



Extreme Competition

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*Extreme Competition:
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The Process-Managed Org Chart: The End of Management and the Rise of Bioteams

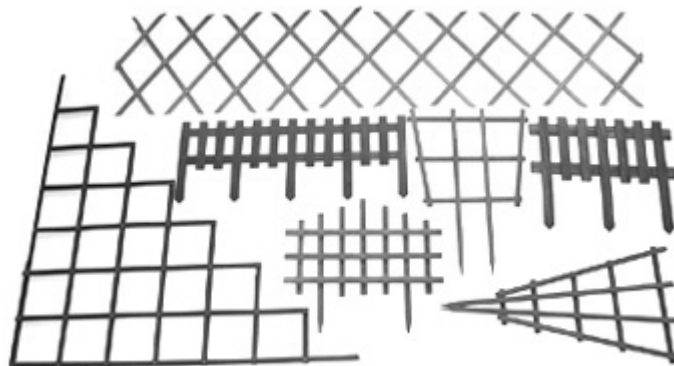
Adapted from the forthcoming book, *Dot Cloud: The 21st Century Business Platform*
(www.mkpress.com/cloud)

An overlay of end-to-end process management onto existing functional organizations has its rough edges, to say the least. In fact, the transformation to a process-managed enterprise could really mean the End of Management, as we know it.

What might a process-managed org chart look like? If you consider that today's value chains consist of over 20 autonomous companies, each running according to its own clock, then we'll have to unbundle our traditional hierarchal models that structure our organizations, where information flows through filters up and down the command chain, and look to nature for new patterns that have been under development for millions of years. By mimicking the designs of nature, the new org chart will no doubt look far more like the complex adaptive system made up of autonomous, self-organizing, self-managed teams found in nature.

While I've argued many times that operational innovation, via business process management is the cornerstone of 21st century competitive advantage, operational innovation will be for naught without innovation of another kind, Management Innovation. When responsiveness trumps efficiency, hierarchical command-and-control management systems fall flat. In a world of hyper change, centrally controlled hierarchies simply cannot see the opportunities or move quickly enough (remember the Soviet Union). Even if they utilize advanced business process management (BPM) systems, their management processes and structures cannot adapt with the required speed.

What pioneering companies are doing is to replace top-down pyramids with trellises of latticework, where each lattice represents an autonomous, self-managed team.



Sound farfetched and anarchistic without central control? You bet. But, guess what? That's a mirror image of the real world, a world made up of complex adaptive systems.

Turning to the Santa Fe Institute's John H. Holland: "A Complex Adaptive System (CAS) is a dynamic network of many agents (which may represent cells, species, individuals, teams, firms, nations) acting in parallel, constantly acting and reacting to what the other agents are doing. The control of a CAS tends to be highly dispersed and decentralized. If there is to be any coherent behavior in the system, it has to arise from competition and cooperation among the agents themselves. The overall behavior of the system is the result of a huge number of decisions made every moment by many individual agents."ⁱ

Complex adaptive systems are managed without managers!

Can businesses manage without managers?

Indeed. Just look at W. L. Gore, the company that makes Gore-tex, the fabrics that keep you warm and dry, but that also breathe, and Glide dental floss. In 1958, former Dupont engineer and geek (e.g., no MBA), Bill Gore would forego a ladder-like hierarchy and create an organization with a flat, lattice-like organizational structure where:

- There are no "employees," and everyone shares the same title: associate.
- There are over 8,500 associates that have, so far, turned out over a thousand innovative products.
- There are neither chains of command (pyramids or reporting structures) nor predetermined channels of communication. Anyone can talk to anyone, anytime.
- There are a large number of small, autonomous, self-organizing teams that function as a web of startup companies.
- There are no bosses, no V.P.s, executives, or managers—there are "sponsors" and "leaders." Associates are only responsible to their teams: Everyone's the boss, and no one's the boss. There are no slackers.
- There are no standard job descriptions or "assignments." Associates make sets of "commitments" to their teams, and sometimes unorthodox titles emerge, e.g., a "category champion."
- Associates choose to follow leaders rather than have bosses assigned to them.
- Performance reviews are based on a peer-level rating system.

What's really going on that makes a real difference at Gore? The company has closed the "information gap." Humans are unique in their ability to manipulate information outside the body, and are constantly hungry for information and narratives. While we speak of a growing wealth gap in today's economies, the volume and depth of information available to senior executives compared to the shop floor worker is staggering in typical corporations. Left starved for information, it's little wonder why curiosity and creativity remain in lock-down among the rank and file in most corporations. As John Caddell writes in his *Shoptalk* blog, "Perhaps it's concern for confidential information leakage, or for PR fallout, or that management simply doesn't trust in the employees' [Theory X] ability to add value to innovation."ⁱⁱ

Got Team?

According to the distinguished Indiana University technology professor, Dr. Curtis Bonk, "This is the age of employee participation, multiple leaders and yet no leader, and prompt communication, as well as the technologies that make all this possible." Got team? You'd better. To succeed in today's dynamic, technology-enabled environment, you must be able to function in and through teams. But, if we stick with our current pyramid-style designs of our organizations, we will not be able to meet the growing needs of our communities in the high-change global economy.

The discipline of *bioteaming* offers a vision of what successful teaming experiences look like in the interconnected world of the 21st century. A February 2008 *Business Week* feature, "Using Nature as a Design Guide," focused on how the "biomimicry" design movement helps companies look to the natural world to help take their business green. The feature reported on the pioneering work of Janine Benyus, biologist-cum-evangelist, the driving force behind the movement. In her writings she detailed how companies could study nonpolluting, energy-efficient manufacturing technologies that have evolved in the natural world over billions of years.

Now enter Ken Thompson, the former CIO with Reuters, who over the past ten years has taken the field of biomimicry from innovation related to physical things on to the realm of social structures. Thompson takes ideas from Nature about how groups perform and operate, and applies them to enhance how humans can work together in groups and teams.

Thompson's "bioteaming" is about designing and implementing organizational teams that operate on the basis of the communication principles that underpin nature's most successful groups. Spot the common theme: the waggle dance of honeybee, the pheromone trails of ants, the one-way information bursts of migrating geese. According to Thompson, nature's teams have characteristics that are not usually present in organizational teams:

Collective Leadership: *Any group member can take the lead.*

Nature's groups are never led exclusively by one member; different group members lead as needed. When geese migrate it is well known that the goose leading the V formation rotates. However, this is not just because they get tired and need to fly in another goose's slipstream for a while. The real reason is that no one goose knows the whole migration route. Collectively, between them, they know the migration route but no one individual knows. So a goose leads the part of the journey where it knows the way and when it recognizes "I don't know where to go next" it flies back into the V and waits for another goose to take over.

This is "Collective Leadership," the right leader for the right task at the right time.

The human species seems to be the only species that trusts in a single leader (or small management team) to know the whole path, on behalf of the community. Multi-Leader groups possess much greater agility, initiative and resilience than groups that are only led by a single exclusive leader.

Instant Messaging: *Instant whole-group broadcast communications.*

Nature's groups use short instant messages that are instantly broadcast and received "in situ" wherever the receivers are. These messages are very short and very simple – essentially just two types:

- *Opportunity Messages.* Food, nesting materials, Prey
- *Threat Messages.* Predators, Rival colonies

Ants achieve such messaging by using a range of chemical pheromones that they emit and lay in trails, and that are instantly picked up by the other ants. Bees use dances, for example, the waggle dance that is danced by a hive member who has found a food supply. The hive mates watch the dance and the angle of the axis of the dance points them to the food supply. It is important to note that:

- These messages are group broadcasts and are not replied to.
- They are received and acted upon immediately; there is no concept of a 2-stage communication that is received at point A and acted on later at point B.

A critical point is that these instant messages are so simple they really act just as "alerts." The recipient has to "decide" what to do. Such instant messages do not convey orders or instructions.

Ecosystems: *Small is Beautiful...but Big is Powerful.*

In nature, the size of the group is always right for the job and small groups link into bigger groups, that in turn link into still bigger groups. Where you have a very large group or a crowd, it is only possible to achieve coordinated action if each member does the same thing at the same time. Thus a crowd can move a stone or excavate a hole, but large scale innovation is another thing altogether, requiring “Mass collaboration.” Could a virtual team have a million members? Recent developments in mass collaboration, distributed computing and the wisdom of crowds suggest, the answer might be yes. Biological teams such as Ant or Bee societies, can contain *up to a million members in a single mature colony or hive*—all of whom can act as a unit.

Let’s take a physical example of mass collaboration, the tiny European upstart, Skype Technologies S.A., that turned a trillion-dollar industry upside down, by dialing up a vast, hidden resource: its own users. Skype, the newest creation from the same folks whose popular file-sharing software Kazaa freaked out record execs, also lets people share their resources—legally. When users fire up Skype, they automatically allow their spare computing power and Net connections to be borrowed by the Skype network, which uses that collective resource to route others’ calls. The result: a self-sustaining phone system that requires no central capital investment—just the willingness of its users to share. Says Skype CEO Niklas Zennström: “It’s almost like an organism.”ⁱⁱⁱⁱ

Up until recently, the size of the group has meant that some dimensions of biological teamwork and group behavior were not able to be reproduced in human teams and organizations due to this lack of scale. The Internet might change all this. A June 20, 2005 *Newsweek* magazine article, “The Power of Us,” [52] reports that “Mass Collaboration on The Internet is shaking up Business.” The article identifies three types of Internet-based “mass collaboration” that could be characterized as:

- *Give and Take* – for example creating shared, distributed computing capacity [e.g., SETI]
- *Needles in Haystacks* – connecting to other like-minds through shared interest, rather than personal relationship [e.g., Wikipedia]
- *Participation through Passion* – co-inventing with others based on passion, rather than money as the motivator [e.g., Linux]

So large groups enable scale, mass, reach and range. However, in a small group each member can meaningfully do different things at the same time—in other words, “Division of labor” and complex coordination. So a small group may not be able to lift a large weight but it could design a clever tool to make lifting that weight much easier. Nature shows us the importance of having the right group size for the job at hand. It also shows us that “one size does not fit all,” in terms of groups, by its ability to have all sizes of interconnected groups. For example, in the ant world there are castes within colonies, within food webs, within ecosystems. A critical point for human teams is that they need to allow members to enjoy both the small group dynamic for innovation, and the large group dynamic for scale [a perfect case for Virtual Networked Enterprises].

Clustering: *Engaging the many through the few*

Nature’s networks are clustered. The technical term for this is “scale-free networks.” In simple terms, what this means is that in most naturally occurring networks some of the nodes have many more connections than the average. This makes sense instinctively. For example, some of our friends seem to know everybody. If we need to reach someone we don’t directly know, we might try them first. This structure also describes the neurons in the brain and other emerging social structures such as the “hub” sites that are the best connected on the Internet. What this means for teams is that if you are lucky some of your team members will have extreme connectivity in terms of relationships. The team needs to take advantage of these existing connections rather than try and have the team leader(s) create and manage new connections from scratch.

These highly connected people are described elsewhere in various terms, including “alpha users,” “connectors” and “influentials.” But no matter what they are called, if they are well

managed and motivated they can provide the most efficient and effective channels for the team to engage with its wider community.

In his book, *Bioteams: High Performance Teams Based on Nature's Best Designs*, Thompson goes beyond the theory and provides proven method and techniques for creating and managing high performance bioteams. The conclusions in his book, and its companion book, *The Networked Enterprise: Competing for the Future Through Virtual Enterprise Networks*, reveal how business enterprises, supply chains, high-tech ventures, public sector organizations and nonprofits are turning to nature's best designs to create agile, high performing teams. Thompson's work is bolstered with examples from various countries, including Ireland, Mexico, Switzerland, America, Holland, and Germany. They include high performing banks, manufacturers, sports teams, engineering firms, aerospace companies, hospitals, nonprofits and more. Here's a quick taster to provide a sense of the essence of VENS:

Scenario #1: A group of Swiss mechanical engineering companies found themselves under serious competition on price, from eastern European companies just over their border with Czechoslovakia. They responded by collaborating together to design, build and sell a completely new *branded* machine (Tetrapak manufacture) that sold beyond their expectations:

- *The Threat or Opportunity:* Price pressure from low cost competitors.
- *The Result of the Collaboration:* Moving up the value chain from components to solutions.

Scenario #2: A number of Mexican engineering companies collaborated to create a shared brokerage facility, to enable them to go after work over the border in the U.S. market. They also organized themselves into clusters to start upgrading their skill base to meet the market requirements:

- *The Threat or Opportunity:* Accessing a new and more sophisticated market.
- *The Result of the Collaboration:* Creating a strong broker with presence, credibility, brand and quality awareness of the target market, and a mechanism for upgrading member company skills.

Scenario #3: A Cluster of U.S. Information and Communications Technology (ICT) companies offer a one-stop shop to their clients by capturing all the clients' ICT-related needs during business development meetings, and posting the ones they cannot address themselves on a private Web site accessible only to the other members of the cluster.

- *The Threat or Opportunity:* Offering customers a 1-stop shop. Opportunity to share resources to balance supply and demand.
- *The Result of the Collaboration:* Turning each of the companies into a potential broker for the other companies, resulting in prime contractor fees and referral income.

Thompson highlights the future norms of doing business: "Transparency, trust the team, shared glory and *rewards*, incremental improvement, and clear accountability."

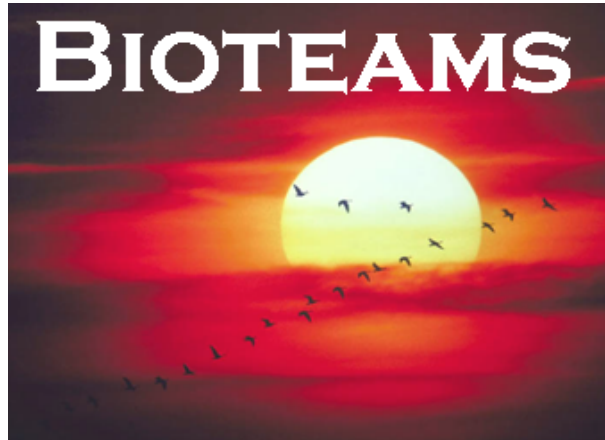
If Thompson is right, and it would be difficult to argue that he's not onto something really important in the interconnected global economy, *today's organizational teams just became extinct*.

Bioteams solve problems and learn by rapid experimentation and evolution. Bioteams have very concrete goals that are hard-wired into the members genetically but the members don't have any actual strategies or plans for achieving them. They work by rapid experimentation and feedback. If something works and solves the problem it gets reinforced within their collective set of responses for the next time; if not it dies.

Bioteams are action-focused. Each bioteam member is fundamentally 3-dimensional. Team members constantly engage autonomously with other close team members, their external environment and the enterprise as a whole. Bioteaming extends biological principles to also deal

with the hugely important issues of the “why” as well as the “how” or the “what.” Human teams have huge amounts of discretion and self-awareness, and thus *human* bioteams need a sense of purpose, a common set of shared values and passion—we can’t treat a human team like an ant colony.

Another key difference is the importance of the individual in a human team. If one member of an ant colony gets it wrong there are so many others who get it right that it does not matter. In general, however, the consequences of individual member failure are much higher in human bioteams and we need working practices and tools (such as accountability and transparency) to protect us from this, as Whole Foods does with its complete transparency of all things to all members of all of its teams.



In short, Web 2.0 and the Cloud aren’t so much about technology as they are about *a new platform for human interactions*, that, in turn, require new forms of organization and new team behaviors. With the emergence of global Internet collaboration, social networks and mobile communications, the very meaning of the word “team” has changed—changed utterly. The most well known trait of a bioteam is Self-Management or Autonomy.

Out of the winter of recession, new growth has room to emerge. The Cloud provides a new business platform that makes it possible to achieve operational innovation and new forms of collaboration never before possible, enabling a whole new set of possibilities for Management Innovation and competitive advantage.

While the notion of “employee,” a construct born during the emergence of the Industrial Age, is only a hundred years old, the Cloud will make it possible for innovative companies to remove the term, and the term “management” from their lexicons. In the Cloud, intra- and inter-company, self-managed teams will *swarm*, as complex adaptive organisms, to seize new opportunities in the brave new world of total global competition.

Have we really reached the End of Management?
Are you ready to work in the white space in the Org Chart?
Does your company’s Org Chart reflect a complex, adaptive system of Bioteams?

To answer these questions, you may just want to refer to www.mkpress.com
Dot Cloud: The 21st Century Business Platform,
Bioteams: High Performance Teams Based on Nature’s Best Designs, and
The Networked Enterprise: Competing for the Future with Virtual Enterprise Networks.

As the title of George Clooney’s 2005 movie says, “Good night, and good luck.”

ⁱ *Complexity: The Emerging Science at the Edge of Order and Chaos* by M. Mitchell Waldrop.

ⁱⁱ http://shoptalkmarketing.blogspot.com/2007/10/on-gary-hamels-future-of-management_19.html

ⁱⁱⁱ http://www.businessweek.com/magazine/content/05_25/b3938601.htm