Leading Change in Complex Environments

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Maverick & Boutique

Canada DND

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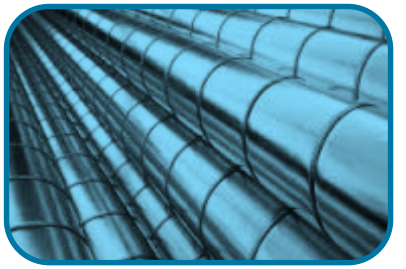
M&B helps people and their organizations leverage complexity, paradox and change

Strategic Planning

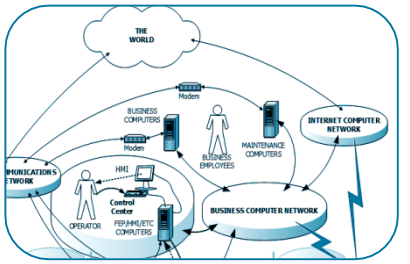
Leadership & Coordination



Project & Program Review

Stakeholder Engagement

Economic Development



Organization Agility & Change

Our clients include…

VERMONT

Chevron

unicef

ICPM

UBS

BRAC UNIVERSITY

LibraryLinkNJ
THE NEW JERSEY LIBRARY COOPERATIVE

Cleveland Clinic

ارامكو السعودية
Saudi Aramco

msh
Management Sciences for Health

brac

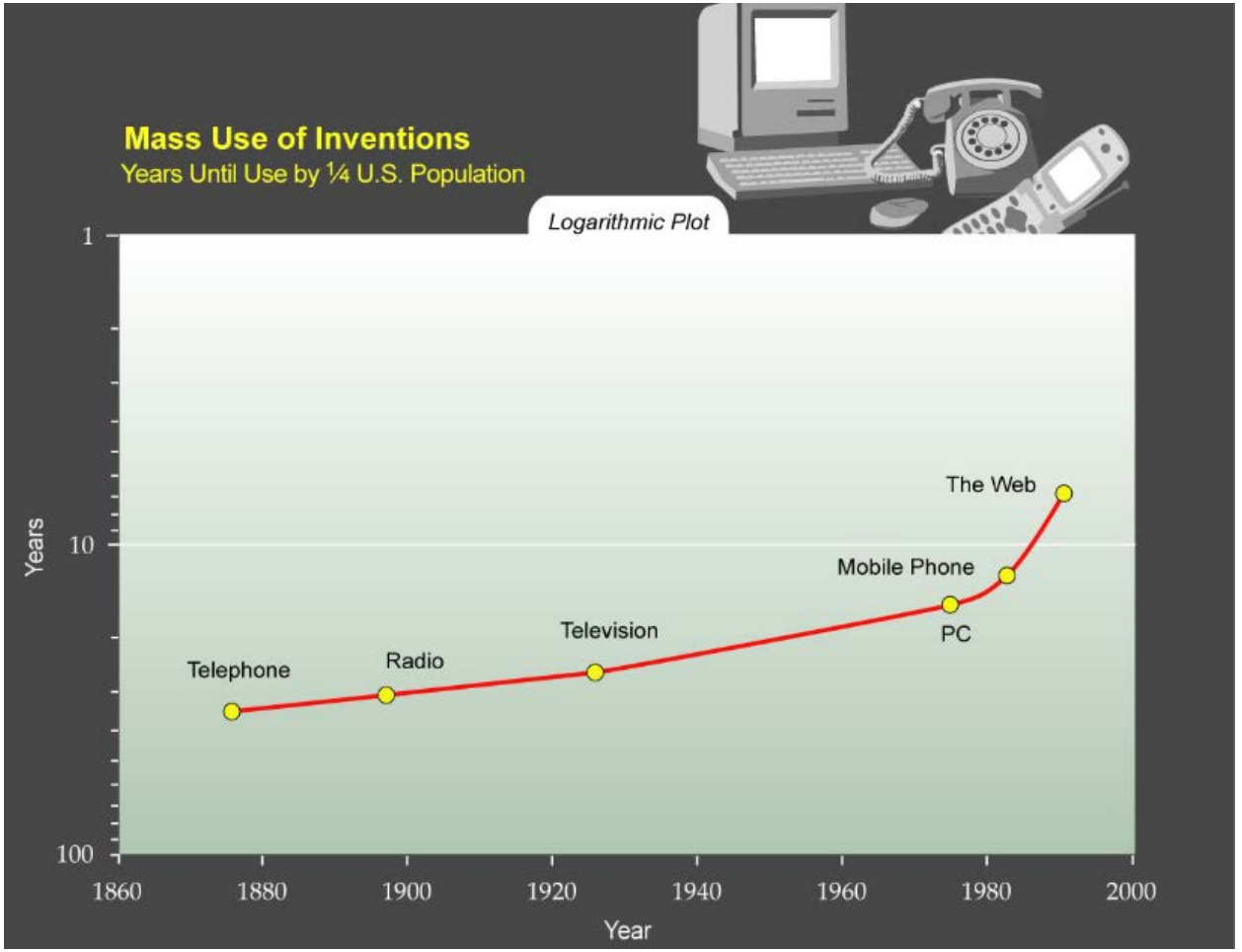
IACCM
International Association for Contract & Commercial Management

NAO

DAU
Defense Acquisition University

GENERAL DYNAMICS

The rate of technological and social change is accelerating



Some of the trends:

- Globalization and localization
- New “haves” and “have nots”
- Governance and institutions failing us
- Exponential growth in connections
- Growing interdependence of systems
- Ubiquity of information and knowledge
- Big data, anticipatory awareness, centralized information
- Democratization of knowledge/content/product creation
- Need for tools to deal with increasing complexity, uncertainty and change

Top Complex Project Management Issues

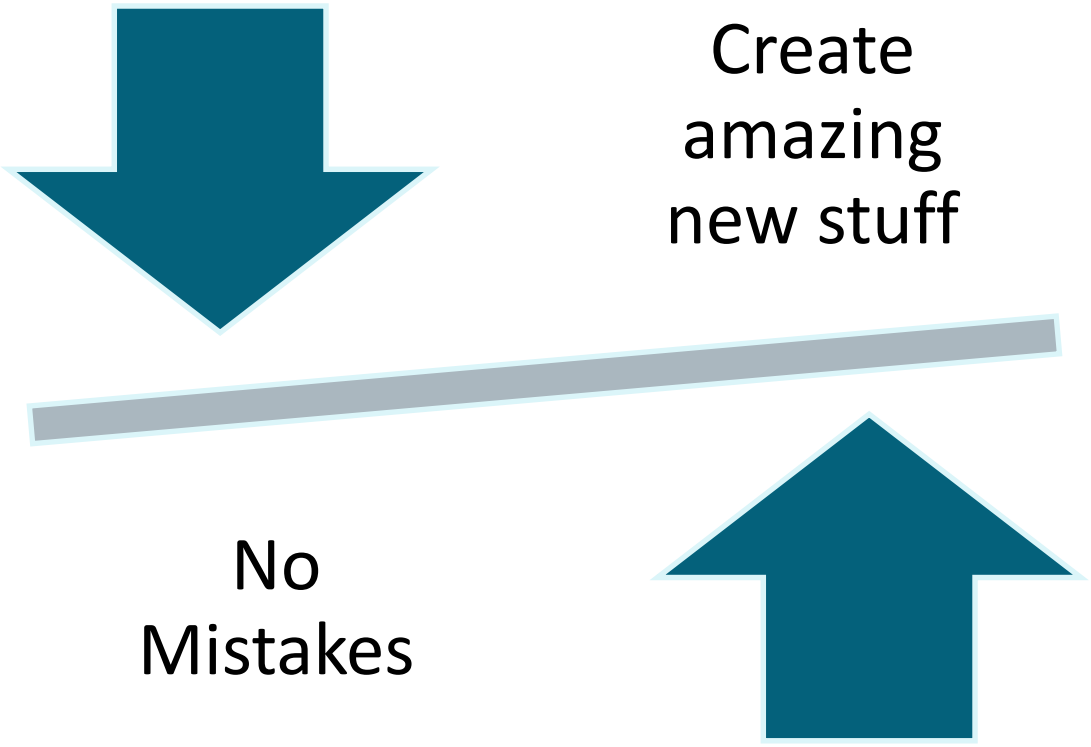
Unmet customer expectations	Marginalized stakeholders	Changes in political climate
Scope creep	Cross-boundary team integration	Procurement inflexibility
Lack of supply- and buy-side goal alignment	Variations due to breakthroughs and uncertainties	Lack of tools and methods for dealing with uncertainty

A metaphor for the current transformation underway

"Learning to fly a plane, while the plane is already in the air, and being re-assembled into another kind of transportation technology altogether."

Hitting a Moving Target,
ICCPM Roundtable Report, 2013

The challenge for leaders in defense acquisitions



Activity

Matching Challenges, Results and Leadership: What are the **challenges** we face in project management, what would be a better or the best **result** we could expect, and what **leadership capacities** do we need to ensure this happens? Respond like this: **Challenge + Best Result + Leadership Quality or Capacity**

Leadership capacities identified by complex project management leaders

Agile and adaptive	Creative orientation	Leverages complexity and paradox
Passionate	Self-and group-aware	Open, honest and trustworthy
Synthesizes and integrates ideas and interests	Systemic thinker who relies on feedback	Wise-risk taker

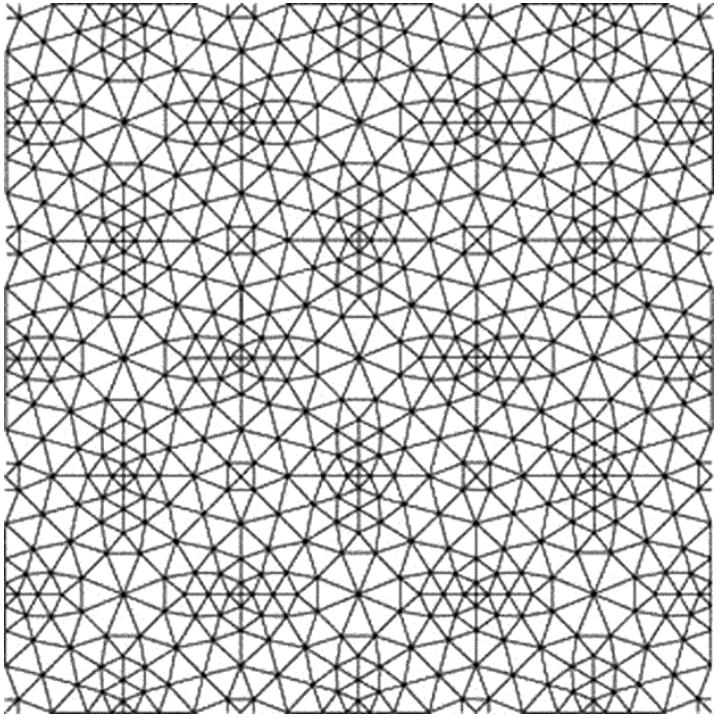
The 13 most powerful ways for leaders to

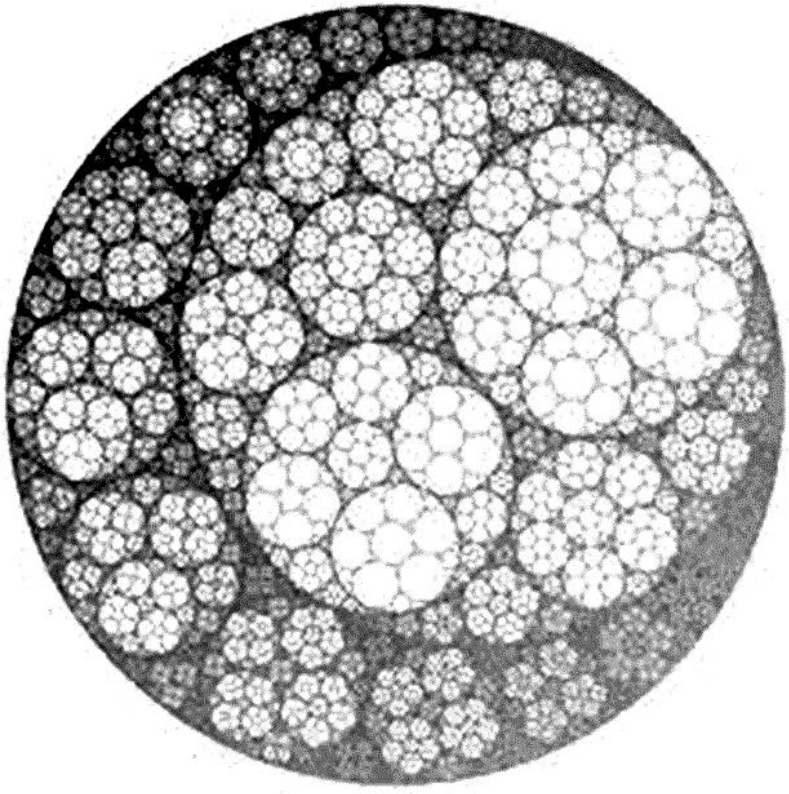
Think + Act + Interact

1. Cultivate leadership capacity everywhere.

A few people lead → Fractal leadership, self-similar at every scale

Fractal Leadership – distributed throughout the organization system, self-similar at every scale

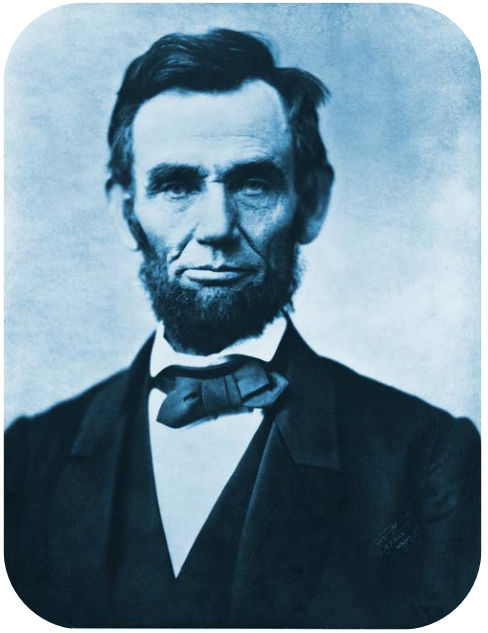




2. Create the future of your choice.

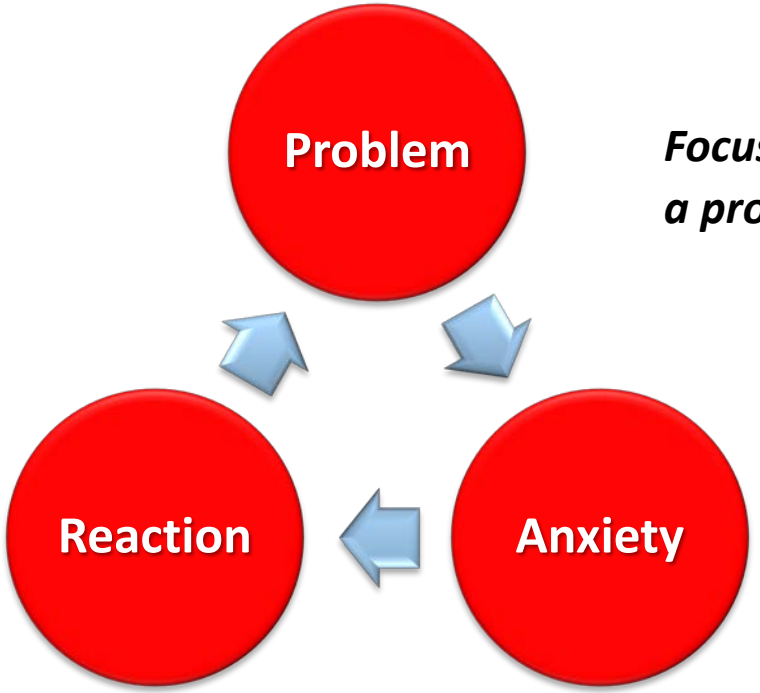
React to circumstances

Create what you want to want to achieve



**“The way to predict the future,
is to create it.”**

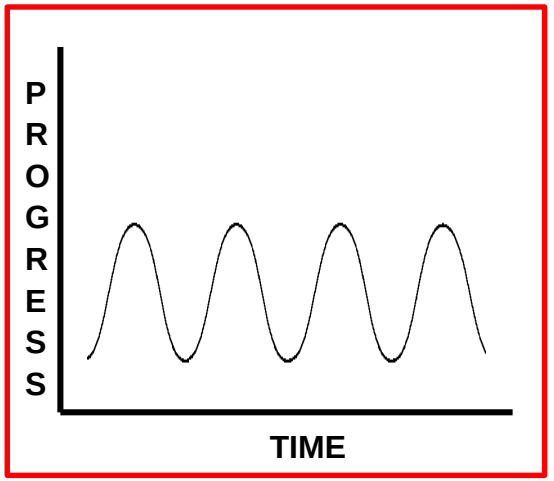
A problem centered or reactive focus results in a vicious cycle



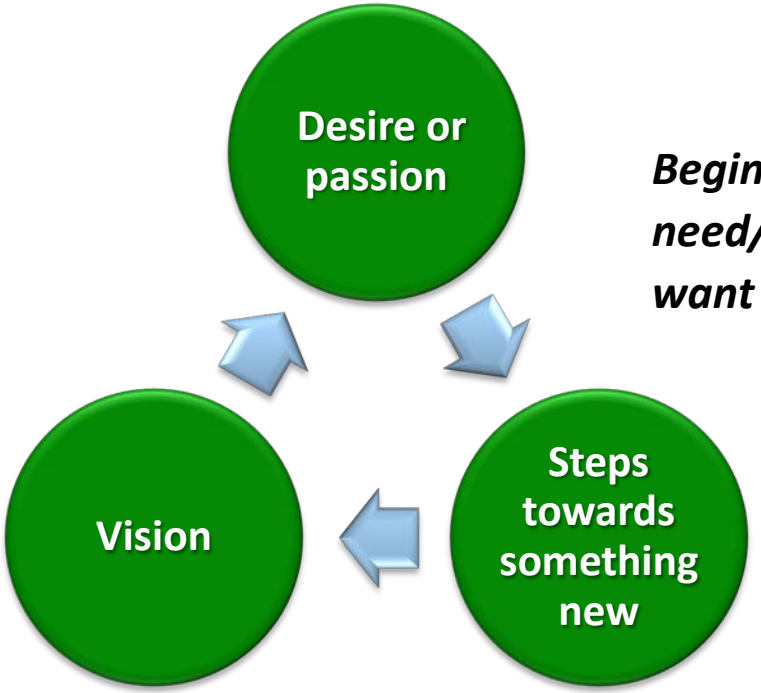
Focusing primarily on a problem produces…

We then react to relieve the anxiety,

Which may or may not solve the problem and will result in a vicious cycle of sub-optimal results.



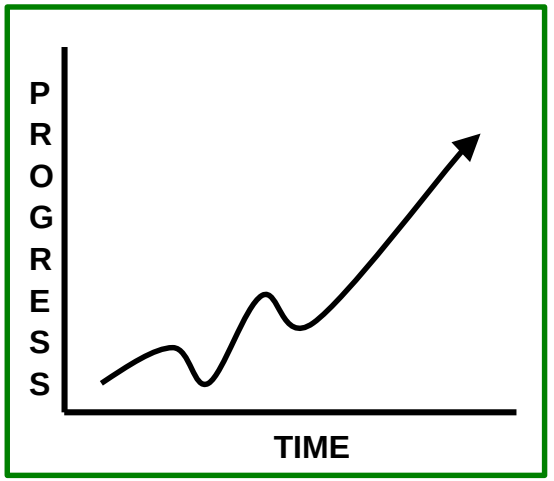
A creative focus results in a VIRTUOUS cycle of creating what we want



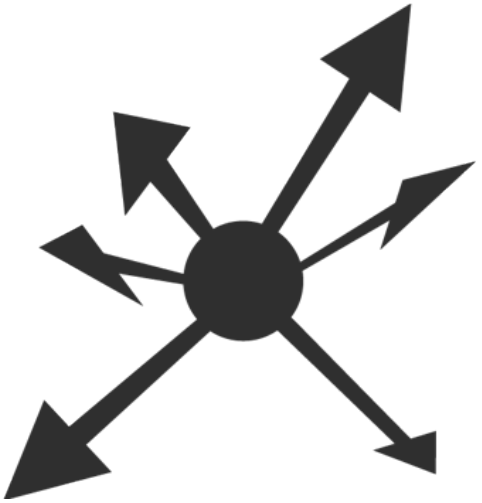
Beginning with a felt need/passion for what we want to create or be

We start to do things differently

…which then reinforces our desires and coalesces into a cohesive vision of the future. This results in a virtuous cycle of high performance.



3. Create agile organizations by letting go of “control”.



“Control” projects or organizations like machines

Leverage and influence them like complex adaptive systems

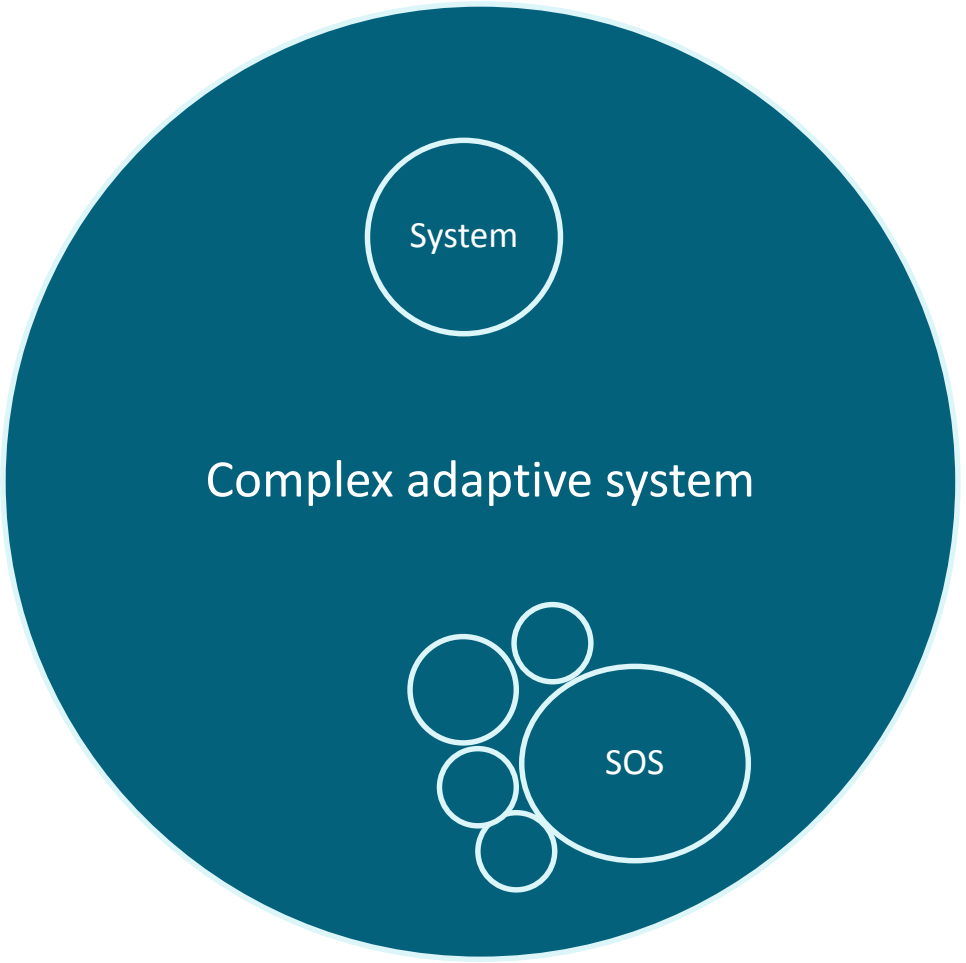
The myth of “control”

“Control is…an emergent property, not an option to be selected.”

“[The] best that one can do is to create a set of conditions that improves the probability that a desirable…outcome will occur.”

Dr. David S. Alberts, US Defense

ALL human systems are complex adaptive systems



Some parts of our systems are machines with linear/algorithmic features

Complex adaptive systems are emergent and learn as they develop

Brains

Markets

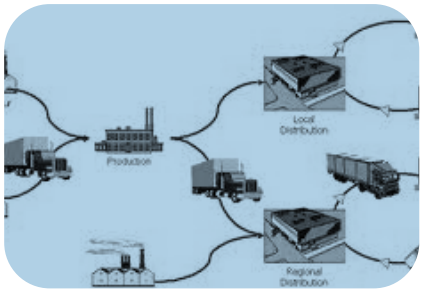
Communities

Teams

CAS include systems of systems (SOS)

(multiple systems that are interdependent)

Defense system



Supply chain

Electrical grid

Health system

Air Transport

Emergency services

To facilitate the emergence of resilient, adaptive organizations and systems of systems…

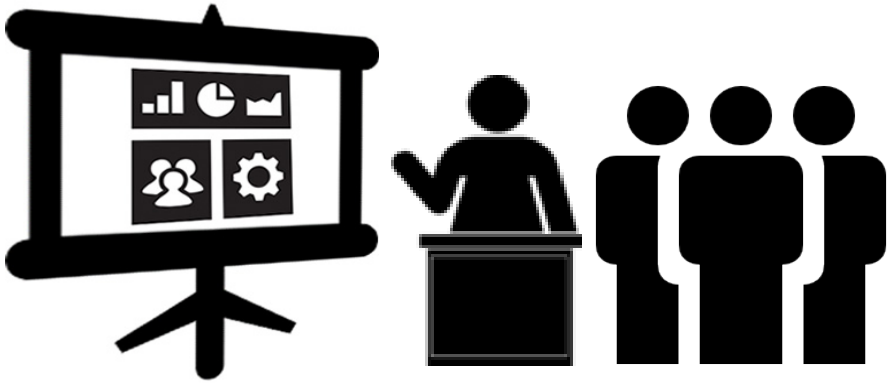
Leverage the laws of complexity

- **Requisite variety**
- **A robust model of the system**

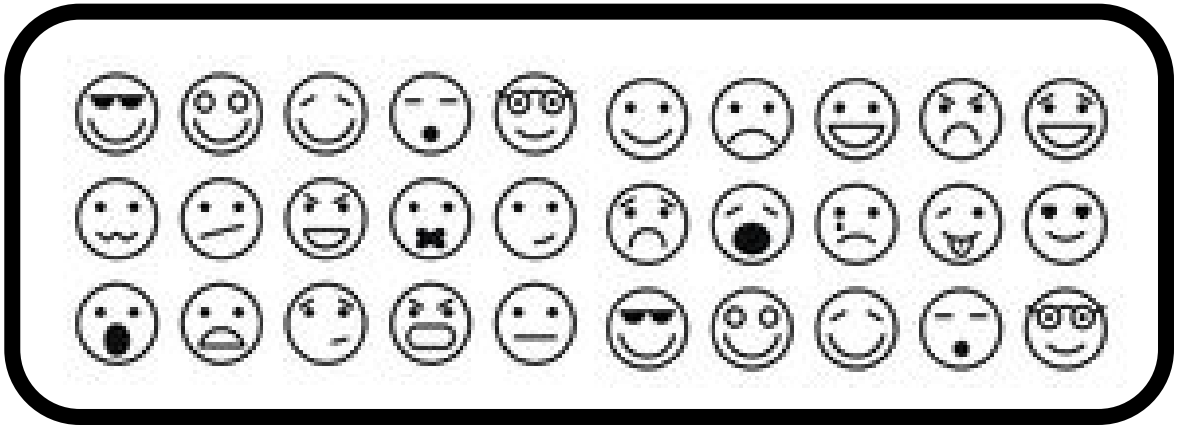
Leverage the features of complex adaptive systems

Use the highest leverage action in systems

In order to influence a system one must…



1. Have a robust model of the system

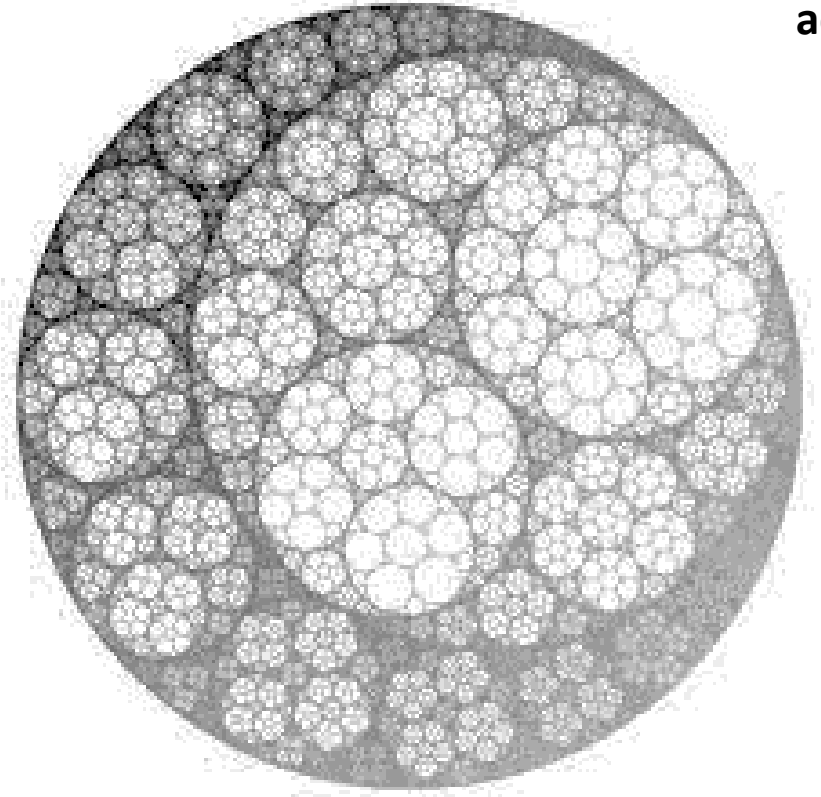


2. Match or exceed the variety that exists in the system

Ways to leverage the features of complex adaptive systems

Pay attention to small changes that can result in very different outcomes.

Make use of attractors: to achieve optimal states of the system.



Make use of feedback loops to auto regulate the system or generate growth.

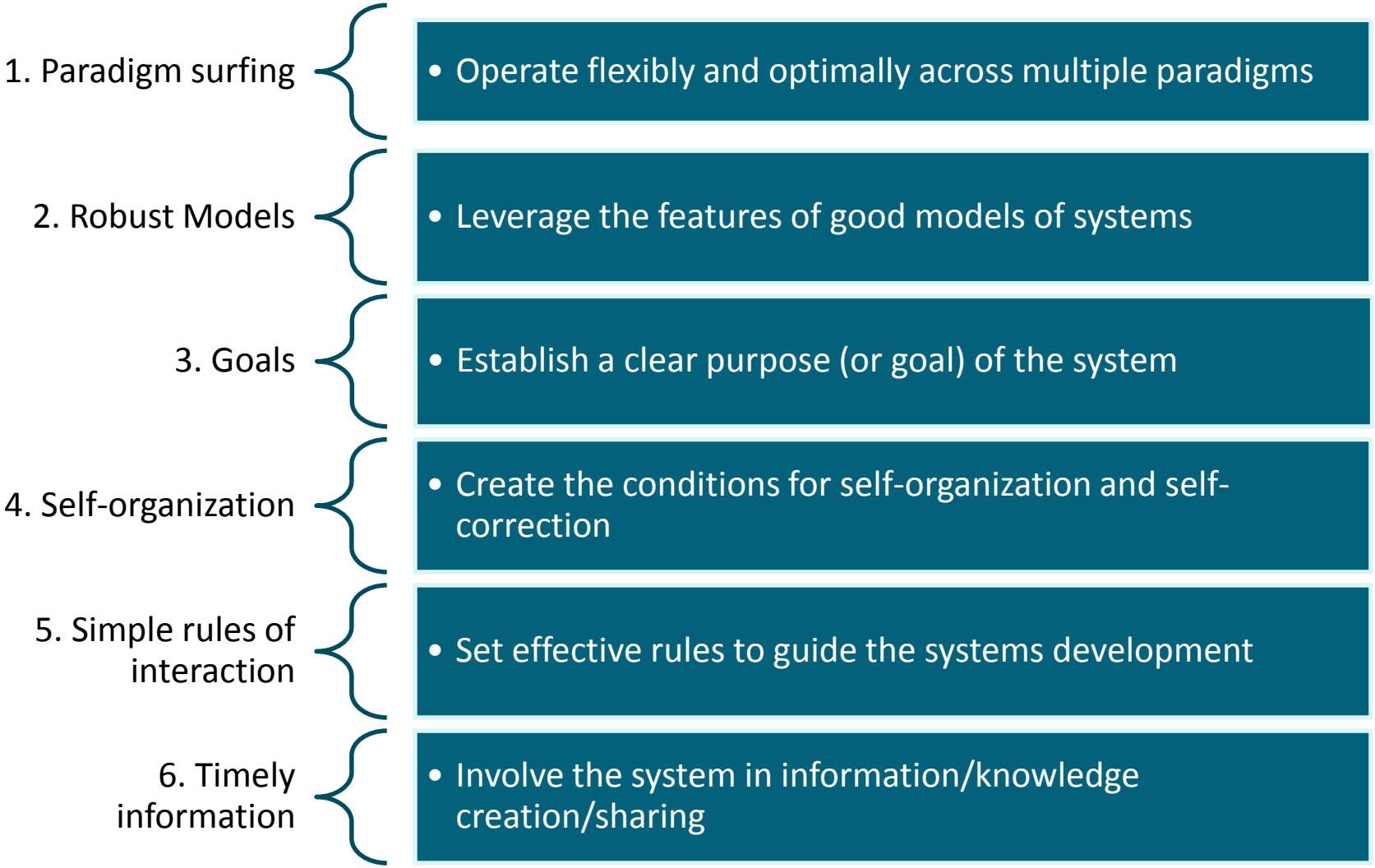
Develop fractal capabilities for leadership, knowledge creation, and collective action.

Guide the development of the system via simple rules of interaction, governance etc.

Surf phase transitions to new paradigms or stages of team development.

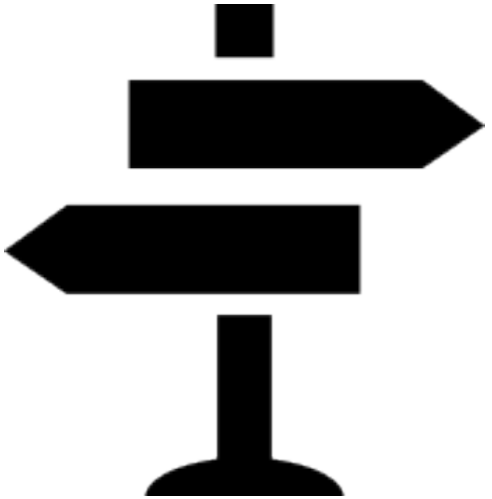
Set up for self-organization, so the system self-corrects

Top 6 ways to intervene in a system



Base on Meadows, D. (1999)

4. Recognize that many problems cannot be "solved" with one right answer.



Choices to be made (either-or), between ideas or actions

AND

Emergent/evolving (both-and) patterns that persist, e.g. the need develop relationships AND get results

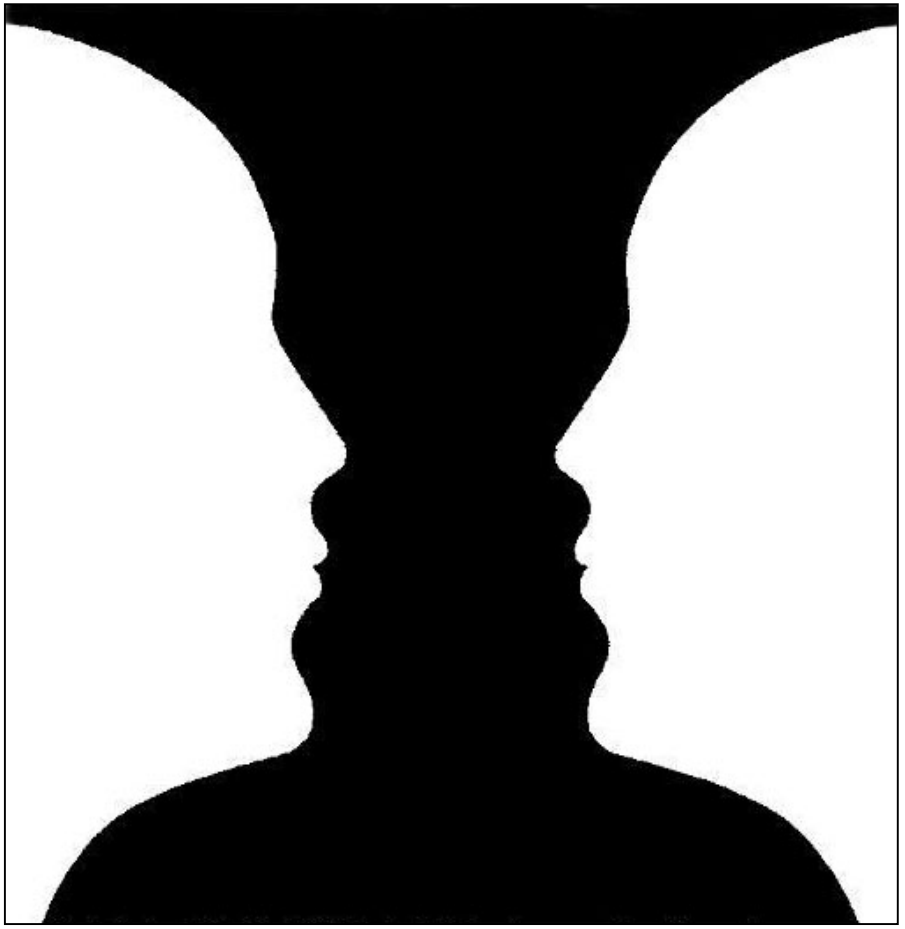
We often experience

- Dilemmas
- Wicked problems
- Paradoxes
- Tensions
- **Polarities**
- Ongoing conflict
- Divisiveness
- Blame
- Lack of engagement
- Failure to get results

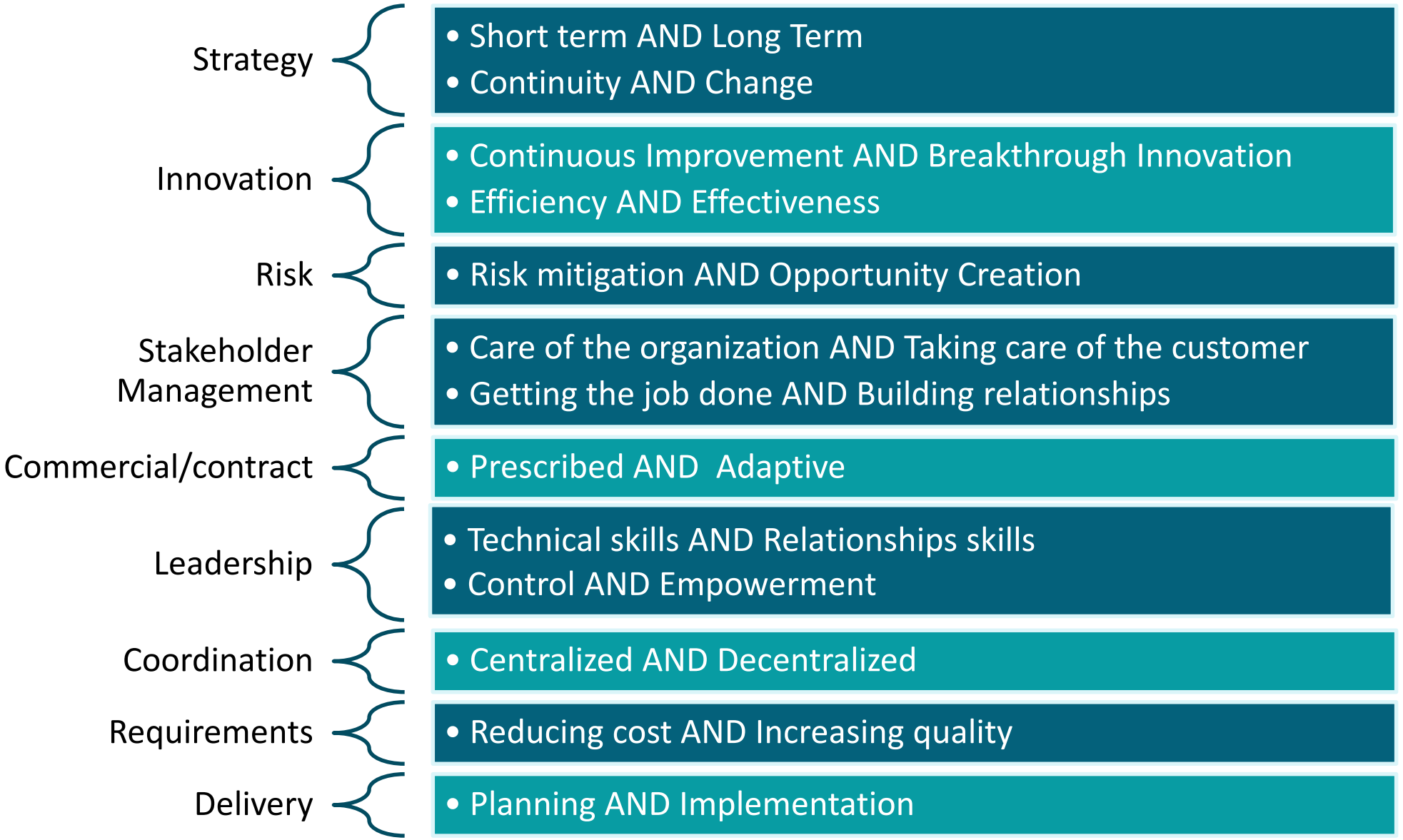
Visual Illustration of a Polarity

ANSWER CORRECTLY

What is this a picture of?



Project Management Polarities



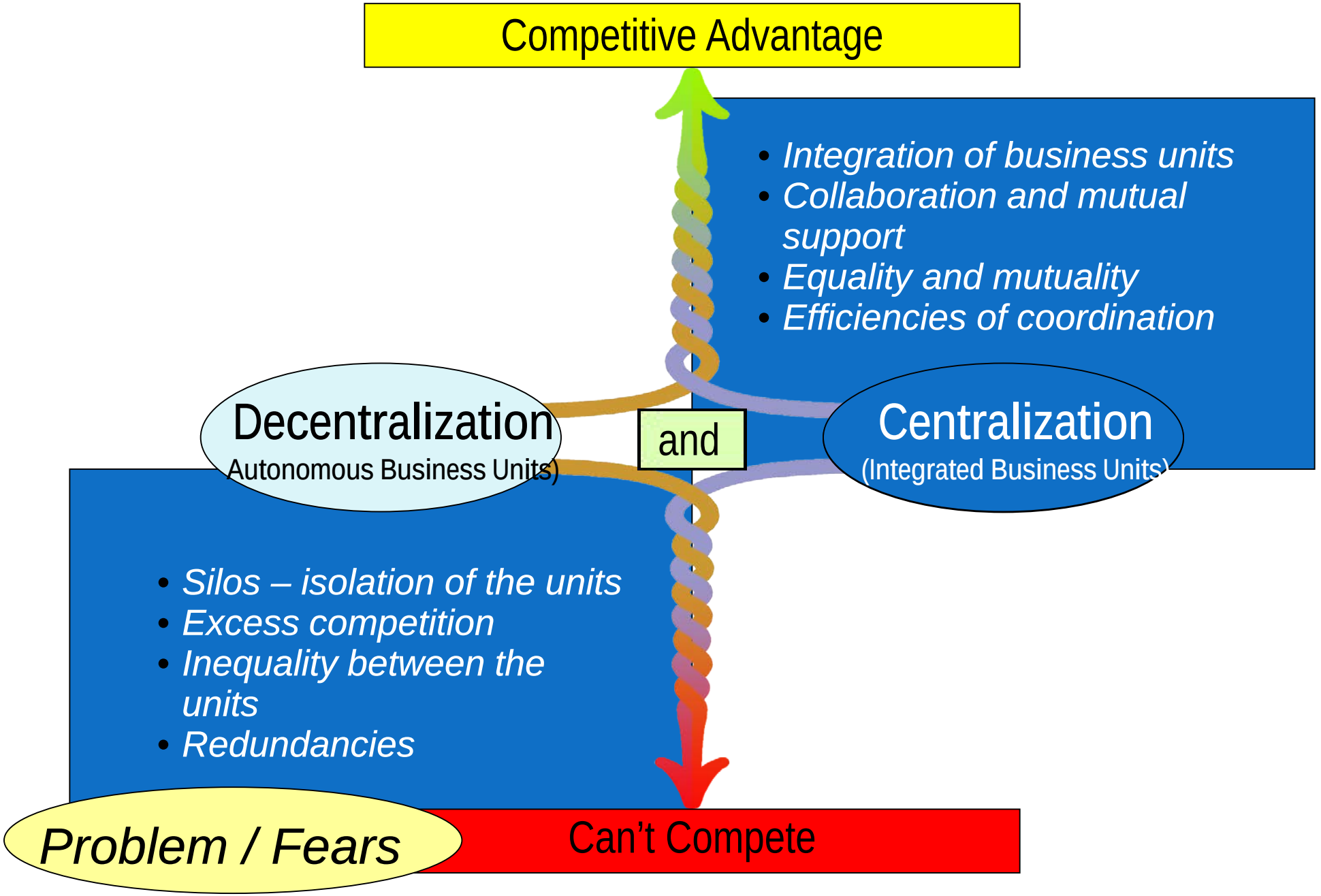
Polarity Reality

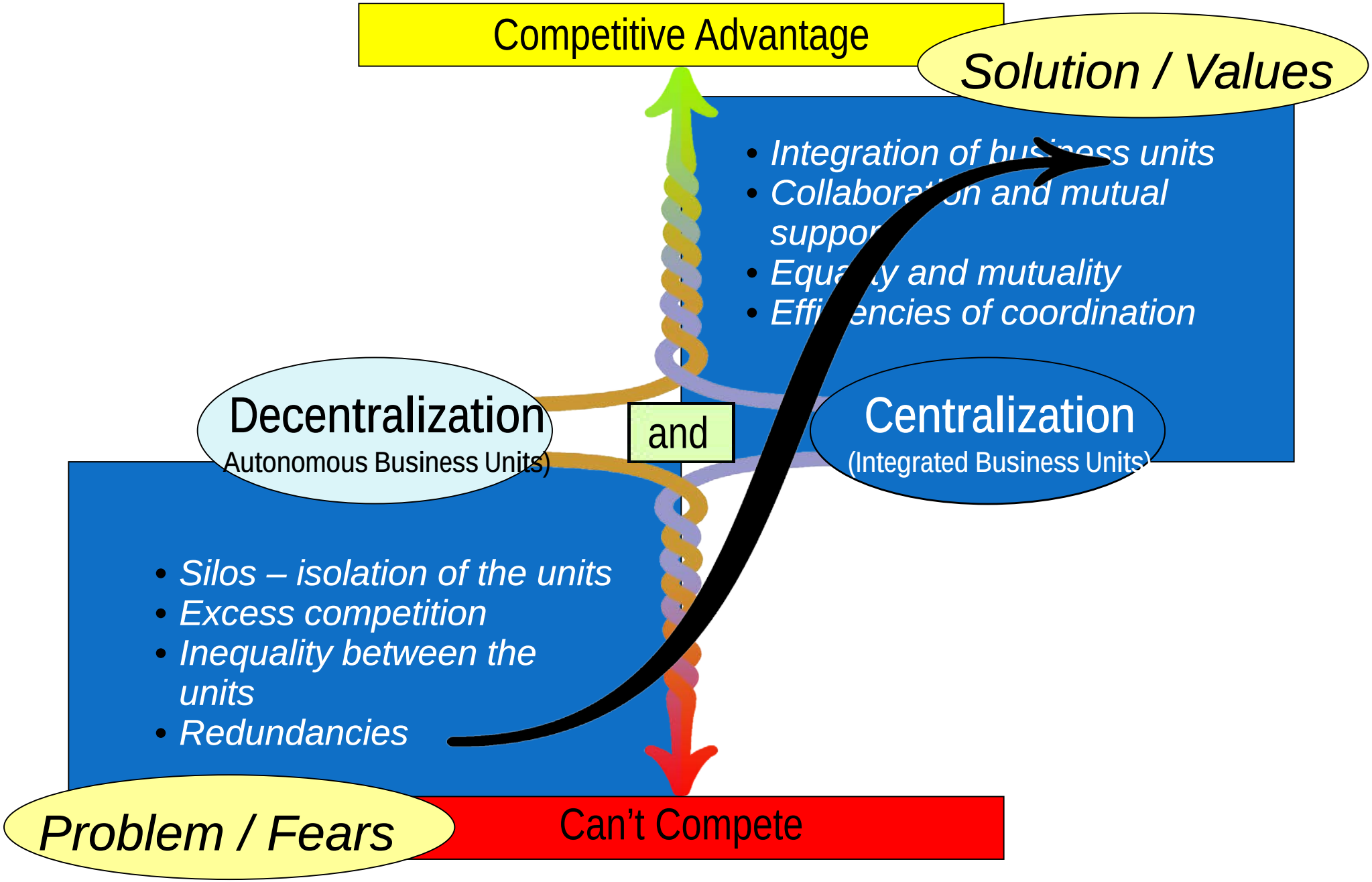
Polarity Thinking provides the highest point of leverage for intervening in systems

<u>The power to transcend paradigms</u>

Either/or Thinking

Both/and Thinking


Competitive Advantage
Integration of business units
Collaboration and mutual support
Equality and mutuality
Efficiencies of coordination
Decentralization
Autonomous Business Units)
and
Centralization
(Integrated Business Units)
Silos – isolation of the units
Excess competition
Inequality between the units
Redundancies
Problem / Fears
Can't Compete


Competitive Advantage
Solution / Values
• Integration of business units
• Collaboration and mutual support
• Equality and mutuality
• Efficiencies of coordination
Decentralization
Autonomous Business Units)
and
Centralization
(Integrated Business Units)
• Silos – isolation of the units
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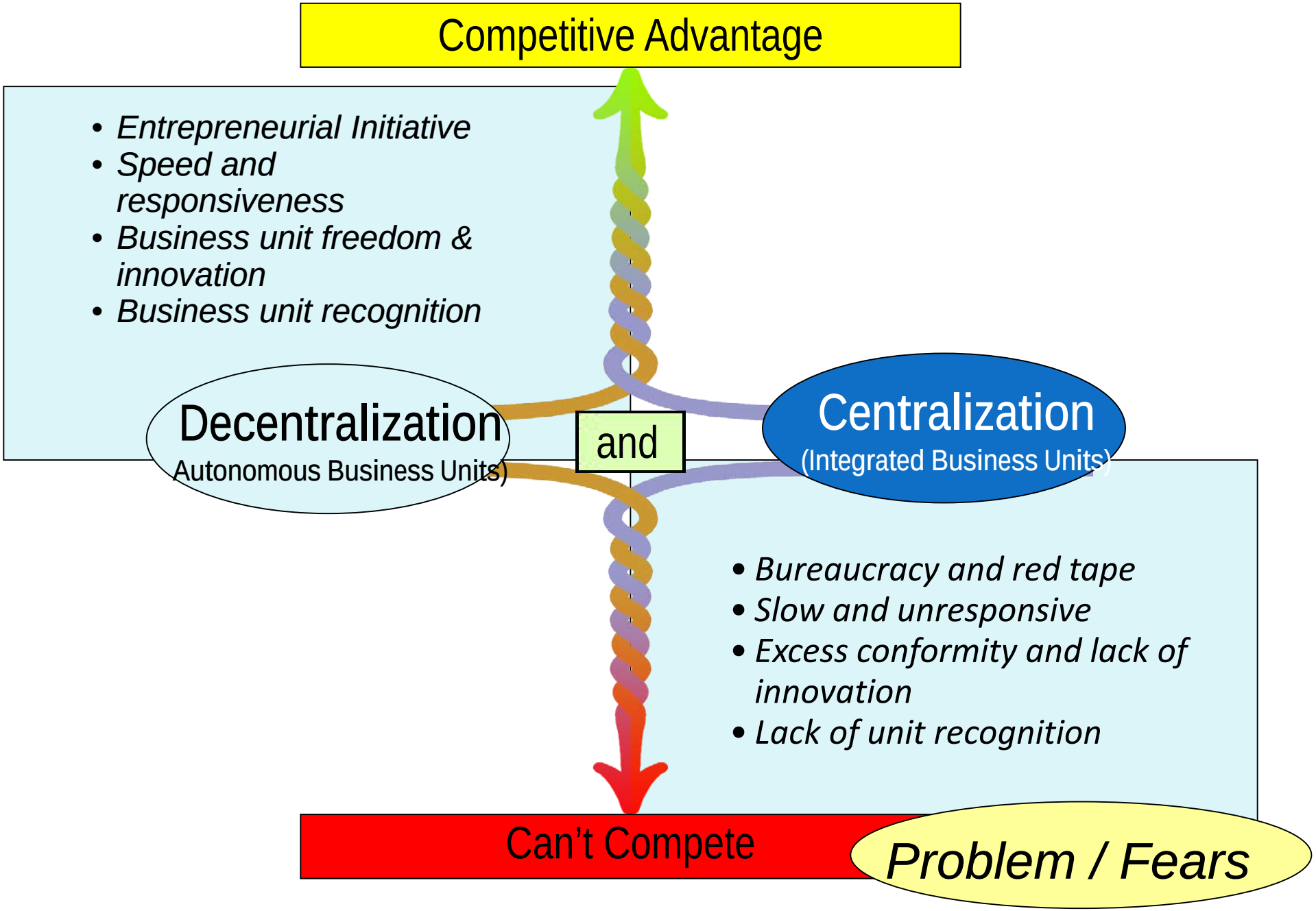
Problem / Fears
Can't Compete


Competitive Advantage
• Entrepreneurial Initiative
• Speed and responsiveness
• Business unit freedom & innovation
• Business unit recognition
Decentralization
Autonomous Business Units)
and
Centralization
(Integrated Business Units)
• Bureaucracy and red tape
• Slow and unresponsive
• Excess conformity and lack of innovation
• Lack of unit recognition
Can't Compete
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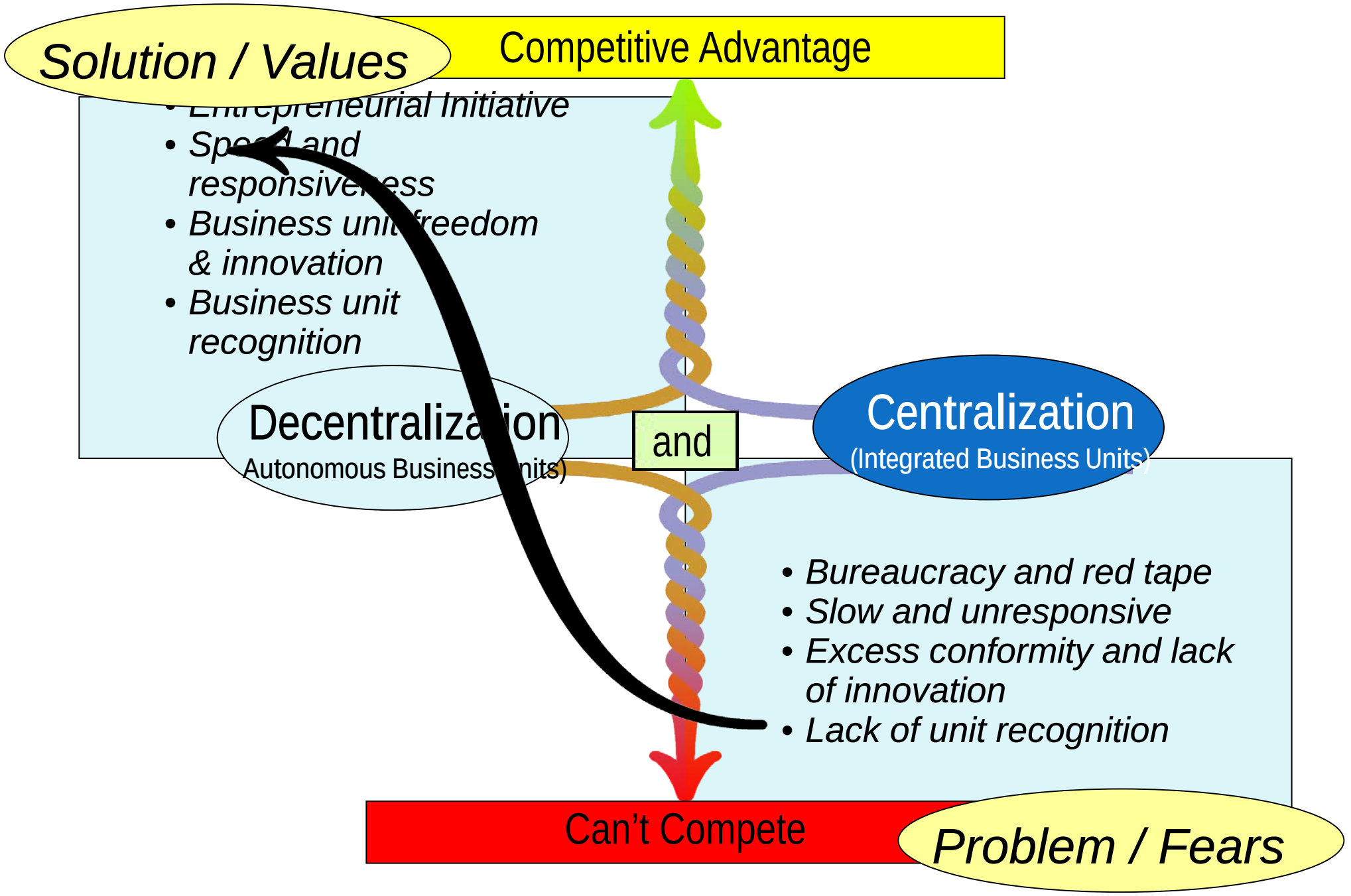
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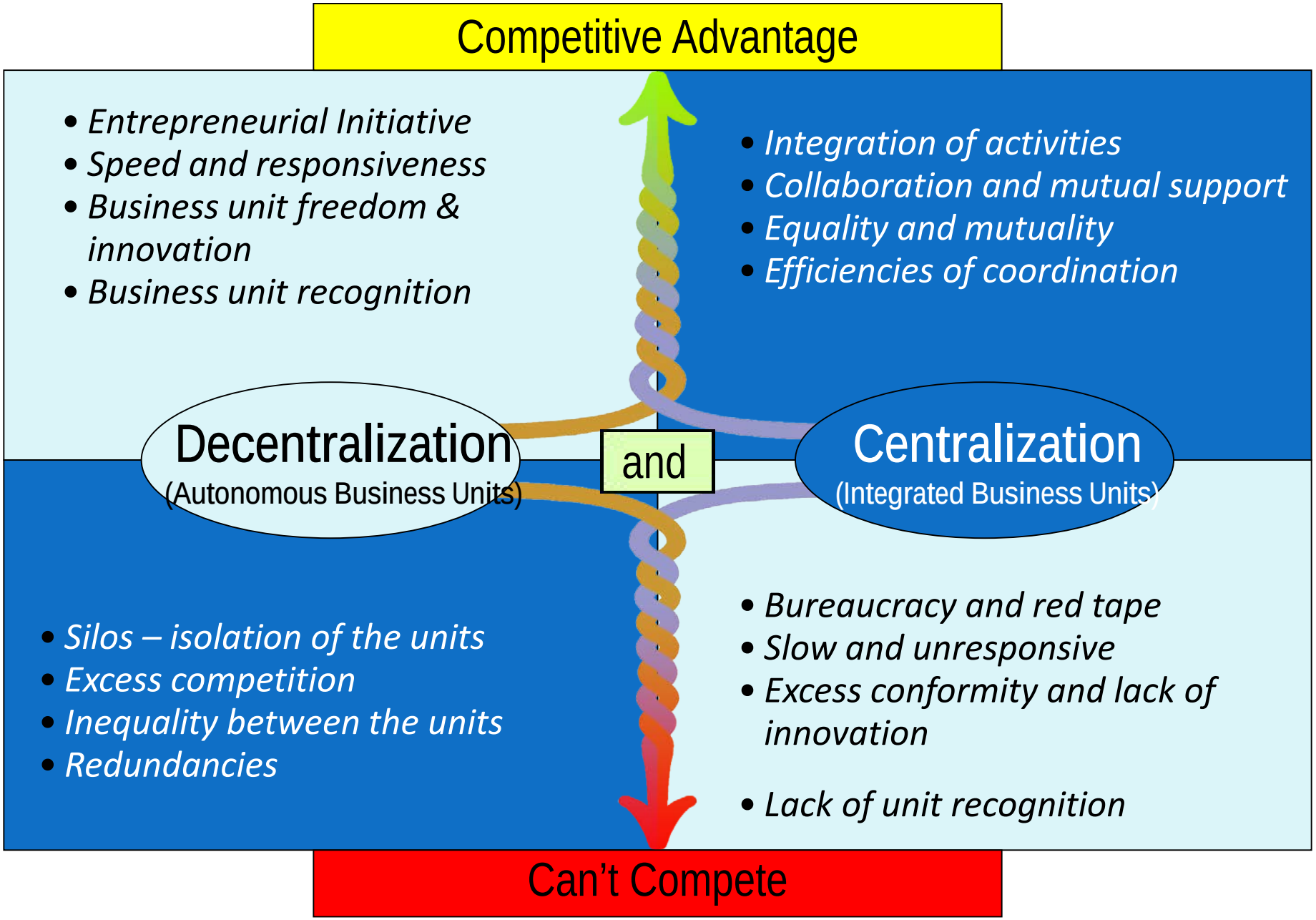
Competitive Advantage
• Entrepreneurial Initiative
• Speed and responsiveness
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• Integration of activities
• Collaboration and mutual support
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• Efficiencies of coordination
Decentralization
(Autonomous Business Units)
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• Silos – isolation of the units
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• Inequality between the units
• Redundancies
• Bureaucracy and red tape
• Slow and unresponsive
• Excess conformity and lack of innovation
• Lack of unit recognition
Can't Compete

Action Steps

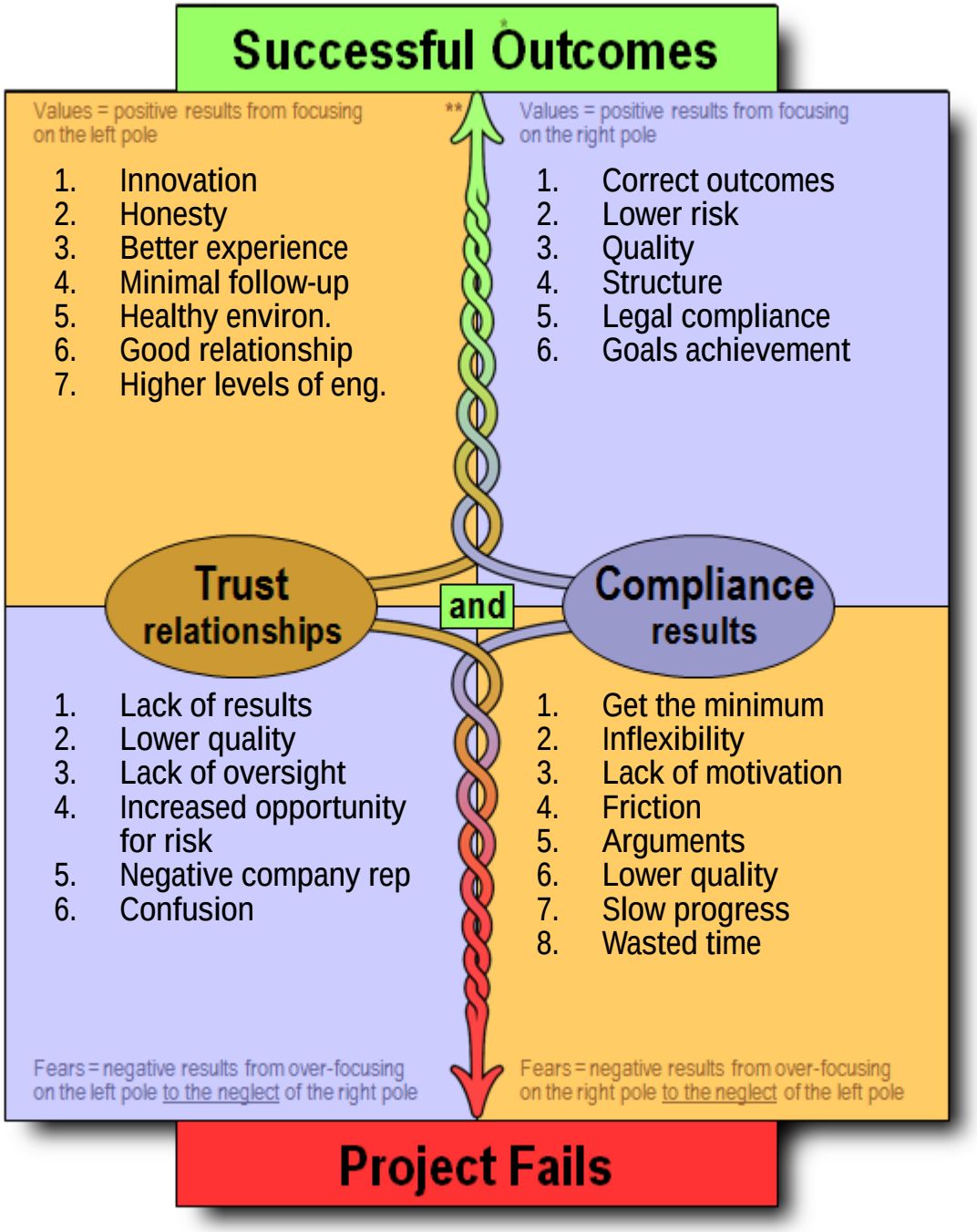
How will we gain or maintain the positive results from focusing on this left pole? What? Who? By When? Measures?

1. Build stakeholder relationships
1. Recognition
2. Report on innovation
3. More frequent engagement
4. Team building and collaboration
5. Listen and understand others
1. Give people the authority to act

Early Warnings***

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this left pole.

1. Chaos
2. People do not communicate openly
3. Signs of disengagement
4. Legal ramifications
5. Friction
6. Lack of commitment
7. Poor quality



Action Steps

How will we gain or maintain the positive results from focusing on this right pole? What? Who? By When? Measures?

1. Provide policies
2. Knowledge sharing
3. Audit policies
4. Consistent procedures
5. Train and distribute policies
6. Sharing the end goal
7. Process map
8. Mentoring

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this right pole.

1. Missed deadlines
2. Turnover of key leadership
3. Indecision
4. Slow response time
5. Slippage indicated in reporting
6. Lack of innovation

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WE KNOW CHANGE BECAUSE WE CAUSE IT

5. Leverage the patterns in social and technological change.

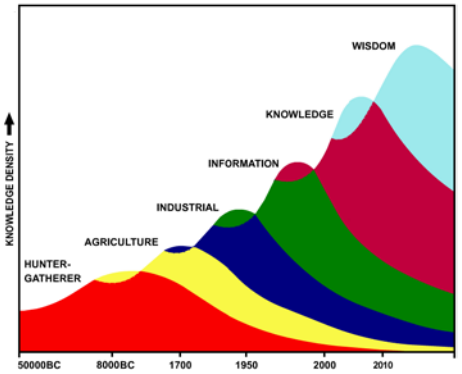
Regard change as continuous and exponential

AND

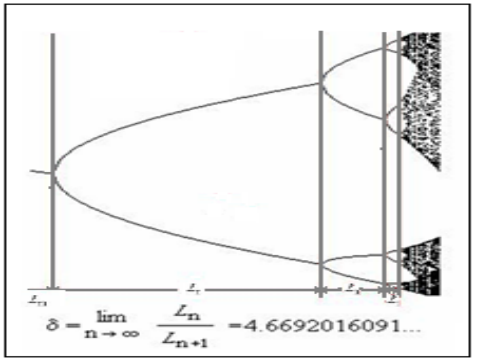
Regard change as disruptive sequences of paradigms

The cycles obey the laws of complex systems

Era		Onset	Period	Ratio
Wisdom		2010	Emerging	Emerging
Knowledge		2000	10	1: 5.0
Information		1950	50	1: 5.0
Industrial		1700	250	1: 5.0
Agriculture	Mining & Building	8000BC	1,200	1: 5.0
	Agriculture		8,500	1: 4.9
Hunter-gatherer		50000BC	42,000	1: 4.3



The model helps us understand what skills, roles, relationships, capacities and methods, technologies, tools, leadership and knowledge creation approaches are most appropriate at each stage.



INFORMATION AGE (1950-2000)

Metaphor	Computer
Technologies	Software, e.g. spreadsheets, word processors , television, photocopier, mobile phone, fax machine
Productivity gains	Automates routine cognitive work, e.g. secretarial, clerical, numerical
Rate of change	Transformation in two generations
Knowledge use	Knowledge reproduction, e.g. on-line learning
Roles	Team leader-team member, trainer-trainee, supplier-agent or representative
Production methods	Distributed production closer to customer; local customization of mass production; expanding choice
Strategic focus	Distributed , national and global. Longer term focus, e.g. five years; do-it-yourself
Co-ordination	Expert procedures & methods, e.g. systems engineering and project management; expert know-how e.g. doctors/nurses
Organization structure	Distributed, autonomous, matrix, cross -functional reporting
Communications	Informal discussion , information seeking/giving, quality circles

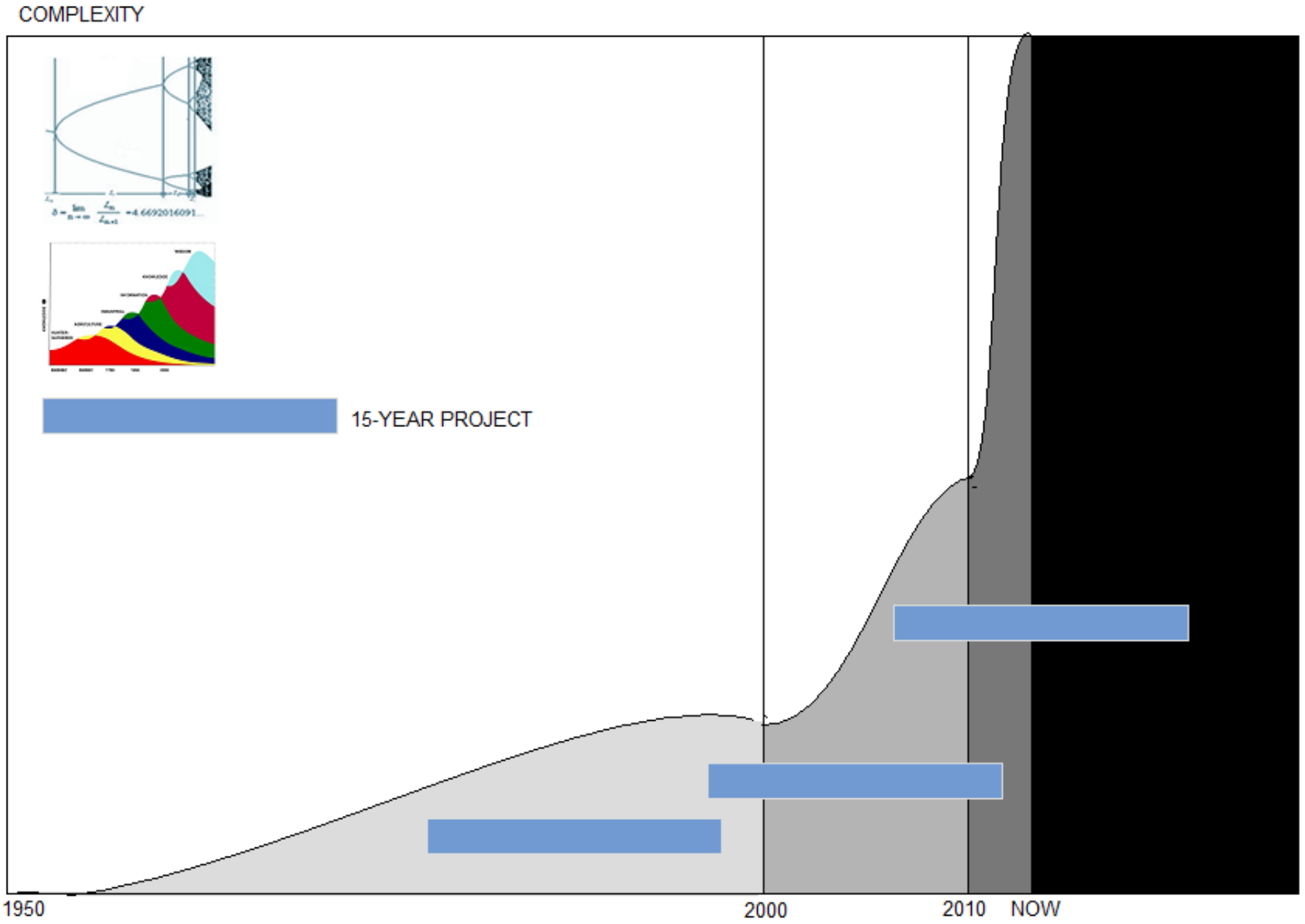
KNOWLEDGE AGE (2000-2010)

Metaphor	Network
Technologies	Internet, iPhone, voice response systems; expert systems and processes, automatic trading, lasers, software as a service, multiplayer games, CRMs, data mining, mesh services, e.g. Zip cars
Productivity gains	Automates knowledge and relationships work, e.g. the work of professionals, middle managers, travel agents, etc.
Rate of change	Transformation in one generation
Knowledge use	Knowledge creation
Roles	Servant leader, co-creator, facilitator-contributor
Production methods	Customized, customer involved in the design/delivery
Strategic focus	Long term focus, vision for 20-30 years informs short term
Co-ordination	Cross-functional teams using shared databases and complex decision processes and facilitation techniques
Organization structure	Network, short-term teams come together for a purpose, dissolve and reform as new teams
Communications	Facilitated meetings , creating knowledge via dialogue (empathic), dialectical (integrative) and sense-making

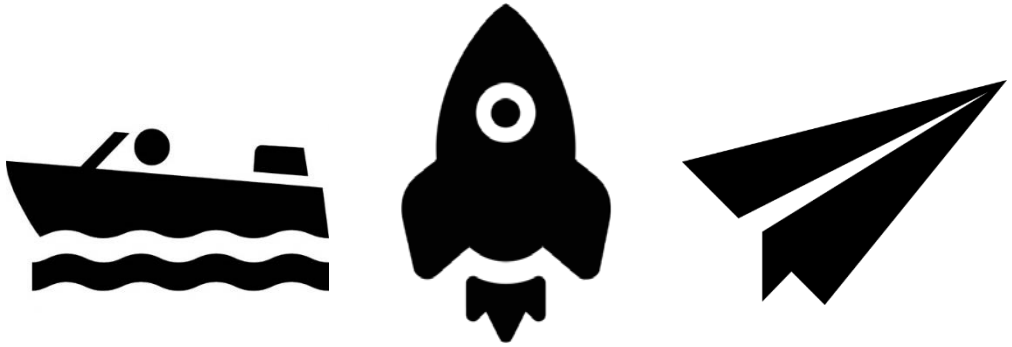
WISDOM AGE (2010-)

Metaphor	Complex adaptive system, e.g. ecology, market or brain
Technologies	Nanotechnology, biomimicry, advanced energy, tools for expanding consciousness and relationships, e.g. social media, and complex adaptive learning environments
Productivity gains	Automates scientific, judicial , leadership or wise expert work
Rate of change	Transformational change is less than a generation to something bigger, from non-deliberate to deliberate
Knowledge use	Wise application of knowledge
Roles	Orchestrator-interactor, challenger-designer/creator, inspirer-activist, researcher-discoverer, prod-users
Production methods	Agile, adaptive, high value-add, high precision, rapid prototyping, customizable by customer, anticipates your needs.
Strategic focus	Transcend and include: whole system, multiple generation, paradigm and cultures, shift from boundaries to horizons
Co-ordination	Simple local rules/principles > desired complex global activity & behavior; facilitate what emerges; simulation, improvisation.
Organization structure	Multi-flex, shape shifting; uses many kinds of structures for maximum efficiency, creativity and agility
Communication	Dialectical discourse (win-win-win, does it work for everyone)

The impact of accelerating disruptive change on projects and strategies



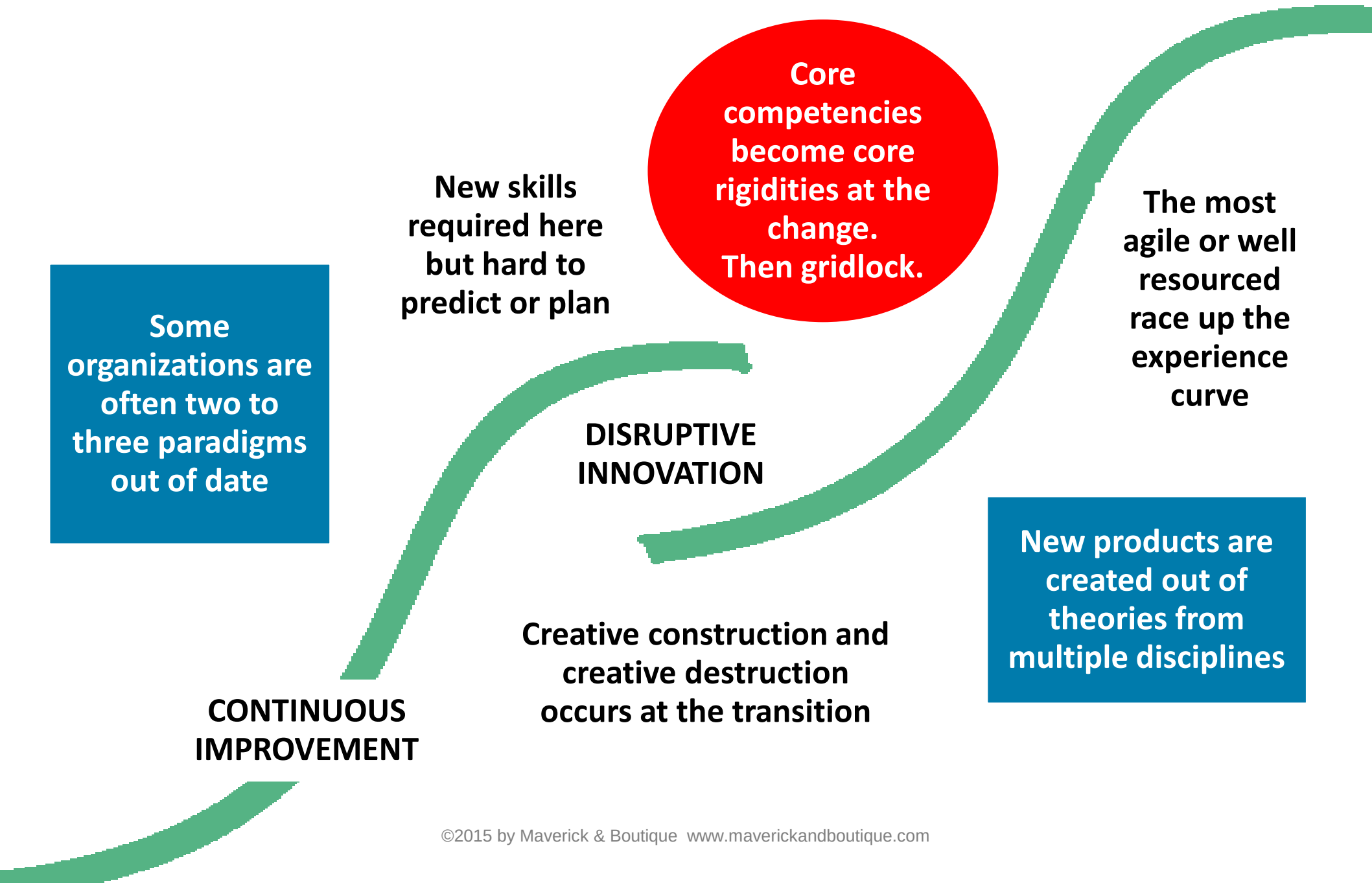
6. Pilot many small projects to accelerate learning.



One-best way solutions that do not learn from experience

Multiple solutions to learn quickly and race up the experience curve

The learning-innovation system dynamic



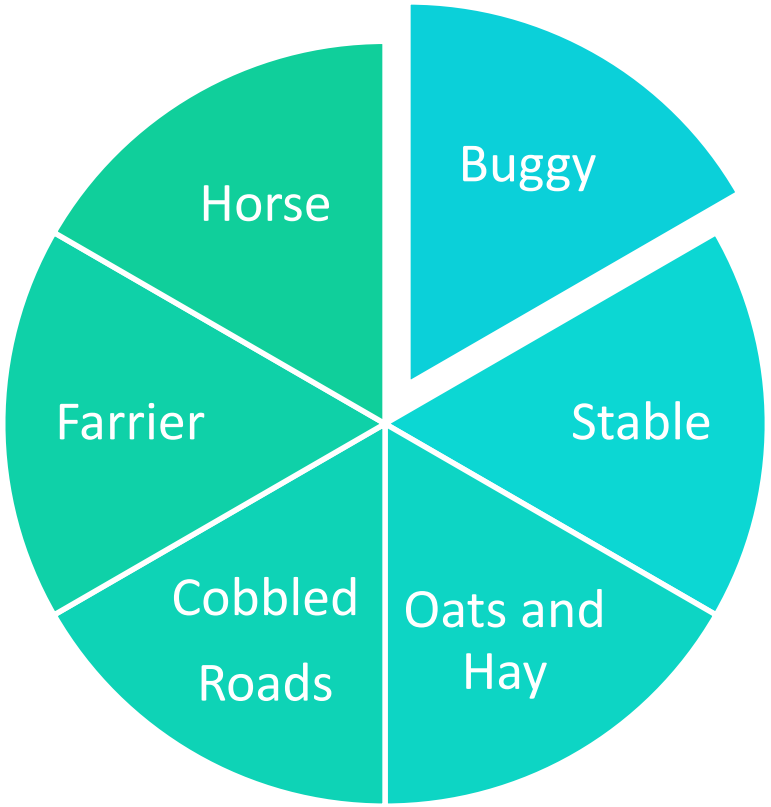
Productivity gains at phase transitions

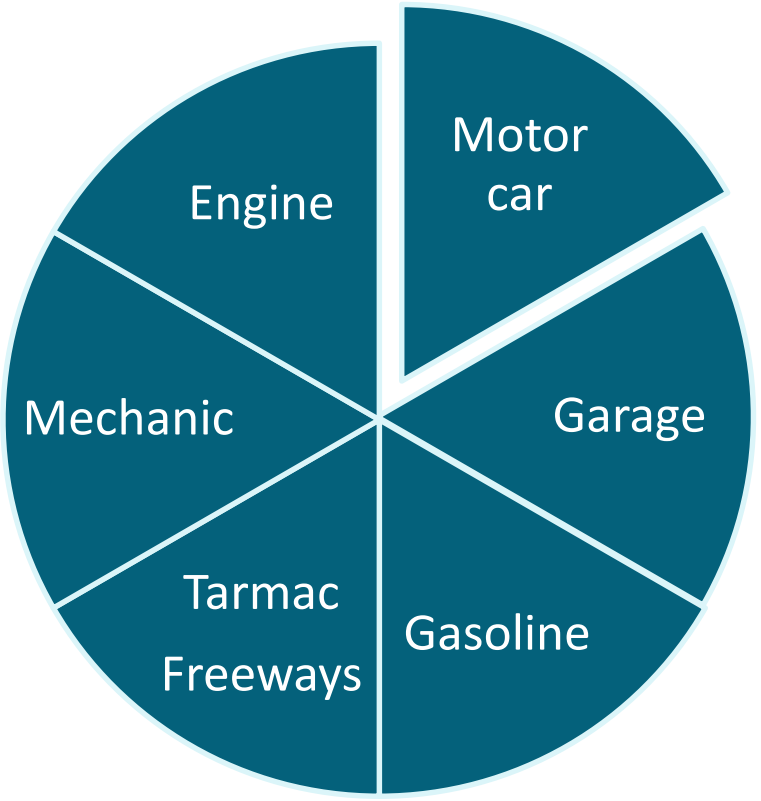
Productivity gains of 3x to 10x
Manual cargo handling > Containerization
Vinyl > Tape > CD > Flash memory > Cloud
Calculator > Mainframe > PC > Cloud and i-devices
Horse and buggy > Motor car
Bias tires > Radial tires

At each transition the system undergoes re-organization to a higher level of order

Technologies	• More knowledge dense: automates work
Methods	• Faster and more efficient
Skills	• More complex and cross-boundary
Roles	• More interdependent and integrative
Rules of Interaction	• Simpler and more powerful

Whole-systems transition





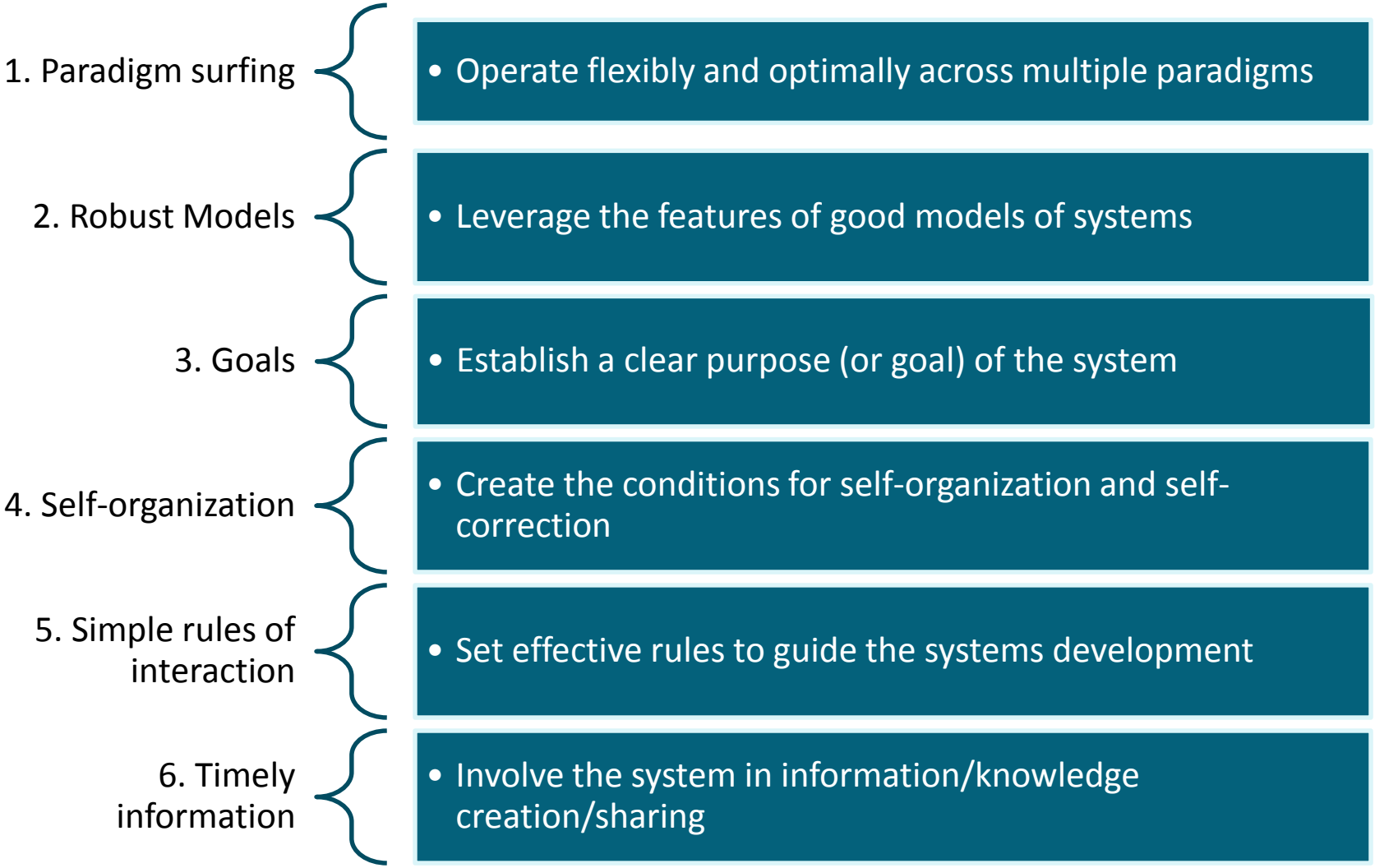
7. Intervene at the highest or most appropriate level in a system.

Influence the system by using any leverage point (numbers, buffers, delays feedback loops)

AND

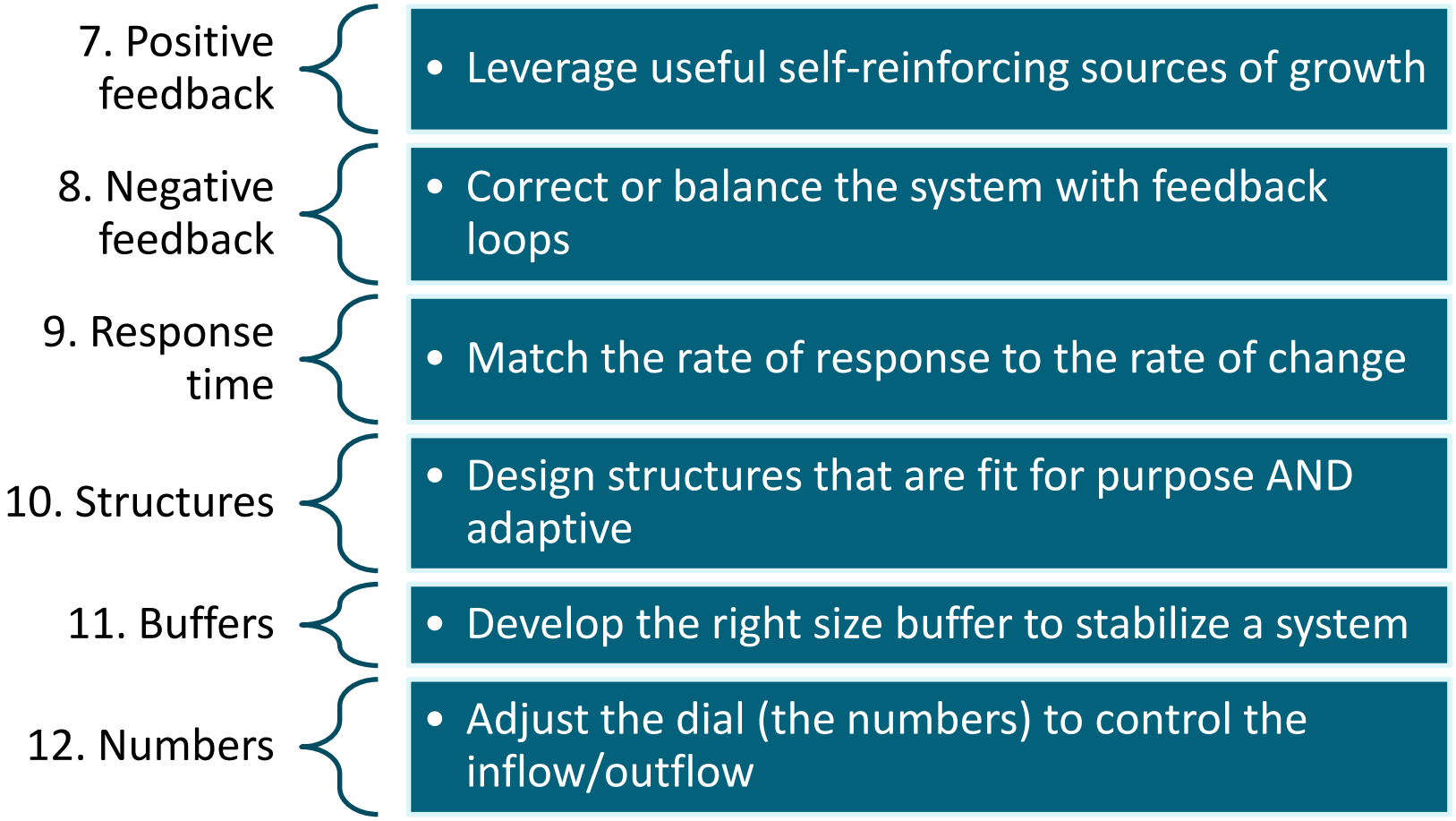
Intervene at the highest point including the ability to transcend paradigms or use the features of a paradigm to advantage

Top 6 ways to intervene in a system



Base on Meadows, D. (1999)

Next 6 ways to intervene in a system



Base on Meadows, D. (1999)

Paradigm surfing: Operate flexibly and optimally across multiple paradigms

Work the paradox of MYSTERY and MASTERY

Be comfortable with not Knowing

Create new paradigms: use metaphors to transform the past features into new and more powerful feature, e.g. CAOS

1.

Use the process to invent new products, services, governance, leadership, processes, methods etc. that are aligned to an emerging paradigm

Remain unattached to any paradigm

Robust models: Leverage the features of the best model of a system

Use a model, framework or metaphor to better describe the parts of the system and how they work together

Use Polarity Thinking to deal with both-and paradoxes

2.

Approach challenges from a creative perspective to create what you want, do not focus on what you don't want

Use the Complexity Model of Change to understand how others think or operate and/or improve the system

Work with other stakeholders and disciplines to create new, shared and better models of a system

Continually seek out new and better models for the way systems work e.g. TED

Rich questions based on frameworks lead to the self-organization of shared knowledge

Goals of the system: Establish clear goals for the system

Change the whole system. All other interventions work best if aligned to the goal

Test assumptions. Ensure the goal has not been subjugated to an inferior purpose

Acquire the power to change the system goals and have a big impact on the system

3.

Craft action plans with Snazzy Titles to attract supporters

Reduce complexity using shared goals and good coordination

Work with others to resolve competing commitments into shared goals

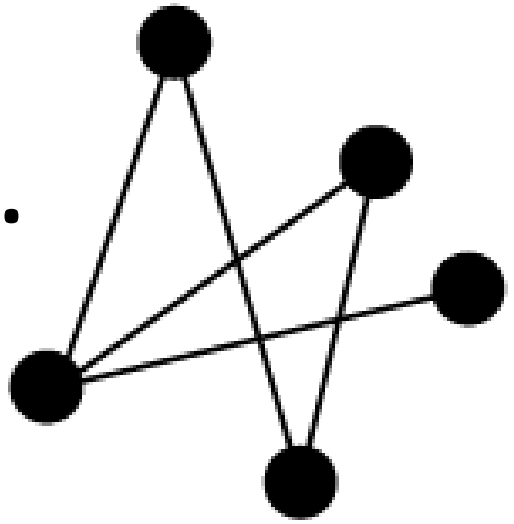
Conduct regular workshops with all stakeholders to re-align cross boundary teams, resolve conflicts, improve coordination and reset the goals of the system

Create the conditions for self-organization and self-correction

Recognize the replicators (the DNA of the system) Whatever the market wants, or governments and foundations will fund.

Approach risk management via opportunity and possibility creation

4.



Develop “fractal leadership” capacities that self-replicate throughout the system

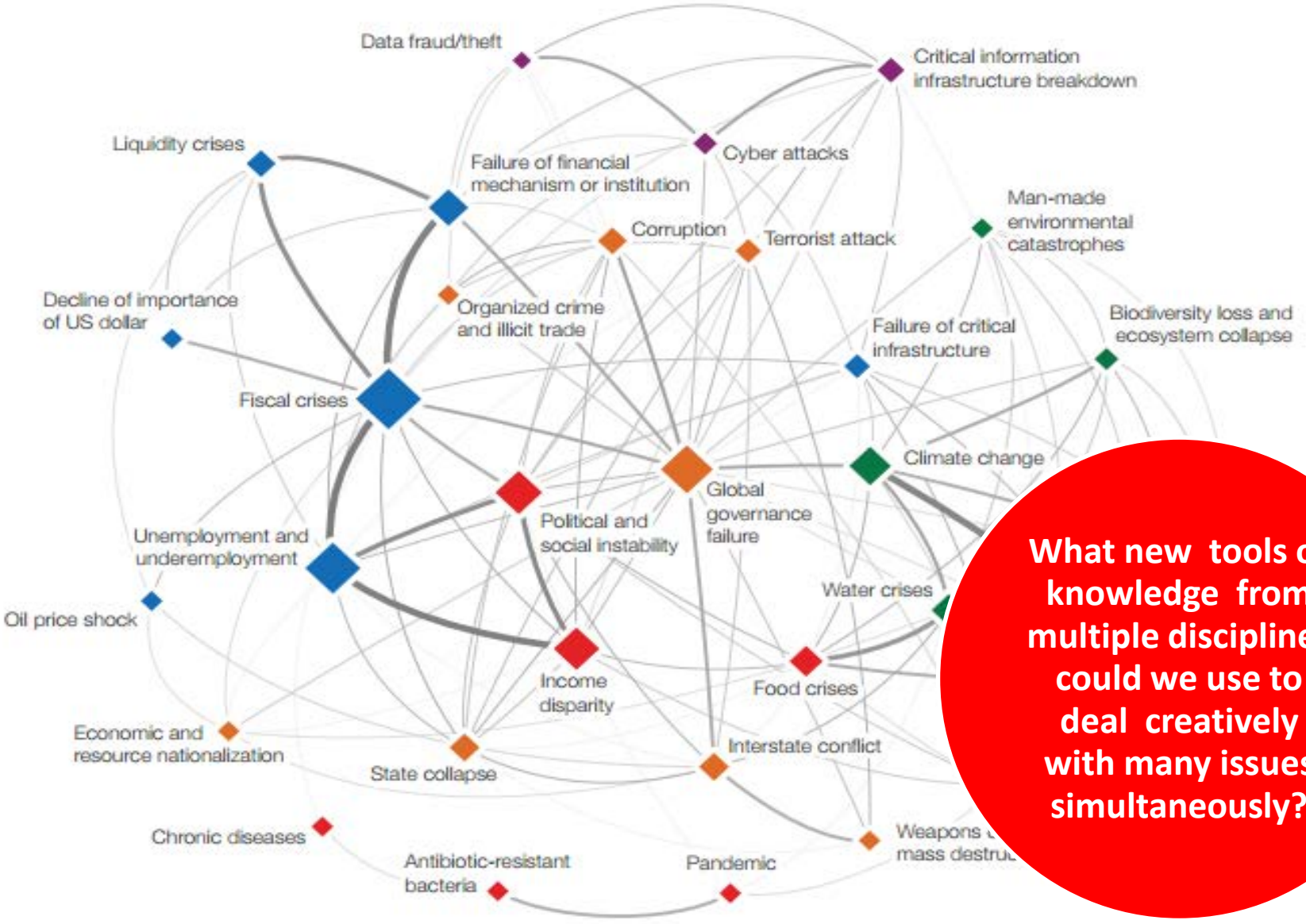
Use multiple approaches, so the system can increase the potential for learning what works best

Adopt relationships based contracting to adapt to change

Design multi-flex structures for essential combinations of creative, adaptive, scale up big etc.

Set up the system for rapid adaptation and self-correction

Figure 1.4: The Global Risks 2014 Interconnections Map



What new tools or knowledge from multiple disciplines could we use to deal creatively with many issues simultaneously?

Set effective rules to guide development of the system

Design the rules of interaction to define the scope, boundaries, flexibility and how people or parts will interact.

Practice governance innovation. It is more powerful than product innovation.

5.

Choose the type of conversation (rules of interaction) that are most appropriate to a situation e.g. dialogue, discussion, or works best.

Help others see themselves and be influential players in the system.

Identify and transform the hidden assumptions (rules, codes of practice, regulations) that are not helpful.

Create measures that give feedback AND automatically help the system to self-correct

Establish the clear governance necessary for project success. It determines how the game is played. Start here.

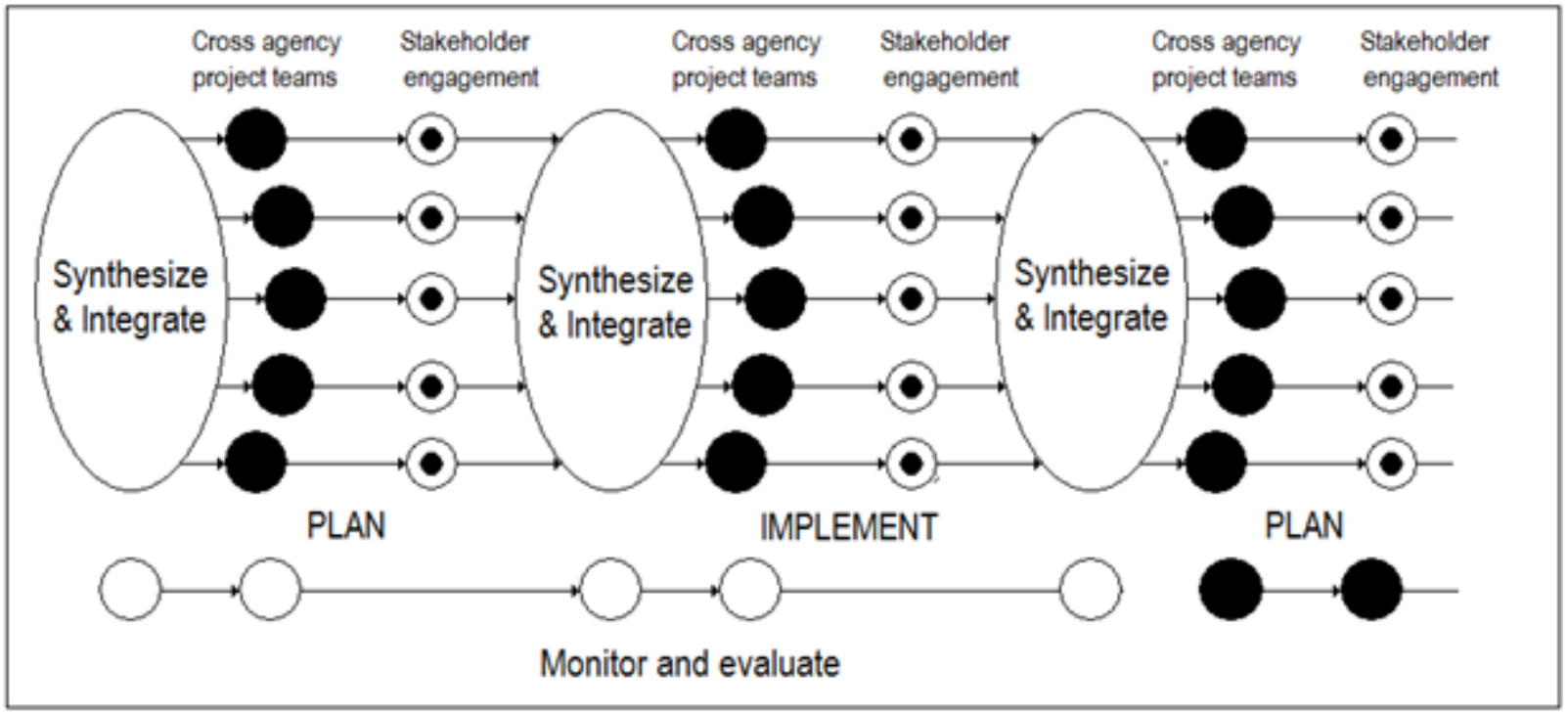
Simple rules of interaction help people work/think/learn together well

8. Work with the system to constantly design strategy/tactics and learn from feedback.

Ignore/exclude input or feedback that does not fit the picture

Create a robust model of the system with inputs from many disciplines etc.

Undertake cycles of adaptive planning with internal and external stakeholders to align vision, strategy & activities



9. Create the conditions for peak team performance and results.

Recruit the best people

AND

Develop shared purpose and rules of interaction

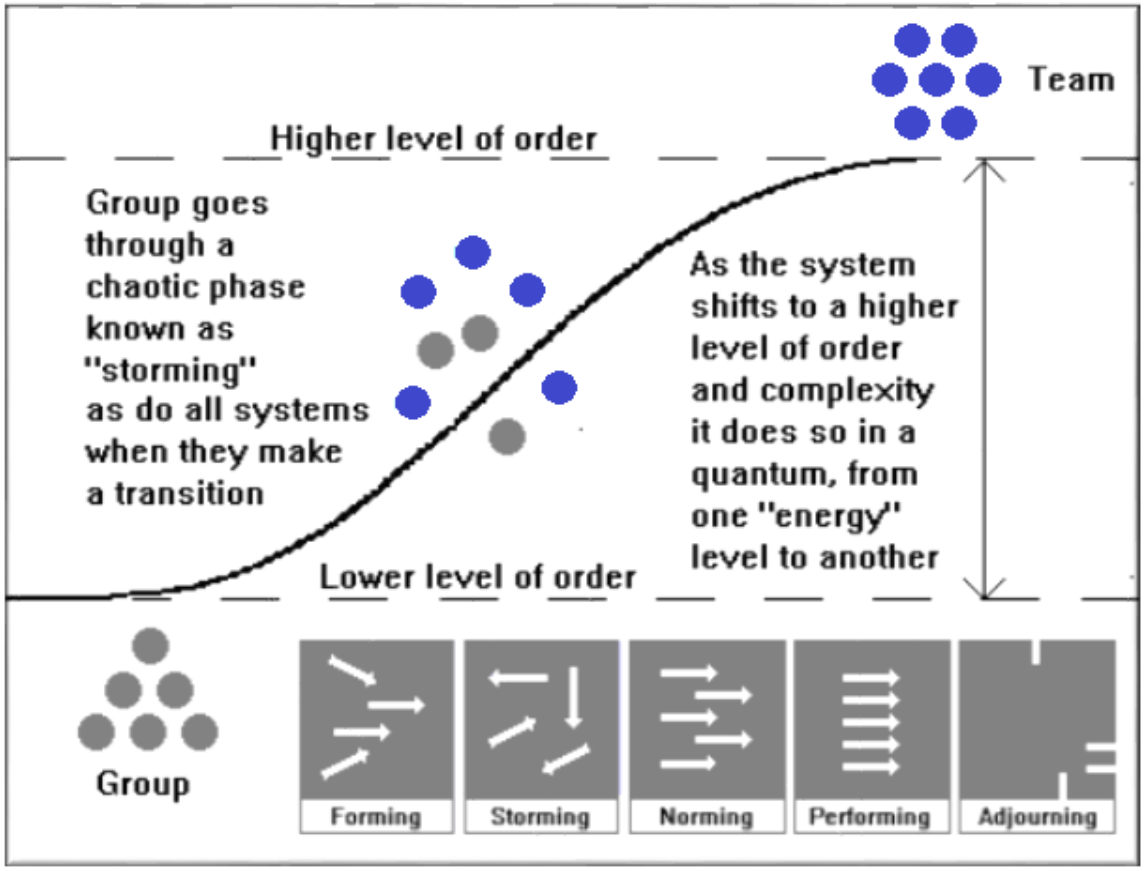
Team Performance: A state of peak or optimal experience

“Basketball player, Bill Russell, wrote of the Boston Celtics,

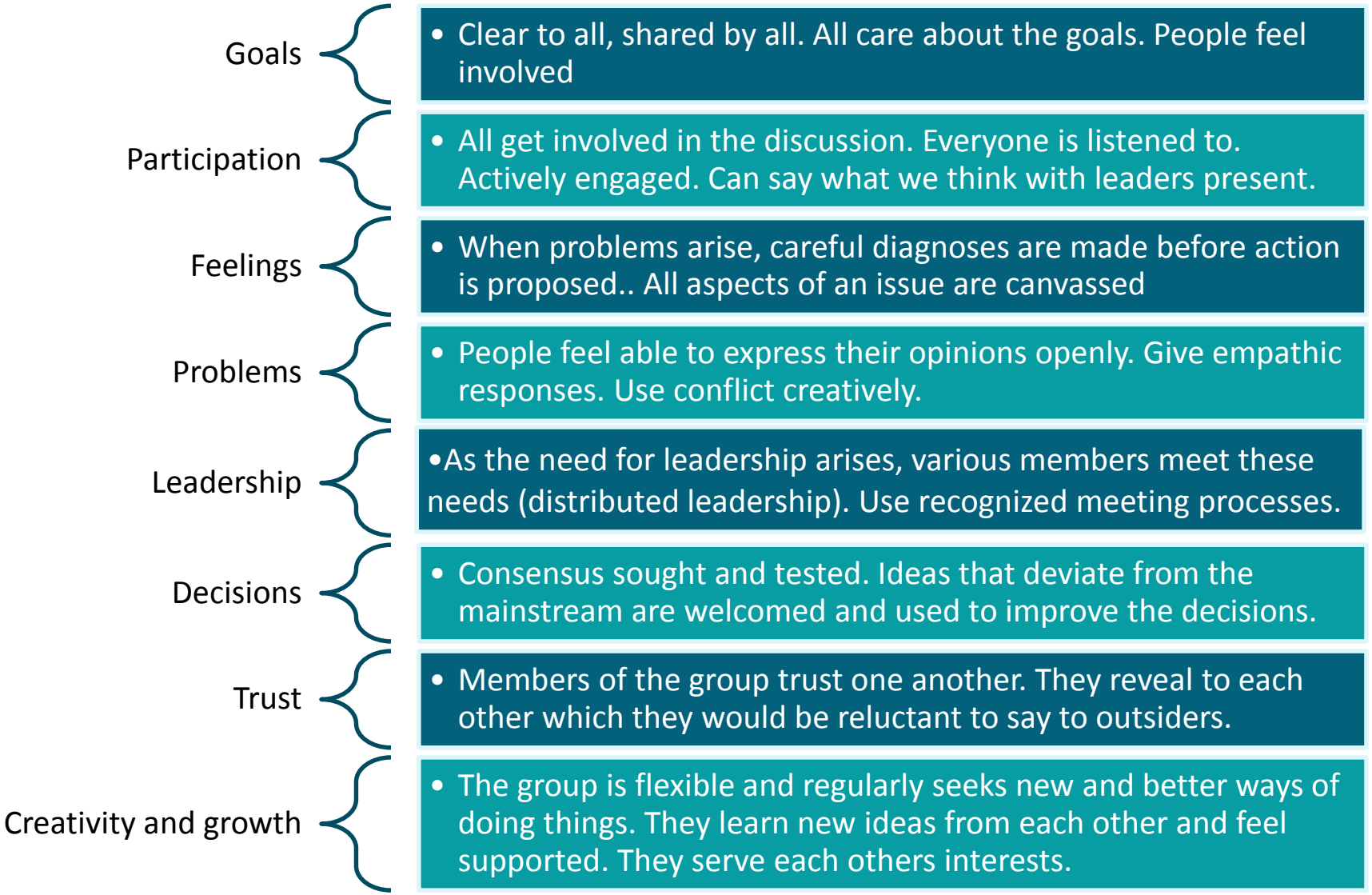
Every so often a Celtics game…became more than a physical or mental game and would be magical…like in slow motion...I could almost sense how the next play would develop and where the next shot would be taken…both teams had to be playing at their peaks.”

-Peter Senge, The Fifth Discipline, P.234

Teams reliably undergo a transformation process to a high performance state



Qualities of a high performing team



10. Create an “unstoppable movement” when you start a project.

Design then “sell” the project to stakeholders

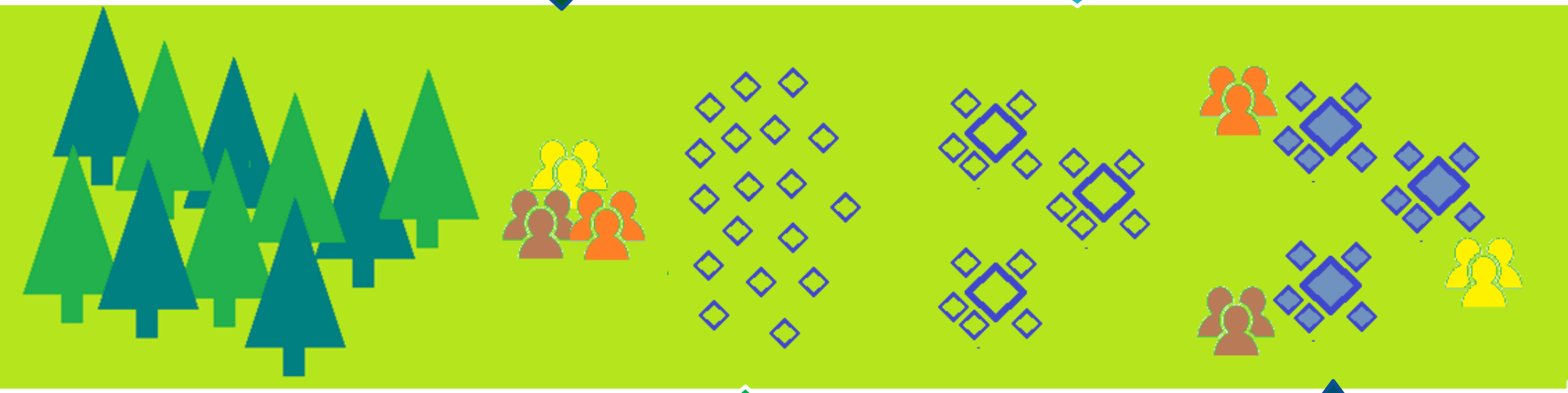
Involve stakeholders in the design of the project and complementary initiatives

Project Development

Strategic Planning Workshops with key stakeholders

Scope clusters of projects around a major project that have the support of diverse stakeholders

Secure Investors



Situation and Issues research

50-100 project concepts

Prove up and get 4-6 projects investor/funder ready

11. Get optimal results by serving both individual and shared interests.

Play zero sum games: winner and losers (win-win, win-lose, lose-lose)

Seek win-win-win outcomes through knowledge synthesis and interests integration

Stakeholder Interests Integration Method

How are the TRENDS impacting the stakeholder?

What skills and resources could the stakeholder offer the PROJECT?

How might the stakeholder interests serve the PROJECT?

How are the TRENDS impacting the PROJECT?

What skills and resources could the PROJECT offer the stakeholder?

How might the PROJECT serve the stakeholder?

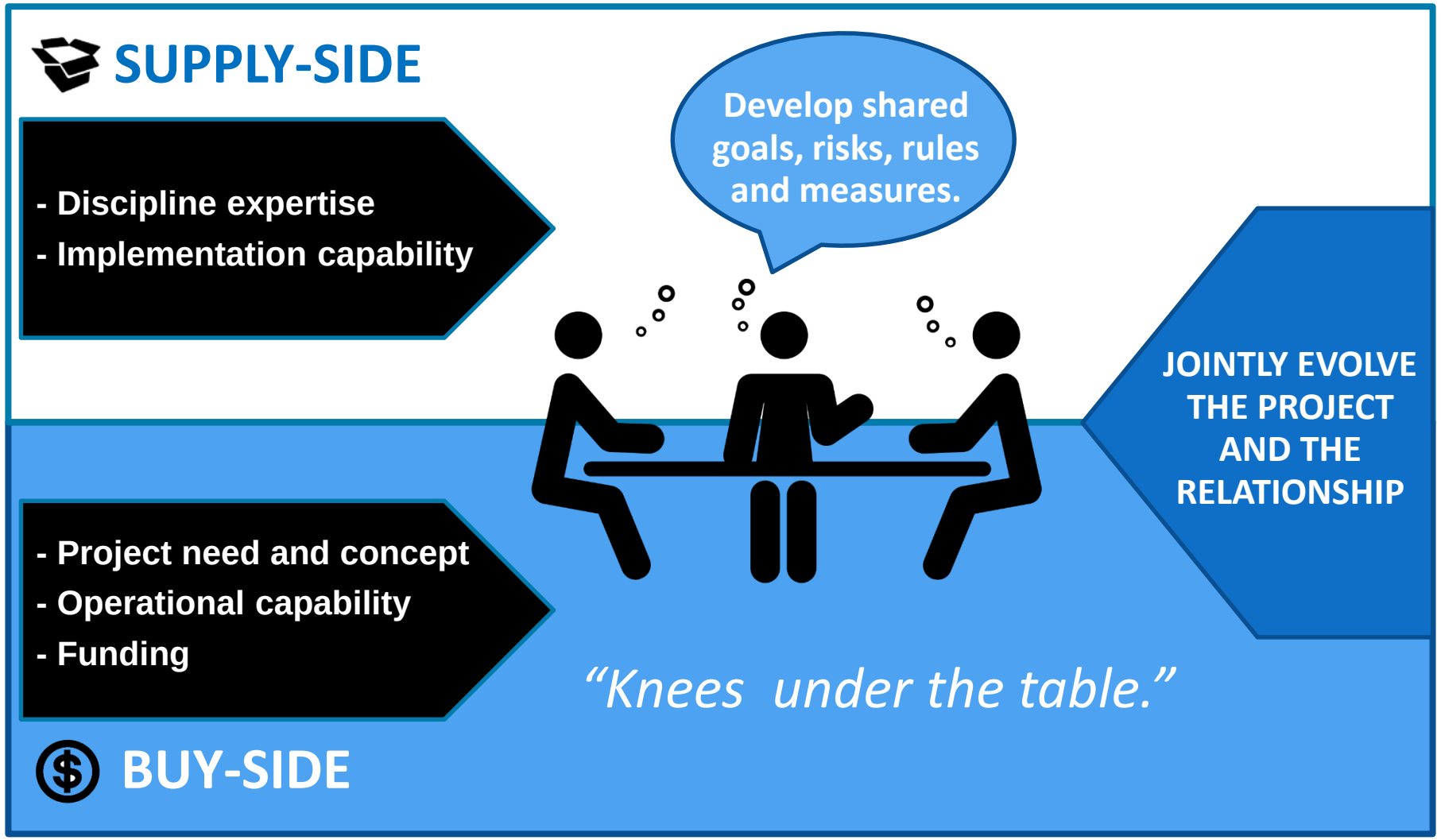
12. Regard the contract as an opportunity to develop optimal outcomes for the system.

Make contract design a collaborative effort that supports the goals of the system

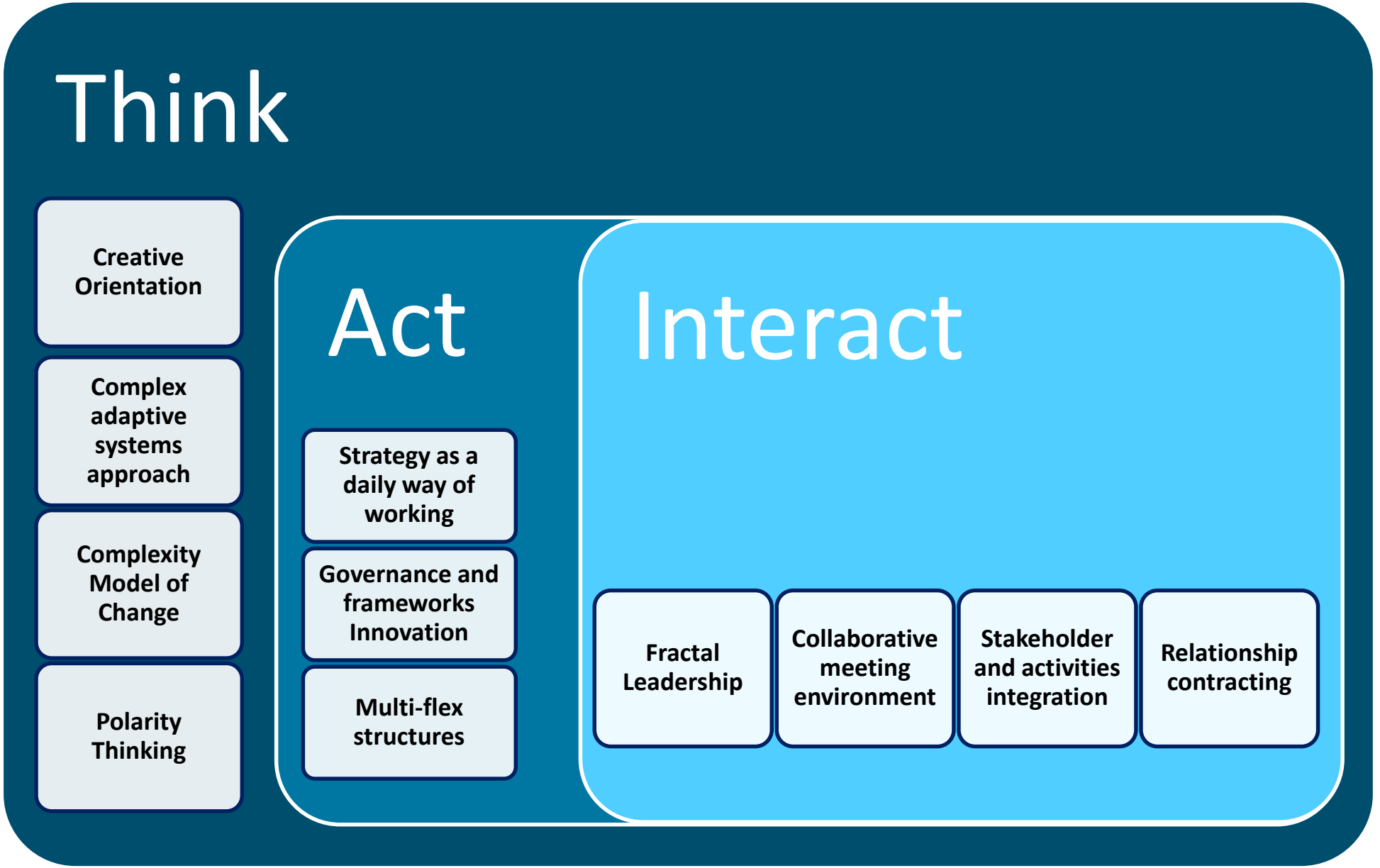
AND

Grow a productive relationship that adapts to changed circumstances

A collaborative, systems-based approach to contracting

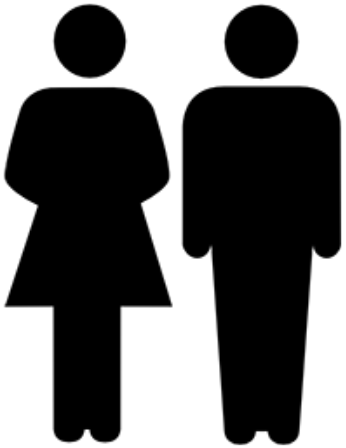


Complex Adaptive Operating System (CAOS)



13. Start where you are. Right now.

Think + Act + Interact



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