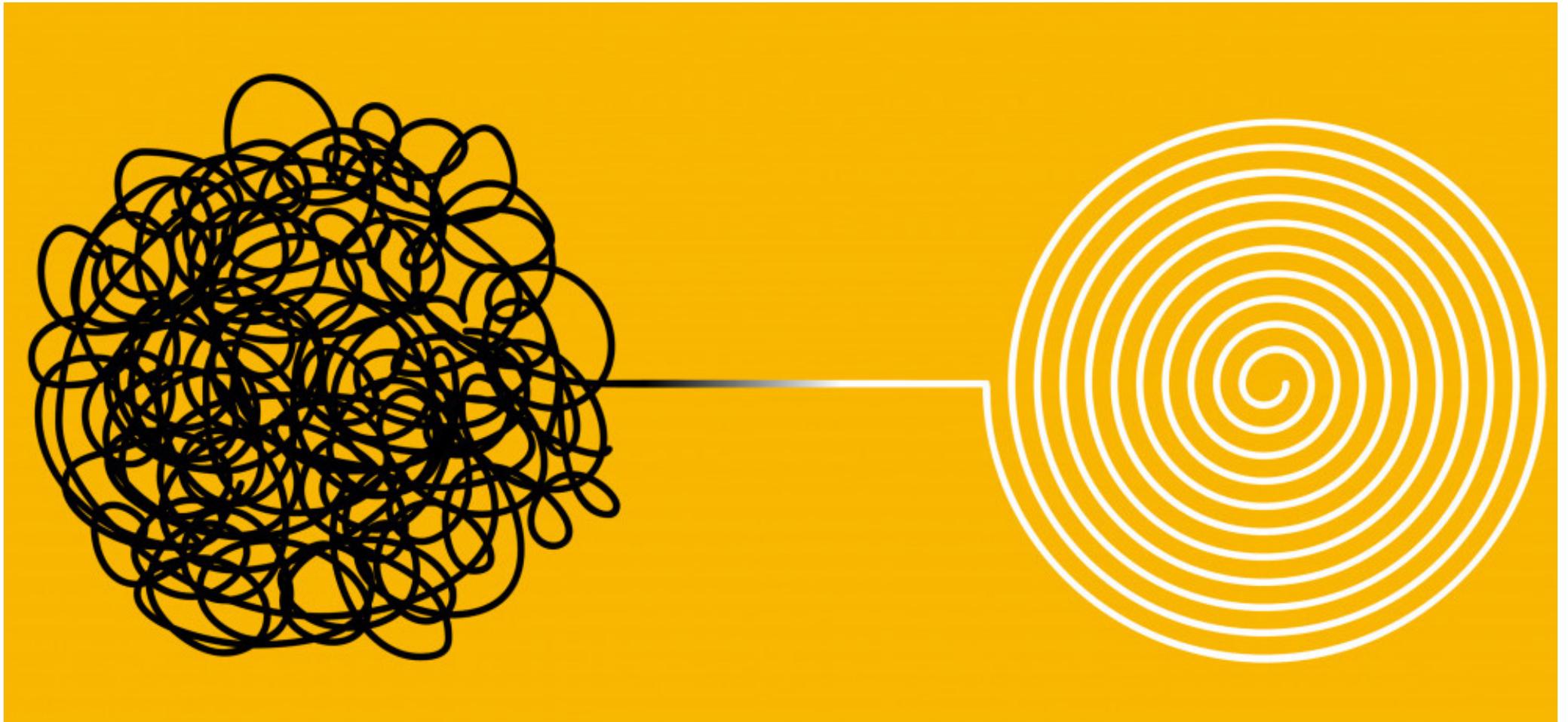# Distinguishing simple, complicated, complex and chaotic
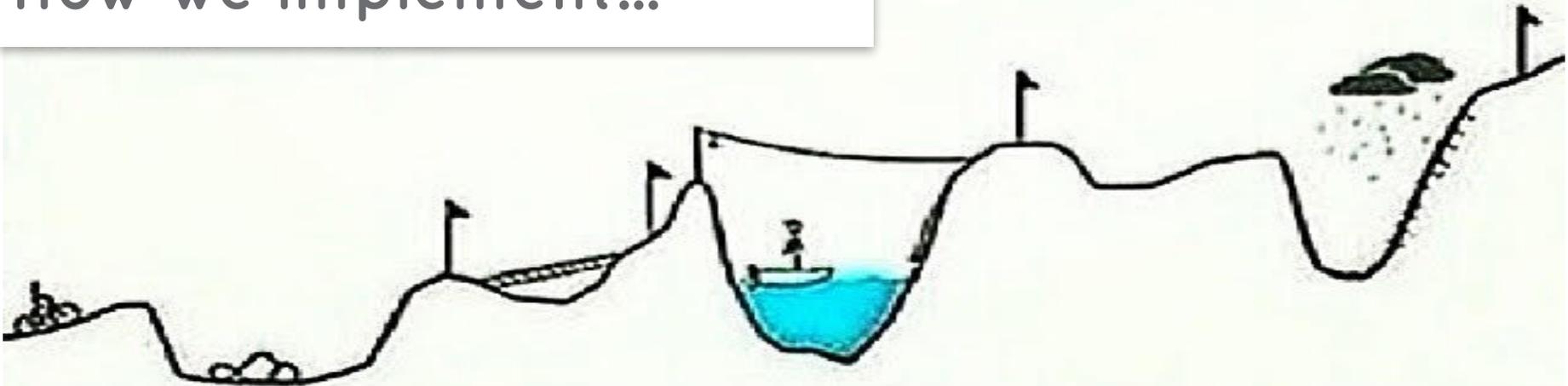

Facilitator: Rita Muckenhirn
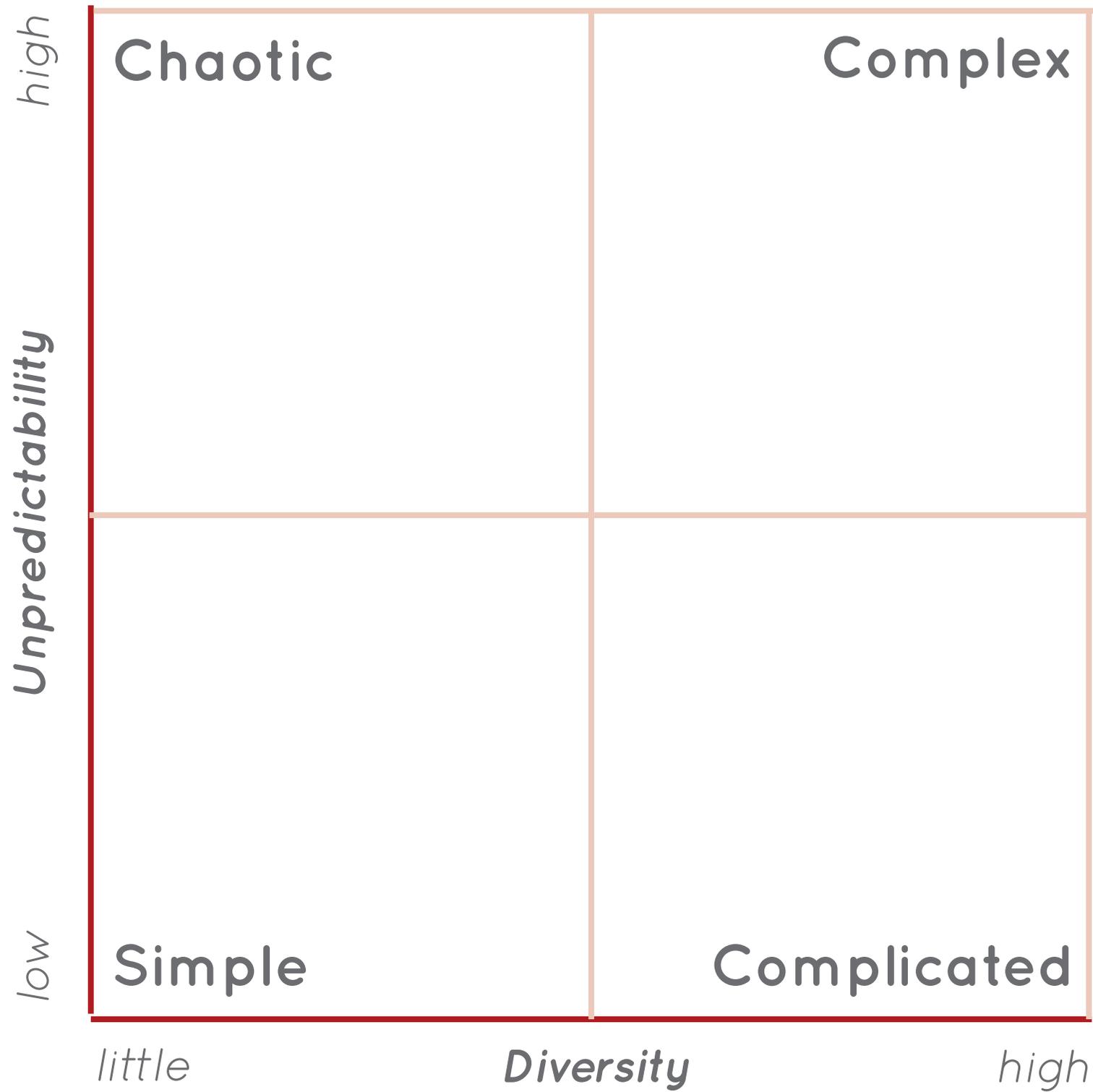
systways.

Planning organizational and social development

How we plan...

How we implement...

	Chaotic	Complex
	Simple	Complicated

Unpredictability: high / low

Diversity: little / high

high Chaotic | Complex

Unpredictability

low Simple | Complicated

little **Diversity** **high**

systways.

Chaotic
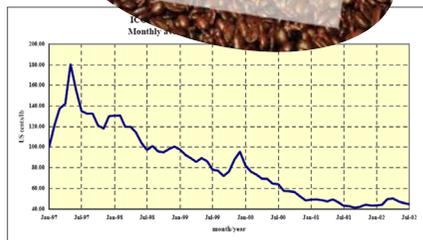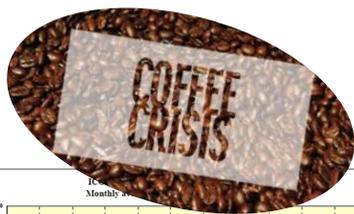
Complex

Younger Americans Are Ditching Coffee For Tea
Percentage of Americans who prefer coffee or tea by age group in 2015

Coffee

42%	50%	62%	70%
42%	35%	28%	21%
18-29	30-44	45-64	

Tea
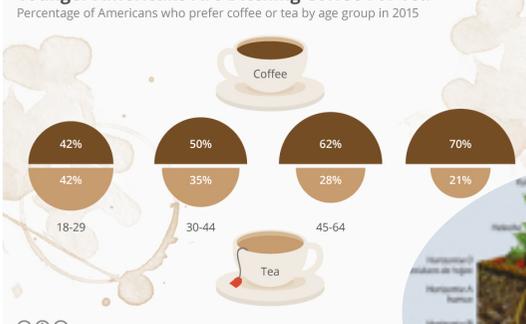
Unpredictability

Simple

Complicated

little   **Diversity**   high

This is a 2×2 matrix (Cynefin framework) with axes **Unpredictability** (vertical: low to high) and **Diversity** (horizontal: little to high).

Unknowable ever - Chaos

- No cause-and-effect relationships are perceivable due to rapidly changing and highly unstable systems dynamics
- Action is required
- Stability is the focus of interventions
- Crisis management
- Sense-making and action:

Act → Sense → Respond

Unknowable in advance - Complex

- Cause and effect are only coherent in retrospect and do not repeat
- Patterns are unpredictable in advance
- Complex adaptive systems
- Practice is emergent and contingent
- Perspective filters
- Sense-making and action

Probe → Sense → Respond

Known - Simple

- Cause-and-effect relationships are repeatable, perceivable, and predictable
- Best practices and standard operating procedures are possible
- Process re-engineering
- Sense-making and action:

Sense → Categorize → Respond

Knowable - Complicated

- Cause and effect are separated over time and space
- Things are not yet known but knowable
- Good, effective practices be identified
- Systems analysis and thinking
- Scenario planning
- Sense-making and action:

Sense → Analyze → Respond

Unpredictability — high / low
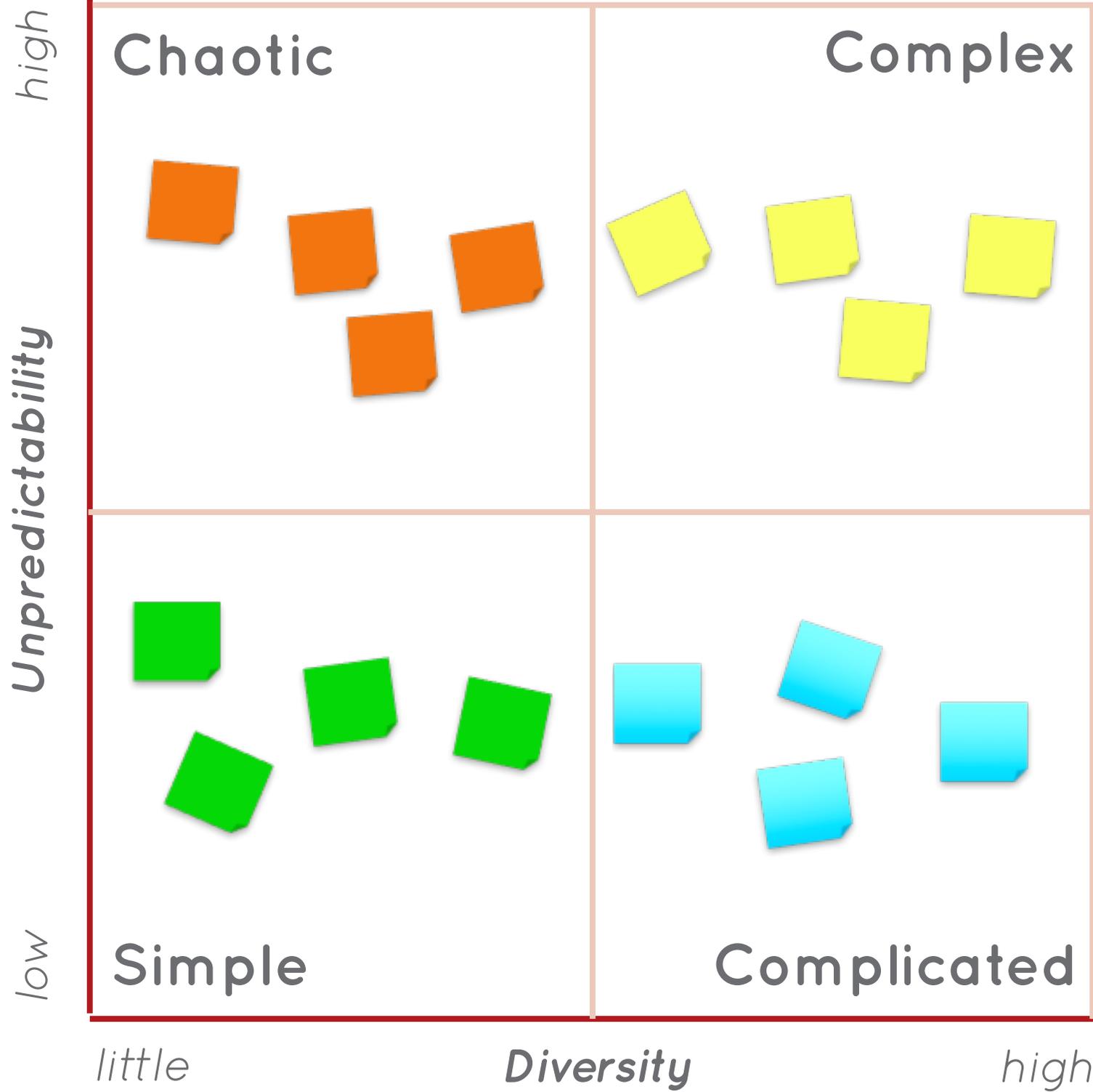
Diversity — little / high

Apply this framework to your partners

Which of the elements, specific aspects of these elements and/or situations of their context we have been discussing are rather...?

- simple
- complicated
- complex
- chaotic
-

What does this mean for organizational development processes?

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Fuentes

Además de las fuentes ya citadas, la presentación se basa en los conocimientos de los siguientes autores:

- Asociación de Educación y Comunicación "La Cuculmeca". Bases del Pensamiento Sistémico. Jinotega, Nicaragua. March 2009.

- Boulton, Jean G; Allen, Peter M; Bowman, Cliff. Embracing complexity. Strategic perspectives for an age of turbulence.

- Briggs, John; Peat, F. David. Las siete leyes del caos. Grijalbo. Barcelona. 1999.

- Heise, Ruth y Hosemann, Dagmar. Módulo I del Diplomado de Desarrollo Organizacional con Enfoque Sistémico. Managua, Nicaragua. February 2006.

- Meadows, Donella H; editade by Diana Wright. Thinking in Systems. Chelsea Green Publishin. United States of America. 2008

- Muckenhirn, Rita. Pensar y actuar sistémicamente. La Cuculmeca. Jinotega, Nicaragua. 2011

- Patton, Michael Quinn. Developmental evaluation: applying complexity concepts to enhance innovation. The Guilford Press. New York. 2011.

- Senge, Peter. La Quinta Disciplina. Ediciones Granica. Argentina. 2004.

- Simon, Fritz. Einführung in Systemtheorie. Carl Auer Verlag. Compact. Heidelberg, Alemania. Erste Auflage 2006.

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