Two key messages

• There are patterns in organizational design.

• Organizational design is changing.
There are patterns in organizational design

• If you learn the common patterns, you don’t need to keep rediscovering them.

• If you apply these patterns well, your company can gain significant strategic advantage.
Elements of organizational patterns

Strategy

Incentives (Alignment)

Structure (Grouping)
Process (Linking)

Staffing

Who

When

What

How

Why
How can activities be grouped?

**Functional Organization**
- CEO
- Engineering
- Marketing
- Manufacturing

**Geographical Organization**
- CEO
- Eastern US
- Western US
- Canada

**Product Organization**
- CEO
- Product 1
- Product 2
- Product 3

**Matrix Organization**
- CEO
- Marketing
- Manufacturing
- Product 1
- Product 2
When are different groupings useful?

<table>
<thead>
<tr>
<th>Structure</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional</td>
<td>• Economies of scale within functional departments</td>
<td>• Slow response time to environmental changes. Less innovation</td>
</tr>
<tr>
<td></td>
<td>• In-depth knowledge and skill development</td>
<td>• May cause decisions to pile on top, hierarchy overload</td>
</tr>
<tr>
<td></td>
<td>• Enables organization to accomplish functional goals</td>
<td>• Poor horizontal coordination among departments</td>
</tr>
<tr>
<td></td>
<td>• Best with only one or a few products</td>
<td>• Restricted view of organizational goals</td>
</tr>
<tr>
<td>Divisional</td>
<td>• Suited to fast change and innovation in unstable environment</td>
<td>• Eliminates economies of scale in functional departments</td>
</tr>
<tr>
<td>(Product, Geography, Customer, Market)</td>
<td>• Higher client satisfaction because product responsibility and contact points are clear</td>
<td>• Duplication of resources and poor coordination across divisions</td>
</tr>
<tr>
<td></td>
<td>• Units can adapt to differences in products, regions, clients</td>
<td>• Less in-depth competence and technical specialization</td>
</tr>
<tr>
<td></td>
<td>• Decentralizes decision-making</td>
<td>• Integration and standardization across divisions (products, regions, etc.) more difficult</td>
</tr>
<tr>
<td>Matrix</td>
<td>• Achieves coordination to meet dual demands</td>
<td>• Dual authority can be frustrating and confusing</td>
</tr>
<tr>
<td></td>
<td>• Flexible sharing of human resources across divisions</td>
<td>• Participants need good interpersonal skills and extensive training</td>
</tr>
<tr>
<td></td>
<td>• Suited to complex decisions and rapidly changing environments</td>
<td>• Time-consuming: frequent meetings and conflict resolution sessions</td>
</tr>
<tr>
<td></td>
<td>• Opportunity for both functional and divisional skill development</td>
<td>• Requires great effort to maintain power balance</td>
</tr>
</tbody>
</table>

How can groups be linked? (lateral coordination processes)

In order of coordination capability (and management time and difficulty)

- Informal communication (e.g., voluntary conversations, informal groups)
- Formal electronic systems (e.g., CAD, CRM)
- Formal groups (part-time, simple to complex)
- Integrator (full-time)
- Matrix organization

In order of coordination capability:
- Low
- High

Examples

• Proctor & Gamble (history)
• Google
• Cisco
• AES
• Siemens
How can groups be linked across organizations? (outsourcing)

Flexibility need

High

Low

Control need

High

Low

Full ownership

Partial ownership / Joint venture

Joint development / Alliance

Long-term contract

Short-term contract

When is outsourcing useful?

<table>
<thead>
<tr>
<th>Structure</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
</table>
| Outsourcing | • Can take advantage of supplier’s specialization:  
  – Economies of scale  
  – In-depth knowledge and skill  
  – Entrepreneurial motivation to excel on specialized task  
• Lower capital investment required  
• Many risks transferred to supplier  
  – e.g., costs of development, weather, inventory, labor  
• More flexibility  
  – Can change components or suppliers more easily (e.g., in rapidly changing technologies or fashion goods)  
  – Can decrease design cycle times  
  – Can draw on much larger pool of potential innovations | • Foregone profit on outsourced activities  
• Loss of critical skills internally  
  – May make future developments harder  
• Coordination may be more difficult (and expensive) across firm boundaries  
• Loss of control  
  – Supplier not necessarily motivated to take actions that are desirable for buyer  
  – Supplier may be unwilling to make investments specific to a particular buyer  
  – Supplier may “hold up” buyer later  
  – Supplier may provide critical advantage to buyer’s competitors  
  – Supplier may directly compete with buyer |

Examples

• Proctor & Gamble (Connect & Develop)
• eBay
• InnoCentive
• Wikipedia
• Threadless
• ...
**Eight steps for organizational change**

1. **Establish a sense of urgency**  
   Identify potential crises or major opportunities.

2. **Form a powerful coalition**  
   Assemble a group with enough power to lead change effort.

3. **Create a vision**  
   Compelling, can be communicated in less than 5 minutes

4. **Communicate the vision**  
   Communicate (by words and examples) ten times more than you think you need.

5. **Empower others to act on vision**  
   Remove obstacles (individual & organizational).

6. **Create short-term wins**  
   Systematically plan for (and celebrate) early victories.

7. **Consolidate and spread improvements**  
   Don’t declare victory too soon. Keep spreading change.

8. **Institutionalize new approaches**  
   Connect change to organizational culture and succession.

Keys to organizational change (condensed version)

- Support from the powerful
- Participation of those affected
- Phased approach
Examples

- Charlotte Beers at Ogilvy & Mather
- iStockPhoto, Current TV
- ...

Organizational design is changing

• New, often more decentralized, patterns are becoming increasingly desirable.

• You will probably have opportunities in your career to invent or apply new organizational design patterns.
How technology enables changes in organizational design

New technologies
- Cheap transportation: New ideas travel faster. Change is faster. Innovation is more important.
- Cheap communication
- Cheap automation: For other physical and information tasks

More innovation
- More tasks can be done anywhere in the world.
- More people can have more information and make more decisions for themselves.
- Less need for people to do physical work.

More globalizations
- People are more innovative when making decisions for themselves.

More freedom
- People are better at knowledge work when making decisions for themselves.

More knowledge work
- People are more able to do knowledge work.

More education
- Basic needs are already met.

More affluence

Intangible needs are more important
- Shaded boxes indicate core argument in Malone, Future of Work
In other words...

• New technologies
  (for communication, transportation, and automation)

• are decreasing the costs and increasing the desirability of

• organizations where
  – more people make more decisions (freedom)
  – activities are more distributed geographically (globalization)
  – intangible needs are more important
What new types of organizational genes are becoming more common?

<table>
<thead>
<tr>
<th>Crowd</th>
<th>Hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money</td>
<td>Glory</td>
</tr>
<tr>
<td>Love</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Create</th>
<th>Decide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection</td>
<td>Collaboration</td>
</tr>
<tr>
<td>Individual decisions</td>
<td>Group decision</td>
</tr>
</tbody>
</table>
When is the Crowd gene useful?

• The resources useful in solving the problem are distributed widely (or in unknown places).

• The problem be divided into pieces such that:
  – Single individuals can do the pieces.
  – Enough individuals can be found and are (or can be) sufficiently motivated to participate.
  – The current owners of necessary information are willing to share it with the “crowd.”
  – Gaming and sabotage can be managed satisfactorily.
  – ...

### How?

<table>
<thead>
<tr>
<th>Crowd</th>
<th>Independent</th>
<th>Dependent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Create</strong></td>
<td>Collection</td>
<td>Collaboration</td>
</tr>
<tr>
<td></td>
<td>• Contest</td>
<td></td>
</tr>
<tr>
<td><strong>Decide</strong></td>
<td>Individual decisions</td>
<td>Group decision</td>
</tr>
<tr>
<td></td>
<td>• Market</td>
<td>• Voting</td>
</tr>
<tr>
<td></td>
<td>• Social network</td>
<td>• Consensus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prediction markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other</td>
</tr>
</tbody>
</table>
### How?

#### Examples

<table>
<thead>
<tr>
<th>Crowd</th>
<th>Independent</th>
<th>Dependent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create</td>
<td>Collection</td>
<td>Collaboration</td>
</tr>
<tr>
<td>• YouTube videos</td>
<td>• InnoCentive</td>
<td>• Linux</td>
</tr>
<tr>
<td>• Wikipedia (collection)</td>
<td></td>
<td>• Wikipedia (article)</td>
</tr>
<tr>
<td>Decide</td>
<td>Individual decisions</td>
<td>Group decision</td>
</tr>
<tr>
<td>• iStockPhoto</td>
<td>• Amazon recommendations</td>
<td>• Kasparov v. World</td>
</tr>
<tr>
<td>• eBay</td>
<td></td>
<td>• Prediction markets</td>
</tr>
</tbody>
</table>
### When is democratic voting desirable?

<table>
<thead>
<tr>
<th>Structure</th>
<th>Favorable conditions</th>
<th>Unfavorable conditions</th>
</tr>
</thead>
</table>
| Democratic voting | • The knowledge, skills, and motivation needed to make a good decision are distributed widely.*  
• The *average* voter is more likely to make a good decision than a bad one.***  
• Whoever controls the information needed to make good decisions is willing to share it with voters.*  
• Everyone in the group needs to abide by the same decision. (Otherwise individuals can just decide for themselves without a group vote.)**  
• It is important for the voters to be committed to the decision. (They are more likely to feel committed to the decision if they had a chance to vote on it.) | • The *average* voter is more likely to make a bad decision than a good one.***  
• The voters’ motivations are too divergent. For instance, there is no satisfactory way to prevent:  
  • Gaming*  
  • Sabotage*  
• There isn’t enough time (or enough of other resources) for everyone to become informed and then to vote.  
• If votes are visible to others, then  
  • early voters may have too much influence on decisions (“information cascades”)  
  • social pressures may have too much influence on decisions |

* Conditions shared with other forms of action by a Crowd  
** Conditions shared with other forms of Group Decision  
*** See Condorcet Jury Theorem (described, for example, in Sunstein, 2006)

### When are internal markets desirable?

<table>
<thead>
<tr>
<th>Structure</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Markets</strong></td>
<td><strong>Efficiency</strong>&lt;br&gt;Maximizing your own benefits, results in efficient overall allocation (the invisible hand)&lt;br&gt;<strong>Flexibility</strong>&lt;br&gt;More information and minds applied to figuring out how to adjust Individual variation can be accommodated&lt;br&gt;<strong>Motivation</strong>&lt;br&gt;People are often more motivated and creative when they are rewarded directly for the results of their own actions</td>
<td><strong>Incentive problems</strong>&lt;br&gt;Sometimes agreements that would be good overall aren’t in the individual interests of one or both parties involved.&lt;br&gt;<strong>Communication</strong>&lt;br&gt;Lots of communication usually needed to find and compare alternatives and to negotiate agreements.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Question</th>
<th>Gene</th>
<th>When useful</th>
</tr>
</thead>
</table>
| **Who**  | Crowd | - Resources useful in doing activities are distributed widely or in places not known in advance  
- Activities can be divided into pieces satisfactorily (necessary information can be shared; gaming and sabotage can be managed) |
| **Hierarchy** |  | - Conditions for crowd aren’t met |
| **Why**  | Money, Love, Glory | - Many factors, too complex to list here, are relevant, with two rules of thumb  
- Appealing to Love and Glory, rather than Money, can often (but not always) reduce costs  
- Providing Money and Glory can often (but not always) influence a group’s direction and speed |
| **How—Create** | Collection | Conditions for Crowd, plus…  
- Activity can be divided into small pieces that can be done (mostly) independently of each other |
|  | Contest | Conditions for Collection, plus…  
- Only one (or a few) good solutions are needed |
|  | Collaboration | Activity cannot be divided into small independent pieces (otherwise Collection would be better)  
- There are satisfactory ways of managing the dependencies among the pieces |
| **How—Decide** | Group Decision | - Conditions for Crowd  
- Everyone in the group needs to abide by the same decision, plus … |
|  | Voting | - It is important for the Crowd to be committed to the decision |
|  | Averaging | - Conditions for Voting, plus…  
- Decision consists of estimating a number  
- Crowd has no systematic bias about estimating the number |
|  | Consensus | - Conditions for Voting, plus…  
- Achieving consensus in reasonable time is feasible (group is small enough or has similar enough views) |
|  | Prediction market | - Decision consists of estimating a number  
- Crowd has some information about estimating the number (biases and non-independent information are okay)  
- Some people may have (or obtain) much better information than others  
- Continuously updated estimates are useful |
| **Individual Decisions** |  | - Conditions for Crowd  
- Different people can make their own decision, plus … |
| **Market** |  | - Money is needed to motivate people to provide the necessary effort or other resources |
| **Social network** |  | - Non-monetary motivations are sufficient for people to provide the necessary effort or other resources  
- Individuals find information about other’s opinions useful in making their own choices |
Evocative examples of Crowd genes

- InnoCentive
- eBay
- Wikipedia
- W. L. Gore
- Intel scenario
- Threadless
- Cambrian House
- iStockPhoto
- ...


For what purposes are we designing organizations?

- Values that are not easily measured in economic terms are often important to many key stakeholders in organizations: investors, customers, workers, and others.

- IT makes an organization’s actions about these values more visible to the world.

Therefore:

- You have more opportunities to pursue non-economic values if you want to.

- You have to care more about your stakeholders’ non-economic values, whether you want to or not.
Examples where non-economic values are critical

- Wikipedia
- AES
- Threadless
- Whole Foods
- ...

What does this mean for your career?

• If you know how to recognize and apply *classic* patterns of organizational design, you’ll be better able to implement strategies effectively in many situations.

• If you know how to effectively invent or apply *innovative* organizational designs, you may be able to make this a key element of your whole strategy.
What does this mean for your life?

• You probably have more choices than you realize.

• To make the choices wisely, you need to think about what really matters to you.
How can you know what to do?

• “... ‘What can I actually do?’ The answer is as simple as it is disconcerting: we can, each of us, work to put our own inner house in order. The guidance we need for this work cannot be found in science or technology, . . . but it can still be found in the traditional wisdom of mankind.”
