindle the Japanese industry[14]. Meaning simply « improvement » in English, Kaizen is typically interpreted as a workplace philosophy aiming at continuous improvement and removing waste from the process. Kaizen is based on a four-step cycle: *plan, do, check, and act,* where each individual is encouraged and mandated to stop moving the production line when a fault is detected. In the case of abnormalities then, together with a supervisor, an immediate solution to the problem can be suggested, and the problem solved immediately without causing further problems in the process. [15]

Kaizen is an integral part of the so-called *lean* production model, gleamed from the Japanese car manufacturing company Toyota's practices. Lean is a holistic operational model for eliminating three types of waste from the production: *Muri* which means too heavy work (dangerous working tasks, too heavy workloads, too fast paced work) resulting from poor organisation, and cause of variation in the process. Muri thus refers to wasteful planning. *Mura* is the waste in the implementation of work design, and targets phenomena like fluctuations in volume, quality, and scheduling. Lastly, *muda* is waste that is discovered after the process has been run. It means variation in the output. In the original Toyota model, the seven mudas are transport (moving products that are not actually required to perform the processing), inventory (all components, work in process, and finished product not being processed), motion (people or equipment moving or walking more than is required to perform the processing), waiting (waiting for the next production step, interruptions of production during shift change), overproduction (production ahead of demand), over processing (resulting from poor tool or product design creating activity), and defects (the effort involved in inspecting for and fixing defects).[16] In later interpretations, also additional mudas have been suggested.

Agile management model and the Agile Manifesto

A related, yet completely separate concept is the Agile software development concept. Agile methods are a set of principles aiming at lightweight development of software. Key features in any agile methodology are *adaptive planning, evolutionary development, early delivery, and continuous improvement,* and a *rapid and flexible response to change.* Agile methods were developed as a counterforce against the so-called waterfall-methods, which were experienced as too regulated and micro-managed.

Agile methods were summarized in Manifesto for Agile Software Development[17] by 17 software developers, who convened together to discuss lightweight methodology. It states the following as elements of Agile:

- Customer satisfaction by early and continuous delivery of valuable software
- Welcome changing requirements, even in late development
- Working software is delivered frequently (weeks rather than months)
- Close, daily cooperation between business people and developers
- Projects are built around motivated individuals, who should be trusted
- Face-to-face conversation is the best form of communication (co-location)
- Working software is the principal measure of progress
- Sustainable development, able to maintain a constant pace
- Continuous attention to technical excellence and good design
- Simplicity – the art of maximizing the amount of work not done – is essential
- Best architectures, requirements, and designs emerge from self-organizing teams
- Regularly, the team reflects on how to become more effective, and adjusts accordingly.

Scrum

The agile methodology has been popularized by several conceptualizations, perhaps most notably Scrum, which was initially documented by organisational researchers Hirotaka Takeuchi, and Ikujiro Nonaka, who introduced it as a form of *"organizational knowledge creation, [...] especially good at bringing about innovation continuously, incrementally and spirally"[18].* The word "scrum" comes originally from the game rugby, and describes the moment when the ball is cast out onto the field. In management it draws attention to cross-functional teams who together strive to bring out the results, in a way that resembles rugby players collaboration that shuffles the ball across the field, towards the goal. In scrum the work is divided between the team members. The method is facilitated by three key roles: product owner, who represents the voice of the client, development team who do the actual development work, and scrum master, who acts as the facilitator in the process. Scrum process is clearly presented, the method is standardised and licenced, and due to these factors it is currently probably the most common procedure for adopting agile methods into organisational work.

Nevertheless, no process can provide competitive advantage and drive persons, teams or organizations to success as such. What are the true driving forces of the most successful dynamic teams? What makes them more successful in comparison to the average Scrum Master playing according to the rule book? Many have tried to apply similar agile principles, but failed if the underlying values and way of thinking have not profoundly changed as well. Decision- making is sometimes chaotic, non-rational and based on feelings. In order to dig deeper and uncover some of the true reasons, we needed to spend time with the teams, observing them in their natural working settings and experiencing the mundane everyday routines, highs and lows of the success and drawbacks as an "invisible fly on the wall" team member. Furthermore, in order to manage this transformation and make the path less bumpy for the followers this report includes a few hints how to make small steps from current way of working in a traditional organization into practices required in the emerging sixth wave.

"Adopting different management methods requires an acceptance that there is something to learn from other cultures, followed by a commitment to understanding the philosophy before the practice"[19]

2. THE RESEARCH QUESTIONS: WHAT DID WE STUDY?

In this report we present a case study on Reaktor that had as its aim to understand novel working cultures from within, as a field study in informants' natural setting. Our aim was to identify behaviour, motivation, attitudes and perceptions in the work setting. We wanted to find out how a successful company, where the employees function without hierarchies, titles, or for example budgets, are able to function efficiently. How the tasks that in a traditional organisation would be assigned managers, controllers, and administrators, are dealt with? How is this unorthodox operational mode received by the clients? But most importantly, we were interested in why this company is so highly regarded both by its current, by also potential employees. What motivates people to grow and develop in their work, and use their whole potential productively for the betterment of the company? And what kinds of explanatory principles could we find that also other organisations could benefit from in their development work?

In our research the focus was on investigating the functioning of the teams. How does the organisation facilitate the teams and organisation wide networks to function and flourish? How are resources and workload divided in teams? How is the communication (intra-team and inter-team) facilitated?

In our research we were especially interested in issues related to communication and interaction. Under genuine uncertainty, an increasingly important skill for an organisation is to unlearn goals, habits and skills that are no longer relevant. The locus of information processing in an organisation is shifting from collecting information to discovering it, and this brings about also an epistemic shift from objective to subjective conception of knowledge. Hence, the processes of information transfer become increasingly a matter of inter-subjective communication. In this kind of reality, rather than think about information in terms of information retrieval and transfer, the whole organisation, as well as its connections to other systems are best understood in terms of information.

A socio-cultural approach to analysing teams emphasizes a holistic perspective towards the communication processes affected by emotional factors, as well as the team members' relationship to the surrounding cultural environment, artefacts, and technologies[20]. We were interested in how the teams are able to use the kinds of resources that typically in organisations are subdued, or not considered desirable. Especially the expression of emotions is often shunned in the rational ideals of the workplace. However, research has pointed out the importance of emotions in e.g. decision-making[21] and creativity[22]. In a similar vein, the surrounding environment has traditionally been perceived as a mere hygiene factor in the workplace. In recent research, however, also this has been identified not only as a motivating factor, but also as an important resource for cognitive functioning of the organisation.

What if there were no bosses?

In non-hierarchical teams the individual employees are given responsibilities and power to develop services further as they see best. The management's role is to facilitate the development and remove obstacles if such arise. By observing dynamic teams that consist of about 10 people for half a year, we identified underlying driving forces that make this kind of teamwork possible and effective. One example of driving factors that goes beyond the daily routines of agile project management or scrum techniques is pro-social motivation − the desire to benefit other people[23] in this context meaning the employees level of emotional intelligence, instrinsic motivation to help the team members and clients, as well as the teams' collective ability to take into account feelings. Daily and weekly routines that facilitated meaningful discussions in order to anticipate future frustration points in the service development process as well as deal with the potential problems in a constructive manner helped the team to perform well and innovate new things in a pro-active manner. In the most successful teams, social pressure also exists as a driver for constant better performance, which sometimes may even exceed the level of performance the management would set as a goal. Employee emotional intelligence has recently been identified even as a stable predictor of customer satisfaction[24].
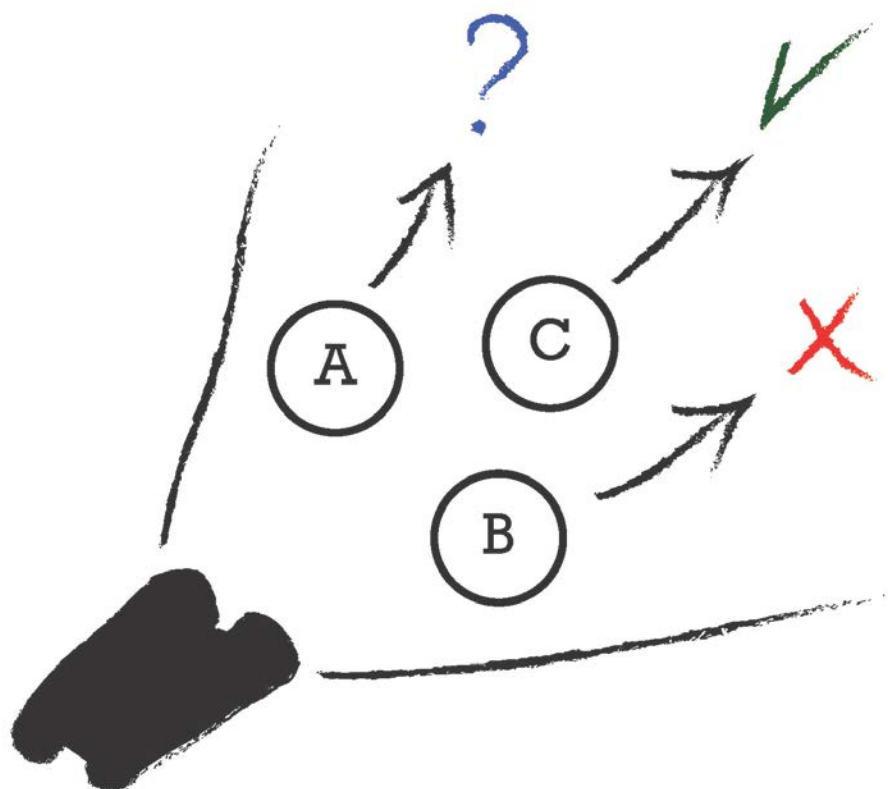
3.   METHODS: HOW DID WE STUDY REAKTOR?

The research group consisted of four researchers, Markku Wilenius and Sofi Kurki from the Finland Futures Research Centre, University of Turku, and Minna Pura and pro-gradu thesis worker Mary Meinander from Hanken. The research was conducted during Spring/Summer 2015 when Pura and Kurki observed three different Reaktor teams in situations of client interaction, informal company gatherings and personnel interaction. Wilenius conducted key informant theme interviews within Reaktor, and Meinander interviewed big organizations here represented by Reaktors' client organisations' personnel. As a result were a multi-faceted collection of observations that give a balanced view to the function, values and goals of Reaktor.

Ethnographic, non-participatory observation was chosen as the main research method as it helps reveal both conscious and unconscious activity in a natural setting. The advantages of the method include its ability to give deeper knowledge about the construct of reality amongst the observed, unveil important details about the social interaction, and help to understand interaction and relationships. Ethnography searches for fragments of processes how things work within development teams in organizations that are not easily detected with other methods[25].

The unstructured observation is well suitedin innovation context, where flexibility is needed to shift focus, pursue emergent aspects of the phenomenon as well as investigate a variety of issues simultaneously. The unstructured observation is a "means of discovery" forming insights into phenomena.[26] Real-time ethnographies help to understand better controversies, tensions and fissures provoked by the alternative development paths, political processes involved in making decisions and discarding options during innovation processes.[27]

The observations took place in March-June 2015. The observed situations were recorded, and certain pre-selected events were also videotaped. For the ethnographer, the challenge is nowadays to capture organisational practices when the organisational members themselves rely on various technologies to communicate and work with one another. Systematic tracking of e.g. internal chat discussions in relations to face-to-face observation at one location helps to identify the critical situations when decisions are made in teams and analyse what influenced those decisions.

In this research we also observed chat communication in the virtual discussion environment Slack both during the face-to-face observations and remotely, which gave us access to observe what was discussed among team-members 24/7.

We revealed our identities as researchers to all project members, but never told the details of our research questions. Observations revealed how development projects' members reasoned, negotiated, made decisions on the development, performed development activities, reviewed completed "action points" and allocated resources to perform further tasks. Virtual observation and supporting material

such as history of internal chat discussions, or e-mail groups helped also to capture the decision points whenever and wherever they occurred. Interviews in big organizations were conducted in June – September 2015 and revealed conscious motivations in the interactions between team members and client organizations.

4.   RESULTS: WHAT DID WE FIND?

Case Company Description:

Reaktor was founded in the year 2000, with 10 founding members. The guiding aim of the founders was to form a company they themselves would like to work in: focusing on doing good work on interesting projects, and minimizing unnecessary office bureaucracy. From its beginnings with just a handful of employees, Reaktor has grown to a company that has 360 employees, and 43 million euros in turnover in 2015. The size has over doubled in the last three years from under 150 to its current size.

Originally Reaktor's focus was solely on technology and it sought after only experienced developers to its teams. However, it has since broadened its functions to better respond to market needs, and now self-describes itself as a creative technology firm that combines "code, user-experience design, visual design, concept design, analytics, content planning and growth hacking".

Agile working methods and lean philosophy form the core of Reaktor-practices. Many employees have scrum-master certificates, and in the daily practice the agile principles are quite carefully applied.

Reaktor has a policy of not paying their personnel by performance. Instead, if the company has enough profits, all get a similar sized bonus. At the turn of the year 2016 Reaktor opened its ownership to all its employees (previously it had been owned by about a dozen long-time employees). Reaktor states it has a strategy time span of 200 years.

The Agile-method provides a blueprint for understanding structure at Reaktor, but the culture is not reducible to the philosophy alone. In this report we will bring to fore observations that directly relate to the agile way of working, yet the reader is advised to look at these practices in the context of how these specific methods and tools have influenced and helped shape the holistic way of thinking and acting at Reaktor, as manifested in our observations.

In the life of a Reaktor team, the Agile method is present though rituals, such as the daily, which means that the team gathers together to start the morning by examining the current state of the project. Acute tasks are presented on the wall with post-it pads, along with indicators of who of the team-members is responsible for/working on what. The benefits of the procedure include keeping visible track of the progress as well as helping to build next steps as a team, visualizing the project to the client (whose representative often participates in the daily), helping to prioritize tasks, and allowing each team member to focus on one thing at the time. In the daily, everyone participates in planning and reflection of how things could be done even better, and what needs to be taken into account while proceeding.

At the end of the week teams have a "Retro" session, in which the team reflects upon the past week on a more general level, as well as processing issues related to team dynamics, and practical matters.

Teams also present their work to a larger client audience as forms of "Demo sessions" and occasionally with a more formal meeting where members of the team, client, and Reaktor headquarters representatives discuss on the project on a more strategic level.

4.1   How Reaktor operates

"Being self-organized simply means that our teams have the freedom to choose how they work, observing any conditions set by the client or the project itself. To reach and enact a decision, the team doesn't need to consult our executive group or anyone else from the head office. In fact, the main function of the head office is to facilitate the work of our teams by means of financial management, sales, recruitment, and administrative support...Indeed, one way to think of Reaktor is to consider a group of networks, or links between people without an imposed hierarchy. The more links between people and the stronger these links are, the stronger the network becomes." http://reaktor.com/blog/how-reaktor-grew-without-hierarchy/

At Reaktor, power and responsibility about a project reside in the team doing the work. The teams work autonomously of the headquarters, but get support if needed. HQ also acts as a community platform, where informal interaction with all the other Reaktor employees is happening (this is also actively promoted, and people are encouraged to get to know each other).

The teams are relatively fluid in terms of membership: new members are appointed and old members shift teams during the project.

The teams do not have roles (team leaders etc.), but everyone does everything. There are differences in professional expertise, but all participate as equals in team dynamics.

The project work is based on communication: consulting the colleagues both in the team and through virtual channels (support and expertise from colleagues in other teams is readily available and volunteered). The teams work directly with the customer. People, whose opinion is needed are contacted directly, not via their superiors. Direct communication is preferred over meetings. Projects typically produce little written documentation but there are extensive information sharing resources, are the teams actively seek out feedback from the clients, and from each other.

Conflicts and issues are mediated primarily within the team by the team members. Reaktor has at its disposal external facilitators who can be used to help, and also Reaktor employees have been given facilitator training.

Decisions about the project are done by individuals in the teams. As a basic rule, one can make a decision after consulting colleagues. One does not have to take the advice of the colleagues, but it is mandatory to ask for feedback before making a decision.

4.2   Environment, extended organisation

Reaktor teams work in their clients premises, but at the outset of each project they claim a space for their work by bringing in their own tools, but also additional paraphernalia that makes them feel like home. Typically Reaktorians furnish their working space with coffee machines, and refrigerators (filled with beverages and snacks). On occasion they have asked walls to be removed to enable fitting people in to the same room. Screens for viewing on-line data are mounted on the walls, and pull-up bars for inter-team competitions installed to doorways.

> *On one occasion, due to security concerns, a team was banned from bringing their own refrigerator to the team room. Also coffee machine was banned because of contracts with another supplier. The team repeatedly referred to this with displeased tone, and had even started a half-joking experimental campaign to test what types of objects would pass the security screening (soda stream ok, next step gas refrigerator?).*

Client team representatives were often observed casually popping in for a soft drink, nuts, or other Reaktor hospitalities.

The homely feel created in the working spaces is highlighted by the informal dress code of the Reaktorians. They often wear company t-shirts, and some go barefooted. The teams refresh during the working day with coffee and tea breaks (coffee being "the thing" at Reaktor, but also tea drinkers have their own community). One of the Reaktor principles is that longer than eight hour working days are not encouraged.

> *A strict insistence on the need to have private time was evident when a team member was going on a holiday in a tight spot of a project, and volunteered to be available for short tasks during his vacation. This was politely declined. "Don't worry, we will not be calling you".*

Reaktorians form a tight community but one that extends beyond the official borders of the company. In recruitment, having "passionate" hobbies and active lifestyle that go beyond the professional identity are highly valued qualities. Reaktor also take various initiatives to reach out to the families of the workers, by for instance arranging a coding school for children, where Reaktorians teach on a volunteer basis coding skills. Team members are also sometimes invited to team days, and significant others, relatives, and friends from outside of the organisations join the team in after-work drinks.

4.3 Emotions

> *"This is minitherapy, you can go on and continue again after going through the feelings with the team!"*

Team members often refer to what something feels like, and this is a valid argument in discussions: "I hope you are not feeling bad after this discussion. I am sorry that I got so anxious about this thing. We should take everyone into account as human beings!" In reflections the teams also try to understand the clients from the perspective of their potential emotions: "I think that the client is worried about ....". Team members are clearly aware of this dimension in the team dynamics: "We try to take others feelings into account or at least identify that such exist, everyone needs to feel comfortable as part of the team!" and they also consciously use the emotional dimension as part of their communications with the clients: "Even in the client interaction, we try to find out why they said that, we need to understand what they are worried about...what it really means, not just do what they ask."

4.4 Close Collaboration and Cultural Clashes with traditionally organized entities

Clients are part of the daily functioning of the teams. Close interaction with the client is a central part of the agile philosophy, and Reaktor teams working at client's premises has evolved into a general practice. Although the need for such a practice with contemporary technology was in discussions sometimes questioned, and even if some teams spend a number of days in a week also in their own office, working with at the clients spaces is in general accepted as a given in project work. Reaktor has a policy of always having at least two Reaktorians in a project to help them maintain the Reaktor way in doing the work. Reaktors aim at having a set-up where the team members mix freely with the client organisation's representatives. If possible, they want to have all the people who are active in the project sit in the same room, to be as available and within the communicational sphere as possible. Even if the Reaktor team had been given their own room for practical reasons, during our observation, clients came and went through the team space naturally, without raising much attention.

The clients comments about Reaktor's way of working were generally very positive and appreciative: describing it as a "Relaxing way of doing things" or "Refreshing with new ways of doing things". Several commented about how their own organisation had grown more dynamic with the example of having Reaktorians in their amidst, and there have been requests for Reaktor to consult traditional companies to teach their working method to more traditional organisations. Yet, an intimate collaboration often with two quite different set of assumptions about organisational structure, client-provider relations, and the way projects generally proceed are fertile ground for culture clashes.

As part of the HUVA research project, Hanken student Mary Meinander studied the client – provider relations and value co-creation processes in two teams for her Master's thesis in more detail to

find out how the daily life between two organisations that come from entirely different cultural settings get along. She interviewed client representatives to find out how agile practices on the part of the provider are received in more traditional corporate culture. Her main findings included the recognition that although in general Reaktor is perceived to be a reliable and efficient partner, the two cultures do indeed occasionally clash over expectations, values, and practices. As the Agile method is based on close communications with the client for instant feedback and on-time adjustments, mutual understanding about each other's way of working is of utmost importance. Based on her study, Meinander gives suggestions for both parties as how to approach a different type of culture. The main issues giving rise to uncertainty in the relationship, as well as suggestions for solutions are summarized in Table 3.

Table 2. Suggestions for how the collaborators could adapt for smoother collaboration.

Phenomenon/ issue	Adaptation/Solution	
	Customer	Provider
Who is in charge?	Try to remember why the provider was hired. Ask the provider to explain why the requirements and expectations are not taken into consideration.	Explain why the requirements or wishes cannot be considered. Give concrete and tangible reasons instead of just saying no.
Budget	If the budget and timetable are important and required, explain this to the provider already in the beginning to prevent misunderstandings.	Give at least some type of estimation. By giving even a very elementary estimation, the customer will feel much more comfortable.
Timeframe/ schedule	Try to adapt a similar type of flexibility in the other processes. If the entire firm is flexible, small adjustments in the company's processes will not destroy an entire project.	Give the customer estimation. If the estimation does not hold, explain why it did not hold. Giving the customer straight answers and explanations, the customer can try to ramp up the processes in their end.
Documentation	Rely on minimal documentation. Simply get used to the fact that excessive documentation is not a part of the work-image.	Even the slightest documentation is appreciated. Try to understand the customer organizations employees who have not participated in all meetings.
Estimation of workload and future obstacles	Create processes that are not dependent on the provider's processes alone.	Try to plan the future to some extent. If it is not possible, do not stop other processes due to lack of knowledge regarding the own timetable.
Language	Study the basics of software development in advance.	Try to explain with normal, non- software development words.
Expectations regarding tone of communication	Discuss communication in advance. If the provider is too straightforward and questions every single requirement, question back. There needs to be a mutual tone of communication.	Instead of questioning the customer without explaining why, try to explain why certain requests are not possible. If the customer is given a good reason, questions will not be perceived as neglected.

In summary, a method or way of working that has developed along the years in one company can never truly be copied to another organization. Instead, in large projects a common collaborative culture among different stakeholders needs to be created that respects different teams own values and communication culture, but still enables them to effectively work together and gain the benefits of others' expertise to co-create value together. In a similar vein, agile project management consultants have also concluded that a company needs to develop their own agile way that effectively takes into account the network of operators who have a different background and history. The organizations own way of working is defined also in e.g. procurement principles and how results are evaluated.

Meinander[28] suggests the following steps for conquering resistance to change in transformation from a traditionally managed corporation into a non-hierarchical team driven dynamic structure:

1) Employees should be given extensive briefing regarding the methods that are to be implemented. It is important to present the underlying reasons why certain actions are done as they are.
2) Documentation can be limited but not eliminated
3) Placing effort on creating good team dynamics is especially important in the beginning of collaboration.
4) Gatherings where the entire team can see the collective progression are important facilitators of team dynamics and creation of cohesion.

4.5   The Reaktor model in a nutshell

At Reaktor the success is based on trust among the Reaktorians throughout the organisation: There is a low threshold of contacting anyone in the organisation, and personal, informal relations among the workers act as facilitators to honest feedback and generous information sharing. The teams are not fixed, but members can be interchanged, and project teams are generally self-selected based on interest either in the technology or the topic. The teams have control over their work, but need to give rational justification for their actions. The whole team needs to be able to stand behind the decisions made in the team (this does not however mean consensus needs to be reached about everything).

The employees at Reaktor see a direct correlation with the success of the firm and the success of all the employees: through bonuses for everyone based on profit-making, but also on a more universal level.

> *We want to still be around after 200 years. With this group we can make it happen!*

Ownership was decided to be offered to all the employees in the beginning of 2016 (previously owned by senior employees and founders). This was generally received positively, as adding more transparency to even this part of the organisation. More than approaching it from monetary significance, the ownership was perceived symbolically, as adding more meaning to the work.

Table 3. Reaktor way as manifested on different levels.

Company says	Teams say	Teams do	Client says
Community	"Our team feels like a family".	Collaborative decision-making: everyone's opinion matters.	"Hi honeys!"
Focus on doing	"We don't book meetings".	Passive resistance to meetings practice, but seek to solve the issue immediately so that the project proceeds.	Natural and spontaneous co-operation
Empowering the teams in decision-making	"We don't want any asshole bosses" "There are no fixed roles", "The one who happens to be around will communicate with the client"	No corporate ladder to climb, team members are treated equally. Challenging the team to better performance with constant sparring and leading collective self-control: asking e.g. How effective do you think you were today?	Need to justify own opinions
Minimizing bureaucracy	"It's everyones responsibility, you don't have budgets at home either do you?"	People have the power to act immediately according to own judgement. They feel responsible. People are free to focus on what is most important.	At first confusing, but effective results
Quality work	"No flaws, let's get it right from the beginning"	Constant testing is essential, other person tests, team pressure, coaching other team members	When will things be ready?
Solely high level professionals	"we just do it", "only competence matters, not a degree"	Learning by doing, team or extended team helps: "If we don't have the knowledge, we find out together how to do it"	How can we trust?
Constant questioning of given models, even own existing practices	"How could we do it even better?" "What could go wrong?" "How do you feel today?"	They prioritise and focus on what is necessary and timely. A lot of visualization: tags who does what now, planning together before doing.	Takes time but it is important
Social fit of employees a priority	"We want to recruit active people with hobbies and interests" "How could I improve myself as a person or as an employee?"	They want to recruit the kind of people they would like to hang out on their freetime. They recruit new team members themselves. They invite family members to team gatherings.	Participating in team competitions & common hobbies
200 years focus	Fast fail	Teams focus on the task at hand.	Too much focus on instant tasks

5.   DISCUSSION

The Reaktor approach to their projects can be understood as a relentless focus on the quality of the output, and this revolves around value produced for the end-user. This goal overrides any other conflicting target. Reaktorians' culture is often quite different from that of their client organisations', and some of the features that relate to for instance the furnishing of the working spaces, or for instance the hospitality that they offer to themselves and to the clients can be interpreted as a mechanism supports the teams in maintaining their own identity, and way of thinking and functioning among what must be relatively strong pressures for complying with the host organisations practices. This interpretation is supported by a comment by one of the team members, who explained the furnishing and changing of spaces as a transition ritual that helps even the client organisation realise "something new is happening". In a similar vein, when a team's freedom to bring to their working space things that represent core items in the Reaktor working culture (own coffee machine, refrigerator), the unhappiness this caused clearly was not due to the fact that they had to walk to the cafeteria to fetch their coffee drinks and snacks. The role and attention Reaktor gear gets both from the team, as well as from the clients, is interesting also because of the different meanings the teams and the clients give it. This may be in line with the other cultural clashes that surfaced in the client interviews. From the Reaktor's side, maintenance of their own working culture and identity are key to delivering the high quality end-results they presume both they and their clients are after. For representatives of a different type of organisational culture, this decisiveness may come in specific situations as stubbornness, or high-mindedness. About the Reaktor perks comments were also divided: clients appreciated the hospitality, but at the same time regretted not "ever having the possibility to offer similar things to their own employees". It was interesting that learning in the relationships went almost solely to the direction of clients adopting practices from Reaktor. Among these are exactly the kinds of behaviours that may cause initial culture shock between different types of organisational cultures. Dynamic, adaptive, just-in-time development, and a focus on instant communication instead of heavy documentation are amongst them.

Reaktor's almost ideological resistance to more hierarchical practices again is likely to be explained by organisation's history and identity as a "countermeasure" against the types of practices that had made the founders decide on starting their own company, where things would be different.

The Reaktor-case brings about considerations about the difference between working culture, and culture in general. In western societies, the working place has become to be seen as venue where ra-

tionalist thought prevails, and there is usually a clear divide between work and leisure, between colleagues and friends, family and the work community. At Reaktor these divisions seem to be blurring in a way that is clearly different from traditional organisational culture[a].

Novel organisational cultures that put the human being in the centre as and assume that it is in everyone's nature to do well and help others to succeed are sometimes well put referred to as tribal organisations. The Japanese agile way of management has also been described as a clan-based approach[29]. The tribal ways of organizing work and collaborating in small self-sustainable entities is in use still today in many cultures. One example is the Maori are the indigenous people of Aotearoa New Zealand. Their management practices have been noted in organizational research and increasingly similar principles are used for training people across the world. Mika and Sullivan[30] summarize that Māori management is: "the systematic action-oriented deployment of resources by Māori and potentially non-Māori managers within a Māori world view (āronga Māori), to achieve purposes which are meaningful and of benefit to whānau (family), hapū (sub-tribe), iwi (tribe), Māori communities and others, in terms of both the means and ends, and which may be conducted within both Māori and non-Māori organisational contexts."

Māori management is not only concerned about what gets done (the ends) but how (the means). This is because of wider responsibilities to family, one's tribe and the environment[b].

A Māori world view brings into play aspects of Māori culture. These include: a commitment to intergenerational wealth and wellbeing; long-range planning horizons (25–100 years being common); the practice of Māori values such as rangatiratanga (self-determination), whānaungatanga (relationships), kaitiakitanga (stewardship), manaakitanga (generosity) and wairuatanga (spirituality); and the pursuit of multiple objectives – social, cultural, economic and environmental – as indicators of progress and outcomes.

Māori management sets out to benefit one's tribe and others, meaning the general community, society, and economy. Māori management is not only concerned about what gets done (the ends) but how (the means). This is because of wider responsibilities to family, one's tribe and the environment. Finally, Māori management can be practised within Māori and non-Māori organisations as a subset of what the organisation does or as an integral part of its operations. Examples of corporations managed

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[a] Reaktorians themselves are keen to emphasise their organization to be just a working place, not a "community", or a "family".

[b] See more at: http://masseyblogs.ac.nz/jpmika/2014/11/24/maori-management-a-home-grown-approach-to-managing-sustainably-in-aotearoa-new-zealand/#sthash.y619OiyX.dpuf

in this way are e.g. Tūaropaki Trust and Wakatū Incorporation. These organisations demonstrate that it is possible to make money, operate sustainably and to do this in a way that supports the Māori values.

Thus we found many similarities in the Māori management style and the way of working among the Reaktorians. Reaktors values include aspects that span across the micro to metalevel, e.g. the aim of the company is to exist still after 200 years and work in a sustainable way.
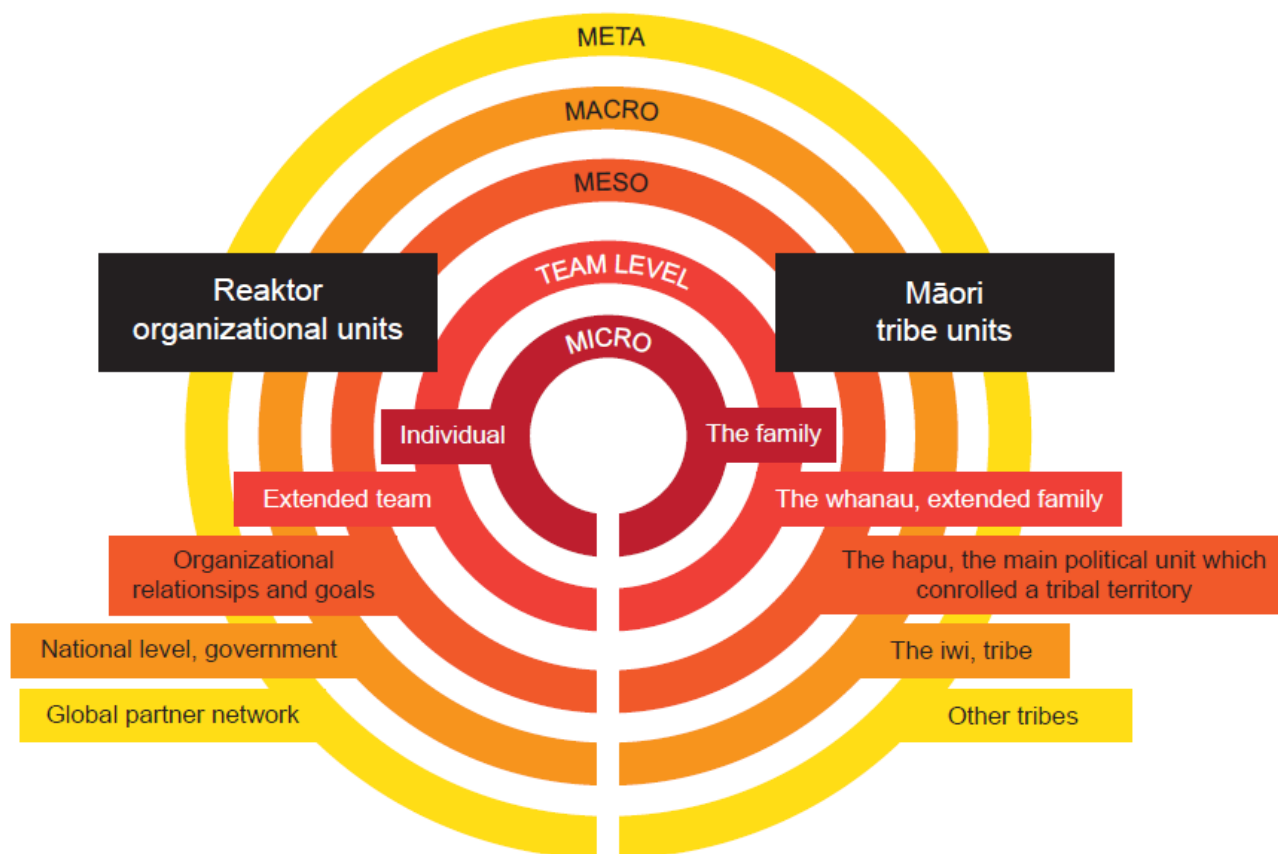

Image 1. Social structures of Reaktor and Maori society systems.

The comparison can be extended into the practices and important places in each culture:

At Reaktor, all personnel emphasize that there are no leaders or bosses, the person who knows best acts at that moment as the decision maker. However the value or reasoning behind it was not clear, the sole rational motivation articulated aloud being avoidance of previous experiences in other organizations. In Maori management culture the non-hierarchical, family like management principle based on tribal principles is called "Tautou tautou".

"We [the department of university] operate as a whahau or family unit. The managerial and leadership roles are shared. Who takes the lead depends on who is best qualified to do the job…We collectively help one another to perform our tasks. This also implies that we share the accountability of our department." (Bush and Middlewood 2009, p. 89)

Next the emerged similarities between Reaktor practices and Māori practices are presented in the figures. More details can be found in a separate conference paper titled: "Team-to-team Relationship Dynamics: The tribal team as the success factor of future organizations" by Pura, Kurki and Meinander[31].

Comparison of places & symbols

Comparison of practices

Reaktor	Māori
no shoes	no shoes
welcome	the hongi (traditional greeting - the exchange of the ha, or breath of life)
daily, demo	haka (posture dance performance)
retro	pūkana (widening of eyes to demonstrate passion and deep-felt emotions)

Some terms and wordings used by Reaktorians are summarized in the Glossary in connection with Maori words. These serve as examples of the language used during work to illustrate the aspirations, motives and values Reaktor emplyees share and consider important (see Glossary at the end of the document).

In summary the"Reaktorians"
- love their work,
- are passionate about their hobbies,
- are caring personalities with emotional intelligence and
- lead to embrace change with their own responsible example.

6. RECOMMENDATIONS FOR A NEW CULTURE

Although the Reaktor culture reflects both the field it is working in, and the people that make it up, we have distilled seven principles from our observations that we believe are universally valid bases for developing a human-centric organisational culture. We present them in the form of postulates, and then explain in more detail what they mean for an organisation.

Instead of the individual, put your focus on communities.

What does it mean: overtly individualised culture that rewards singular employers for their efforts is effective in destroying the culture and ethos of working together. Most achievements in an organisation are the result of long-term concentrated effort of many people. By building up strong working communities, one enables getting the benefits of the creative potential of all the workers. In most cases, collective intelligence is much more productive than having an individual genius in an organisation.

Splurge on beer. You'll save in administrative costs.

What does it mean: People get to know one another as they discuss in more informal settings. The richer the communication environment, the stronger the ties that form between people. Common values and norms, but also understanding about what the others know and are interested in, develop in complex interactions. If you try to obtain savings in supporting this social interaction, you'll end up lowering productivity.

Don't collect data. Use and share data.

What does it mean: Many organisations have elaborate processes for collecting multi-faceted data from their activities. Typically this is far removed from the daily practices of the employees, and sometimes no-one makes use of it. However, data is a powerful feedback method that can be used by everybody in interpreting the success of their work. Data can tell important things about what the organisation does, and with what success. It should not be locked in vaults for the board to look at for quarterly reviews, but shared with everyone, real-time.

Do not motivate with money, but with meaningful acts.

What does it mean: Many organisations hope to motivate their members by offering monetary incentives for initiatives. Novel organisations motivate people by giving them opportunities to fulfil their personal goals. Collecting ideas for improvements is frustrating without feedback about their progress in implementation. Even better than mere feedback is including and empowering the idea generators in the actual process of realizing the promising ideas.

Your client is your friend.

What does it mean: If you approach your client as a friend whose existence you want to help improve, your relationship is entirely different than if you consider the client as a trading partner for whom you want to sell your products and services to. In any working relationship it is important to understand what the other party thinks, what they hope for, and what they aim at. It is also important that both parties can trust each other so that they feel free to express their opinions and sentiments honestly. These kinds of relationships are born only if the communication is diverse, varied and rich.

Only if you're free can you truly be responsible.

What does it mean: Do you budget your personal incomes, expenses, as well as those of your spouse and your children? Do you do this on annual basis, and with very little flexibility, or so that your consider differences between reality and the budgets a major failure? If you understand where your money comes from, and where it is needed, you probably do not need strict budgets. On the other hand, even if you did budget your own expenses, this would not outsource the responsibility about them to your parents, would it?

You are married to your organisation.

What does it mean: Do you choose your personal partner based on your life situation in the next quarter, or rather because you believe this person to be someone you would like to commit to in a longer term, and you think you have what it takes to be together for the long run? In successful organisations, like in marriage, you cannot expect trust and common goals without long-term commitment.

7.   AFTERWORD

At Reaktor, the real focus that makes the organisation into a thriving community is communications: Collective knowledge is actively shared and greatly appreciated, and also knowledge and problems are shared collectively. Information is shared from the "bottom up": employees inform the higher level and they involve the highest level only if necessary.

The community's effort to enhance team spirit and dynamics is a natural part of every day. Informal networking and personal relationships within the organisations are both encouraged and also materially supported to enhance communication within the organisation. Also in line with the community focus are the physical and virtual meeting places that provide platforms for communication to take place.

At Reaktor, the employees to have a real stake at the decisions that have an impact on the work. Ownership at Reaktor is not just a metaphorical expression for commitment, but a real-life fact.

The case of Reaktor is a reflection of a larger movement breaking away from industrial conduct of organisation. In our understanding, the case resembles very well the type of aspiration people in our age are seeking from their professional life. It is our understanding, that emergence of new socio-economic paradigm, known as Sixth Wave, will fundamentally affect our leadership patterns as well as our understanding of private company's role in larger society[32].

This new socio-economic era will increasingly challenge our fundamental understanding of what is the true purpose of private corporations. In the previous waves it was common to claim that enterprises only real purpose is to increase the profits of their owners. Not so in the sixth wave. That discussion, which renowned business strategist Michael Porter and Steven Kramer started some years back, is referring to the new kind of approach, where "creating shared value" is put at the centrefold of business strategy[33]. It means, in essence, that the business goals of a company needs to be aligned with societal goals. Moreover, it means that actually societal goals (increasing health, lessening hunger, toppling inequality etc) can provide a business goal to follow.

This type of approach is very much akin to the type of world view people in this "new" wave of organisation are looking for. It means essentially, that not only this movement seeks to depart from industrial, hierarchical and bureaucratical way of organisation. It also intends to revamp the basic tenets and values on which business is based.

This is ultimately why we can call these new type of organizations as human centred organizations. They source of aspirations are those values that people as human beings appreciate everywhere in the world: honesty, recognition of other people, respect for nature. In this way, it is not primarily the seeking for profit but seeking for a right organizational culture that adheres to basic human values that becomes the most valuable asset of the company.

It is not a minor point to recognize that this new type of approach seems to be very profitable approach to business, as the cases of Reaktor, Buurtzorg or Supercell proves. This last point will obviously make it very attractive way to run business in the emerging sixth wave.
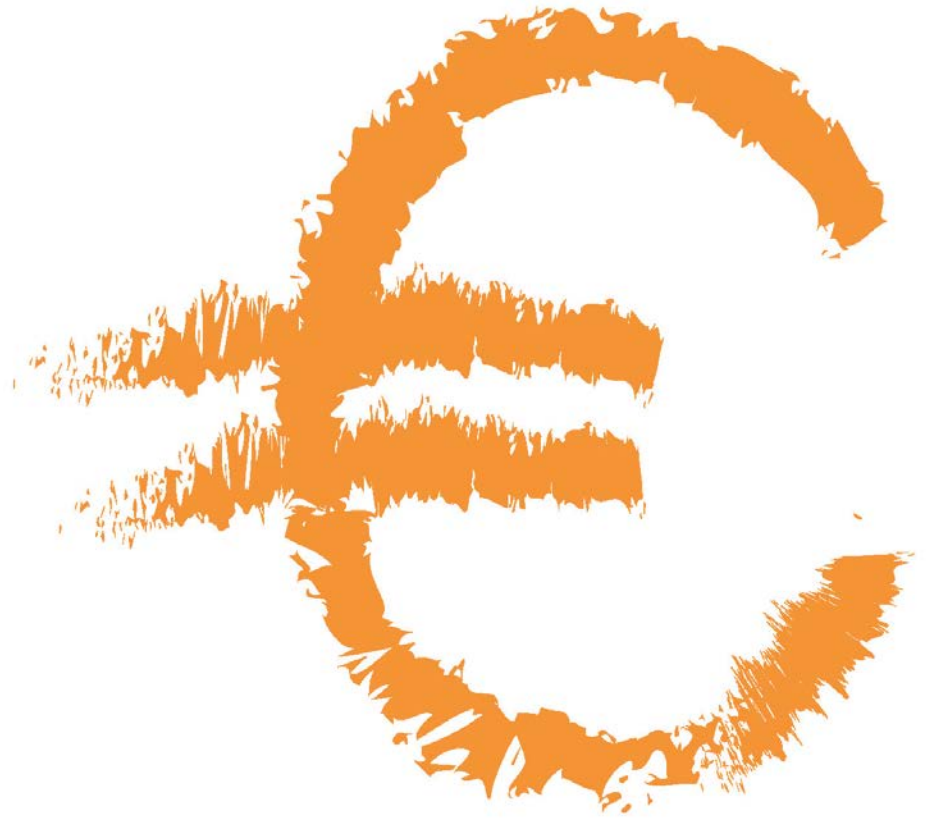
MĀORI – ENGLISH – REAKTOR GLOSSARY

(in parenthesis example words used at Reaktor in Finnish)

Aroha   Love   (intohimo /passion)

Hapü   Sub-tribe   (tiimi / team)

Hinengaro   Mental health and emotions   (fiilismittari, miltä tuntuu, miniterapia, palautekeskustelu, konfliktien ratkaisu / feeling score, how are you feeling today, mini therapy, feedback discussion, re-solving conflicts)

Kuia   Older woman   (asiantuntija, osaaja, kova koodaaja / expert, knowledge, coding expert)

Iwi   Tribe   (reaktorilainen / people who work at Reaktor)

Karakia   Prayer   (tiimin jäsen, joka on paperilla nimetty asiakkaan yhteyshenkilöksi / a team member that is named as a contact person by the client on paper, in practice there are no leaders)

Kaumätua   Older men and women   (asiakas, puhutellaan etunimellä tai lempinimellä / client spoken to on a fist name bases)

Koroua   Older man   (asiakkaan yhteyshenkilö, puhutellaan etunimellä tai lempinimellä / the contact person of the client, spoken to on first name bases)

Kotahitanga   Māori unity, shared sense of belonging   (tuntuu kuin tulisi kotiin / it feels like coming to home when going to work)

Manaakitanga   Hospitality, generosity, care, and giving   (kestitään kumppaneita ja asiakkaita, tarjotaan oman jääkaapin antimia kaikille / hospitality towards co-operation partners, clients offering refreshments and snacks from Reaktor's own refridgerator)

Mana   Respect   (kaikkien mielipiteellä on väliä, kunnioitan muita / everyone's opionon matters, I res-pect others)

Matauranga   Mäori Knowledge of experience of Mäori   (joku Reaktorilla osaa ja opettaa miten se tehdään / someone at Reaktor knows how to do it and will teach others)

Mauiuitanga   Original charge, baggage   (ei haluta tehdä niin kuin aiemmissa työpaikoissa / avoidance of doing things as they were done in previous working places)

Mihimihi   Welcome   (tervetuloa)

Moemoeä   Dreams, aspirations, personal worth   (opin koko ajan lisää, saan olla oma itseni / I learn more all the time, I can by myself as a holistic person)

Puawaitanga   the principle of best outcomes   (kerralla oikein / do it right from the beginning)

Purotu   the principle of transparency   (avoimuus, kaikki info kaikille / transparency and openness, all information is shared to the whole team)

Pöwhiri   Welcome ceremony   (tervetuloa meille, mitä kuuluu? kengät pois, istu rauhassa sohvalle, saako olla kahvia… / Welcome, how are you? take your shoes off, sit on the couch, I'll serve you some coffee…)

Taha wairua   Spiritual base   (uskomme kaikista hyvää, suvaitsevaisuus / we believe all people are good, and accept that individuals are different)

Taonga   Treasure   (ihmiset, vahvuudet / people and their strenghts)

Tinana   Physical and personal care or body   (harrastusryhmät, "leuat" / competition for chin-ups)

Tuhono   Cross-sectoral alignment of aspirations on all dimensions   (koodikoulut lapsille yms. henkilökunta ehdottaa mitä yhteistä hyvää haluavat edistää / programming competitions for children etc. personnel suggest what good causes they wish to promote)

Tohukataka   state of being a wise person   (jipii, nyt se toimii / yahoo, now it's working)

Whänau   Extended family   (asiakkaan tiimi / the extended team including co-workers from the client team or other stakeholder teams in the project)

Whanaungatanga   An ethic of belonging, kinship   (on tärkeää tuntea toisensa hyvin ja viettää aikaa yhdessä myös vapaa-aikana, yhteenkuuluvuus esim. harrastusryhmien kautta / it is important to know each other well and spend time together also in free-time, belongingness is built through e.g. hobby groups)

Tēnā koe   formal greeting to one person   (hei / hi)

Tēnā kōrua   formal greeting to two people   (katotaanko yhdessä… / let's look at this together)

Tēnā koutou   formal greeting to many people   (hei murut / hi honeys)

Tēnā tātou katoa   formal inclusive greeting to everybody present, including oneself   (nyt taululle? oisko nyt retron aika? / to the board! would it now be good time for a retro?)

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