

15.320  
Strategic Organizational Design  
**Course wrap-up**

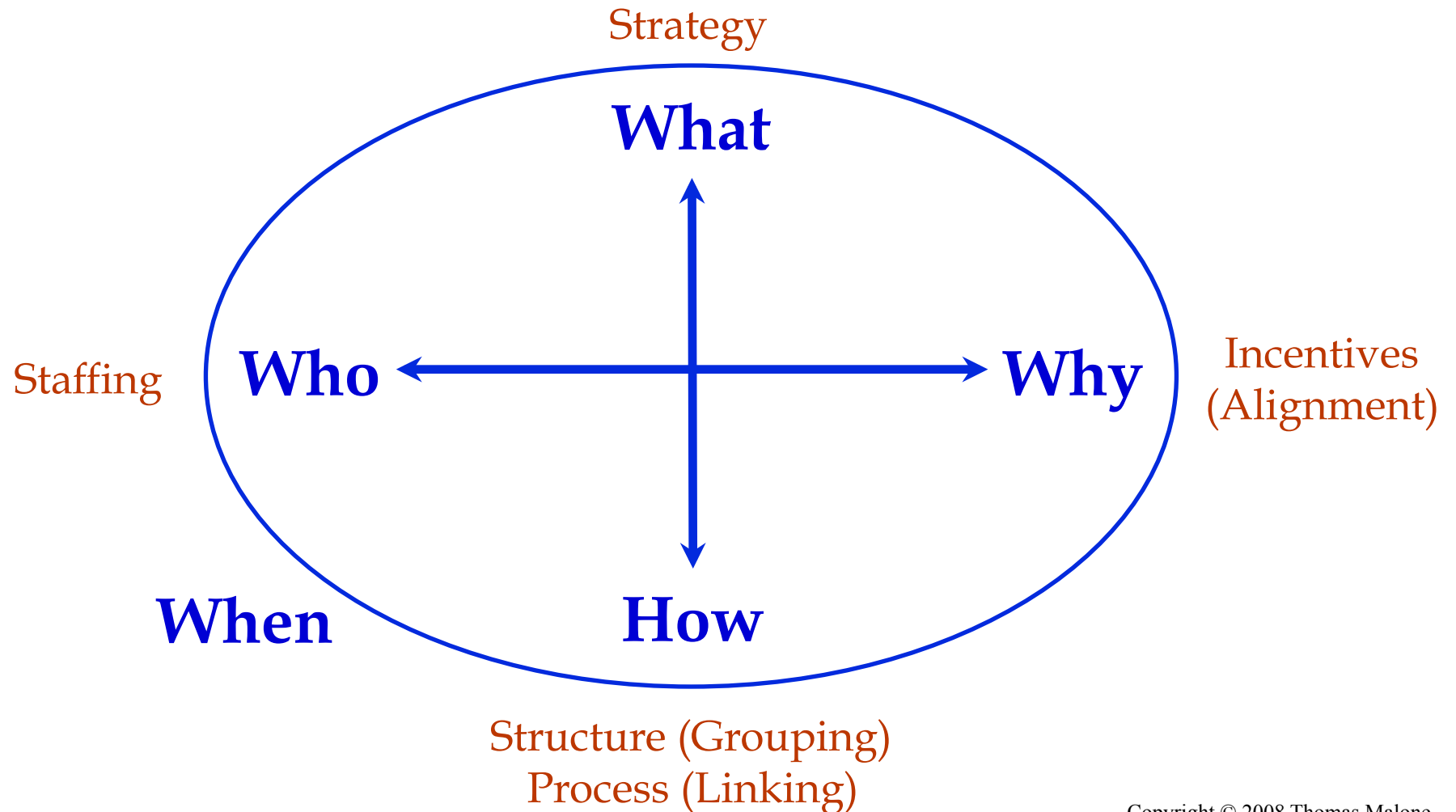
## Two key messages

- **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

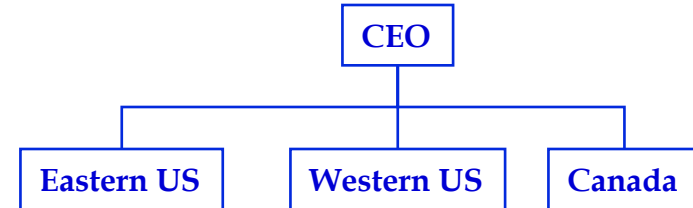


# How can activities be grouped?

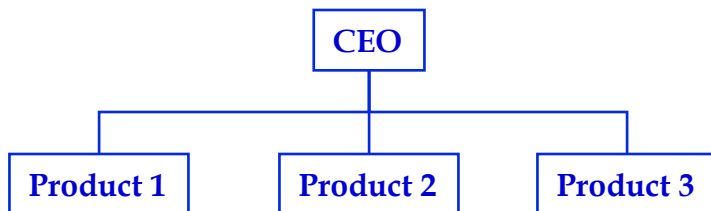
## Functional Organization



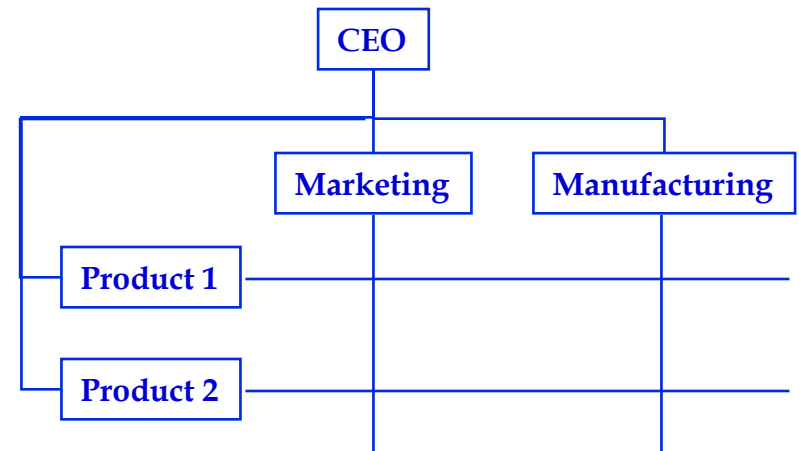
## Geographical Organization



## Product Organization



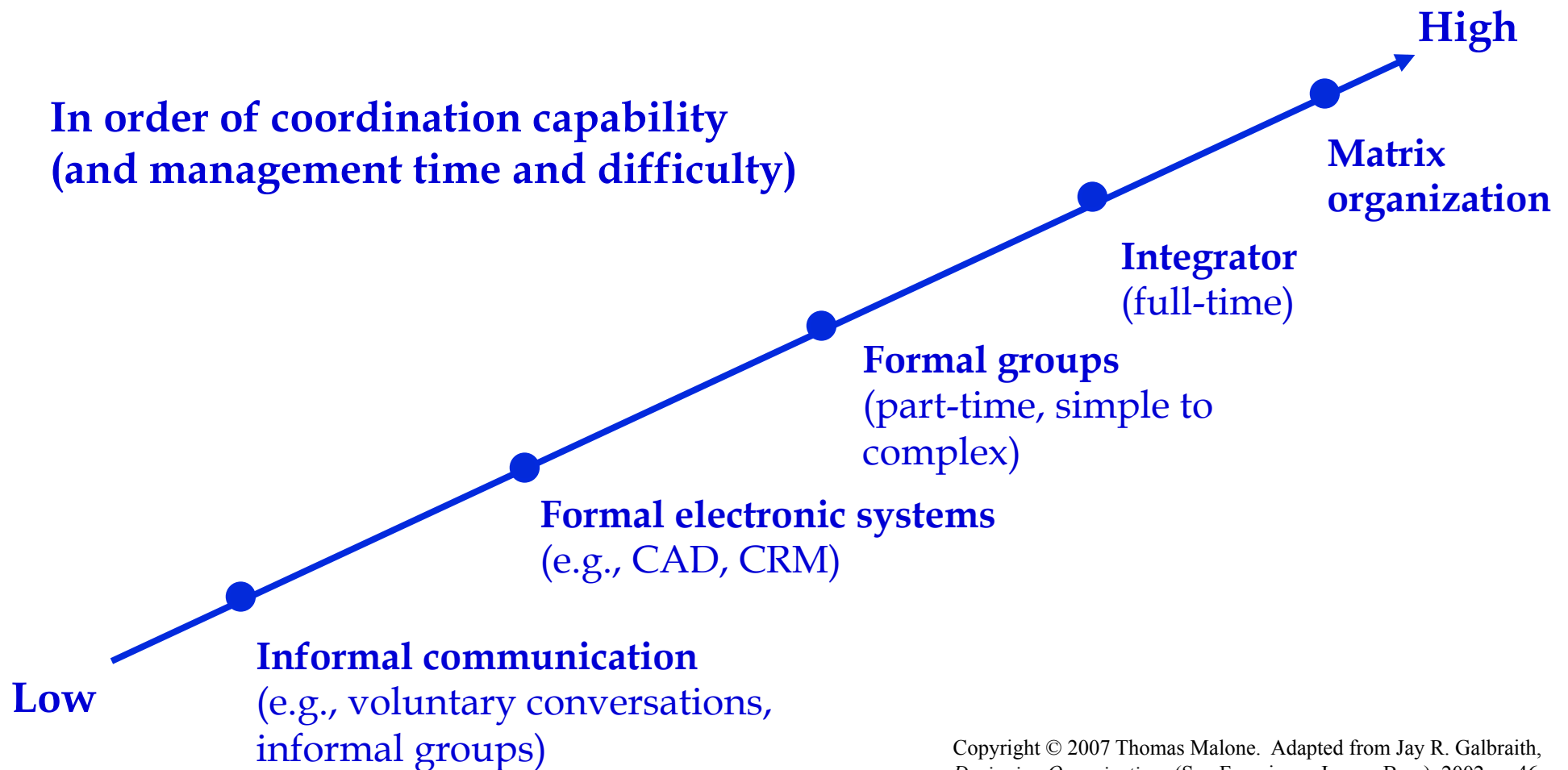
## Matrix Organization



# When are different groupings useful?

Structure	Strengths	Weaknesses
<b>Functional</b>	<ul style="list-style-type: none"> <li>• Economies of scale within functional departments</li> <li>• In-depth knowledge and skill development</li> <li>• Enables organization to accomplish functional goals</li> <li>• Best with only one or a few products</li> </ul>	<ul style="list-style-type: none"> <li>• Slow response time to environmental changes. Less innovation</li> <li>• May cause decisions to pile on top, hierarchy overload</li> <li>• Poor horizontal coordination among departments</li> <li>• Restricted view of organizational goals</li> </ul>
<b>Divisional</b> (Product, Geography, Customer, Market)	<ul style="list-style-type: none"> <li>• Suited to fast change and innovation in unstable environment</li> <li>• Higher client satisfaction because product responsibility and contact points are clear</li> <li>• Units can adapt to differences in products, regions, clients</li> <li>• Decentralizes decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminates economies of scale in functional departments</li> <li>• Duplication of resources and poor coordination across divisions</li> <li>• Less in-depth competence and technical specialization</li> <li>• Integration and standardization across divisions (products, regions, etc.) more difficult</li> </ul>
<b>Matrix</b>	<ul style="list-style-type: none"> <li>• Achieves coordination to meet dual demands</li> <li>• Flexible sharing of human resources across divisions</li> <li>• Suited to complex decisions and rapidly changing environments</li> <li>• Opportunity for both functional and divisional skill development</li> </ul>	<ul style="list-style-type: none"> <li>• Dual authority can be frustrating and confusing</li> <li>• Participants need good interpersonal skills and extensive training</li> <li>• Time-consuming: frequent meetings and conflict resolution sessions</li> <li>• Requires great effort to maintain power balance</li> </ul>

# How can groups be linked? (lateral coordination processes)

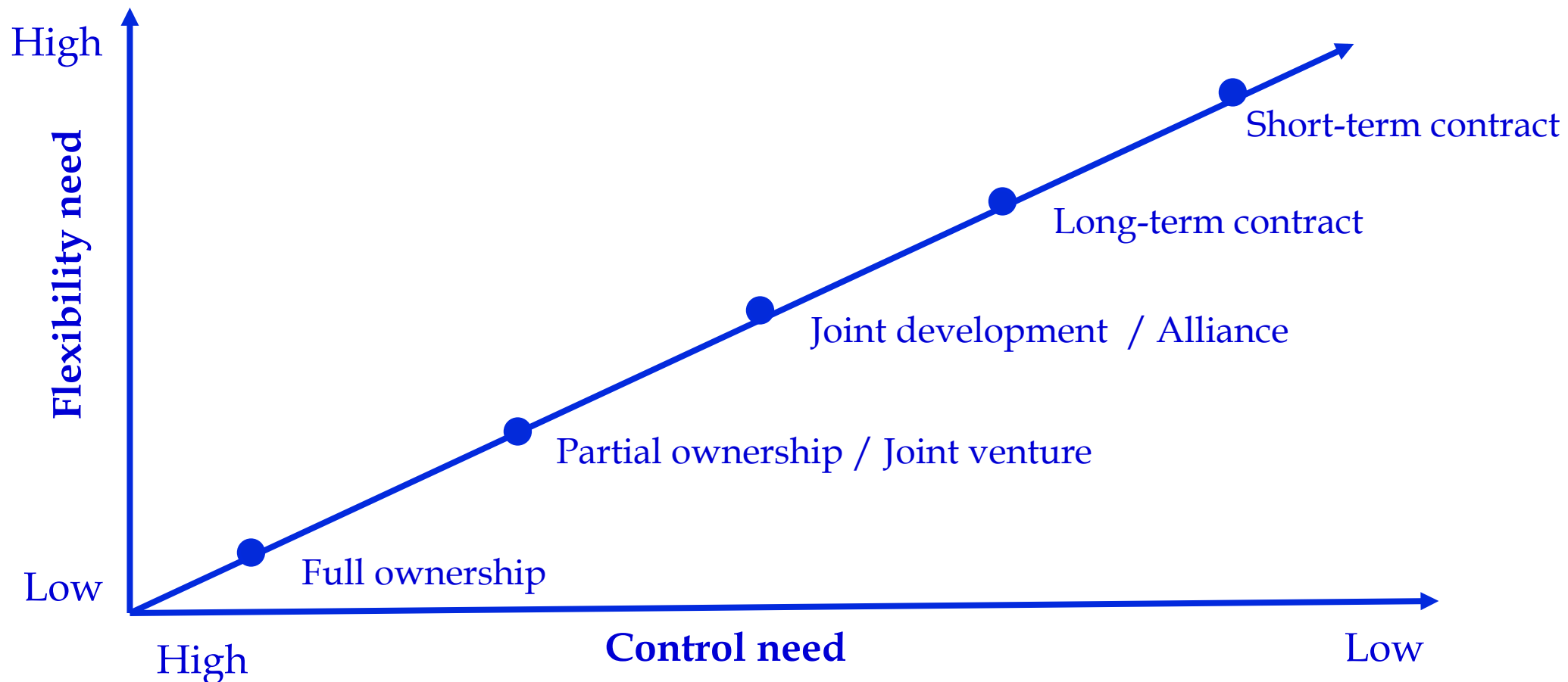


# Examples

- Proctor & Gamble (history)
- Google
- Cisco
- AES
- Siemens



# How can groups be linked across organizations? (outsourcing)



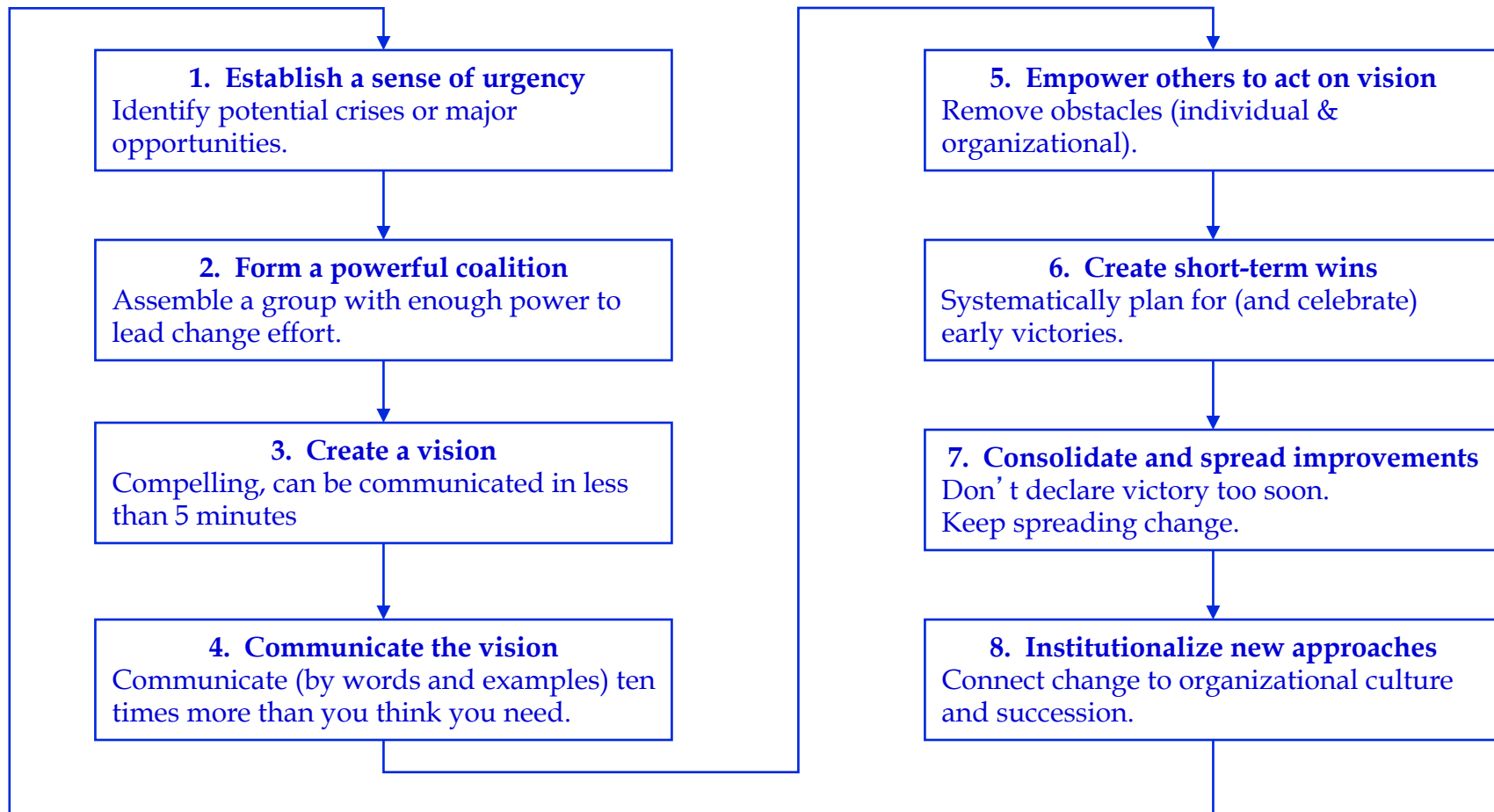
# When is outsourcing useful?

Structure	Strengths	Weaknesses
Outsourcing	<ul style="list-style-type: none"> <li>• Can take advantage of supplier's specialization:               <ul style="list-style-type: none"> <li>-Economies of scale</li> <li>-In-depth knowledge and skill</li> <li>-Entrepreneurial motivation to excel on specialized task</li> </ul> </li> <li>• Lower capital investment required</li> <li>• Many risks transferred to supplier               <ul style="list-style-type: none"> <li>-e.g., costs of development, weather, inventory, labor</li> </ul> </li> <li>• More <i>flexibility</i> <ul style="list-style-type: none"> <li>-Can change components or suppliers more easily (e.g., in rapidly changing technologies or fashion goods)</li> <li>-Can decrease design cycle times</li> <li>-Can draw on much larger pool of potential innovations</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Foregone profit on outsourced activities</li> <li>• Loss of critical skills internally               <ul style="list-style-type: none"> <li>-May make future developments harder</li> </ul> </li> <li>• Coordination may be more difficult (and expensive) across firm boundaries</li> <li>• Loss of <i>control</i> <ul style="list-style-type: none"> <li>-Supplier not necessarily motivated to take actions that are desirable for buyer</li> <li>-Supplier may be unwilling to make investments specific to a particular buyer</li> <li>-Supplier may "hold up" buyer later</li> <li>-Supplier may provide critical advantage to buyer's competitors</li> <li>-<i>Supplier may directly compete with buyer</i></li> </ul> </li> </ul>

# Examples

- Proctor & Gamble (Connect & Develop)
- eBay
- InnoCentive
- Wikipedia
- Threadless
- ...

# Eight steps for organizational change



# Keys to organizational change (condensed version)

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

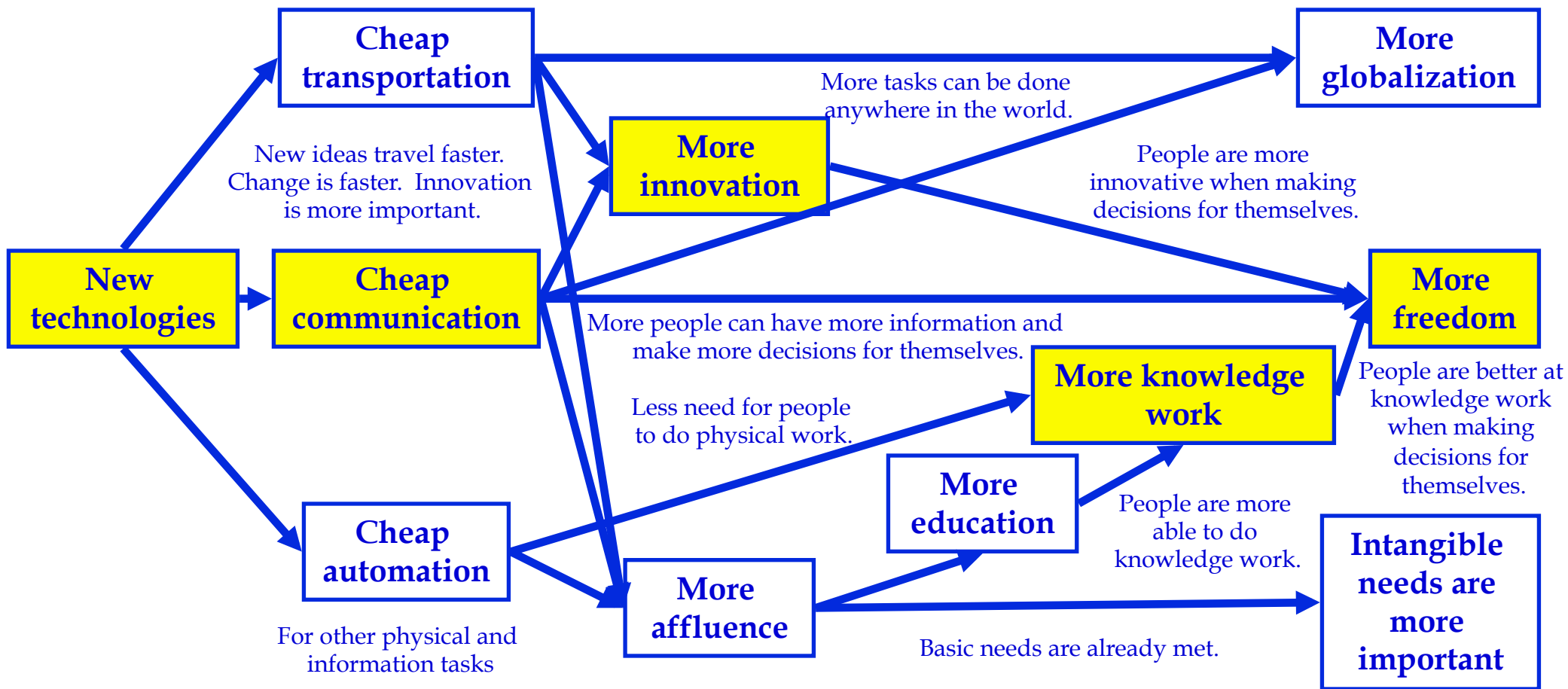
# Examples

- 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

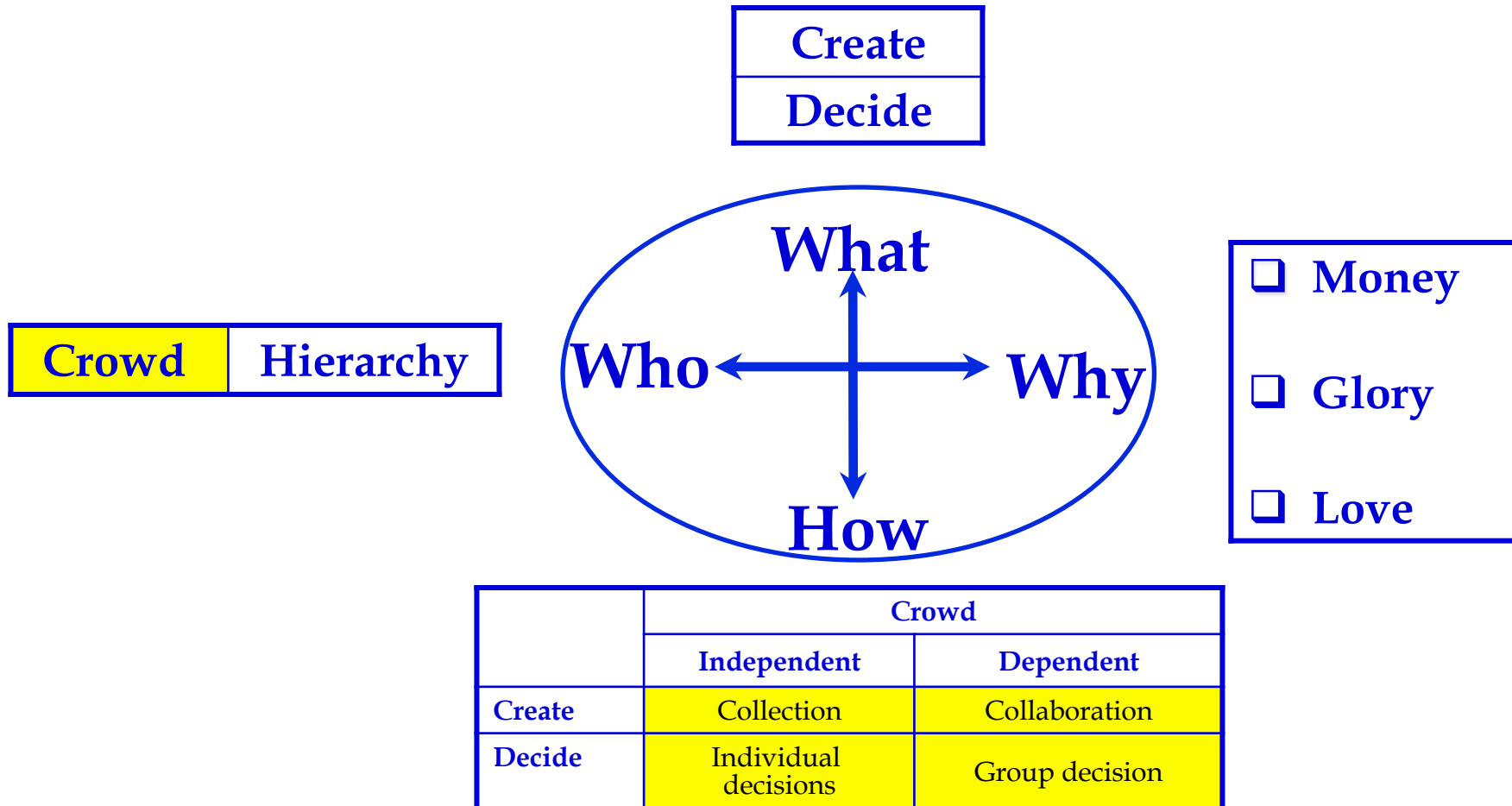




## In other words...

- **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?



# 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?

	Crowd	
	Independent	Dependent
<b>Create</b>	<b>Collection</b> <ul style="list-style-type: none"><li>• Contest</li></ul>	<b>Collaboration</b>
<b>Decide</b>	<b>Individual decisions</b> <ul style="list-style-type: none"><li>• Market</li><li>• Social network</li></ul>	<b>Group decision</b> <ul style="list-style-type: none"><li>• Voting</li><li>• Consensus</li><li>• Prediction markets</li><li>• Other</li></ul>

# How? Examples

	Crowd	
	Independent	Dependent
Create	<b>Collection</b> <ul style="list-style-type: none"><li>• YouTube videos</li><li>• Wikipedia (collection)</li><li>• InnoCentive</li></ul>	<b>Collaboration</b> <ul style="list-style-type: none"><li>• Linux</li><li>• Wikipedia (article)</li></ul>
Decide	<b>Individual decisions</b> <ul style="list-style-type: none"><li>• iStockPhoto</li><li>• eBay</li><li>• Amazon recommendations</li></ul>	<b>Group decision</b> <ul style="list-style-type: none"><li>• Kasparov v. World</li><li>• Prediction markets</li></ul>

# When is democratic voting desirable?

Structure	Favorable conditions	Unfavorable conditions
Democratic voting	<ul style="list-style-type: none"> <li>• The knowledge, skills, and motivation needed to make a good decision are distributed widely.*               <ul style="list-style-type: none"> <li>• The <i>average</i> voter is more likely to make a good decision than a bad one.**</li> </ul> </li> <li>• Whoever controls the information needed to make good decisions is willing to share it with voters.*</li> <li>• Everyone in the group needs to abide by the same decision. (Otherwise individuals can just decide for themselves without a group vote.)**</li> <li>• 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.)</li> </ul>	<ul style="list-style-type: none"> <li>• The <i>average</i> voter is more likely to make a bad decision than a good one.***</li> <li>• The voters' motivations are too divergent. For instance, there is no satisfactory way to prevent:               <ul style="list-style-type: none"> <li>• Gaming*</li> <li>• Sabotage*</li> </ul> </li> <li>• There isn't enough time (or enough of other resources) for everyone to become informed and then to vote.</li> <li>• If votes are visible to others, then               <ul style="list-style-type: none"> <li>• early voters may have too much influence on decisions ("information cascades")</li> <li>• social pressures may have too much influence on decisions</li> </ul> </li> </ul>

\* 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?

Structure	Strengths	Weaknesses
<b>Internal Markets</b>	<ul style="list-style-type: none"> <li>• <i>Efficiency</i> Maximizing your own benefits, results in efficient overall allocation (the invisible hand)</li> <li>• <i>Flexibility</i> More information and minds applied to figuring out how to adjust Individual variation can be accommodated</li> <li>• <i>Motivation</i> People are often more motivated and creative when they are rewarded directly for the results of their own actions</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Incentive problems</i> Sometimes agreements that would be good overall aren't in the individual interests of one or both parties involved.</li> <li>• <i>Communication</i> Lots of communication usually needed to find and compare alternatives and to negotiate agreements.</li> </ul>

# When are all the different Crowd genes useful?

<i>Question</i>	<i>Gene</i>	<i>When useful</i>
<b>Who</b>	<b>Crowd</b>	<ul style="list-style-type: none"> <li>Resources useful in doing activities are distributed widely or in places not known in advance</li> <li>Activities can be divided into pieces satisfactorily (necessary information can be shared; gaming and sabotage can be managed)</li> </ul>
	<b>Hierarchy</b>	<ul style="list-style-type: none"> <li>Conditions for crowd aren't met</li> </ul>
<b>Why</b>	<b>Money</b>	<ul style="list-style-type: none"> <li>Many factors, too complex to list here, are relevant, with two rules of thumb                             <ul style="list-style-type: none"> <li>– Appealing to Love and Glory, rather than Money, can often (but not always) reduce costs</li> <li>– Providing Money and Glory can often (but not always) influence a group's direction and speed.</li> </ul> </li> </ul>
	<b>Love</b> <b>Glory</b>	
<b>How—Create</b>	<b>Collection</b>	Conditions for Crowd, plus... <ul style="list-style-type: none"> <li>Activity can be divided into small pieces that can be done (mostly) independently of each other.</li> </ul>
	Contest	<ul style="list-style-type: none"> <li>Conditions for Collection, <i>plus</i>...</li> <li>Only one (or a few) good solutions are needed.</li> </ul>
	<b>Collaboration</b>	<ul style="list-style-type: none"> <li>Activity <i>cannot</i> be divided into small independent pieces (otherwise Collection would be better)</li> <li>There are satisfactory ways of managing the dependencies among the pieces</li> </ul>
<b>How—Decide</b>	<b>Group Decision</b>	<ul style="list-style-type: none"> <li>Conditions for Crowd</li> <li>Everyone in the group needs to abide by the same decision, <i>plus</i> ...</li> </ul>
	Voting	<ul style="list-style-type: none"> <li>It is important for the Crowd to be committed to the decision</li> </ul>
	Averaging	<ul style="list-style-type: none"> <li>Conditions for Voting, <i>plus</i>...</li> <li>Decision consists of estimating a number</li> <li>Crowd has no systematic bias about estimating the number</li> </ul>
	Consensus	<ul style="list-style-type: none"> <li>Conditions for Voting, <i>plus</i>...</li> <li>Achieving consensus in reasonable time is feasible (group is small enough or has similar enough views)</li> </ul>
	Prediction market	<ul style="list-style-type: none"> <li>Decision consists of estimating a number</li> <li>Crowd has some information about estimating the number (biases and non-independent information are okay)</li> <li>Some people may have (or obtain) much better information than others</li> <li>Continuously updated estimates are useful</li> </ul>
	<b>Individual Decisions</b>	<ul style="list-style-type: none"> <li>Conditions for Crowd</li> <li>Different people can make their own decision, <i>plus</i> ...</li> </ul>
	Market	<ul style="list-style-type: none"> <li>Money is needed to motivate people to provide the necessary effort or other resources</li> </ul>
	Social network	<ul style="list-style-type: none"> <li>Non-monetary motivations are sufficient for people to provide the necessary effort or other resources</li> <li>Individuals find information about other's opinions useful in making their own choices.</li> </ul>

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 Thomas Malone.  
 Based, in part, on:  
 Malone, T. W.,  
 Laubacher, R., &  
 Dellarocas, C. The  
 Collective Intelligence  
 Genome, *Sloan  
 Management Review*,  
 Spring 2010, 51, 3,  
 21-31.



# 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.”

– E. F. Schumacher, *Small Is Beautiful*, 1973

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