

Collective Intelligence (CI)

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None of us is as smart as
all of us.

None of us is as smart as all of us.



None of us is as smart as all of us.



Search term



↓ Full text

Boosting medical diagnosis by pooling independent judgments.

Kurvers RH, et al. Proc Natl Acad S A. 2016.

Conclusion

Aggregating the independent judgments of doctors outperforms the best doctor in a group whenever the diagnostic accuracy of doctors is relatively similar.

None of us is as smart as all of us.



↓ Full text

The Potential of Collective Intelligence in Emergency Medicine: Pooling Medical Students' Independent Decisions Improves Diagnostic Performance.

Kämmer JE, et al. Med Decis Making. 2017.

Conclusion

Combining independent decisions may substantially improve the quality of diagnoses in emergency medicine and may thus enhance patient safety

What is Collective Intelligence?



What is Collective Intelligence?

Collective intelligence is groups of individuals doing things collectively that seem intelligent.

Thomas W. Malone

We, *Homo sapiens*, are not the only species with CI



We, *Homo sapiens*, are not the only
species with CI



An example of CI

COLLECTIVE INTELLIGENCE

Creating a Prosperous World at Peace

Foreword by Yochai Benkler (Remixed by Hassan Masum)

The Wealth of Networks: Remixed Highlights

Prefaces by Thomas Malone, Tom Atlee, and Pierre Lévy

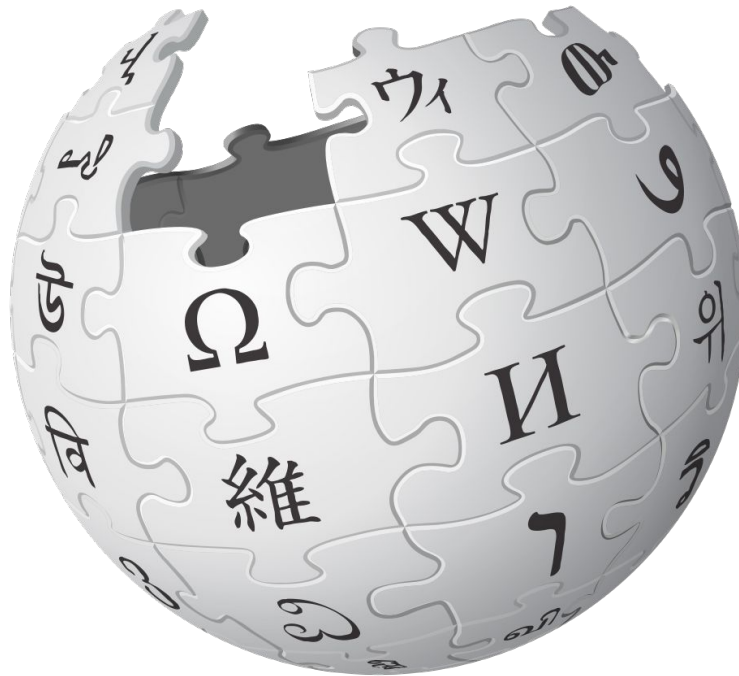


Edited by Mark Tovey

Afterword by the Rt. Hon. Paul Martin & Thomas Homer-Dixon

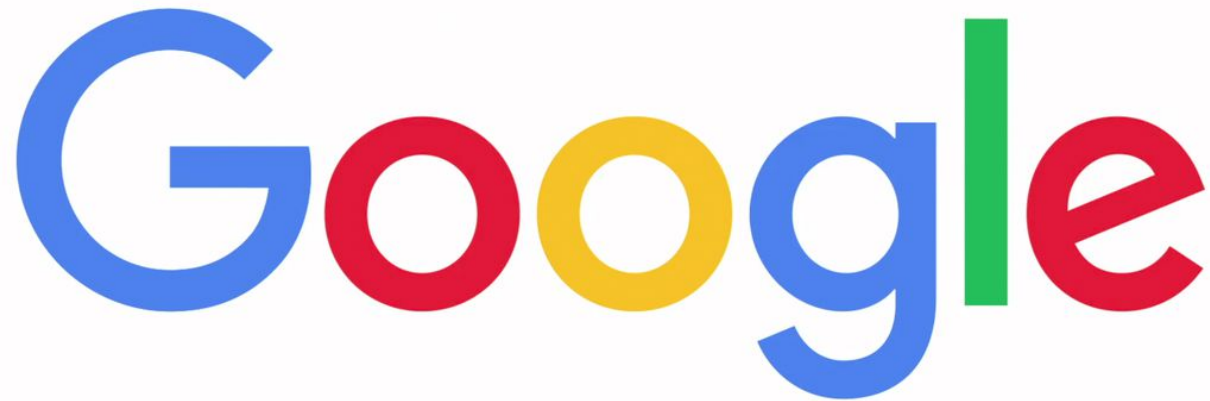
The Internet and the Revitalization of Democracy

An example of CI



WIKIPEDIA
The Free Encyclopedia

An example of CI



An example of CI



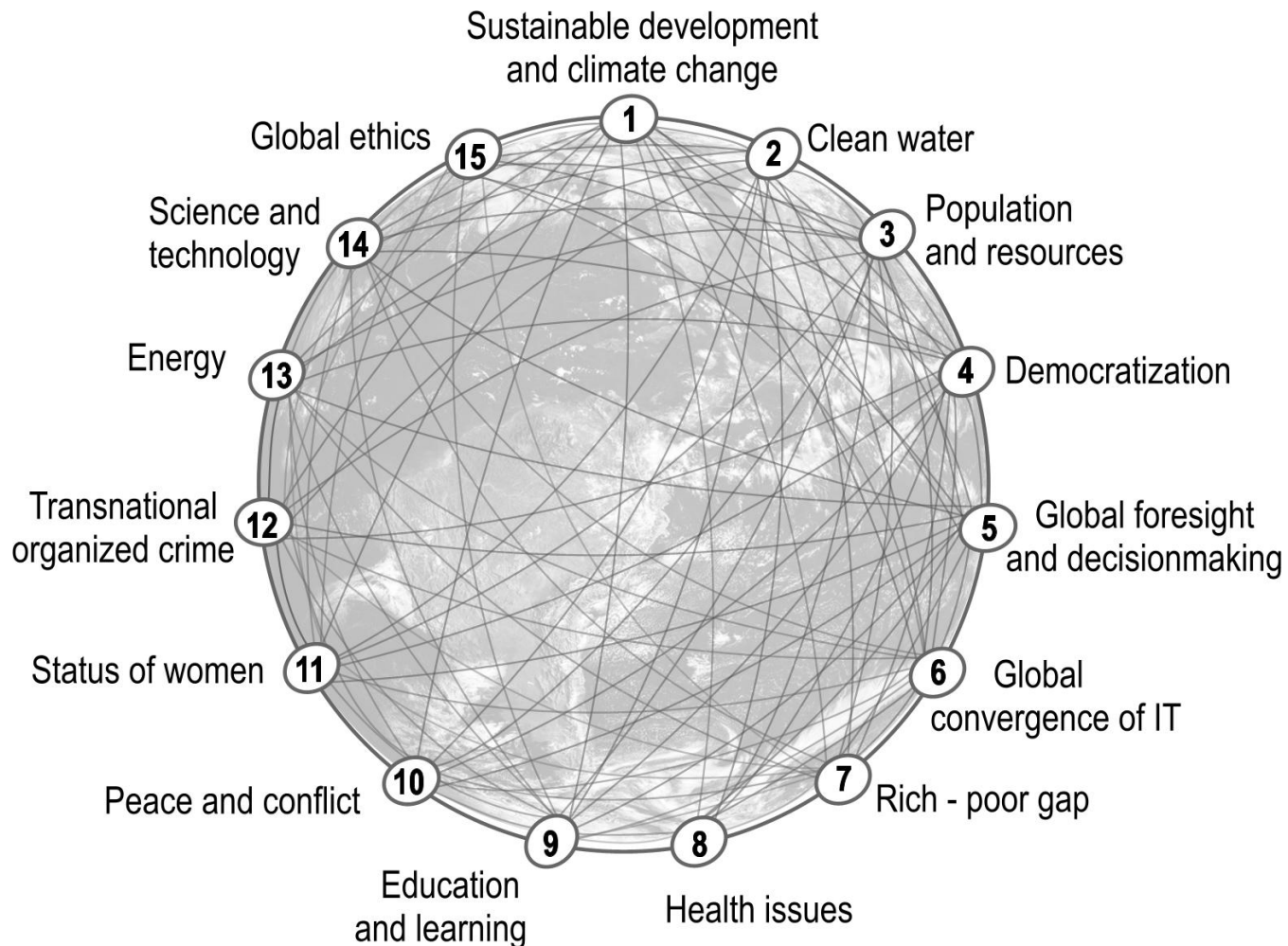
Why do we need Collective Intelligence?

Collective problems today

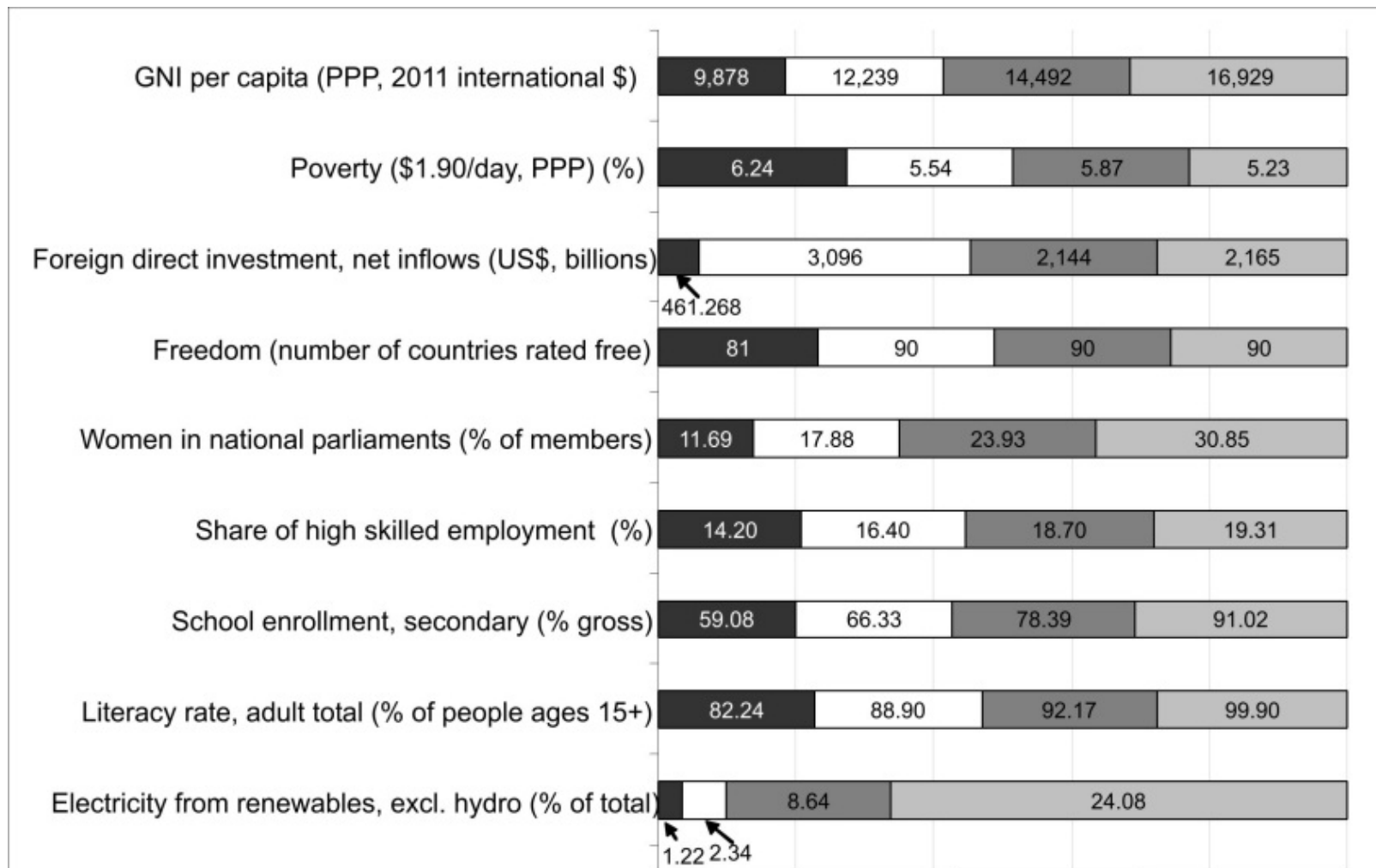
- Transnational in nature
- Trans-institutional in solution

Collective problems today

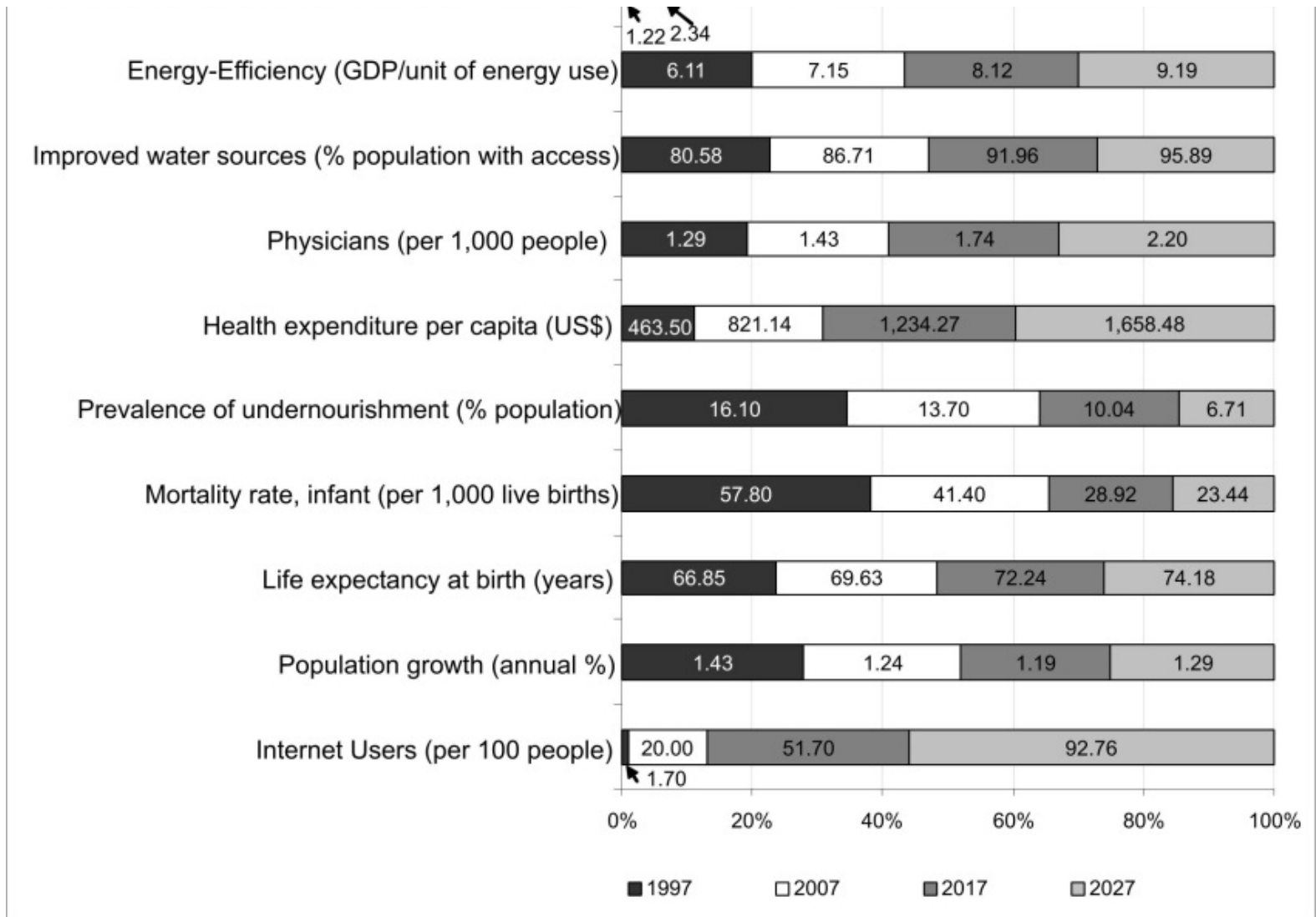
State of the future report



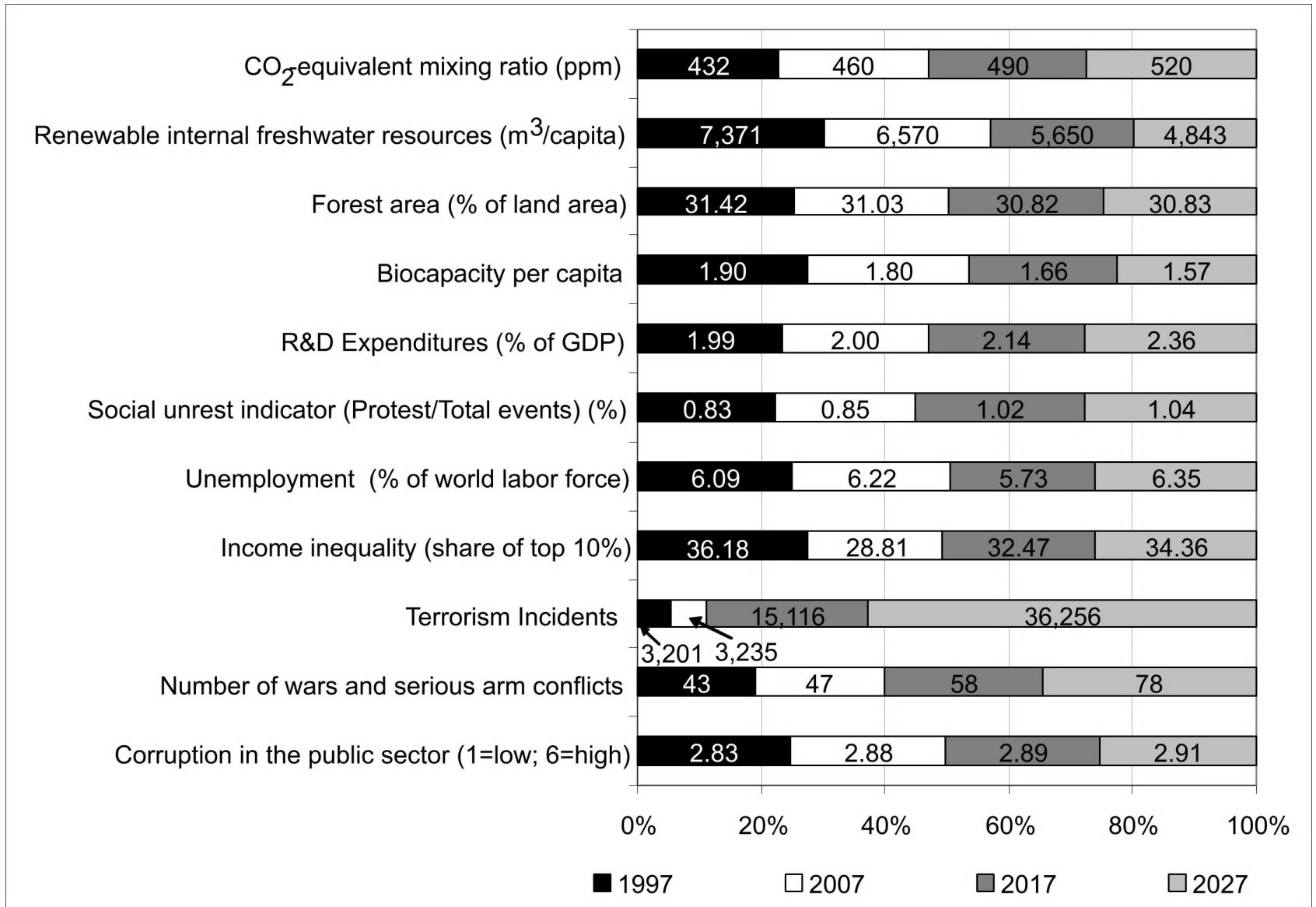
SOFI (We're winning)



SOFI (We're winning)



SOFI (We're losing)



What would our future be like?

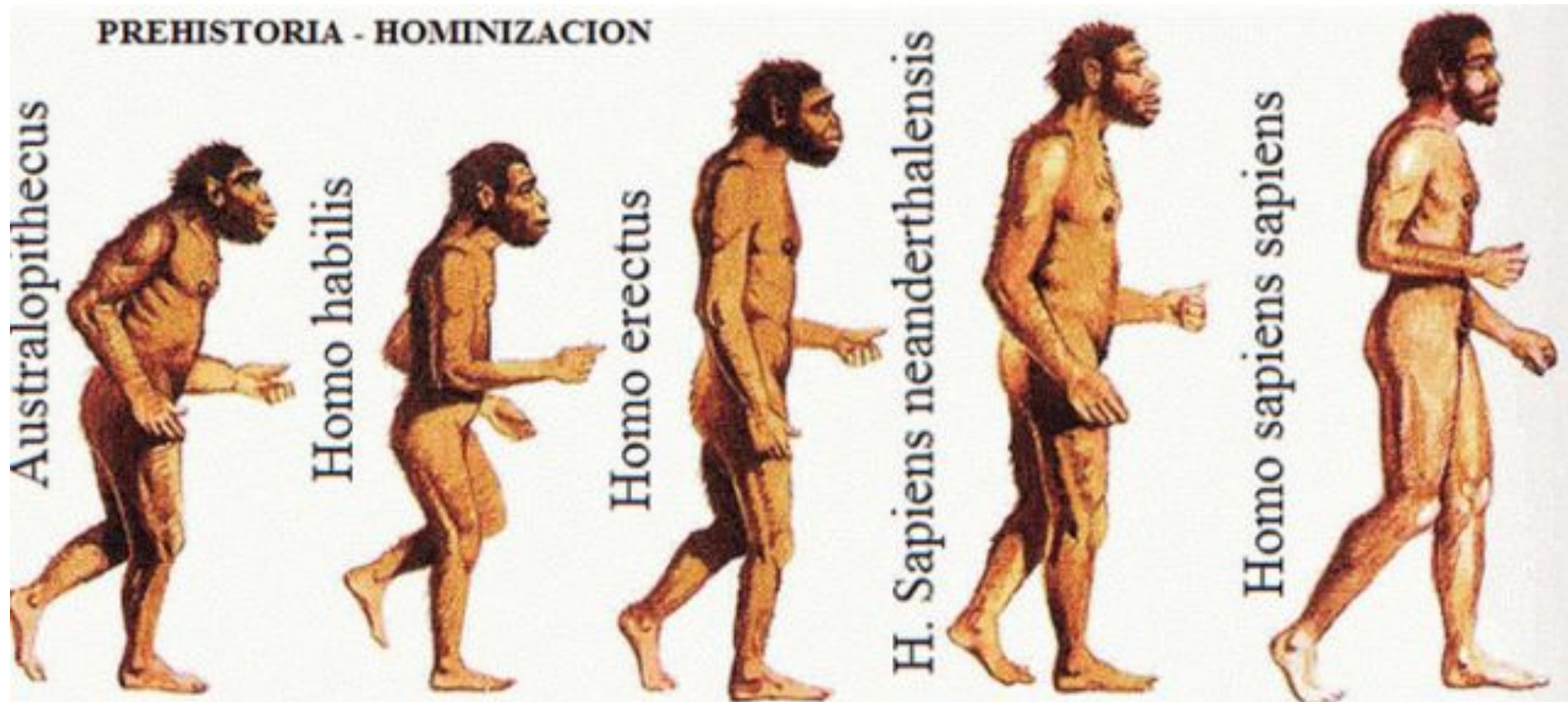
- Bleak, marred by lack of water, arable land, mass migrations, terrorism, economic chaos, corruption and other disasters
- Our species extinct
- OR
- Solve these problems and reach a sustainable and livable future for everyone

CI may be a solution.

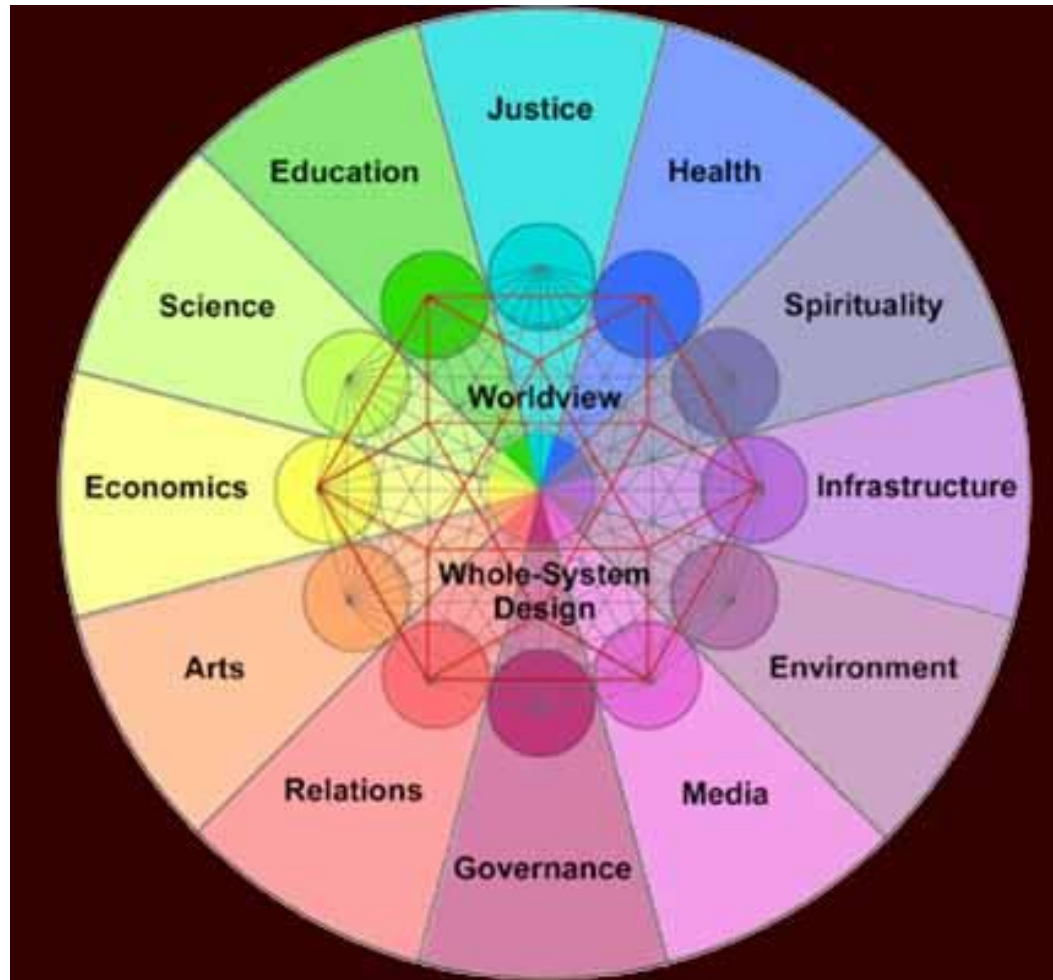
The conscious evolution



Survival of the fittest



CI may be a solution



Some forms of collective intelligence

- Reflective (dialogic) CI
- Structural (systemic) CI
- Evolutionary (learning-based) CI
- Informational (communication-based) CI
- Flow (mutual attunement-based) CI
- Statistical (crowd-oriented) CI
- Relevational (emergence-based) CI

We need to make conversations

- How can we enhance our capacity to talk and think more deeply together?
- How can we access the mutual intelligence and wisdom we need to create innovative paths forward?

The World Café

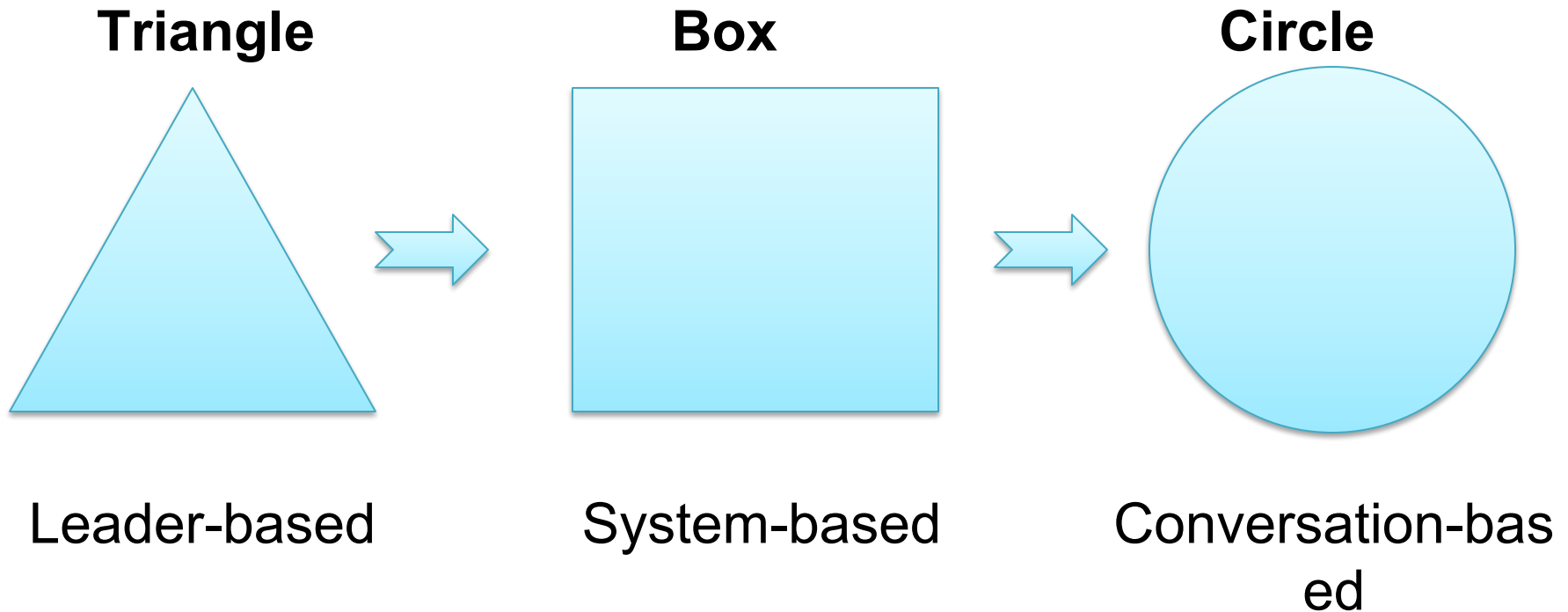
The World Café

Seven Principles

- 1) Set the context
- 2) Create a hospitable environment
- 3) Explore questions that matter
- 4) Encourage everyone's contribution
- 5) Cross-pollinate and connect diverse perspectives
- 6) Listen together for patterns, insights and deeper questions
- 7) Harvest and share collective discoveries

The Circle Organization and Choice-creating

Three Systems of Organizing



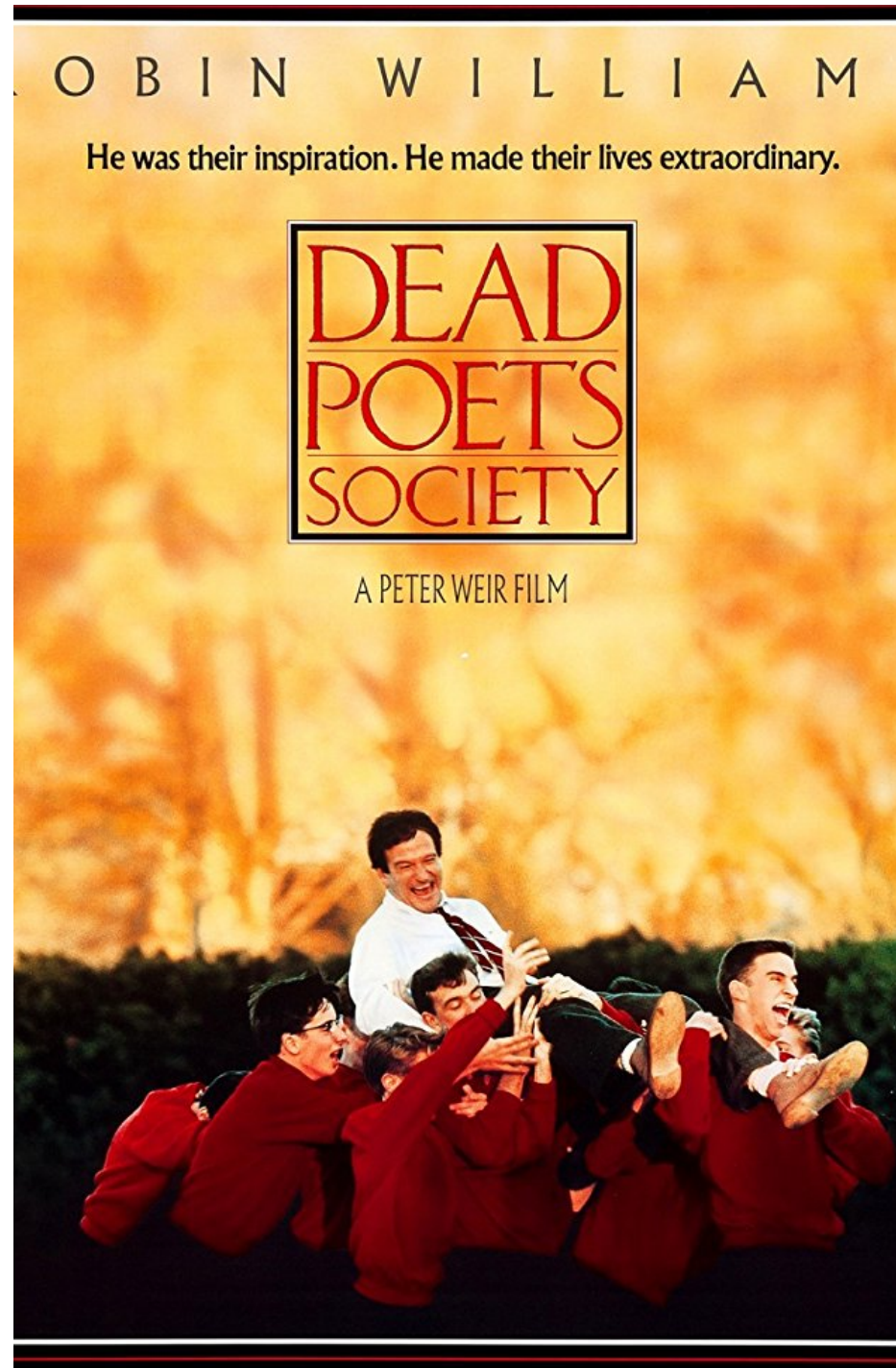
The Circle Organization and Choice-creating

Three Systems of Organizing

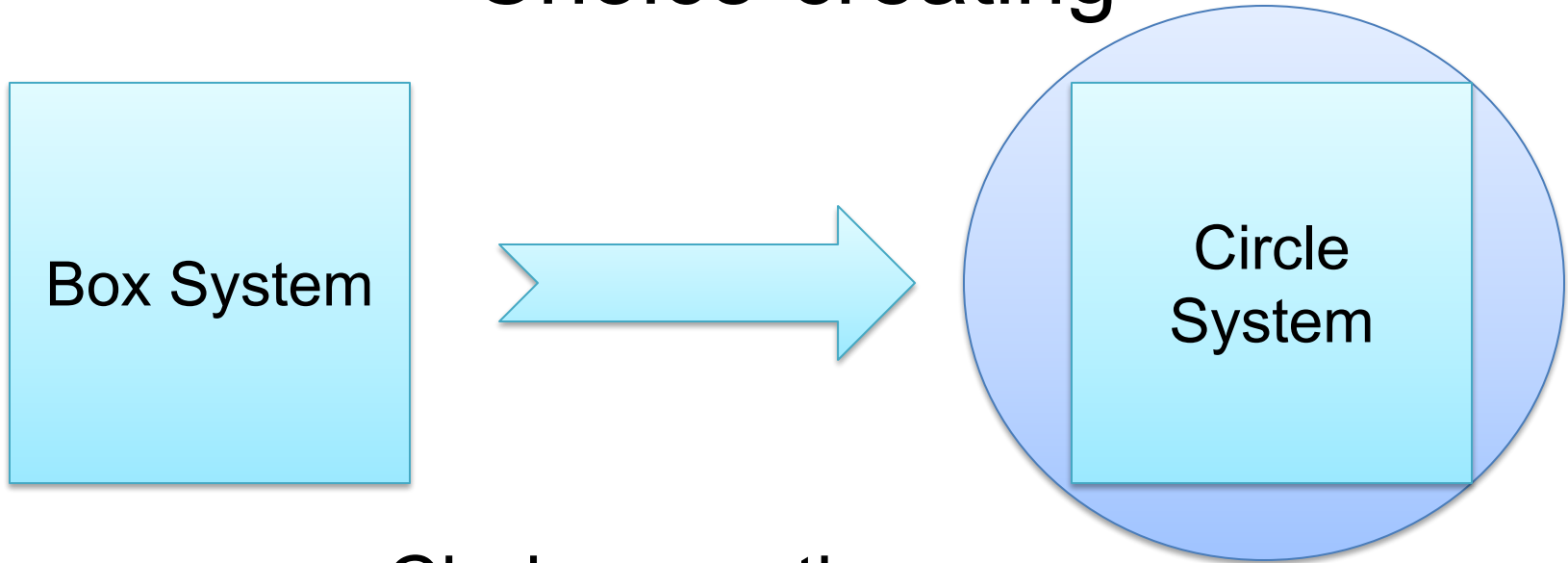
- Different underlying structures
- Promote different attitudes
- Require different leadership competencies
- Generate different results

The Circle Organization and Choice-creating

Dead Poets Society

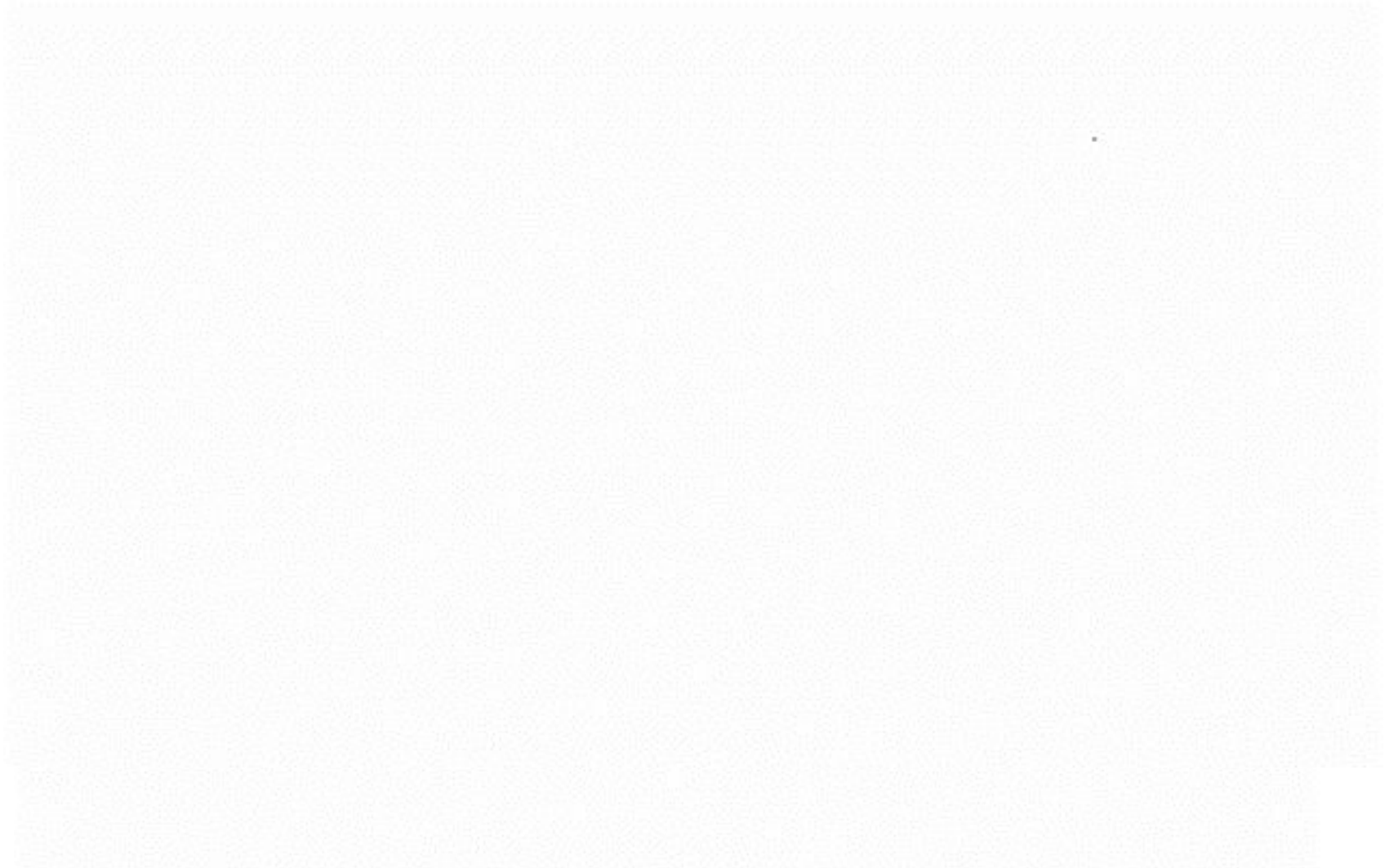


The Circle Organization and Choice-creating



- Choice-creating
- Dynamic facilitation
- The wisdom council

The Circle Organization and Choice-creating



Seeing beyond the **SELF**



*"I" is the
Obstacle*

A Primitive psychological and emotional drive
for security and certainty

Seeing beyond the **SELF**

I'm the intellectual
superiority in the
group.



Seeing beyond the **SELF**

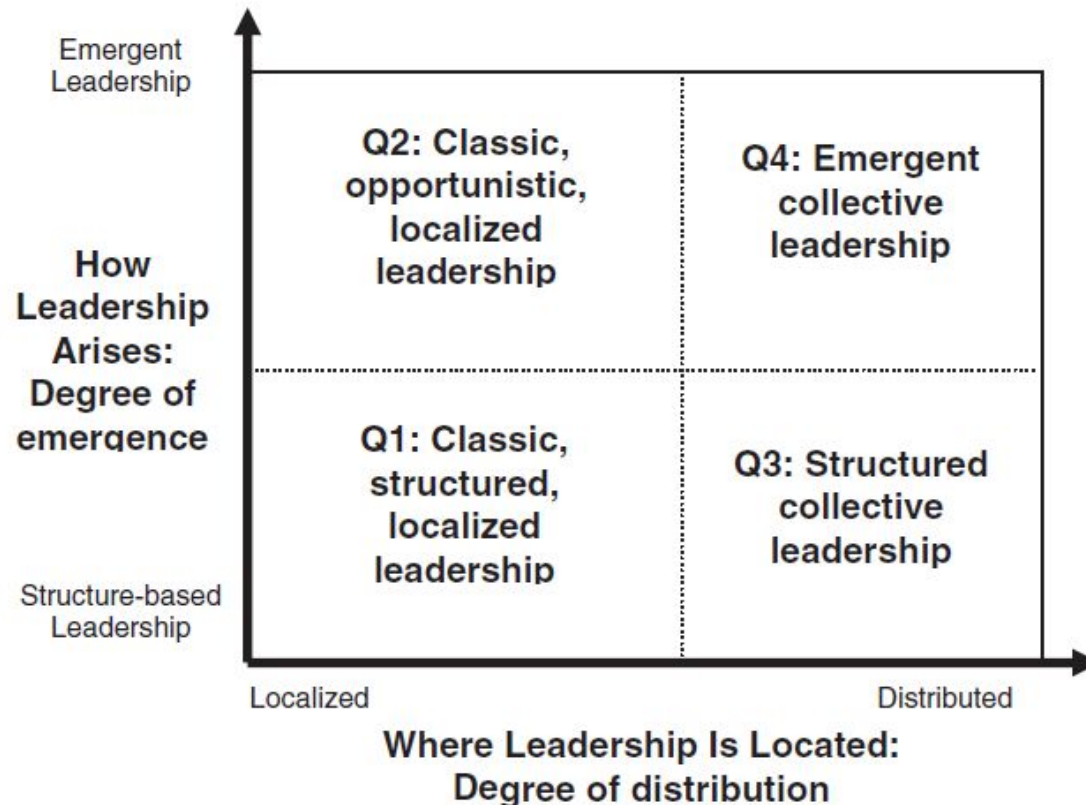
Principles of Evolutionary Culture

- 1) A Commitment to the Greater Good
- 2) A Commitment to Wholehearted Engagement
- 3) A Culture of Self-Responsibility
- 4) A Suspension of Assumptions
- 5) Culture of Deep Listening
- 6) A Commitment to Authenticity
- 7) A Culture of Risk-Taking
- 8) A Culture of Empowered Vulnerability
- 9) A Culture of Constant Resolution
- 10) A Commitment to Grow and Evolve

Collective Intelligence and Leadership

- Collective intelligence is a threatening concept to many leaders.

The leadership landscape



University 2.0

Informing collective intelligence



University 2.0

- What knowledge do we need?
- How higher education could help inform collective intelligence?
- How can we possibly change higher education?
- What does it mean by universal access to higher education?
- How can we assure universal access to higher education?

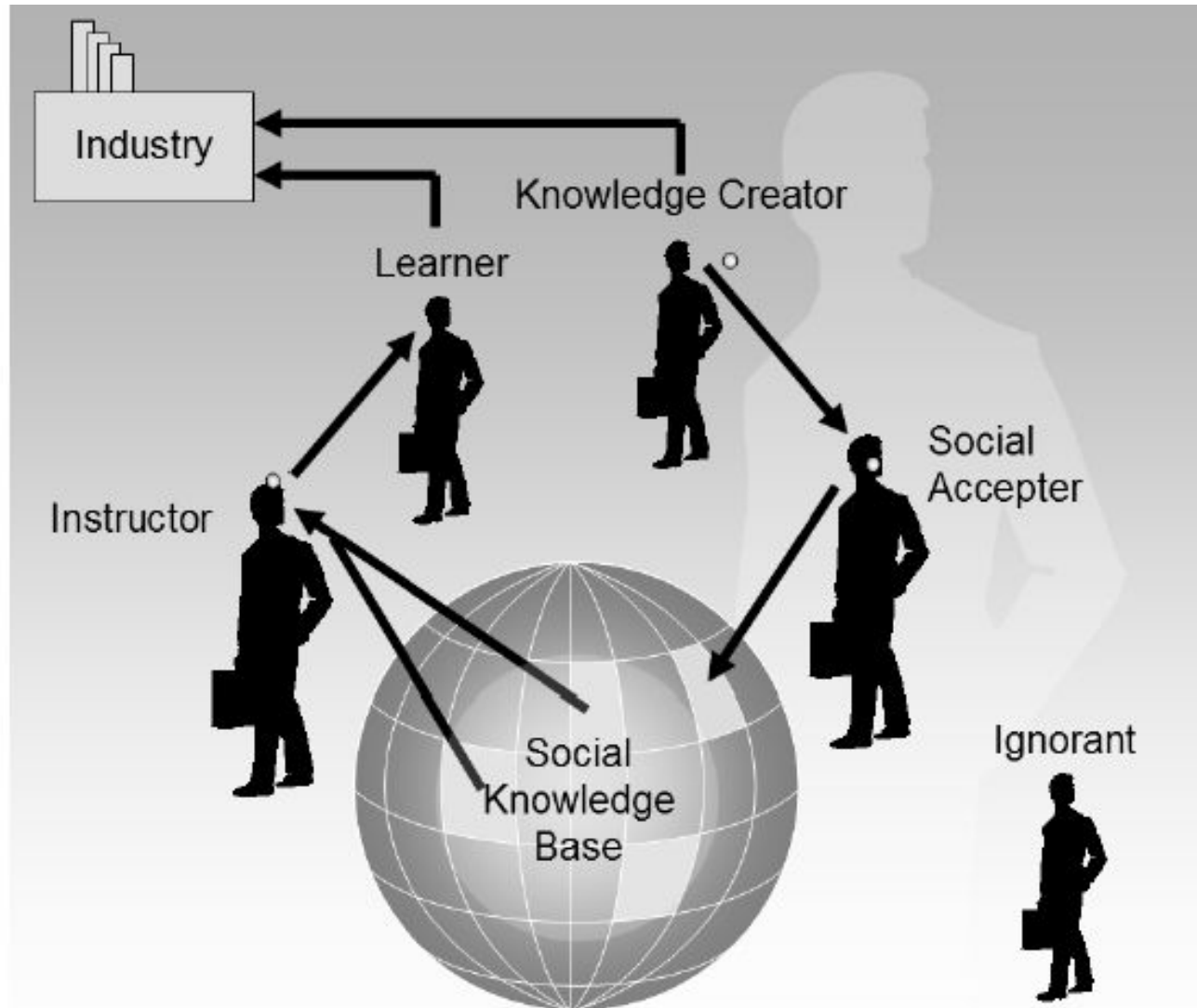
Knowledge Creation in Collective Intelligence

- The source of all knowledge
- Society cannot advance without it

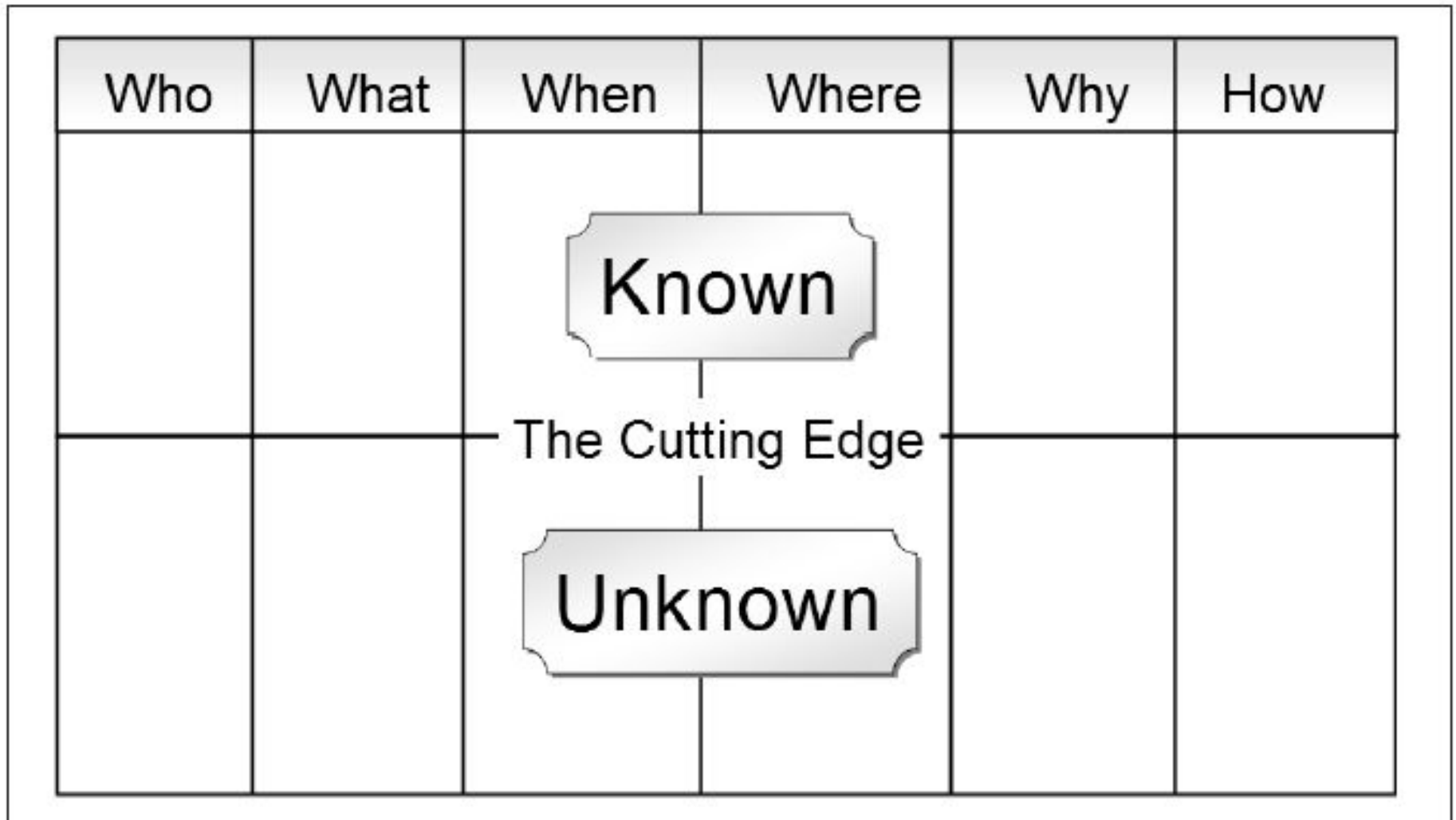
Intelligence

- Knowledge that is stored, and can be recalled, at the individual, group, or societal level

Knowledge Creation in Collective Intelligence



Knowledge Creation in Collective Intelligence



Centralization or Decentralization



University 2.0

No longer a centre for learning, but a network
for learning



How can we possibly change higher education?

- Create access to global knowledge network
- Distribute to all, learning, knowledge management, and communication tools
- Teach how to learn
- Assure skill in using knowledge
- Offer a map of what knowledge there is
- Expand the concept of “critical thinking”

How can we possibly change higher education?

- Teach new conceptions of citizenship
- Teach the values of conflicting views
- Study and institutionalize as norms, the conditions known to develop mutual trust among people and concern for each other's needs and for the good of the whole.
- Envision and prepare for a culture of deliberative democracy and participatory design

University 2.0

Knowledge about knowledge

- Formal schooling will be less and less about learning content, and more and more about how to handle content.

University 2.0

Learning to learn

- Learning is itself a skill, and one that can be taught.

University 2.0

Mapping human knowledge

- Most of the content from school is soon forgotten.
- But that such content exists – and where to find it again, is not.
- It is the challenge and privilege of our times to redraw the map.

University 2.0

Critical thinking



or the questions from material we've given them
or the questions that take them beyond that material.
eir own questions

- to find answers to their questions
- to question answers
- to question the questions.

University 2.0

Questioning the questions

- Learn and teach as we go

Participatory Democracy

- Having not only the will, but also the competence, to work collaboratively, and to involve effectively in the making of decisions

- Not all collective capacities are intelligent.
- We need Collective Wisdom.

Think different.

James Watson

- Excellence demands the pursuit of seemingly unattainable goals. Those schools and teachers that really succeed are those which inspire their students move beyond the expectation of conventional wisdom.

James D. Watson

THANK YOU!