An introduction into the *Harmonic Organization*©

A new organizational model for companies and management in the 21st century

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This paper is a pure concept paper. It introduces the concept of a *Harmonic Organization*©. In brief a *Harmonic Organization*© is achieved when all parties in a company have compatible interests. The purpose of this concept is to suggest a new organizational model for modern companies which supports the accomplishment of the highest amount of organizational efficiency and sustainability. In the future and especially in the digital ages, no company can afford to waste even fractions of their resources. Incompatible interests, however, inevitably always introduce inefficiencies.

The *Harmonic Organization*© is taking a systemic approach to achieving organizational efficiency. For this the *Harmonic Organization*© challenges the intrinsically flawed principles of *hierarchy* and *hierarchical responsibility* on which most companies are built. Instead the *Harmonic Organization*© suggests the principles of *ownership* and continuous internal *customer-supplier-relationship* as a replacement to structure and design the organization. As a consequence, a *Harmonic Organization*© is built on the criterion *competence* instead of *power*. By doing so, the *Harmonic Organization*© also systemically solves a number of issues that are highly relevant for employees, companies as such and the society as a whole. A *Harmonic Organization*© always strives for making full use of all of its company's resources. Through its mechanisms it offers its employees the means to develop as well as exploit their full potential and, thus, also shows a high amount of corporate social responsibility.

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Contents

1 Introduction

This paper introduces the concept of the *Harmonic Organization©*. The purpose of this concept is to suggest a new organizational model for modern companies which supports the achievement of the highest amount of organizational efficiency and sustainability. In brief a *Harmonic Organization©* is achieved when all parties in a company have compatible interests. In this case all parties of the company play harmonically together to achieve the overall common objectives of the company.[1]

Other than the name suggests the concept of a *Harmonic Organization©* is by no means esoteric in nature. It is indeed the opposite: the concept of the *Harmonic Organization©* is quite radical and very difficult to achieve, because it requires some significant changes to how today's companies are structured and managed. Its objective is not per se to avoid conflicts. However, with a *Harmonic Organization©* most or at least many reasons for conflicts disappear as we will discuss later.

The *Harmonic Organization©* is taking a systemic approach to achieving organizational efficiency.[2] In other words: an organization that is wasting the company's resources by not being organizationally efficient can also not be harmonic. Organizational efficiency is difficult or even impossible to measure. For that reason it is most often assumed, that companies have an efficienct organization when they perform well. However, this must not be true at all, if the company just generates sufficient income to cover for all of its inefficiencies.

Even though organizational efficiency is difficult to measure, one could at least try to find a language that describes when and how inefficiencies manifest themselves. This would help to eliminate their causes. Astonishingly, such a language does not exist. For this reason this article uses the language of *company physics*.[3]

The basic idea of *company physics* is to consider a company as something that is run on a big battery. This battery contains the *company energy*, which is equal to the energy of all of the company's resources. The energy is then used up when the company operates. This requires the battery to be regularly re-loaded, which obviously incurs costs.[4] If all the energy is going into achieving the company's objectives, the company operates efficiently. However, if some of the energy is lost on friction or unproductive activities, the company does not operate efficiently. Activities such as internal conflict, overlapping responsibilities, slow decision taking, resistance to change or projects, doubling of work, re-iterations due to poor quality, reduced motivation, little loyalty, unavailability of infrastructure, absence of information, inaccessibility of knowledge, power games or company politics can usually be considered to be non-value-adding, unproductive or to be a waste of company energy.

Such situations are to a varying degree present in most companies. The *Harmonic Organization©* recognizes that the main cause for all this is that in today's organizations parties have systemically contradicting, competing or at least incompatible interests. Incompatible interests always lead to inefficiencies.

Seminal work has been done to consider *interests* as the main factor in negotiation processes

[1] The name of the *Harmonic Organization©* was actually developed by looking at an orchestra, where all parties play harmonically together to jointly deliver one piece of music.

[2] There is a lot of literature on the topic of efficiency. Debreu (1951) offered the first measure of efficiency with his coefficient of resource utilization. its output and input. A common denominator is found by Heizer et al. (2012) Lovell (1993) defines efficiency by comparing observed and optimal values of who define efficiency to be the ability to avoid wasting resources, such as efforts, money, materials, energy, and time when producing a result.

[3] See Anders, U. (2018).

[4] These costs could, for instance, be approximated with the monthly fixed costs of the company.

between individual parties.[5] However, little to no work has been undertaken to use the alignment of the varying *interests* in an organization as the fundamental concept on which organizations should be structured and designed.

The *Harmonic Organization*© does just this. It tries to systemically align the interests of all parties in an organization to the company's overall objectives and by this to remove inefficiency. Only when all parties in the company have compatible interests the organization is harmonic. For achieving this, the *Harmonic Organization* needs to remove all structural aspects that principally prevent harmony and replace them with better alternatives.

The underlying concepts for structuring organizations that are used for most companies are *hierarchy* and *hierarchical responsibility*. The *Harmonic Organization*© challenges these principles as they are intrinsically flawed.[6] *Hierarchies* introduce potentially incompatible interests into a company: between superiors and subordinates as well as between different areas or functions since they are directed to the top of the company and not the customers of the company.[7]

As a replacement for these principles the *Harmonic Organization*© introduces the principle of *ownership* as the main underlying element to structure organizations and the principle of internal *customer-relationships* to define the interaction between the varying parties in the organization. The principle of *responsibility* remains, but becomes *ownership responsibility* instead of *hierarchical responsibility*.

By doing so, the *Harmonic Organization*© also solves a number of issues that are highly relevant for employees, companies as such and the society as a whole. These issues are:

- removing slow maneuverabilty which is often found in large corporates, especially if compared to modern startups,
- systemically building the organization on motivational aspects and removing reasons for demotivation,
- fostering people to develop and to exploit their full potential, as people and their skills are the most essential resource to the company,
- using resources in a sustainable way and proving a corporate social behavior,
- making disregarded or ignored competences less likely,
- removing the potential for abusing organizational power, for playing power games or for exercising company politics,
- incentivizing life-long learning,
- ironing out unfair payment systems,
- preventing early retirement plans, which cannot be considered to be sustainable management since they are to a large degree counter-intuitive.

This article introduces the reasoning behind the *Harmonic Organization*©. As a basis, however, we need to first agree on some underlying terms and definitions.

[5] See Fisher / Uri (1981).

[6] *Hierarchies* have also already been challenged in the concept of *holacracy* by Robertson (2015) or in the *teal organization* by Laloux (2014) but for a different very good reason: basically to free up people's capacities which tend to be suppressed in a hierarchical organization.

[7] These different interests lead to a lot of absurd situation in today's companies, which are regularly portrayed by the very popular comic strips of Dilbert.

2 Shareholder value and the purpose of a company

There is some kind of consensus in the business and academic world that companies must strive to generate shareholder value. Many people are additionally convinced that the value creation must not only target the shareholder, but the much larger group of stakeholders, e.g. also the employees or the society as such.

The difficulty arises when one tries to define what value generation actually means, because different groups of shareholders or stakeholders may attribute quite different values to the same objectives. So deriving concrete objectives for a company from shareholder or stakeholder value, without exactly specifying value, is a rather pointless exercise. However, if we start our consideration not with the shareholder or stakeholder value, but instead with the *purpose of a company*, the whole exercise becomes a lot more easy.

The *purpose of a company* is to continuously generate valuable customer benefit through the organization of the collaboration of resources.

Let us look into this definition. In its core the purpose of a company is to *generate customer benefit*. The company is therefore producing a product or service that the customer considers useful.[8] This is a good start. However, the company can only survive if the benefit of the product is so *valuable*, that the customer is willing to give something in return, which usually is money, but nowadays can also be data.

A company is not a project. It was not initiated with a limited life span in mind. Quite the opposite, a company has been set up to exist for a long time. This means the company has to generate customer benefit *continuously*, year after year after year and with new valuable products if the older ones have reached the end of their product life cycles.

According to the above given definition, companies transform resources into products. These resources are people's work, machines, capital, raw materials and many more. But such resources don't just combine themselves with a magic trick and result in the product. No, it is the task of the management of the company to *organize the collaboration of all the company's resources* to yield the desired product. Generating valuable customer benefit is the WHAT a company is doing. The organization of the collaboration of all its resources actually is the HOW a company is generating the customer value. The HOW reflects the strategy of the company and exactly this HOW makes the company unique.[9]

Coming back to the shareholder or stakeholder value. A company that is successfully generating valuable customer benefit continuously will certainly generate shareholder and stakeholder value. It will show good revenues or profits. It will have a long-term perspective but will also try to satisfy short-term goals. It will also deal with issues in a legally sound and morally acceptable manner, because everything else may hurt its future creation of valuable customer benefit. And it will take care of its resources, because they are needed to create their products. All in all, a company that is good at what the definition of the purpose of a company suggests will most likely generate value for both its shareholders and stakeholders.

In summary, if a company concentrates on its customers and its products and the organization of the collaboration of its resources, shareholder and stakeholder values will be generated which reflect the success of the company.

[8]For the reminder of this article we will no longer distinguish between a product or a service of a company and name both a *product*. The word *service* we like to reserve for services that are provided internally.

[9]Sinek (2011) would add the WHY which reflects the inspiration or value proposition of the company.

3 Management and organization

A lot has been written about the tasks of management in a company.[10] But one topic repeatedly evolves: in times of increasing complexity the task of the manager more and more changes from directing and steering to organizing the company. Companies have an organization and this organization must be well chosen and designed to achieve the company purpose.

But what exactly is the task of *organization*? *Organization* of a company means to, firstly, break down the company into areas of expertise, in which each area can specialize to deliver or perform certain tasks (e.g. professionally manage some resources or generate some output), and then, secondly, to combine these areas ideally without friction to achieve the overall goals of the company.

The times in which an inspired leader alone is required for the success or failure of a business are long gone. Too extensive, too complex, too far-reaching and too interlinked are in the meantime all markets, customers, products and processes. Modern managers need to consider themselves more as enablers and organizers.[11]

This consideration is also well in line with the above stated definition of the purpose of a company. Someone needs to organize the collaboration of resources, which eventually makes up the strategy of the company. Obviously this task falls to management.

On this background, *organization* probably is and will be *the* core task of management. This statement would also be backed up by recent research on leadership.[12] Leadership is not primarily about leading people, it is primarily about achieving objectives with a group of people by successfully *organizing* this very group. For this the leader is making good use of the capabilities and resources the group has to offer including the leader's own.[13]

3.1 The ideal organization

Everyone probably agrees, that the ideal organization does not exist. However, it is overlooked how dangerous this statement actually is. It is dangerous because it is comfortable. With the lapidary remark, that the ideal organization does not exist, managers can too easily remove the problem of finding an organization that is as ideal as possible.

An organization of a company is ideal if it achieves the following six goals:

1. To break down the company into areas that allow each area to best develop the expertise required for managing some of the company's resources.

2. To secure the co-operation of all resources of the company towards the overall company's objectives.

3. To enable a lossless and efficient interaction between all of these resources.

4. To foster the responsiveness and flexibility of the company towards new market requirements or customer demands.

[10]See Malik (2009).

[11]Complexity means that a system can not easily be predicted or not even predicted at all in its behavior because the system has too many elements in it, which have mutual relationships that also behave nonlinear. The more complex a system becomes the less is one individual person able to see through it and take good decisions. To control complex systems they need to be modularized as much as possible which leads us back to the central task of management, which is the organization of the company into areas, to best deal with certain aspects of the complex system.

[12]See Kotter (1999).

[13]See Sinek (2014).

5. To ensure that new tasks resulting from new products, projects or external requirements easily find a new home to be quickly dealt with.

6. To stimulate the development of new products that will bring the company into a position to turn resources into valuable customer benefit also in the future.

3.2 Resources

We have established that the purpose of a company in its core is to transform resources into customer benefit. Companies have two types of resources:[14]

1. Operating resources: These resources are needed and necessary to produce, offer or service the company's products. Such resources are, for instance, human resources, knowledge, skills, information, machines, robots, materials, facilities, energy, etc.

2. Non-operating resources: These resources often result from a successful past and usually also significantly contribute to a company pursuing its purpose. Such resources are a customer base, the brand name, own funds, shareholders, liquidity, innovation power, etc.

Whatever the resource of the company is, it is precious and must not be wasted by not efficiently using it, by not employing its full capacity or by abusing it for the wrong purpose.

3.3 Organization is a resource

It seems obvious that it is quite a challenge for management to ensure the efficient collaboration of all these operating and non-operating resources. A poor organization of the collaboration of the resources to generate the customer benefit will lead to a lot of waste and, thus, cannot be considered efficient. *Organization* therefore is not only a resource in itself, it is a meta resource since it determines how efficient and waste-free all the other resources of the company are used to generate the customer benefit.

There are a number of good reasons to actually look into the organizational efficiency of a company:

1. Most companies strive or at least intend to have a sustainable approach. Sustainability, in short, means not to waste resources. If a company is wasting its resources through an insufficient organization, it is obviously not working in a sustainable manner.

2. When parties in a company do not properly cooperate due to poor organization, the whole of the company is slowed down. Instead of developing for the future the company is trying to resolve unnecessary conflict.

3. When parties in a company do not work well together, the company is not generating the synergies of scope that it should generate. In the extreme, the value of the company is less then the sum of the values of its areas. In that case the company is a good takeover candidate, because it generates negative value solely through poor organization.

[14] Some of these resources, even though intangible, are so important and valuable that they can even be put as assets into the balance sheet of the company.

4. Many studies have pointed out that companies will be much more successful, if they have engaged and motivated employees.[15] People do not like to be suppressed of feel powerless. Instead, people are motivated through joint target achievements, self-determination, the desire to become better and by producing esthetic results. In contrast people can easily be demotivated by a missing recognition, a felt injustice, a perceived lack of sense and a waste of their energy.[16] People do not work efficiently in environments that are full of conflict, especially if the conflict is avoidable. Instead of working productively employees waste their time.

If an *organization* is not well chosen, it will lead not only to a waste of the resource *organization* as such but also to a waste of other resources because they do not collaborate efficiently. Management must therefore carefully choose and design the *organization* to make the best organizational use of all resources available to the company. For their choice of *organization* they have only one objective: *organizational efficiency*.

3.4 Organizational efficiency

Organizational efficiency is very difficult, if not impossible to measure.[17] Measuring process efficiency or even work efficiency of individual employees (for instance in call centers) is much easier. One either compares the productivity or measures the amount of waste accumulated. For companies as a whole this approach simple does not work. Most companies are complex systems and are based on interactions of people, departments or areas. Nothing can be exactly measured in this context.

As a result, organizational efficiency is often simply assumed when a company generates good numbers. But this approximation is logically not valid. A company may make its numbers even if it is very wasteful with its resources. It may just have the luck of a good product that yields a comfortable price and enough demand.

The inability to measure organizational efficiency does not make the subject of *organization* a good target for optimization and to gain the necessary management attention. Quite the contrary: because it is commonly assumed that the organization is working efficiently, when it is making its numbers, managers get away with focusing on the numbers and in that case *kill two birds with one stone*.

The situation would be completely different with respect to management attention if it became transparent that management is implicitly wasting the company resources simply by not searching for the most efficient organization. In that case management would generate less value for shareholders or stakeholders then they could.

Furthermore, no company can afford to run an *organization* that is systemically leading to a waste of some of its resources. This becomes even more true in the digital age and for companies that are more and more surrounded by startups, that employ more efficient organizational models and that put a lot of pressure on existing companies.

But how can can organizational inefficiencies be pinpointed. When researching this question, the author of this paper noted that there does not even exist a language to describe such inefficiencies. As a consequence he borrowed the terminology from physics and developed what he called *company physics*.

[15] See e.g. Sprenger (2004).

[16] See e.g. Pink (2011).

[17] One method of measuring efficiency has been the calculation of performance indicators, but it is often unclear how these indicators are to be interpreted in isolation. See e.g. Daft et al. (2017).

3.5 Company physics

Physics has provided us with a complete terminology to describe systems of *energy*, *work*, *performance*, *forces*, *friction* or *inertia*. All these terms are already metaphorically used in the context of organization. So, why not take such physical terms to exactly describe organizational situations? We have learned from physics that energy can be transformed into work and other less valuable forms of energy, that are not available any more to generate work. The least valuable form of energy, for instance, is heat that results for instance from friction and that is "lost" for anything useful.

So the aim of *company physics* is to borrow physical terms and re-define them in the context of organizations to show where energy is "lost" in companies through inadequate organizations.[18] In the concept of *company physics* a company is considered to be something that runs on a huge battery. This battery contains all the energy of the company, i.e. the ability to do work of all of its resources. The energy in the battery is then expended for operating the company. This battery is regularly re-loaded with energy by the company paying for its resources. The cost for loading up the battery can be approximated with the fixed cost of the company. If all of the energy is used to achieve the companies objectives, the company is working efficiently.[19]

However, if some of this energy is lost in the organization through friction or activities that do not bring the company closer to its objectives, the company is wasting some of its energy for other purposes and the company is certainly not working efficiently or sustainably.

4 Company structures

We have established that the objective of *organization* is to achieve organizational efficiency. The task of *organization* is to break down the company into areas of expertise and then to bring these areas together again.

4.1 The default approach

Let us determine, how companies can be broken down. Companies have three dimensions that can help to define these areas of expertise:

1. Products (aggregated in divisions)
2. Functions
3. Locations (reflecting also markets)

Typically companies decide whether or not locations are managed centrally or decentrally and then they choose one of the two remaining dimensions as a starting point and put the other dimension hierarchically underneath, thus yielding an overall divisional or functional organization. Of course, all other hybrid combinations (e.g. matrix or parallel structures) of these three dimensions to determine the areas of expertise are also possible and found in real life companies.

Once, the company is structured into areas of expertise, further hierarchies are put underneath to break down these areas of expertise into smaller fields. The reason for hierarchies is to

[18] See Anders (2018): »Company Physics«.

[19] Actually physics has also defined the term of *work* to be *force* times *distance*. In analogy, in *company physics* *work* is only carried out if the force generated with the company's energy is bringing the company some distance closer to its objectives.

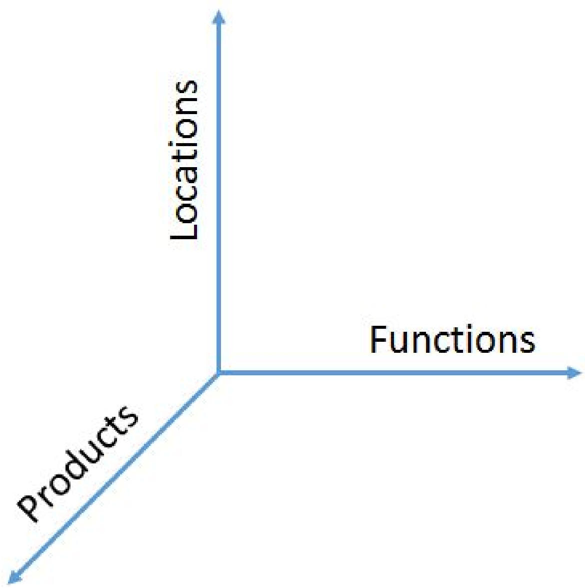

Figure 1: The 3 dimensions of a company.

establish a line of command to distribute *authority* and *control*. *Authority* is "the power to hold people accountable for their actions and to make decisions concerning the use of organizational resources". *Control* is the power to direct people to work towards a certain set of goals.[20]

Allmost all companies are organized in this form. So the hierarchical approach to organising a company goes largely unchallenged. At best researchers discuss the levels of hierarchies. Flat hierarchies are considered to make companies more innovative whereas tall hierarchies make companies more deterministic and machine-like.[21]

4.2 Structure with hierarchies

Hierarchies have an unbeatable feature: they are going from top to bottom and with this approach they match the principle from general to specific. Through this feature they appear to be the natural choice for structuring a company. At the top of the hierarchy people deal with fundamental issues, whereas at the bottom they deal with very specific topics.

In addition, hierarchies have two further advantages in a company context. Without explicit specification they sort of implicitly help to determine the relationship between different parties within a company. This is convenient for top management which is freed of the cumbersome task of defining company-internal relationships. Furthermore, hierarchies also introduce some sort of quality assurance, since the next level up is checking on the quality of the results of the level below. To have inter-company relationships defined and to have an in-build quality assurance system are two very valuable traits of any organizational form.

Finally, hierarchies are easy to understand, they bring a clear line of command and they allow individuals to control a large domain. Hierarchies also introduce a defined path for information flow and communication in both directions top to bottom and vice versa. But hierarchies come with several high prices to pay.

[20]See Jones (2013).
[21]See e.g. Mintzberg (1989).

4.2.1 Organizational borders

The first price to pay is that hierarchies introduce overlapping fields and organizational borders. Every border makes a company more rigid and less flexible. In the depicted figure 3 a team member may need to cross up to eight borders to work or meet with a team member from a different team. It is also obvious that the potential for conflicting interests rises with every extra field introduced, especially if these fields are also overlapping.

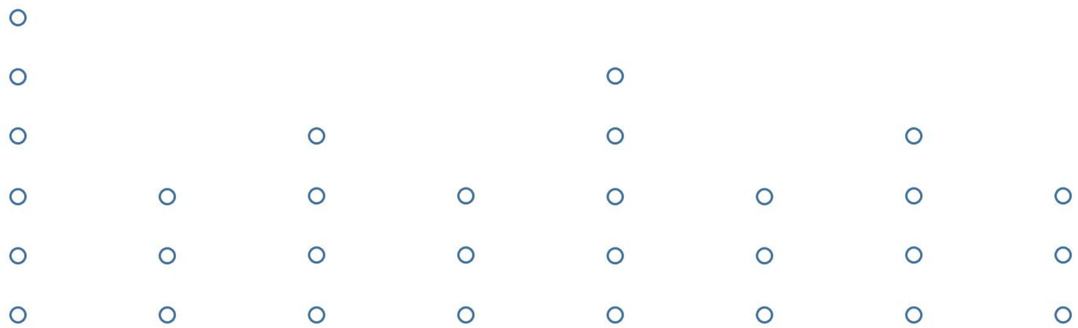

Figure 2: People in a company not yet structured.

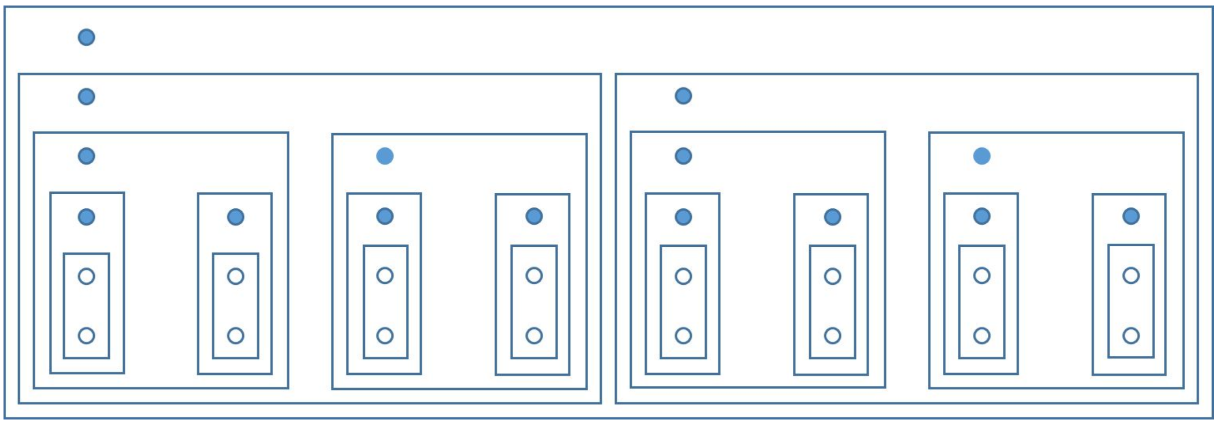

Figure 3: People in the same company structured with hierarchies. Bosses are full circles. Going from one team to the next may need the crossing of up to 8 borders.

4.2.2 Hierarchical responsibility

The second price to pay is that the *hierarchy* goes hand in hand with the concept of *hierarchical responsibility*. The higher up one is in the hierarchy the larger is the alleged responsibility. Exactly this larger responsibility is the prime reason why people are getting better paid the further they rise to the top of the organization: their *hierarchical responsibility* goes up.

But is this *hierarchical responsibility* really a useful concept? Certainly, the CEO has the ultimate responsibility, but what happens between the top and the bottom of the company in terms of responsibility? The truth is, responsibility gets shoved around quite a bit. It is in the interest of a manager to claim a large general responsibility when it comes to negotiation salary or receiving bonus. But having the responsibility in adverse developments is certainly not in the interest of the same manager. For that reason, in day-to-day operations, managers often try to avoid the sole responsibility for concrete decisions by either stating that it is not within their sole scope or by trying to spread the responsibility by making committee decisions. The result is a shared responsibility, where nobody alone can really be held accountable.

The recent scandals (e.g. fudging with motor engine software, manipulating money markets, supporting clients to commit tax-fraud or over-exploiting subprime markets) show this in an impressive manner. Even though a company or even the whole economy has experienced significant losses due to misdemeanor it appears at least more than difficult to pinpoint the responsible person. Many people may have been involved in the wrongdoing but all only had a minority share of the responsibility. This clearly shows that the implementation of *hierarchical responsibility* is certainly flawed.

The problem with *hierarchical responsibility* is, that it is not unique. In a hierarchy, the higher level has the responsibility also for all the levels underneath. As shown in figure 4 *hierarchical responsibilities* overlap which means that a lot of people are responsible for the same thing. Who has the responsibility: the superior or the subordinate? The answer is probably both and that says, that the responsibility is split and not unique.

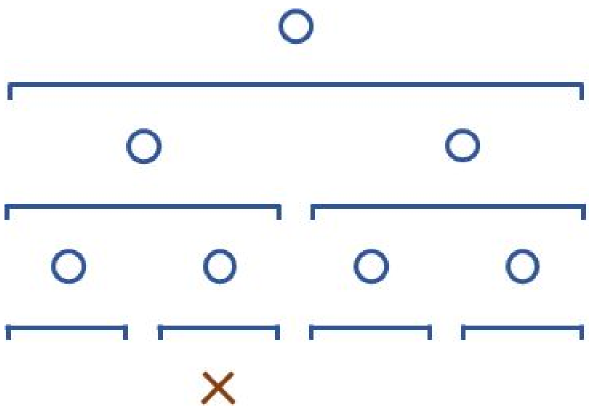

Figure 4: Hierarchical responsibility (depicted as squary brackets): who has the responsibility for an issue with x?

A similar adverse situation occurs for new tasks, that result from new topics, new products, new markets, or new external requirements. In hierarchies new tasks regularly do not fall into place naturally. Hierarchies are a distribution systems for task responsibilities. New tasks enter at the top and are rarely desired. Obviously new tasks mean more work (often with the same resources) and more risk to fail for the same salary, so where is the upside for managers to accept new tasks? If they are not pushed down the hierarchical line at times new tasks have difficulties to find a place to land and only do so after some negotiations. This understandable behavior of managers leads to organizations that develop too slowly because new tasks just need too long to be addressed.

As a result only young managers regularly want to take over (new) responsibility. They are in their interest as a means to rise in the organization. However, more seasoned managers which are already higher up in the hierarchy may refrain from taking over (new) responsibilities because there is more to lose than to gain.[22]

[22] This behavior can also further be explained by the nobel price winning loss aversion theory of Kahneman / Tversky (1994).

4.2.3 Power

The third, even higher price to pay for hierarchies is that they introduce the concept of *power* into an organization where the level of power is determined by the position in the hierarchy. *Power* is defined to be the power over people or company resources.[23]

Power in itself is already a problematic concept. Power usually seduces or corrupts people into never passing back the power they have once been granted. People either want more power of try to at least keep the level of power they have.

In the context of companies and their hierarchies the concept of *power* is even more problematic. Salaries, bonuses, stock options, company cars, statuses, secretaries or other perks are in general attached to power. It is in the interest of a person to keep these advantages. As a consequence (s)he must not share or lose the power. Not sharing power means to not distribute the own power to subordinates or to not give up the power to a colleague. This restricts the willingness of managers to (a) develop capable people if they are considered a threat to their one power and to (b) share or give up resources which is a loss of control and, thus, power.

Furthermore, most often power is lost as a result of failure. People are already loss averse, but they are even more loss averse if there is so much at stake as a power loss. As a result managers may show a tendency to rather not take bold decisions and administer the status-quo. Loss of power due to failure is clearly not in the interest of any manager.

These three aspects, to keep the power, to not share the power and to avoid failure in order to not lose the power, make an organization rather inflexible and immobile.

4.2.4 Incompatible interests

In addition to all this, hierarchies by design introduce incompatible interests into a company. Managers want to keep the power, employees don't want to be controlled by power or individuals claim the power for themselves. Team members want to develop things, but the management rather administers the status-quo for fear of failure.

But incompatible interests are not only resulting from the superior-subordinate-relationship. No, they follow also from the fact that in hierarchical organizations the focus is rather on the individual boss then jointly on the customer or the competition. One area tries to please their boss by introducing better quality which brings extra costs, another area wants to please their boss by reducing costs. One area wants to generate turnover, another area wants to reduce risks. One area wants to acquire customers by promising product features, another area wants to consolidate production. Hierarchical organizations are vertical structures, but production and customer focus require horizontal setups.

4.3 Structure without hierarchies

We have seen that there are quite some disadvantages to *hierarchies*: (1) organizational borders, that make companies inflexible, (2) *hierarchical responsibilities*, which are not unique and thus make it difficult to find the one accountable, (3) the introduction of power, that corrupts people to some degree into keeping the power at all costs, and most significant of all (4) hierarchies introduce the problem of incompatible interests into company, thus, removing efficiency and sustainability.

But if *hierarchies* are so disadvantageous, one big question remains. Are there organizational forms, that are not based on hierarchies? The answer is yes. Two organizational forms have

[23] See e.g. Jones (2013).

recently gained a significant amount of attention: the *Teal or self-management organization* and the *holocracy*.[24] Both systems have recognized, that power is a scarce resource worth fighting for and that power leads to a distinction between the power-full and the power-less. In hierarchical systems, most people could not contribute as much as they liked as they were controlled by their superior. This would neither be in the interest of the company nor in the interest of the employees. Therefore both systems, the *Teal or self-management organization* and the *holocracy* work without hierarchies and have replaced them with a system of roles. Because roles are more or less free to choose, they obviously need to be negotiated and agreed. In addition, as orgcharts have disappeared, solutions had to be developed for decision making, conflict resolution, company spending, control, and for general governance processes. Even though the new systems may be superior to classical hierarchical systems, one already becomes aware of the difficulty that is brought by such systems. The simple structure of a hierarchy has been replaced by a very complex system of roles, mutual negotiations and individual agreements, which poses a significant hurdle and risk for any implementation.

Like the two other organizational forms, the *Harmonic Organization©* also removes the concept of hierarchies in which power is exercised from people over people. This means that also in the *Harmonic Organization©* there is no longer a superior boss. However, the *Harmonic Organization©* keeps the principle of leadership. Team leaders are no superiors and they are elected by the team. Their prime task is to achieve results by organizing teams and resources. Also in other aspects, the *Harmonic Organization©* takes a significantly different approach for replacing the hierarchy. Hierarchy is a very simple concept to implement and it does not require extra training. The *Harmonic Organization©*, therefore, employs only concepts as replacements that are equally simple to understand and that do not require lengthy explanations.

We have already pointed out that hierarchies help (a) to define responsibilities, (b) to specify company-internal relationships and to (c) introduce an overall quality assurance mechanism. The same can be achieved by applying the concepts of *ownership* and a continuous internal *customer-supplier-relationship*. Both these concepts are largely self-explanatory and these are what the *Harmonic Organization©* is using to abandon hierarchy.

4.3.1 Ownership

One of the key fundamentals on which the *Harmonic Organization©* is built is the principle of *ownership*. The concept is easy. The owner of an offered product, an area or resource is responsible for what happens to this offered product, in this area or with this resource. *Responsibility* thus is a derivative from *ownership* (and not from the hierarchical level).

But this means *ownership* needs to be clearly defined. Fortunately, the new programming language Rust has also introduced the concept of *ownership* so that we only need to take over their definition and adapt it to our purpose:[25]

- There are three types of ownership: (1) for products offered to external customers, (2) for areas and (3) for resources.[26]

[24] For *Teal and self-management organizations* see Laloux (2014), for *holocray* see Robertson (2015). A well-known *self-management organization* is implemented by the tomato producer Morningstar, whereas a *holocracy* is prominently implemented by the Amazon subsidiary and shoe/clothes online store Zappos.

[25] Using *ownership* is a pretty innovative and capable concept in building compilers that solves a lot of long-standing problems. Read more at https://doc.rust-lang.org/book/second-edition/ch04-00-understanding-ownership.html.

[26] The owner of a product, which could be chips, orders potatoes from a farmer, who grows them. The farmer owns a field, but he may not own the tractor needed for sowing and harvesting. So (s)he needs to get it from somebody else.

- Every product, area oder resource must have an owner.
- For every product, area or resource there can only be one owner.
- If the owner passes on the ownership to somebody else, (s)he is no longer the owner and therefore not longer responsible for the area or resource.
- The owner can lend the area or resource to somebody else with the right to modify it. The owner still remains the owner and carries the responsibility for the modifications made. The lending is based on the trust that the borrower is doing advantageous modifications. An owner can only grant modification rights to one person, not to more than one. Modification rights cannot be further passed on.
- The owner can lend the area or resource to several others without granting modification rights. In this case the borrowers can only use the area or thing, but not modify it.

Let us see how the principle of *ownership* is applied in a company. Initially everything in a company is owned by the CEO: the products, the resources, and the areas. (S)he then passes on the ownership for (1) the products to the owner of the product pool, (2) the resources to the owner of the resource pool and (3) the areas to new owners. How the areas are chosen depends on the products or needs of the company, but the principal components displayed in figure 7 may be of help. Everything that is not passed on remains in the ownership of the CEO. The tasks to be performed are directly derived from the ownership of the product, the resource or area and usually do not need further specification. For instance, the owner of a product has to figure out the customer needs, has to determine its features, has to make sure that the product is compliant to regulations and has to get it produced, sold and serviced. The owner of the sales area needs to care for the sales activities of the company. The owner of the IT area needs to provide the right IT-infrastructure to the other areas and deal with associated issues. And the owner of a resource, such as capital, need to make sure that it is properly invested, but also provides for enough liquidity if needed.

For doing their tasks the owners of products or areas need resources. In smaller companies they may also receive ownership for these resources, but in larger companies it usually makes sense to give the ownership for a resource to a person that is dedicated to managing it. On the one hand this frees up capacity for the area owner to deal with his/her core tasks and on the other hand this ensures that the resource is carefully and professionally managed. Especially when more than one area needs the same resource, this behavior makes perfect sense. In this setup the area manager becomes the customer and the resource manager the supplier of the resource.

As a result, the company as a whole is partitioned into divisional, functional or locational areas. Areas can be further broken down into fields and so on.[27] Every area has one owner and no task can fall through the net. The same holds for resources including assets. Every resource and every asset has a clear owner who manages this resource.

The owner of an area can pass on a certain part of his/her area to a new owner. Likewise can the owner of a certain product or resource pass it on to somebody else (for instance, the owner of the area of IT who may own all IT-systems can pass ownership for certain IT-systems on to another owner.) However, ownership cannot be passed around arbitrarily. There must be a governance process accompanying the handover, making sure that the new owner actually has the means to perform the tasks resulting from his/her new ownership.

All ownership is granted only for a certain agreed amount of time of, say, three years. Ownership can certainly be prolongated, but after the agreed period it principally falls back to the next larger area where the ownership originated from or to the respective product or

[27] There would be no loss of generality to break down fields into even smaller *lots*, for instance.

resource pools. By this procedure it is ensured that areas or fields that are outlived cease to exist and do not use up company resources any longer. Also by this, ownership can be granted to a different person, in case the previous owner did not satisfy his or her internal customers.

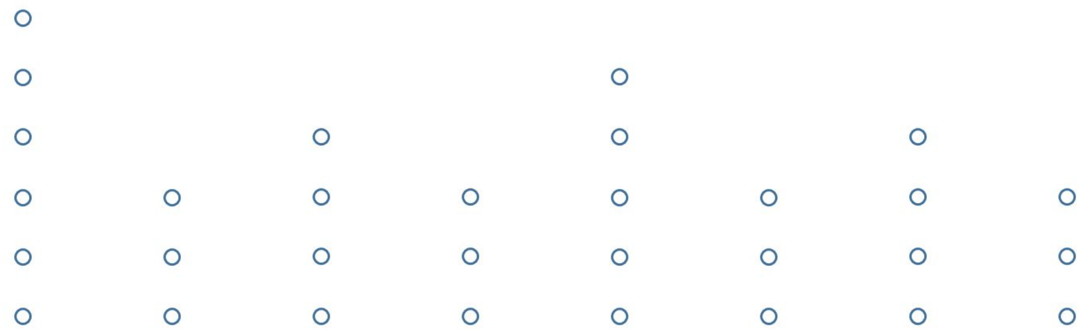

Figure 5: People in a company not yet structured.

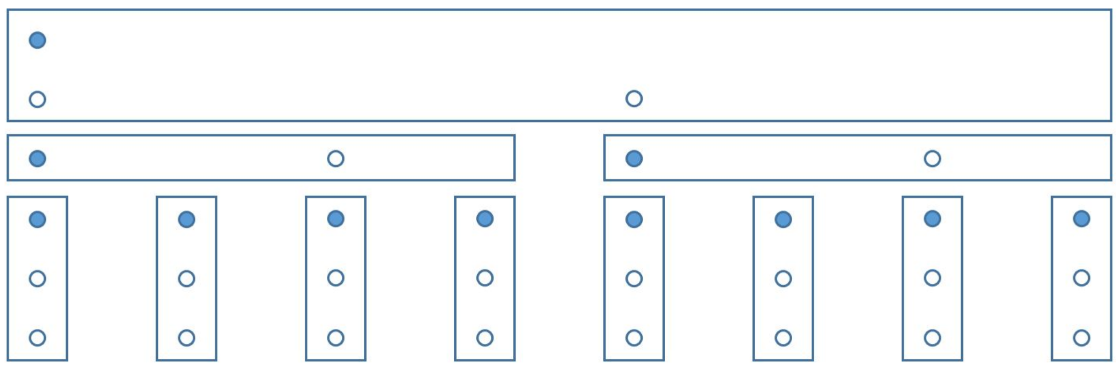

Figure 6: Structuring the same company as above with ownership granted to teams for areas, fields or resources. All parts are non-overlapping. There are no superior bosses, but only team leaders whose task it is to organize their team. Ownership is granted to the team for an agreed amount of time. The team leader represents the ownership and is accountable for what results from that. In contrast to the hierarchical system, for the team members to go from one team to the next means crossing only 2 borders.

What is the advantage of *ownership*? Responsibility is a consequence of *ownership* and not distributed as a function of the hierarchical level. Since *ownership* is always unique, responsibility is also unique and cannot be split. With ownership it is always in the interest of the owner to manage his/her tasks as best as possible because there is never anybody else to blame. This is also in the interest of the company, so interests are perfectly aligned here. *Hierarchical responsibility* can be shoved around. *Ownership responsibility* cannot, since the owner is always clearly defined.

A metaphor shall make this clear: two *hierarchial responsibilities* have been distributed: one for cutting the trees and another for mowing the lawn. Still the garden grows over, since nobody is paying attention to the flowers, the hedges and the vegetables. The person responsible for cutting the trees does not feel responsible for attending to the flowers. Neither does the person mowing the lawn. So the trees and the grass are well-cut, but the flowers and hedges do not get attention. The situation would have been different if one of the person would have been the *owner* of the garden and the other person a team member. In that case the two would have attended to all the elements in the garden and nothing would have fallen through the net.

Ownership is such a simple and useful concept, that is is remarkable, how little it is systematically used in today's companies.[28] Companies need and use a lot of resources and many of them are precious to the company. Even without a *Harmonic Organization©* it would be in the interest of the company to make sure, that every of these precious resources has a clear owner, who cares for it in all aspects — whether it is the customer base, the brand, an IT system or a critical supplier.

4.3.2 Customer-supplier-relationships

In a hierarchy the boss determines what a team, department or area is delivering and with which quality (s)he is satisfied. So, in a hierarchial organization — in general — the prime objective for everybody is to make the boss happy. As a consequence, the focus in a hierarchical organization is by construction more on the boss and less on the external or internal customer.

This is different in an organization where there are no bosses, but each product, area, or resource belongs to an owner and where all functional interactions are determined by a customer-supplier-relationship. Every part of the organization is either an internal customer or an internal supplier with respect to another party of the organization.

To illustrate this, we are looking at the principal components of a company. Every company can be broken down into exactly 8 principal components. These are:

1. *Supervision*, e.g. Supervisory Board, family offices, owners, ...
2. *Strategic management*, e.g. Executive board, CEO, CFO, COO, ...
3. *Control*, e.g. architectural control, financial control, HR control, project control, ...
4. *Operations*, e.g. sales, product management, production, fulfillment, ...
5. *Fulfillment of external (legal, regulatory, etc.) requirements*, e.g. financial reporting, investor notifications, tax, drug testing, environmental certificates, ...
6. *Management of operating resources*, e.g. HR, robots, IT, materials, ...
7. *Management of non-operating resources and assets*, e.g. capital, liquidity, brand, customer, premises, ...
8. *Internal service functions*, e.g. legal, PR, corporate strategy, inhouse consulting, knowledge management, procurement, organization, architecture, standards & design, ...

Every function in any of these principal components is either an internal customer or an internal supplier. The customer would order and pay and the supplier would supply. If the internal supplier does not provide for internal customer benefit, the customer would not order at all. If the supply is too expensive or of poor quality the internal customer would order somewhere else — for instance externally. A supply function, that does not (longer) have internal customers simply does not get paid and, thus, cannot exist (any longer) in a company.

For instance, the IT department is an internal supplier to all other departments who need certain IT infrastructure. The HR function supplies human resources to all other departments. Procurement would provide the desired goods at negotiated prices to its internal customers, the PR or organization departments would have the *strategic management* as customers and so on. Customers or the brand are a significant asset to the company. Service functions should

[28] An exemption are agile products or organizations, where *product ownership* is one central and very important role.

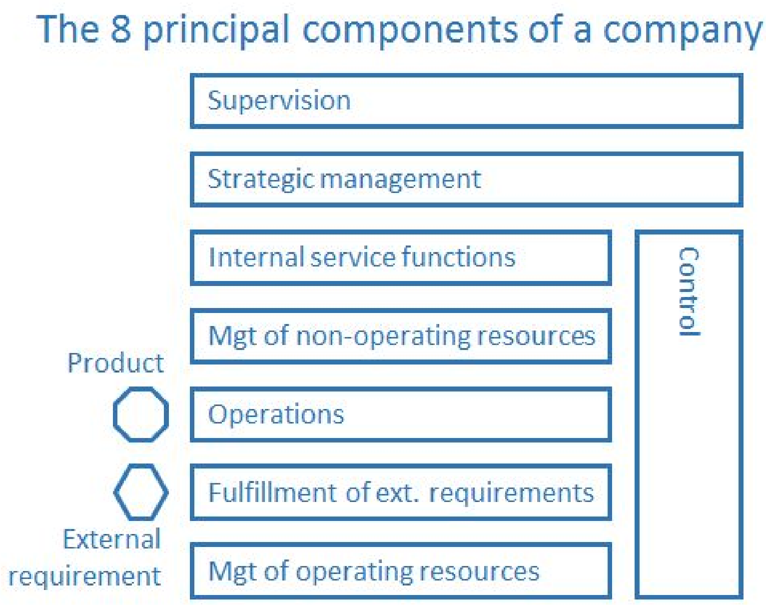

Figure 7: Every company has 8 principal components.

exist to increase or ensure the continuous value of these asset. They would supply their service to the *strategic management*.

A particular role is played by the control functions. They are a supply function to the *strategic management* which determines and pays for the necessary level of control to run the company. This control is then exercised by the control functions.

Internal billing is cost-based, so there are no internal margins. The control function makes the costs of the internal suppliers transparent. The cost of the control functions itself is directly born by the *strategic management* so there is also an incentive to not operate an over-controlled company.

In principle, internal suppliers would try to make their internal customers happy otherwise they would not get paid. Internal customers would appreciate company specific knowledge and price advantages from internal economies of scope fostering a sensible internal clustering, sharing and specialization.

With a continuous customer-supplier-relationship, that starts at the external customers and that then walks through the whole of the organization, all areas and functions would have compatible interests, because they are all principally directed towards the same end.

5 The *Harmonic Organization©*

We have now laid out the basis for the *Harmonic Organization©*. So let us define it and explain its motivation in more detail.

5.1 Definition

The *Harmonic Organization©* tries to achieve organizational efficiency and sustainability by not wasting resources. But resources are automatically wasted when there are conflicting interests between the different parties in a company. In that case not all of the energy of a company goes into bringing the company closer to its objectives. Instead some of its energy is wasted or lost in the conflict or through the effects of competing interests.

As a consequence, if one tries to achieve organizational efficiency and sustainability, all elements of organizing a company that principally introduce conflicting interests have to go. This is what the *Harmonic Organization*© proposes. As a result, the *Harmonic Organization*© does not have hierarchies of people over people and it neither employs hierarchical responsibilities. Hierarchies are replaced by a system of ownership, where the interaction between owners is determined through a system of internal customer-supplier-relationships, that starts at the external customer and that walks through the whole of the organization.

Such a system does generally not have systemically conflicting interests: the company tries to generate valuable customer benefit and all areas and functions in the company — independent of their field or expertise — work towards this objective through their internal individual customer-supplier-relationships.

The absence of hierarchies does not mean that people all work as individuals. Quite the opposite. People are still working together in teams, where the whole team has the ownership for a certain product, area, or resource. The individual tasks the team has to perform and the services it has to provide are not defined explicitly. Instead they automatically result from the ownership and the customer requests. This makes the organization flexible and fast and prevents bureaucracy and tiresome job descriptions. The ownership, even though granted to the whole team, is represented by the team leader who is also the sole accountable. Decisions are taken by the team, which incorporates a qualtity-control, advice and diversity functions. The team leader cannot take or override team decisions, but (s)he has a veto right, because of his/her accountability. The ownership is attached to the role rather than to the person. The team leader is not a superior. (S)he is the representative of the team and (s)he is chosen by the team itself. For times, when the team leader is absent, the team elects a deputy.

A team leader who does not make a good job to organize the team for delivering the team's services can be voted down. In order to act in accordance with their granted ownership, teams also need to choose their own team mates and remove them when necessary. A team that does not deliver as agreed, e.g. because it does not get itself organized, may lose the granted ownership and ceases to exist.

Breaking down the whole organization in teams that all have ownership and that all have customers, forms all these teams into little entrepreneurs. It is in their interest to provide a good service for reasonable cost. After all, the teams compete with services that could be provided by externals and the teams also have to charge their costs to their customers. So the provided services are better worth it. Also in this fashion no tasks in the company should survive, that nobody orders and is ready to pay for. The control functions, which are suppliers to the strategic management team, help to make the internal book keeping as less bureaucratic as possible. All the interests of the individual teams are exactly in line with the overall interests of the company — they are directed towards the overall products of the company, will be quality-aware and try to be reasonable with costs. Teams with similar or overlapping tasks will team up, since there is no downside with regard to losing power. And if there are open problems teams will likely get help or solutions from other team members, because this is how individuals can engage and show competence.

If all hierarchies are gone is there still some sort of career path? Yes indeed, as opposed to a classical organization, where the dominant criterion is *power*, the most dominant criterion in a *Harmonic Organization*© is competence. The areas into which the company is broken down are obviously of higher and lesser importance and weight and need higher and lesser levels of competence. Those who qualify in less important teams as significant contributors will likely be asked by more important teams to join in. The HR team that "owns" will human resources can help to facilitate this process.

The salary depends on the necessary level of competence. Teams that require higher competence get higher pay. All team members of the same team are considered equal and therefore earn the same amount of money. Only the team leader gets a higher pay, since (s)he is considered more competent then the average team member, otherwise they would not have voted for him/her to be the team leader. Also (s)he carries the accountability for the ownership of the team.

Using *competence* instead of *power* as the most dominant criterion in a *Harmonic Organization©* also solves a number of other problems in today's organizations:

- Hierarchical organizations are often rather inflexible and react or adapt comparably slowly. This is due to two reasons: hierarchies introduce a lot of borders as has been shown above and they establish a lot of management positions, where changes or quick decisions are often not in the interests of these managers. Both things cannot happen in a *Harmonic Organization©* due to the absence of both the hierarchy and fixed management positions. Instead a *Harmonic Organization©* can react fast to changing markets or customer demands by reallocation or granting new ownerships.
- In a *Harmonic Organization©* there is no room for power games and politics. Ownership is clearly distributed and through the absence of hierarchies there simply is nobody who has a say over a large amount of company resources.
- In many companies, divisions, areas or departments do not want to share resources, simply because it is not to their advantage. In a *Harmonic Organization©* this changes, because through the principle of customer-supplier-relationship every party is aligned to achieving the company purpose *to generate valuable customer benefit*. As opposed to a hierarchical organization where every party is focusing on the boss, in a *Harmonic Organization©* all parties have the same incentive and thus closer cooperate and share resources.
- As all teams need to charge their costs to their internal customers, teams become much more cost aware and treat costs as if they were there own. This is different to hierarchical organizations where costs are typically considered to be the cost of the company. In order to reduce cost, internal customers are happy to share resources and internal suppliers. This avoids double-work which is frequently found in hierarchical organizations.
- There is no lifetime leadership. This is quite different from real life organizations, where sometimes superiors are superimposed on teams and stay in their positions even though they may not have the required competences any longer. Instead teams can chose their own leader. As a consequence team members will not have to cope with a leader in which they do not trust. This approach — again competence based — is in line with intuition. If a group of people would be stranded somewhere in the wild, they would also want to chose the person in which they would trust the most to bring them out of there.
- Teams will compete for the most competent individuals, so competence will be visible in the organization. As a consequence the most competent people will have to deal with the most important and difficult tasks in the company.
- Required competences will change over time. A competence based organization incentivizes people to constantly acquire the needed skills. This is compatible with the postulation of live-long learning for people to have a working live also in a digital society.
- The energy level and capabilities of people usually reduces when they get older. The current solution is to sent such people into early-retirement or to replace them with younger and cheaper employees. This is neither a good solution for the company, nor

for the people nor for society as a whole. Because there has never been a hierarchy and because pay has never been based on seniority, in a *Harmonic Organization©* people could just move without loss of face or social status into teams that require a lesser competence level and that have a lower pay. This would be good for the people (who would keep a job and their social environment), good for the company (which would keep valuable knowledge and experience), good for younger employees (who may find a more senior mentor in their teams) and the society (which would get tax income from salary income or which would not have to pay social benefit).

- Many incentives for unethical behavior are also gone: (a) the incentive to incur high risks to cut a commission, knowing that the company needs to cover for losses, (b) the incentive for unethical behavior to generate turnover as a means to get a high bonus, (c) the incentive to use the company resources for the own advantage (d) the incentive to make a career on power games or networks instead of competence. For all of these behaviors the *Harmonic Organization©* simple does not provide incentives.
- Finally, companies are an important part of our society and they interact in a social environment. Corporate social responsibility should be an important objective for any company. A *Harmonic Organization©* is by system resource-centric. It's objective is to work as organizationally efficient is possible, which can only be achieved if the *Harmonic Organization©* responsibly looks after all its resources, including its employees, its customers and the people in its environment. As such corporate social responsibility is implicitly built-in into a *Harmonic Organization©* in which there are no incentives like power or money to act other than responsibly.

5.2 Harmony instead of conflict

If the concept of the *Harmonic Organization©* is principally correct, it should help to avoid the most common types of conflict found in today's organizations. These are:[29]

1. Differentiation in values, standards, believes or attitudes
2. Goal incompatibility
3. Task interdependence
4. Contradicting priorities
5. Administrative procedures and bureaucracy
6. Limited resources (human resources, budget, schedules)
7. Personal differences

This paper only allows for a very brief discussion of how such types of conflict should potentially not appear in a *Harmonic Organization©*. The *strategic management* team formulates the values and standards for the whole of the company. This also holds for the salary system. Since there are no bosses due to the absence of hierarchies these values and standards will not be overriden and they apply to everyone. The overall company's objectives are moved into the organization by help of the customer-supplier-relationship and there yield individual goals for the individual teams. Task interdependence is likewise solved through the internal customer-supplier-relationship.

Priorities are always defined by the owners and the internal customers, so they are clear und uncontradictory. Administrative procedures and bureaucracy do not become a purpose by themselves. They are ordered and paid for by the *strategic management* or by area owners to have the required level of oversight.

[29] See e.g. Pinto (2016) or Daft et al. (2017).

Internal suppliers intrinsically compete with external suppliers and they need to fulfill the needs of their customers. They know their ownership may not be prolongated if they are producing too expensive a service or in too poor a quality. Budget constraints are a thing of the past. Internal customers dictate what they can spend on a service and they only get what they pay for.

Whereever people work together, there will be personal differences. These can not be avoided by any organization, not even by the *Harmonic Organization*©. However, often personal differences are the result from conflict in the organization or from contradictory objectives. Most people like to work constructively together and to jointly overcome challenges to find the best solution. The better an organization succeeds in removing incompatible interests, the less likely there is reason for personal differences.

6 Summary

A lot more could be said about the *Harmonic Organization*©, how it works in detail and about its implementation. But the main purpose of this paper is to introduce its fundaments and its rationale, what we have focused on.

The *Harmonic Organization*© wants to achieve the highest amount of organizational efficiency. This means all systemic causes for incompatible interests and conflict in organizations need to go. The prime reason for these are hierarchies of people over people. Therefore such hierarchies are removed. They are replaced with the principles of unique *ownership* and a system of continuous internal *customer-supplier-relationships*. These two principles are already so useful by themselves that they can even be implemented without the whole concept of the *Harmonic Organization*© or as a first step into this direction.

An implementation of a *Harmonic Organization*© will be very difficult, since it requires an existing organization and the managers therein to give up the long learned principles of hierarchy and the power that comes with it. This is a rather radical requirement of the *Harmonic Organization*© but it is for the good of the company and the people that work therein. As opposed to a classical organization, where the dominant criterion is *power*, the most dominant criterion in a *Harmonic Organization*© is *competence*. This will make an organization much faster and much more flexible. This will also allow for different career paths. People can move into more important teams subject to their competence, but people can also work as team members even though they have been working as team leaders at a different point in time.

A *Harmonic Organization*© will also remove the most common reasons for conflicts and will generate an environment for employees on all levels that is much more compatible with what drives people. As a further consequence also pay and salary systems will be much more comparable, transparent and fair and the needs for layoffs or early retirements plans will cease to exist.

Finally, a *Harmonic Organization*© is resource-centric and cares for its resources. There is no other way for a *Harmonic Organization*© to achieve its goal of *organizational efficiency*. This means people will be allowed and encouraged to develop and exploit their full potential and to contribute with their competence, skills and ingenuity to the company as a whole. All this makes *Harmonic Organizations*© not only *organizationally efficient* but, flexible, innovative, sustainable and responsible.

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