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How to build the decentralized network organization putting an end to centralized command and control. A paper on Cell Structure Design

BetaCodex Network Associates

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special

What you will find in this paper

Organization Design is a lost art. A troubled and somewhat abandoned grey space within the field of organizational theory. Nonsensical theory and advice abound in the sphere of Organization Design. And that is for a reason.

In this paper, we outline the rationale for a different, non-tayloristic, way to structuring organizations – leading to the question of how to build organizations capable of (1) accommodating human beings, and

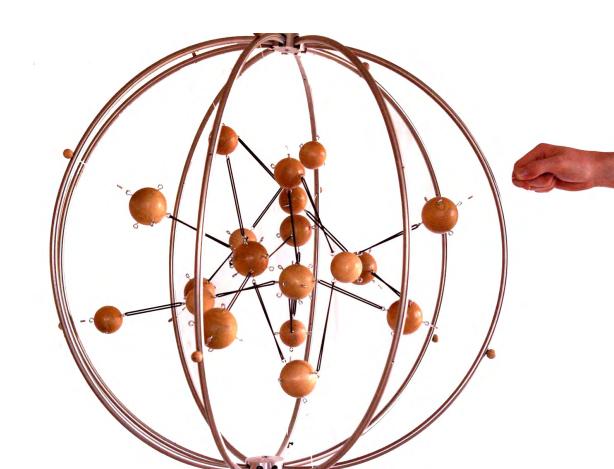
(2) competing in today's dynamic and non-linear market-places.

Part 1 and 2 of the paper...

- describe why previous ideas such as systems theory failed in creating significant momentum for change in organizational practice, and outlined the design principles that decentralized, networked cell structure organizations must adhere to.
- detail the ingredients of such structures, which include
 (1) a sphere of activity, (2) network cells, (3) strings and (4) market pull.
- Finally, we describe some of the consequences of applying such a design, highlighting key advantages as well.

In parts 3 and 4 of this paper, we describe two cases from our consulting practice, in which tayloristic command and control organizations were redesigned as decentralized networks.

Part 1: The trouble with organization design





Think about organizational design

You are now probably conjuring up images of managers or management consultants shuffling boxes on an organization chart.

Right?

Organizational design: the lost art

Well, that kind of "corporate restructuring exercise" hardly deserves to be called organizational design. The topic of effective organizational design transcends disciplinary lines. That's why it is not effectively taught at business schools, that's why there is little decent research in the topic, that's why usually nobody in an organization, except "top management", dares to touch it. To design an organization effectively, you need to understand business models, organizational behavior, information technology, accounting, and leadership.

In recent years, writers and thought leaders have coined a dizzying array of buzzwords to help managers think organizations afresh. There is talk of networked organizations, boundary-less organizations, virtual organizations, learning organizations, federalist organizations, wiki organizations, starfish organizations, and the like, to name only a few.

But if you actually read and study these works, you will share our frustration. With few exceptions, most writing on this topic is either utopian, or limited to certain types of organization, or is shallow in a sense that it offers advice that has no theoretical underpinning. The utopionans rail at the stifling nature of hierarchy and extol the virtues of "organizations without structure": self-organizing work, networks, and employee empowerment will, they argue, miraculously drive out command-and-control empires. The other set of books and articles offers design choices supported by detailed lists of pros and cons. Yet these analyses quickly prove to be unsatisfying. Lists of tradeoffs and considerations fail to provide a clear sense of direction. When you finish a chapter, it is never clear what exactly organizations should do – choices abound, but no rationale for decision and no convincing theoretical underpinning is given.

The BetaCodex, in contrast, presents an integrated theory that gives clear direction about how to design organizations and how to make it fit with management processes, and leadership. To outline how the new breed of organizational design works, this paper offers a tour de force through different disciplines, and through many of the conceptual frameworks that the BetaCodex is based upon.

First, some considerations about organizational design

Organizational design is a means to an end. Not more, not less.

And that end is to create and maintain an organization capable of achieving sustainable competitive success in a dynamic and complex world.*

In this context, it is important to remember:

- There is more to organizations than design –
 so to bring the design to life, you need to create a coherent whole including values, language, communication, leadership style, processes, etc.
- There is no single right design for your organization –
 but your design process should be based on robust design principles
- Organizational design is an evolving, iterative process –
 which only feels messy and complicated if the principles that are applied are messy, and
 if important assumptions are not made explicit.
- The design you will come up with at first will not last forever, or even for long because you will learn more and more about different design options and learning loops will inevitably occur.

^{*} This claim is closely related to the BetaCodex Network's mission.

The notion of dividing an organization into functions, and then departments, is fundamentally flawed.

But what is the alternative?



Why should we look for an alternative way of building and governing organizations?

By dividing a firm into functions, and then departments, you actually impede work flow, build organizational territories, and drive out initiative and entrepreneurial thinking. But companies have done exactly that for ages.

Organizations today are crippled by tayloristic thinking and division between functions. Taylor's idea of separating thinking from execution – like the assumption that responsibility for control and coordination should be located one level above from where the work is actually performed – have created immense misalignment with today's critical success factors. These problems have been laid out in detail by the BetaCodex movement since its foundation (then coined "Beyond Budgeting") in 1998, and also by a fair amount of management thinkers and scientists. As soon as 1960, Douglas McGregor wrote, in his groundbreaking book "The Human Side of the Enterprise", that "it is probable that one day we shall begin to draw organization charts as a series of linked groups rather than as a hierarchical structure of individual reporting relationships" For further reference on the problems with tayloristic management, see the BetaCodex Network's website.

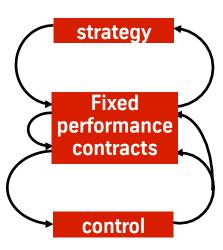
The alternative to taylorism, however, has not been that clear, until recently. And knowledge about how to transform tayloristic organizations into post-tayloristic organizations, which are capable of reintegrating thinking with decision-making and execution, has been patchy at best. So if we want to depart from the current standard of corporate modern-world "slavery", based on now obsolete thinking, we need two things. First, we need new mental models to build and govern 21st century organizations. And we also need new, systemic models for change, in order to enable wide-spread transformation of organizations.

The problem, overall, is not that people were not fit for accelerated dynamic and more fierce competition. We clearly hold a different view: that, instead, organizations as they are designed today, are not fit for the capabilities of the human beings that work inside them. The tayloristic "machine organization" is doomed, in an age of dynamics and competition. The tayloristic model now has become an immoral choice as a blueprint for organizational design. Why? Because, quite simply, it stands in the way of their people to fulfill their potential, and furthermore because quite recently, the vision and practical road-map to an alternative model has emerged. We call this alternative the "BetaCodex".

Outlining the 'industrial age' model (a.k.a. management) and its pitfalls

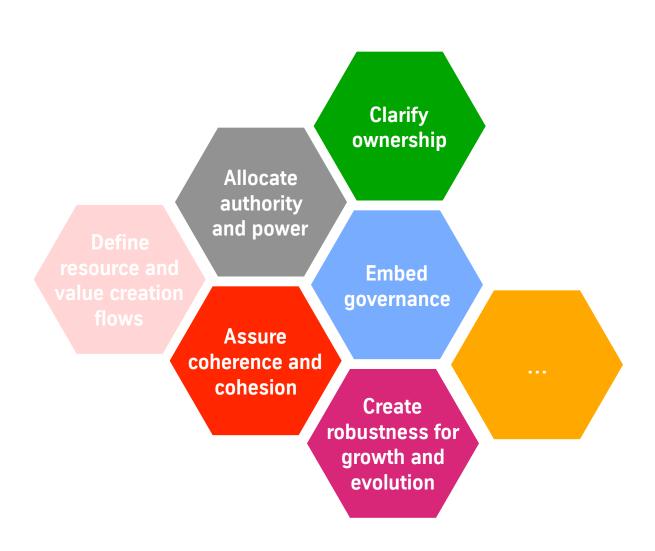
"command and control"

"keep on track"



- Too centralized
- Too inward-looking
- Too little customer-oriented
- Too bureaucratic
- Too much focused on control
- Too functionally divided
- Too slow and time-consuming
- Too de-motivating
- ...

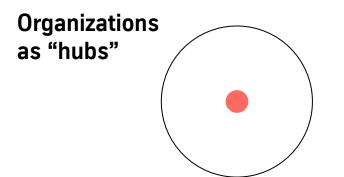
Recurring themes in organizational design that any robust design model must address



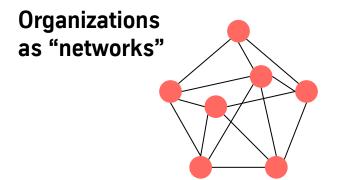
Common alternative ways to visualize organizations – according to Henry Mintzberg

Organizations as "pyramids and chains"

- Process chain strengthens the vertical chain (hierarchy)
- Sustains centralization and heroic management:
 "The top manager as an important person, removed from operations, taking decisions based on analyses and calculation"
- Imagine a hospital, a laboratory or a project they simply don't work this way!



- The points of focus are hubs: it's *them* who attract, emit and move people, things and information
- Less focused on sequential activities
- Example: Hospital the patient as focal point



- Some organizations naturally don't have a centre (e.g. labs, or project teams...)
- They are networks with free interaction, embedded in collaborative relationships that work in any direction
- It's not a model "without structure" –
 it just follows another logic.
 One that is not focused on activities or managers.

Source: Mintzberg, 2004

How to overcome the burdens of taylorism

Highly devolved organizations, as opposed to command and control organizations, are not structured hierarchically. In fact, since hierarchies don't accept any other rulers but "top management", or "bosses", radical empowerment based upon the decentralization of decision-making is not compatible with structures based on power relationships and hierarchy. Although it is well-known that many organizations are factually ruled not by formal, but by informal networks, the common way to make teams act responsibly is still to give some of the organization's members a "commanding", or "managing" position.

BetaCodex organizations, on the other hand, want to achieve something entirely different: They want everybody in a company to think, to be and act responsible, in order to increase the value and wealth creation. Therefore, a BetaCodex organization does not "believe" in hierarchy. It believes in empowerment and in the capabilities of its people. And the best-known and successfully practiced route to empowerment is to turn the organization into a network of interrelated cells.

A cell structure (as opposed to a design based on "departments" and "functions") is capable of interacting situationally, in more diverse ways than functionally divided hierarchies. Even more so, it doesn't need commands to be controlled – it can be controlled and governed just through "market pull". Other control mechanisms that make sense within a decentralized cell structure are self-control, "peer pressure", cultural control inspired by strong shared values and culture, as well as a far higher level of internal and external transparency than is common in the tayloristic management model. Overall, by creating a network of these cells, and by making use of people's full potential, business is being turned as simple and as straight-forward as executives always dreamt it would be.

So what organizations have actually accomplished this, in practice?

Eric Schmidt, CEO of Google, once humorously and with a nod to coined it "the borg", referring to the extraterrestrial race on Star Trek. Dennis Bakke and Roger Sant, of US-based energy firm AES, dubbed it "the honeycomb". Ricardo Semler of Semco from Brazil calls it the "circular organization". Terri Kelly, CEO at W. L. Gore, talks about the "lattice organization", a concept the company has applied since the 1960s. In the past, others have called it "the onion".

Ultimately, they are all talking about the same: A new way of thinking about organizations without a common hierarchy. As one can see, we are still far cry from reaching a consensus on wording with regards to the "alternative" organizational model that will succeed tayloristic command and control pyramids. Schmidt, Bakke, Semler, Kelly and others are all describing the notion of an organizational structure that is a neither based on power relationships, nor on hierarchy or functional division. These organizations have built devolved "sense and respond" networks.

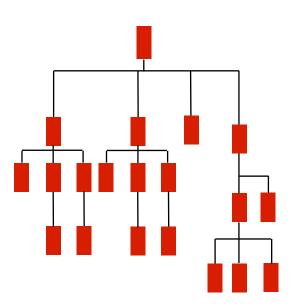
An example: Semco's Survival Manual, the company's only written set of principles, claims that: "Semco does not use a formal organizational chart. Only the respect of the led turns someone into a leader. When it is absolutely necessary to sketch the structure of some part of the company, we always do it in pencil, and dispense with it as soon as possible."

Much like Semco, several other BetaCodex pioneers, such as Guardian Industries and Handelsbanken, do not have an org chart at all, and they get along with three layers of hierarchy only. That said, the pioneers still have some hierarchy, though usually not more than three layers, regardless of their size. In their organizational design, thus, "hierarchy doesn't matter". It is perceived as a rather trivial fact, and one that is not really relevant for day-to-day work.

The challenge: From hierarchy to network structure. We need methodologies for redesign and creating the change!

Traditional model:

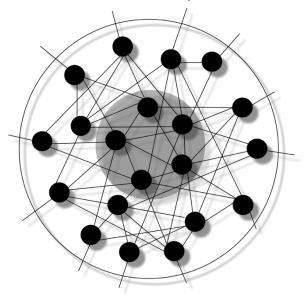
(centralized functional hierarchy)



Changing mental models, leadership and structure

New model:

(decentralized leadership network)



- "Bosses" rule!
- Top-down command and control
- Top management is always in charge
- Centralized leadership
- Functions, departments, divisions
- Outside-in value creation relationships/"pull"
- · Functional division guides structure

- "The market" rules!
- Outside-in sense and respond
- Peripheral teams are always in charge
- Devolved leadership
- Network cells as mini-enterprises
- Hierarchical power relationships/"push"
- Functional integration guides structure

What is new about this?

Although previous concepts have failed to fully explain cell structure as a business organization structure, there is still a lot we can learn from other thinkers on the subject.

One of the most significant contributions to the field of organizational design probably comes from systems theory. Stafford Beer, the father of British systems thinking, who died in 2002, laid the foundations of the Viable Systems Theory – a theoretical concept that lacks practicality, but that has inspired many within the field of organizational development anyway. Dirk Baecker, a follower of German systems theorist Niklas Luhmann, convincingly points to the systemic incoherence between general knowledge of systems and what happens in business organizations. But even though systems theory explains lots of the phenomena that occur, within firms, the advice of Baecker and others has been insufficient for practitioners with a desire to truly transform their organizations.

Other theorists have explained important elements of an alternative model, but invariably failed to describe a coherent theory that would work for any company, or the consequences that come with implementing it: Most scientists, for example, have ignored the impact of steering processes, such as performance targets, planning, and compensation, on organizations. Even worse: Most leading thinkers partially remained within the boundaries of the old, tayloristic mindset with regards how business organizations have to work and be led.

Charles Handy wrote about what he calls the Cloverleaf Organization, based on his observations about the individual and his responsibility in society, and the effects of that will be seen in business organizations one day. Henry Mintzberg made promising attempts at deriving conclusions from different "typologies" of organizations. Jay Galbraith developed what he called the "star model" of the organization, and recently, experts like Thomas W. Malone have been talking of organizations as "democracies", "free markets", or "loose hierarchies", in which "no direction takes place and decisions are met at the front lines". But one might ask, if "front line", "democracy", or "loose hierarchy" aren't rather feeble concepts to be applied in real life. Again, this advice has not been too actionable, overall.

Why have so few organizations adopted a networked design?

Not surprisingly, maybe, some of the best-understood network organizations of the past have come from the realms of the non-profit sector. As success and impact there depends, primarily, on volunteers that resist to "being managed", convincing alternatives to "management" have always been a standard there. Many experts have described key characteristics of organizations like the WWF or the international boy scout movement, as proof that cell structure organizations can actually work.

But is the same possible in the profit sector? Attempts on decentralized organizational models made by previously traditionally organized firms often could not meet the expectations. A high-profile case from the 90s was ABB - but their much lauded "matrix" organization soon went into decline. And for good reasons. Other transformed organizations have fared much better, as they chose more coherent ways of working, ways that were firmly rooted in more radically different mental models. Surprisingly, though, some firms with notable competitive success that abandoned tayloristic management long ago have never been recognized as network structures. A few of these firms have succeeded in building and sustaining a "decentralized network" structure over the course of many decades, as is the case of W.L.Gore, Toyota and Handelsbanken. But although the evidence is there, running a profitable cell network actually is seen as an exotic achievement of some exceptional leaders like Gore.

Neither organizational theory, nor management science have been able to fully describe the principles of such structures, or have formulated a decent road map towards creating this kind of innovative design. This is about to change now. We will argue that, based on the 12 principles, or laws, of the BetaCodex, it is possible to build a high performance cell network for any company of any size.

Organizational evolution: Typical phases within the lifespan of an organization, according to systems thinking

Cybernetics rightly states that organizations have much in common with living organisms. In the same way in which organisms evolve through different stages throughout their lives, so do organizations typically change over the course of their existence. Systems theory has added to this a concept which relates intimately to what we call transformation.

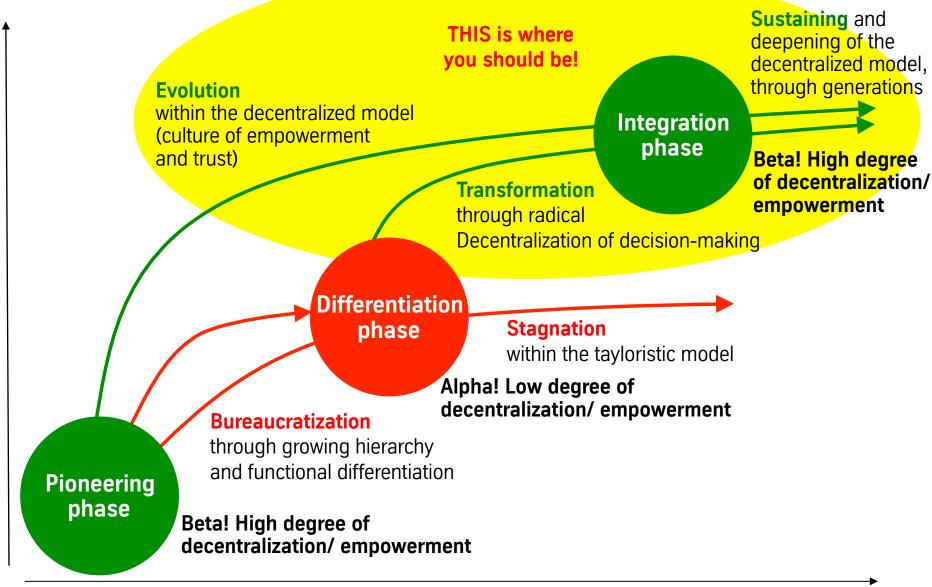
Organizations, in this view, typically begin their lives consisting of very few people, and in a "Pioneering Phase", which is characterized by a high level of entrepreneurship, informality, autonomous and improvised decision making. There is little "structure" here. A pioneer organization may feel chaotic- but a certain amount of chaos seems normal to every start-up, doesn't it?

However, as an organization becomes successful and grows, sometimes very quickly, new forces start to apply: There is a pressure to "professionalize", to create a more formal structure, to hire specialists, to implement systems, to standardize processes and to do lots of "planning". In this "Differentiation Phase", hierarchy, functional division and departmentalization increase strongly, decision-making becomes more centralized, and rules and processes start to substitute improvisation and freedom to act. Though perceived as a blessing by many, differentiation is also always accompanied by the death of the organization's more entrepreneurial founding, or pioneering culture. The place becomes "less fun", in order to become more orderly. Many of us have seen this happening to organizations, and we have often observed the loss of entrepreneurship that comes with differentiation.

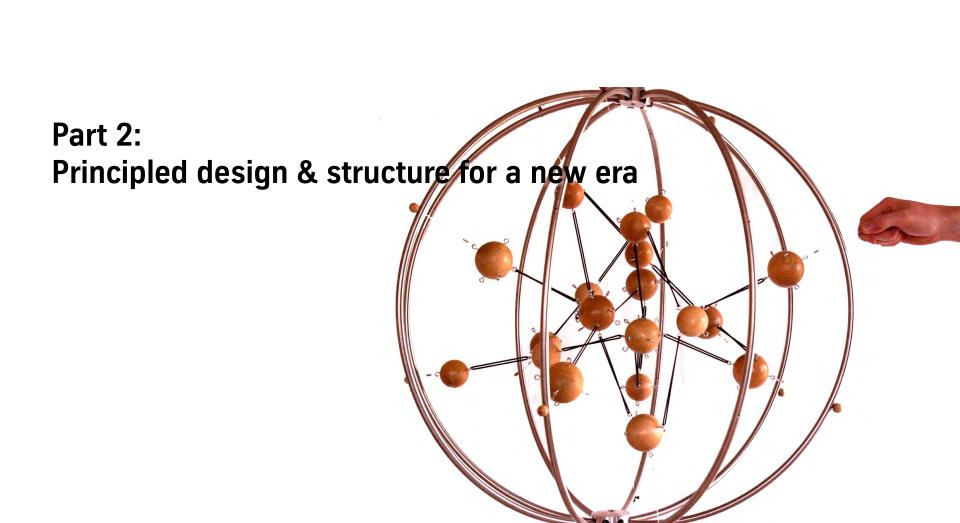
Most organizations remain forever in the tayloristic paradigm. Few have so far escaped the differentiation trap, actively moving towards what we may call the "Integration phase". Integration means applying a thinking that turns "large" organizations into small, functionally integrated mini-firms, which can act with great independency and decision-making power. A visualization of the "phase concept" is shown on the following page.

As noted, few organizations firms have actually made this transformation. Within the BetaCodex research since 1998, however, we have identified a couple of notable and diverse exceptions, such as dm-drogerie markt (Germany), Semco (Brazil), Toyota (Japan), and Handelsbanken (Sweden).

Organizational evolution: Typical phases within the lifespan of an organization, according to systems thinking



Foundation



What makes the difference?

Instead of centralized functions and departments, BetaCodex organizations have a lean and organic network of independent teams, or cells, which each work as fully accountable business units, or profit centers. To create a network of cells, however, you will have to fundamentally change the way you have thought about organizational structure.

- You will apply "functional integration" as opposed to functional division, practiced by tayloristic organizations. This sounds easier as it is: Because our brains are astonishingly hard-wired into the notion of functional division. You may notice that further on.
- You will create a structure in which there is control in the forms of transparency, "market pull", self-control, and peer pressure as opposed to control through hierarchy ad management staff. Cells themselves are accountable for results not managers managing the team externally, or managers within the cell. This requires, first and foremost, a massive change in thinking.
- You will build individual cells that consist of permanent teams, of (temporary) project teams, or of ad-hoc and voluntary task forces. Though not at all common in traditional, functionally divided command and control organizations, teams based on voluntary participation can be highly effective and enthusiastic, as several of our case studies show.

A networked cell structure has a lot in common with living organisms, as we saw before. Cell division is a common feature as well. It happens both in organisms and in networked organizations. Organizations of the new kind share the belief that a single cell should never outgrow a psychologically sound size that can grant high-trust communication among team members. Consequently, in cell network firms, once a team expands too much, this team gets divided "as needed". This kind of cell division can be found at places such as AES, Aldi, Handelsbanken, Dell and W.L. Gore. Maximum cell size defined by an individual firm may vary greatly from industry to industry, and it varies among the case examples. W.L.Gore's unit size, for instance, is limited to around 150 team members.

How is life within a "network cell" different from working in a command-and-control hierarchy?

Generally speaking, single cells within a devolved network do not entail highly specialized people, but mostly generalists who share the workload flexibly among themselves. Furthermore, traditional tayloristic job descriptions focusing on an individual are displaced by role descriptions for entire teams, which focus on the responsibilities that have to be assumed by individual cells. These roles are often juggled with among team members, which means that "role rotation" is very common here. In order to allow for this flexibility, generalist talents of people are more appreciated in networked organizations, as opposed detailed technical knowledge, which is typically (over)valued in tayloristic organizations: Here, organizations sadly classify their people by their work, or job descriptions - not by their talents or abilities. In order to make a devolved network become real, thinking about work and performance have to undergo a deep transformation. In a single cell, employees have to be entrepreneurial thinkers and doers, whereas managers in these structures serve as advisors or keepers of shared values and principles. Their role extends to not more than to steward the organization. In the words of some of the pioneers, this means being a "catalyst" (Ricardo Semler) or an "enabler" (Vineet Nayar). Managers in their traditional role as commander, inspector and executor are not needed in a networked structure, but there are roles traditionally filled out by managers which can be assumed by single persons or by different persons in the cell's team. The lead can be and is taken by everyone who takes the responsibility to act for the team. Besides the need for people to assume the role of "temporary leaders", there is a need for "new roles", which are not common in tayloristic organizations, but which are vital for decentralized networks to sustain coherence and learning. The "master" role: These initiate learning processes in the organization, in order to keep the cells prepared for current changes and keep them innovative. The "symbolist" role: Symbolists have the sense for symbolic gestures, signs and rituals in order to make, maintain and develop internal and external relationships as well as maintaining, keeping conscious and penetrating the organization repeatedly with the its principles, reason for being, values, identity and visions). The "anthropologist" role: Anthropologists provide the understanding of norms and cultural values, of desired attitudes, mindsets and convictions of partnership internal/external in the network.

Let's take a look at the design principles for an alternative organizational structure.

If you are somewhat familiar with the Beta Codex, then you already know these principles...

The 12 laws of the BetaCodex: A full set of "design principles" for complexity-robust structure

Lav	N	Beta	Alpha
§1	Freedom to act	Connectedness	not Dependency
§2	Responsibility	Cells	not Departments
§3	Governance	Leadership	not Management
§ 4	Performance climate	Result culture	not Duty fulfillment
§ 5	Success	Fit	not Maximization
§6	Transparency	Intelligence flo	w not Power accumulation
§7	Orientation	Relative Target	s not Top-down prescription
§8	Recognition	Sharing	not Incentives
§ 9	Mental presence	Preparedness	not Planning
§1	Decision-making	Consequence	not Bureaucracy
§1	1 Resource usage	Purpose-driv <mark>er</mark>	not Status-oriented
the §1: beta codex	2 Coordination	Market dyna <mark>mi</mark>	cs not Commands

organizations for sustained superior



The importance of design principles

In this paper, we are suggesting two main concepts:

- The organization design model that is the BetaCodex with its 12 laws.
- 2. The transformation model that we call the Double Helix Framework as the way to adopting the organization model, or to bring it into life.

It is not very common, actually, that a coherent and full organizational model (BetaCodex) and an implementation model (the Double Helix Framework) are brought together into a single approach, thus allowing not only to envision a new organizational form, but also to develop it.

Having the right design and transformation principles is key to transformation. The reason for this is that, ideally,

- Design principles should be so clear and simple that anyone in an organization can understand and apply them at all times.
- The people in an organization themselves are the ones best suited to develop the new organizational structure. Consultants should only provide moderation and guidance in the process of shaping out the structure.
- For an organization to maintain an organizational structure that is not command and control, the new principles (or the new mental model) have to stick with people.

The design principles of the new model

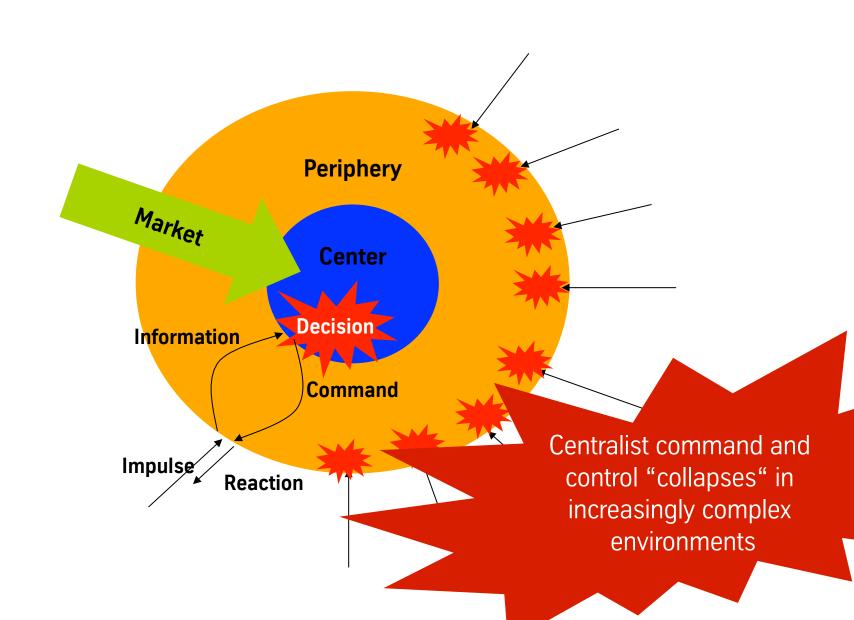
Conventional management practice has ignored the importance of understanding principles before leaping into action. Usually, organizations feel pressured into adopting a new method because "everyone else is doing it". Six Sigma, Lean, the Balanced Scorecard, Business Reengineering, or CRM are such methods. Typically, neither managers nor the recipients of such schemes can articulate the design principles that are driving the method. And usually the majority of organizational members don't have a clear idea of why specific changes are being made and how such change will affect them.

This is different with the BetaCodex. The codex employs a set of 12 design principles for the new type of organization. The design principles are not rigid rules, but instructive codes that shape our thinking about how relationships between people, roles, tasks, and responsibility should be structured. They (and their tayloristic counterparts) reflect deep cultural assumptions having to do with the issues of power, authority, control and value creation in organizations. Design principles are equivalent to a mental model that acts as a systemic framework for constructing organizations. The design principles thus get to the roots of how organizations should be structured to get the work done, and to achieve superior competitive performance, together.

Because organizations are human and social creations, design principles provide the criteria – implicitly and explicitly – that guide the way we structure and lead organizations. It is important in BetaCodex Transformation to make the "old" set of design principles and the new one explicit.

This way, the mental models of all members of the organization can change. The design principles are far more than just rhetoric – they go to the heart of understanding the underlying premises and the structural logic that influence leadership and behavior.

How markets govern organizations "from the outside in"



Why "make-and-sell" business models, combined with "command and control" management, don't fit anymore

Classic 20th century organizations from the industrial age usually applied make-and-sell business models, which means that you develop products, produce them and then give the customer an incentive to buy them. High performance organizations today use a sense-and-respond approach, which applies an outside-in philosophy.

Any organization can apply an outside-in sense-and-respond approach.

- Famously, Toyota and Dell have invented outside-in business models in their industries (cars and computers, respectively), submitting production to single customer orders or projects.
- Guardian Industries originated a similar business model for flat glass and mirror production, being the first company in the industry to sell directly to customers.
- Handelsbanken, dm drogerie-markt and Scandinavian retailer Ahlsell work from the branch outside-in.
- Southwest Airlines, AES and Semco, Egon Zehnder International and W.L. Gore work from single value creation streams or customer projects.

The high performers of the 21t century are "managed" by market pull, not through inside-out command and control. Waste and even damage occurs if inside managers interfere with the mechanism of "market-pull". Every single person needs a free and clear view to the market forces that are driving the organization.

Ways to organize for empowerment

Hierarchical organization charts dissimulate the view that organization members "serve the boss", or hierarchy. They thus stand in the way of the market forces, by making people look "up", not "out". In this way, hierarchies limit the potential of their members to serve the market.

BetaCodex organizations, on the other hand, don't "produce" without market pull. They actually make use of the pull from the outside in to energize and stabilize their adaptive networks of cells. That way, BetaCodex organizations use the somehow differing interests of the market forces like legislation, investors and customers to "manage" their networks of cells.

There are different ways to organize for empowerment, which are all coherent with Beta principles. The different typologies can also exist in combination.

- Profit center networks (e.g. Handelsbanken, Toyota and Scandinavian retailer Ahlsell)
- Multi-project organization or project orientated organization with temporary centers of project teams established instead of permanent profit centers
- Cross-organizational value creation networks between self-dependent cells

Adopting a cell structure design is vital to making integration, or transformation work. Without this kind of concept, building an organization with little hierarchy and no command and control, is near-impossible.



The building blocks of the devolved networked organization

According to the systemic view of an organization, a devolved network consists of only four types of structural elements, which we will explain more in detail in this section.

Understanding the role of each of these elements is key to designing a truly devolved organization.

The four structural elements of the model are:

- 1. Spheres of activity
- Network cells
- 3. Network strings
- 4. Market pull

That's it. Simple, isn't it? So let's take a look at these different structural elements.

Building blocks of the networked organization I: "Spheres of activity" - distinguishing the inside from the outside

- Every organization operates within its own "sphere of activity".
 Consciously or unconsciously.
 - The sphere originates from the combination of an organization's purpose and identity. This encompasses its business model, its shared values and principles, its brand proposal, its vision and mission.
- Traditional command and control organizations frequently fail to make their sphere of activity explicit to its people and stakeholders. The sphere thus remains ambiguous to the involved parties within the system.
 Not so in pioneering organizations of the new model, which always have an extremely strong corporate culture, a clear value system and explicit boundaries. The pioneers have a need for a well-defined sphere, because their governance doesn't rely on command and control, use of power, and fear.
- In traditional organizations, consequences cause actions.
 In pioneering organizations, on the other hand, all acting is a consequence.
- Defining the sphere of activity is a key ingredient of the case for change, which has to be written up in the transformation from command and control (Alpha) to the BetaCodex.

Building blocks of the networked organization II: "Network cells" – how they differ from functions & departments

- Network cells integrate several functions, roles and duties,
 which would be traditionally separated into different departments, divisions and areas.
 A cell thus contains different functions and roles!
- Network cells offer and sell products and/or services on its own, and only depend on its market in its decisions about them.
- Network cells are customer focused, as they respond only to internal or external clients, not to hierarchy.
- Network cells are held accountable by other members of the organization and are responsible for their own value-creation. Each cell has its own P&L statement. Cells are socially dense.
- Network cells apply the full set of 12 laws of the beta codex.



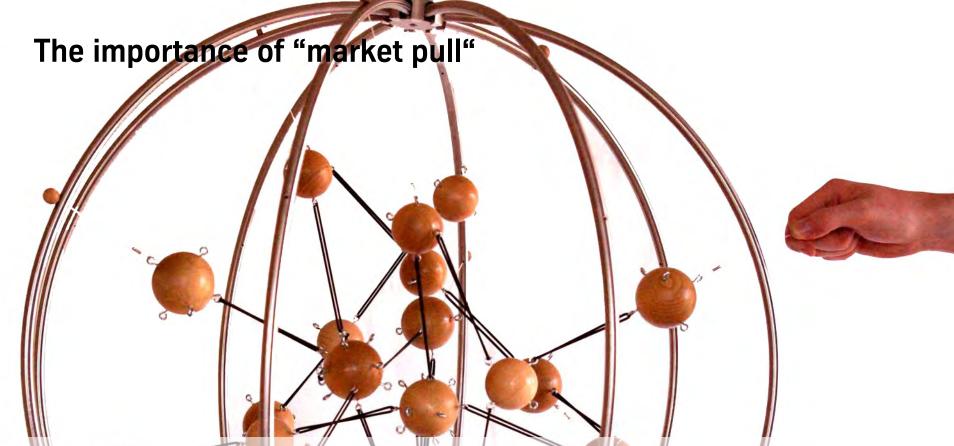
Building blocks of the networked organization III: "Network strings" - the communication and value creation links

- Strings depict the connections between cells, showing a high level of elasticity. Such connections arise from several different kinds of interaction:
 - Value creation flows from the inside out,
 - Formal communication, and
 - Informal networking.
- Internal markets and pricing mirror the value creation flow from inside-out: Cell networks practice internal payments, from the outside-in, to compensate for internal services.

Building blocks of the networked organization, IV: "Market pull" - the force that actually "manages" organizations

 Market pull is what connects the market with the organizations, and thus the outer part of the sphere of activity with the inner part. Whenever an external stakeholder of an organization "wants" or "demands", "orders" or does something relevant to the organization, it originates market pull.

- Market pull can be applied by customers wanting something, but also by shareholders demanding a compensation for their investments, or a bank demanding payback of a loan, or the state demanding the payment of taxes, or a competitor launching a new product. Market pull thus has varied sources.
- In the real world, there is no such thing as "market pressure". This might at first sight appear as a counter-intuitive claim. But if you consider organizations as operating within their own, self-defined Sphere of Activity, then markets simply cannot apply "pressure". What markets really do is that they apply "pull". They do this all the time. And pull is a powerful force. All market actors pull. They stimulate by pulling. They want things. They govern the organization.



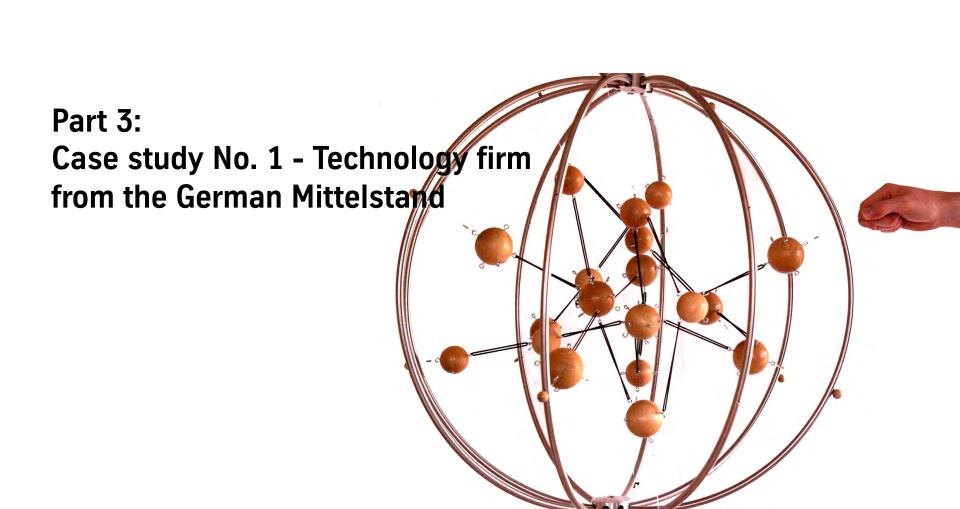
Market pull comes with an interesting collateral. Because once market pull is accepted as a governing and energizing force, consciously and by all members of an organization, it is capable of turning management as an internal function unnecessary.

In fact, management has been outsourced to markets long ago. This happened when competition and dynamic change took over within the environments of our organizations. In consequence, any effort to "manage" an organization from the top down today means making a painstaking, but ultimately fruitless effort to "steer from within", or to internally duplicate "what actually manages us".

In other words: management these days usually means trying to do something internally that the market already does for you in a much better way, because it does so in a more relevant and timely fashion.

Some guidelines to creating a working cell structure: What characterizes a truly networked organization

- It gains stability and resilience not through power relationships, or through "resistance to pressure", but through the "pull" that comes from the market outside. (Sounds simple? It is!)
- It is transparent, through open information systems.
- It shows its internal interactions in a simple manner, based on "market" and "pull" relationships.
- It creates a shared understanding of the "inside" and "outside" relationships of the organization.
- It doesn't care about hierarchy (which is regarded as "trivial", but about value creation streams, based on networking patterns.
- It has the interconnections needed not more, not less
- It applies the full set of 12 BetaCodex principles.



Case Study "Technology firm from the German Mittelstand": An overview over the company

The case company in a nutshell:

- Producer of household equipment, sold to local resellers and craftsmen. Four different product lines, several different "sales channels", dealt with by different teams and areas
- Approx. 350 people, age of the firm: approx. 20 years
- Strong presence in Germany and Italy, weaker presence in other countries. Two production sites – one in Germany, one in China.
- Some technology and production leadership, in a strongly commoditizing market which creates pressure to internationalize the business.
- Huge growth potential, but in the past, internationalization hindered by internal quarrels, lack of coordination, and a culture of internal politicking
- Long history of "feeble" financial results, and, occasionally, dramatic financial losses, compensated for by the owner family.
- A large number of product engineers controls innovation and other processes and thus acts as a powerful function.



What the company looked like

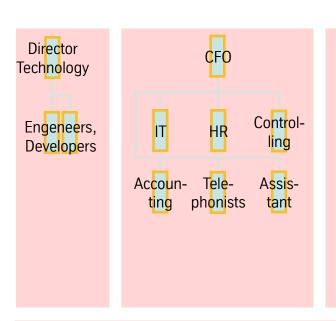
Structure:

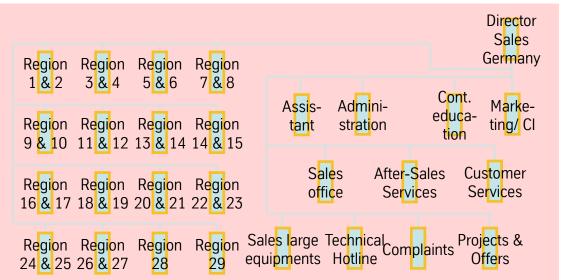
- 5 directors: "Technology", "Finance", "Production", "Sales Germany", "Sales International"
- 20 middle managers, many departments with massive coordination problems.
 Strong link between salaries and job titles.
- Example: The firm's sales force in Germany

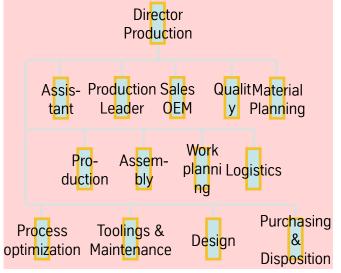
Previous structure:

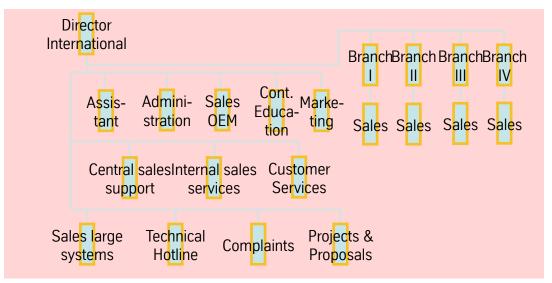
- 29 sales force mavericks (whose decision making powers has been eroded over time)
- 15 field engineers
- 15 back-office sales employees
- ...neatly divided into different departments, with different bosses, targets and interests.

The case study: what the organizational structure looked like

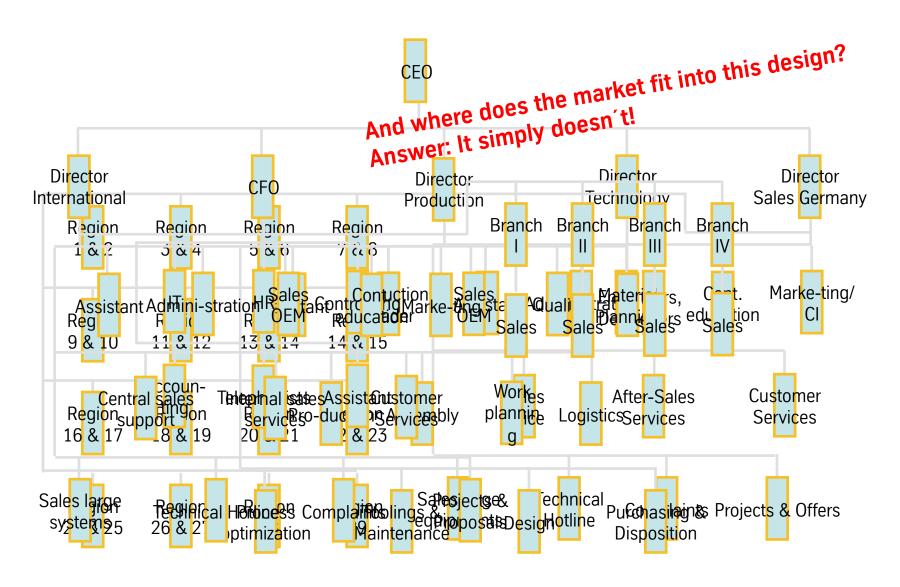








The case study – putting the pieces of the previous tayloristic organizational structure together



The case study: What was done? "The week of truth"

Status of the project, roughly 12 months into the transformation initiative

Phase in %	1. Create a sense of urgency	2. Pull together a guiding coalition	4. Communicate for understan- ding and buy-in	6. Produce short-term wins	7. Don´t let up
100					
80					
60					
40					
20					

- 1. There is a **strong guiding coalition** that sustains the transformation.
- 2. All over the **organization**, "profound change" is considered relevant, there is a sense of urgency.
- 3. Different groups in the organization (task forces) already work on specific changes.

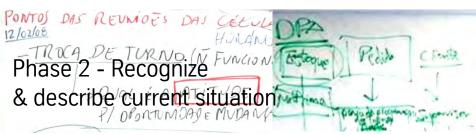
The case study: What was done? "The week of truth"

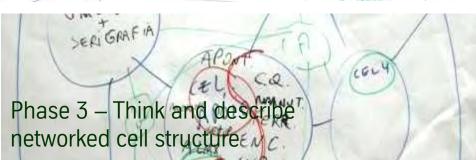
Approach to redesign

- Three 1-day "cell-formation" workshops run in early 2008, about 1 year after the start of the BetaCodex initiative, held over the course of a single week
- Three groups formed:
 - 1. Market, 2. Product, 3. Central Services
- About 60 participants (approx. 20% of the firm's employees) representing all parts of the organization
 - from all areas of the firm.
 - from all hierarchical levels.
- Workshops designed to break up traditional departments and hierarchical power; the workshops start the creation of the new, networked, organizational structure

Workshop execution:







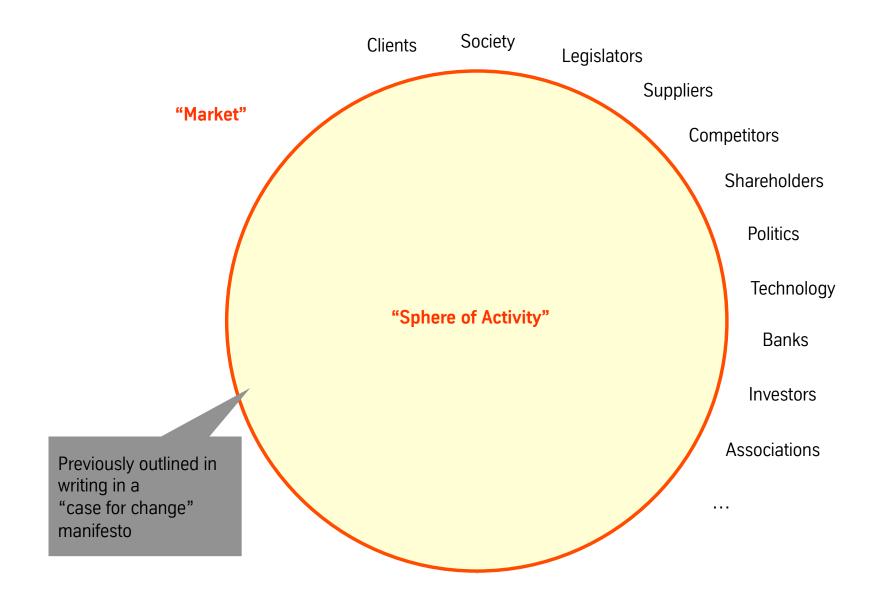


Group exercise during phase 3 of each workshop: "Think and describe decentralized networked cell structure"

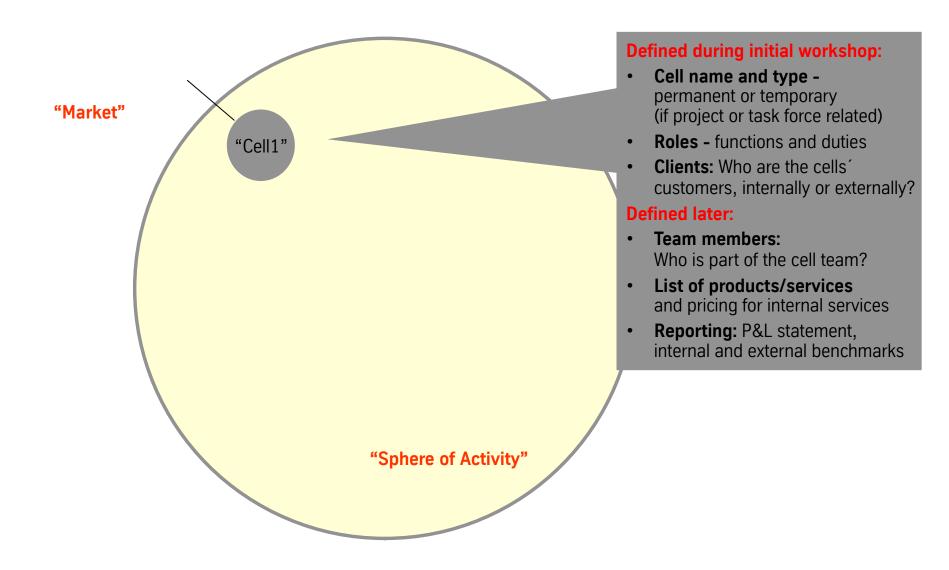
Some of the design principles applied (see part I of this paper for details):

- The market is the boss ("outside" rules!)
- There are four kinds of building blocks of a devolved organization:
 - A sphere of activity,
 - network cells,
 - "strings",
 - "market pull".
- All "key tasks" performed in the old organizational structure must also be performed in the new structure ("business must continue!")
- A cell is not a department: It is functionally integrated, not functionally divided!
 A cell has clients external or internal to which it provides services.
 And it has at least 5 team members, so that actual team spirit and peer pressure can strive.
- Every cell as well as the entire organization applies the full set of 12 laws of the BetaCodex.

Cell structure chart for a "BetaCodex" organization: Defining the Sphere of Activity



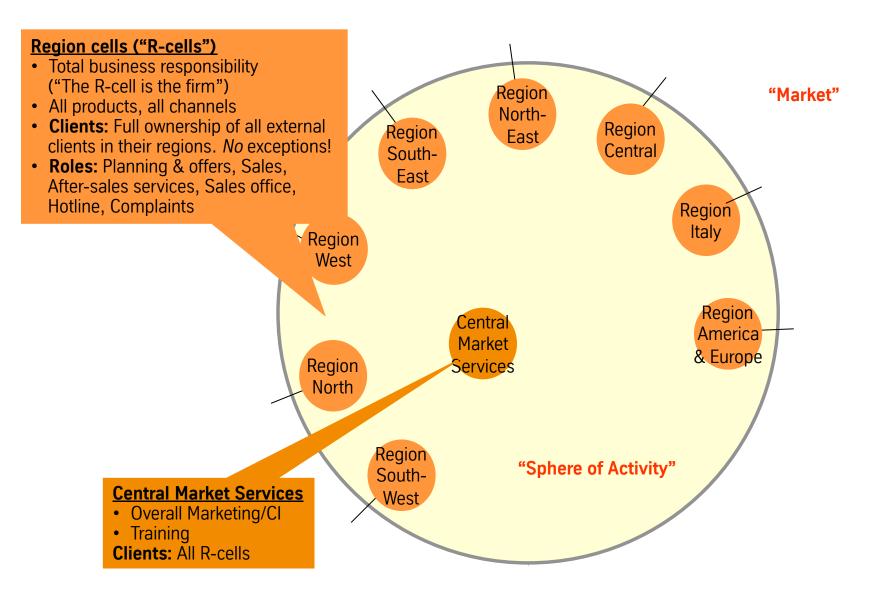
Defining cells and their roles



The solution identified during the design workshops, 1st part: "R-cells" - empowered business teams located in the periphery

- All customer responsibility would reside within the so-called Regional cells, or R-cells, which are responsible for "everything related to the customer" – integrating a wide array of previously separated functions (now: roles). The previous departments cease to exist.
- There would be six such integrated, virtual regional business teams for the German market and another two cells for other countries and regions, subject to cell division whenever acute.
- Instead of different areas and people aiming at different customer segments and channels
 often determined by product lines, now, regional teams would
 - decide themselves on the customer segments they would target, and on their staffing.
 - each have a full P&L account, being ranked monthly among themselves in financial indicators, and paying other cells of the network for their services and products through an internal pricing system.
- Support cells: From the previous departmental structure with "market focus", only two
 market-related key roles would remain separated from the newly integrated R-cells. These
 roles are "over-regional marketing" (of which, as one organization member said, "very
 little should be done in the future organization"), and market-related training.
 These two roles would be integrated in a cell called "Central Market Services"

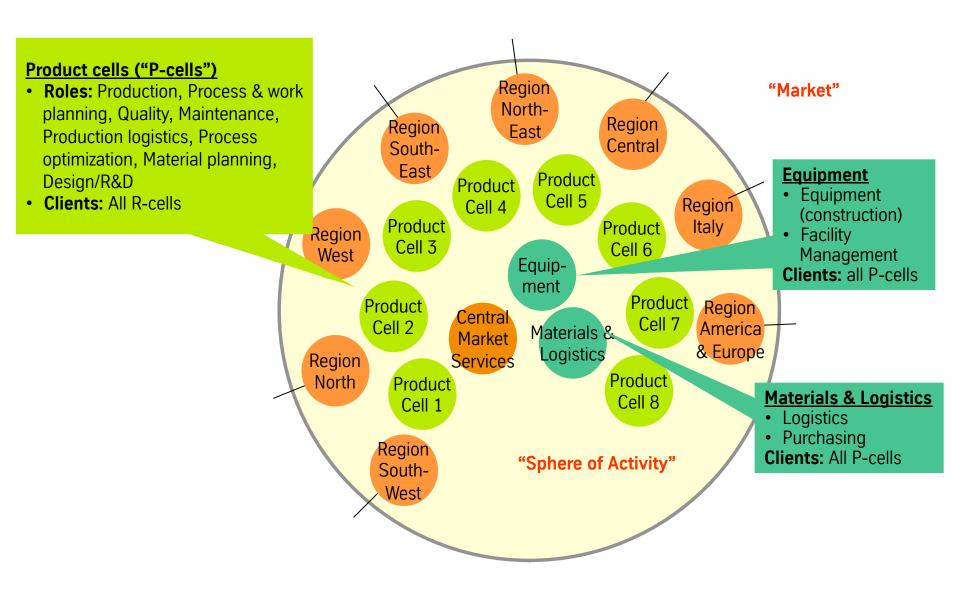
Cell structure chart for a BetaCodex organization, I: R-cells as "mini-firms" within the firm



Solution identified during the design workshops, 2nd part: "P-cells" - from fragmented feuds to integrated product centers

- In the new design, the strict separation between research and development, production and supply chain departments is totally removed.
- The consequence: More humble production people would be teaming up with product engineers, which had previously been operating their own little kingdom, frequently blocking change and responses to customer demands.
- Full responsibility for products throughout product life cycles goes to product cells. In the case of this company, several P-cells (e.g. P-cells 1-4, and 5-6) would be dedicated to the same family of products, and "compete" with each other within the firm.
- Internal transfer prices will never include "margins". All internal network cells sell their
 products and services on a pure cost basis, without retaining a profit. Profit is thus only
 generated by the R-cells.
- Support cells: Two additional specialist support teams for P-cells would be created: one
 responsible for "Equipment" (providing tooling and facility management), the other for inand outgoing logistics.

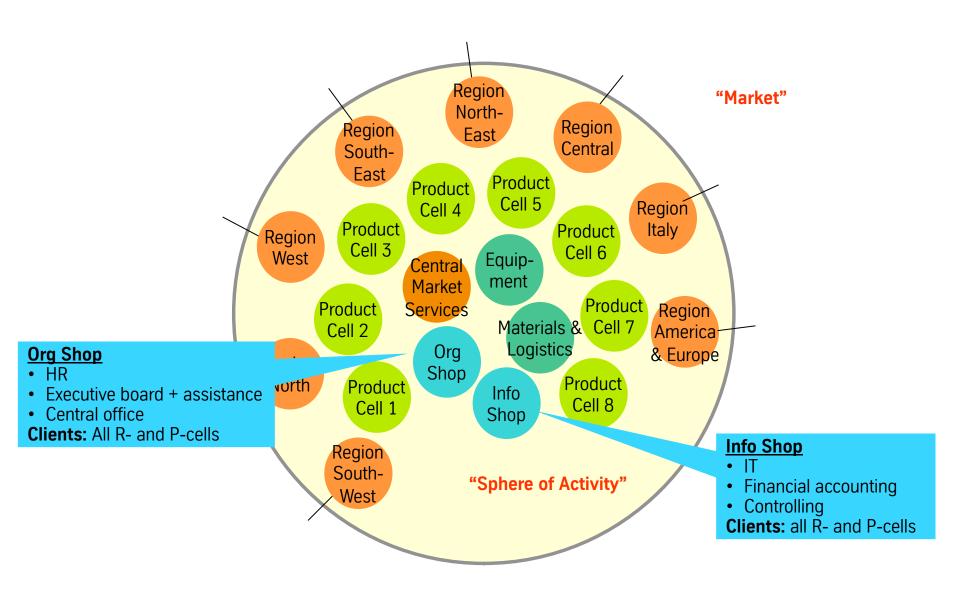
Cell structure chart for a BetaCodex organization, II: Adding "P-cells" to the design.



Solution identified during the design workshops, 3rd part: "Internal Services": from powerful central departments to devoted servants for business teams in the periphery.

- The workshop group arrived at a highly unexpected solution with regards to the previous central "administrative" departments. The group gained the insight that the "administrative" function and departments were basically catering towards "information" and "organizational" services. The workshop participants consequently grouped staff and functions into only two support cells, now dubbed "Info shop" and "Org shop".
- These refreshingly new denominations give the impression that these teams are something like a new "shop floor" within the firm, signaling also that these cells would not be centers of command and control power, but service teams providing necessary informational and organizational help to the periphery.
- Findings: During the workshop, the managers from Controlling and IT concluded quite surprisingly for some, that they had in the recent past worked so much on joint projects and activities, closely working together most of their time, that it would make sense for them to form a joint team, assuming responsibility over "providing useful information for decision-making" within the firm. It was also concluded that the CEO role would be part of the Org Shop, together with the telephone operators, assistants, and HR.
- Interestingly, comparing the cell structure design with the previous departmental design, it
 becomes apparent that out of the previous departmental structure in the case company, only
 one single team would remain basically unaffected by the new design, at least initially.
 After the workshop series, the small "tooling" area would be the only one that would remain
 identical in the cell structure, in terms of scope and personnel.

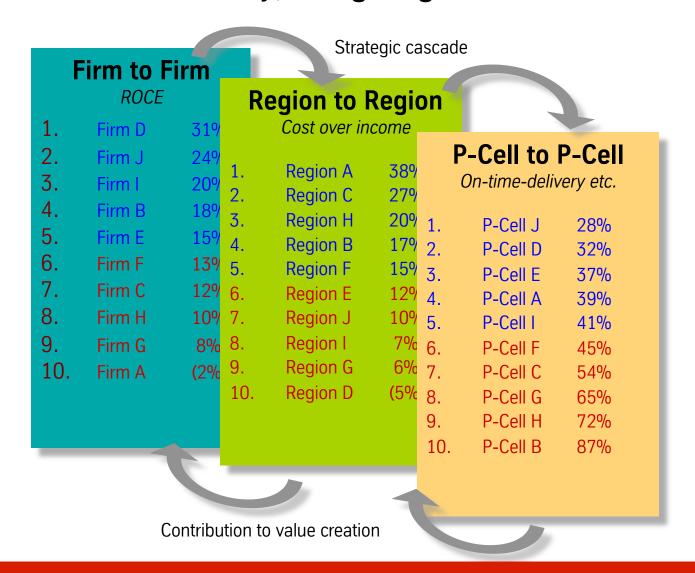
Cell structure chart for a BetaCodex organization, III: Adding the support cells "Info Shop" and "Org Shop" to the design



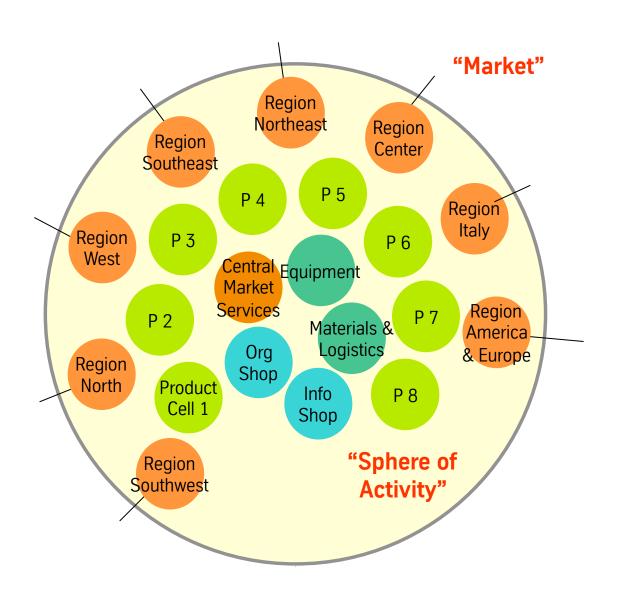
Observations about the cell structure draft design

- Highly intriguing, simple and scalable design easily understandable to all members and external stakeholders of the organization.
- Functional integration (as opposed to functional division, typical in tayloristic structures) has many advantages. However, it requires people to "un-learn" previous behaviors and biases, e.g. the myth that "functional specialization within a team" is superior to functional integration.
- Cell design is a "no redundancy" design, in principle. Since structural growth when triggered by cell growth, and subsequently by cell division, happens only on an as-needed basis.
- All cells will have an own profit and loss reporting, based on an accounting for internal services pricing/charges ("value flow reporting"). However, as an important principle, only R-cells can retain profit. All other, internally serving cells, operate on a cost basis, and thus aim at a financial "break-even", or zero result.
- Rankings, or "league tables" can be used to challenge cells and to create external references for performance (see next slide).
- The 12 laws of the BetaCodex can fully be applied to a cell structure, but not to a tayloristic, hierarchical structure.

"Cell structure" as a foundation for meaningful target definition in a "relative" way, using league tables

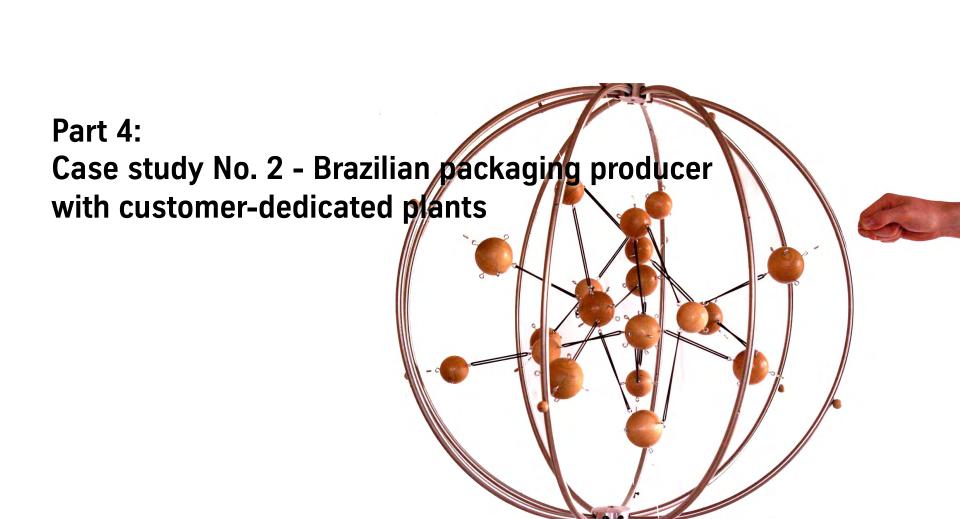


The case study: First full cell structure draft design after workshop series, to be discussed further within the company.



Further measures taken in the case firm

- Introduction of "trust-based working hours for everyone"
- Changes in reward systems:
 - Profit-sharing agreements for managing directors are dropped switch to fixed salaries!
 - Objectives or variables for management staff are dropped (approx. 20% of income) switch to fixed salaries!
 - Annual "appraisal interview" and allowance for employees are dropped (approx. 12% of income) - switch to fixed salaries!
 - Objectives and commissions for sales force are dropped (approx. 60% of income) switch to fixed salaries!
- A homogeneous profit-sharing scheme for the group is created focused on "relative market performance", not on achievement of planned/ fixed budget figures
- Due to the cell-formation process there will be less management staff. In the new model:
 - Some of them would become acting as real leaders, as opposed to managers, according to our new values and model!
 - Some of them will become valuable members of the business cells, because of their mainly specialist expertise.
 - Some of them may not identify with the new model and will resign.



Brazilian packaging producer with customer-dedicated plants

The case company in a nutshell:

- Producer of packaging for consumer goods firms,
 Brazilian country organization of a European multinational group.
- Approx. 400 employees in the country
- 8 production plants, dedicated each to a specific customer (consumer goods producers)
- Massive international and national growth potential due to structural change in the consumer goods industry...
- ...but also internal barriers and infighting in the company, lack of leadership, strong command and control culture from headquarters, lack of "improvement culture" at local plants, lack of agility and responsiveness to customer demands by plants teams.
- Resulting in: Continuously decreasing profitability over the years, lack of competitiveness in acquiring new projects
- Plenty of hierarchy at plants, frequent quality problems, massive waste at some production sites or lines, strong command and control culture, strong departmentalism and nepotism.

Previous problems and structure at the customer plant

- Largest plant/unit of the company, with approx. 130 employees
- Strong power structure, with shift leaders exercising command and control over their teams, fiefdoms and intense game-playing between shifts.
- Departments like quality, maintenance etc. work to their own interests as well.
- Politics between shifts. Little scope for continuous improvement work. Fear culture within the unit.
- Scrap of up to 30% on one production line, lots of rework.
- Changes are often agreed upon, but not truly implemented, improvement initiatives get stuck somewhere.



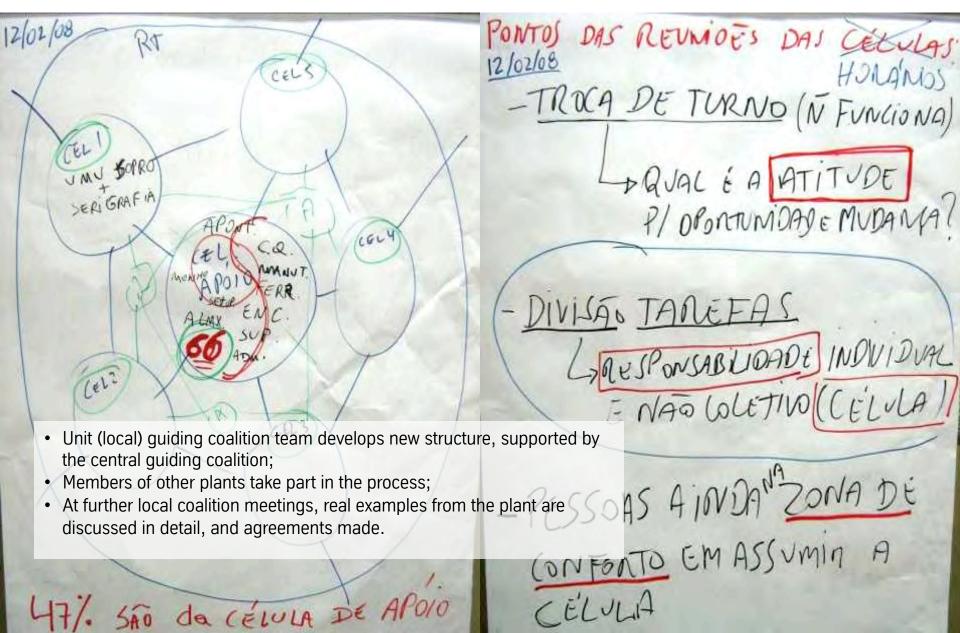
Approach to change: "Breaking the pyramid" at an industrial plant

Chronology and methods:

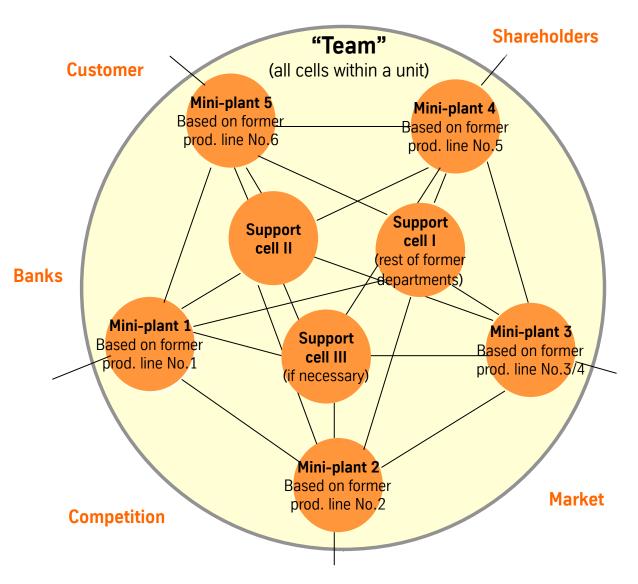
- Week 1: Urgency for action in the unit is identified by company-wide guiding coalition
- Week 4: Initial event held at the unit with 19 people from different areas of the local team ("Breaking the pyramid")
 - Transparency in relation to changes to be made (by commercial director)
 - "Museum" exercise and Knowledge Turntables create urgency and vision for new model
- Week 5: Local guiding coalition meeting
 - group formed by plant manager
 - outline of the new model developed
- Detailed preparation of the future cell structure, including job analysis and functions during work sessions (local "guiding coalition")
- Weekly work meetings/follow-up by local guiding coalition ("on Tuesdays"), supported by coalition support group
- Action groups against waste are formed



"Breaking the organizational pyramid " at a production plant: Designing a new, networked model for a 130-people unit



The results



Principles for defining a "cell" within the new model

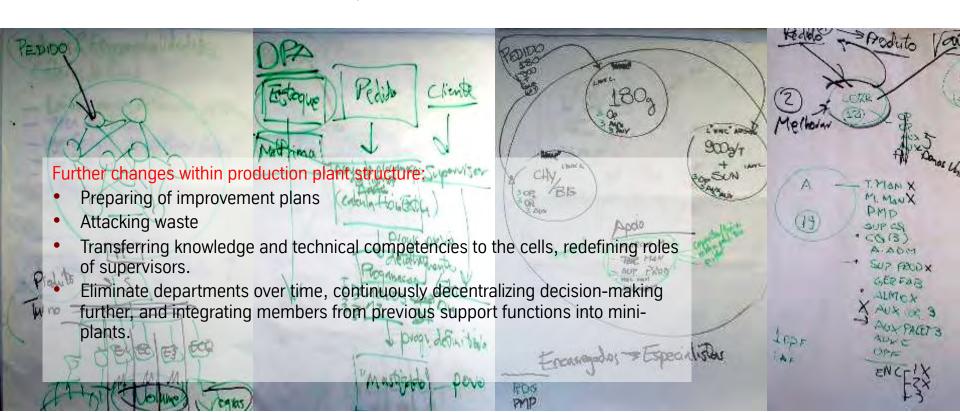
- It contains several functions, roles and duties, which would traditionally be separated into different departments. A cell integrates functions and roles
- It offers and sells products and/or services on its own, and is independent in its decisions about them.
- It is customer focused, in that it responds to internal or external clients, not to hierarchy.
- It is held accountable by the company leadership and is responsible for its own value creation.
- It applies the 12 laws of the BetaCodex.

Key learnings on structure, within the case company.

- Newly created production cells, or "mini-plants" to be formed around existing production lines
 or groups of lines. The concept of "shifts as teams", which was previously predominant, would
 be totally abolished within the plant. There would be no more shift leadership staff whatsoever.
- In the previous structure, around 50% of employees were working in "support functions" like quality, maintenance, internal logistics, etc. Those support teams would mostly be dissolved and team members integrated in mini-plant teams. Supervisors, except for the plant manager, would have to become mini-plant team members, or "specialists" within the support cells depending on their individual talents and preferences.
- Salaries would not be affected by the changes.
 Job titles, however, would at some point be totally abolished, to support transformation.
- Mini-plants alone are responsible for their "business" which includes quality, maintenance, staffing, production planning and scheduling, work organization, and ultimately also plant layout. They would be self-managed and empowered to acquire services from support cells at the plant and at the headquarters. They would also be empowered to challenge the support teams for continuous improvement. Mini-plants may elect speakers, and report directly to the plant manager (previously, there were two additional hierarchical levels).
- Mini-plants organize their work themselves, instead of being managed by supervisors, as in the old structure. To do this, new ways of displaying client orders, performing shift changes, cell coordination, and conflict resolution, would have to be developed.

Context: Foundation of a set of Task Forces begins, in order to "empower all others to act"

- Task Force "Cell networks within the plant units"
 ("Break the pyramid" create networks of highly autonomous teams responsible for results)
- Task Force "Compensation systems" (reward success based on relative performance)
- Task Force "Financial and non-financial reports" (promote open and shared information)
- Other Task Forces (TFs) and Work Groups (WGs) to be created:
 "TF Cell Network in the main office", "WG Waste reduction" in the units and at the head office

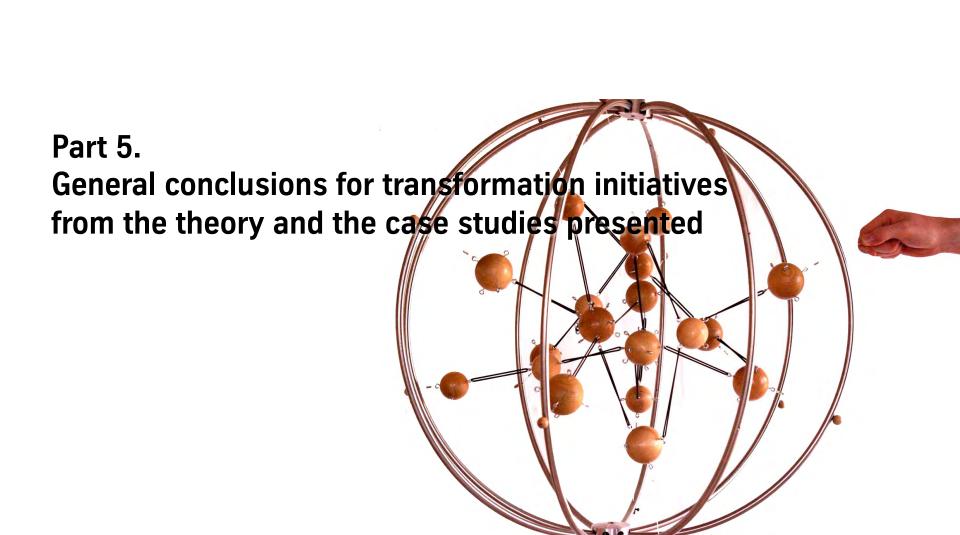


Decentralization and its consequences – a story

One episode from this implementation case illustrates well how devolution works in very practical terms.

In the previous structure, shift leaders (called supervisors) would elaborate a production plan for their shifts each day, for all production lines. The production plan would then be imputed into the ERP by the administrative assistant, and would also be archived in a black file that was always placed on a table in the shift leader's room. The official position was that this file could have been consulted by all plant employees. But that rarely happened. In practice, all decisions regarding work organization were taken by supervisors. Production scheduling was thus a process that was decoupled from the production team. Problems or needs for re-scheduling would remain obscure to team members, leading to conflicts, misunderstandings, and rework. As we discovered together, massive rework was often the consequence, as well as scrap of up to 30% in one production line.

When the process of devolving decision-making power to the decentralized production cells started, a decision was made to abolish the "black file". Each production cell would do its own production scheduling on an as-needed basis – making changes whenever necessary. All production information would be transparent to all: Customer orders, for example, would be displayed on an open panel near each production line. Scheduling should not be done by a shift leader, but by the entire team, or any given elected team member. Orders would be scheduled by the team on an asneeded basis, as well as quality and maintenance work, and training. This way, self-management by the team would be initiated. The shift leaders would in the process lose all authority over the production process.



When, exactly, should you do cell structure design, within the transformation process?

 Don't approach your cell structure design as a mental exercise, decoupled from action.

The idea of "finding the solution all on your own" may seem tempting, but you should restrain from that. If you want to do it anyway, then avoid sharing your insights with others in the organization. The reason: Developing and agreeing on the new structure should be a shared process. Do it with a large group of representatives from all areas, and in a truly shared setting. Don't attempt to envision the full solution for your organization beforehand!

Don't do it too early-on in the transformation process.

Do it in phase 5 of the Kotter transformation process, not before that (see next slide). You should consider it as an element of the stage called "Empower all others to act". Why? Well, first of all, you depend on others to think it through and to make it real. So provide that you only start working out the new structure once a certain percentage of organization members are in the "Neutral Zone".

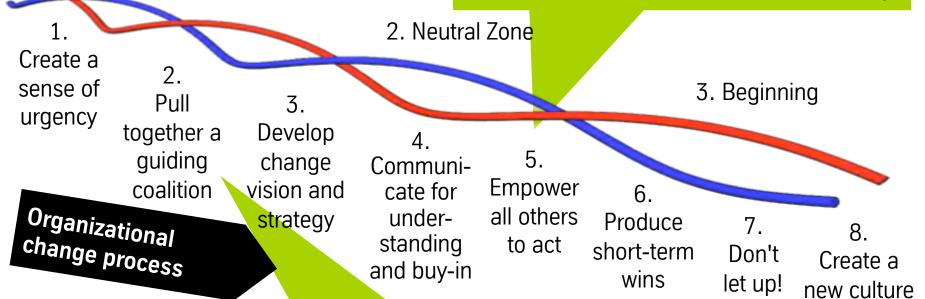
Secondly, before starting on the cell structure design, you should have your guiding coalition firmly established, the "case for change" clearly articulated and widely communicated.

Embedding cell structure design within the "Double Helix Transformation Framework"



Designing cell structure fits here – <u>not</u> earlier!

- Then create array of larger Task Forces to change organizational structure, management processes and business processes
- Align all projects and decision processes with the 12 principles and the values defined in the case for change



What to do before that (selected):

- Write the case for change
- Build awareness through selective action (e.g. abolishing budgets)
- Win hearts and minds, train for empowering leadership styles and act for more transparency

Further insights into the transformation process, gathered during the cell structure design phase

- A "high-quality" cell structure solution will only emerge from a true group exercise.
 What we have learned is: no BetaCodex specialist, however smart, or even with intimate knowledge of the firm will develop as smart a solution as a varied team of company representatives. Consultants as specialists on the method should basically challenge organization members' thinking, so that they themselves can arrive at a smart, consensus-based and satisfying solution.
- Involve as many people as possible into the process.
 Involve all people from the organization (if the organization is small), or with representatives from all departments (ideally: representatives democratically elected by their teams).
 The initial draft of the cell structure design must be worked out by the organization's people, or their representatives, because only a design developed by the firm's members themselves will gain acceptance, it must be deeply rooted in the current reality and in the organization's current sense of urgency. Creating this kind of involvement guarantees that the process and the output of the design workshops is both relevant and perceived as appropriate.
- Cell structure design means unleashing a highly emotional process.
 It is likely to mean a turning-point within the wider transformation initiative. This is why we have sometimes dubbed this moment the "week of truth". Support for transformation, as well as opposition, or resistance will manifest themselves in a more accentuated way after this exercise. Any organization will have to deal with this emotional process in a constructive way, because denying it would lead to a backlash.

Involve as many people as possible in working out the cell structure design.



More reading and resources

For more about complexity-robust organization: see our white papers no. 12 and 13.

For more about organizational structures, see our white paper no. 11.

For more about "relative" performance management: see our white paper no. 10.

For more about problem-solving in complexity, see our white paper no. 7.

For more about the BetaCodex, see our white papers no. 5 and 6.

All papers can be accessed from this page: www.betacodex.org/papers

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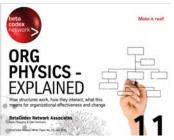
















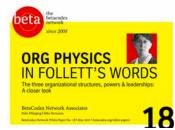




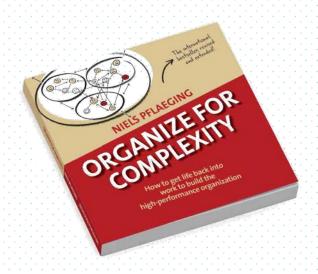




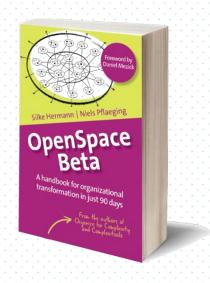




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