

Mental Models and Ladders of Inference

Senior Executive Training Program
For National Audio Department of Malaysia
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You're driving
alone at night on
a long stretch of
deserted
highway. Your
car radio is not
working. You're
tired, and
getting sleepy.
You have
another hour of
lonely driving
ahead.

Would you
give a ride to
this hitch-
hiker? Why, or
why not?



What do you **REALLY KNOW** about the
man in the picture?

NOTHING! Your **mental models** provided
the answers.

Dilemma At the BART Station

- Whom will you believe? The white man or the black kid? The homeless guy, or the gang member? Was one of them or perhaps both of them, trying to play a joke on a couple of Asian tourists? Or were we being set up for mugging?

What are mental models?

“Mental models are deeply held internal images of how the world works, images that limit us to familiar ways of thinking and acting. Very often, we are not consciously aware of our mental models or the effects they have on our behavior.”

(Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. Doubleday Currency, p. 8.)

Mental models...

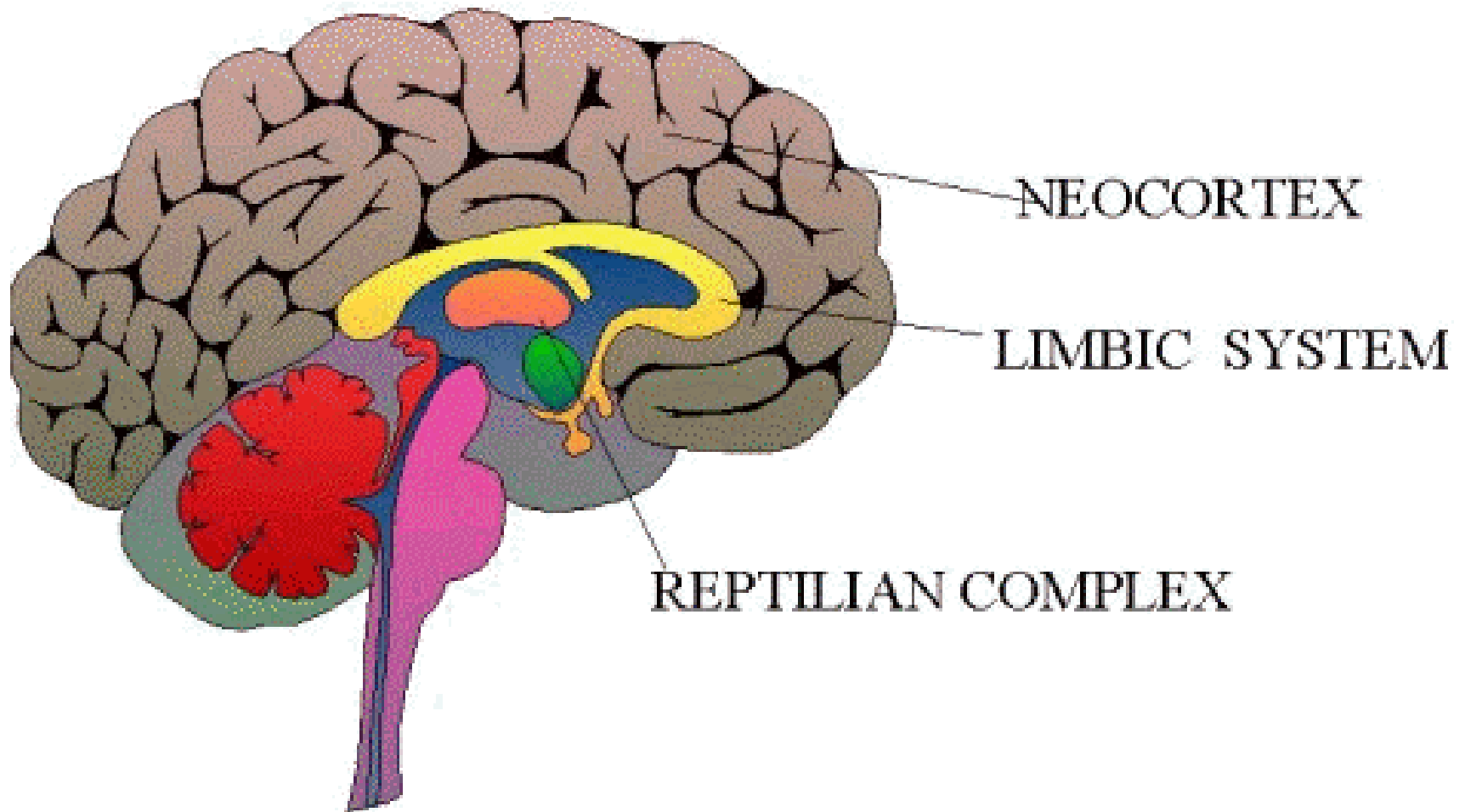
...are unconscious,
entrenched deep in our psyche,
compelling,
represent “the box,” “the frame,”
define our “comfort zone.”

Why are mental models so hard to change?

- Emotional resonance (long-term memory and the limbic system).
- Public commitment.
- Personality factors.
- The theory, assumption, belief, etc. worked before.

THE TRIUNE BRAIN THEORY

By: Dr. Paul Mclean



Intermediate brain (paleopallium)

Limbic system

Emotions



**Rational brain
Neocortex (neopallium)**

Intellectual tasks



Primitive brain (archipallium)

Self preservation, aggression



Why are mental models really so hard to change?

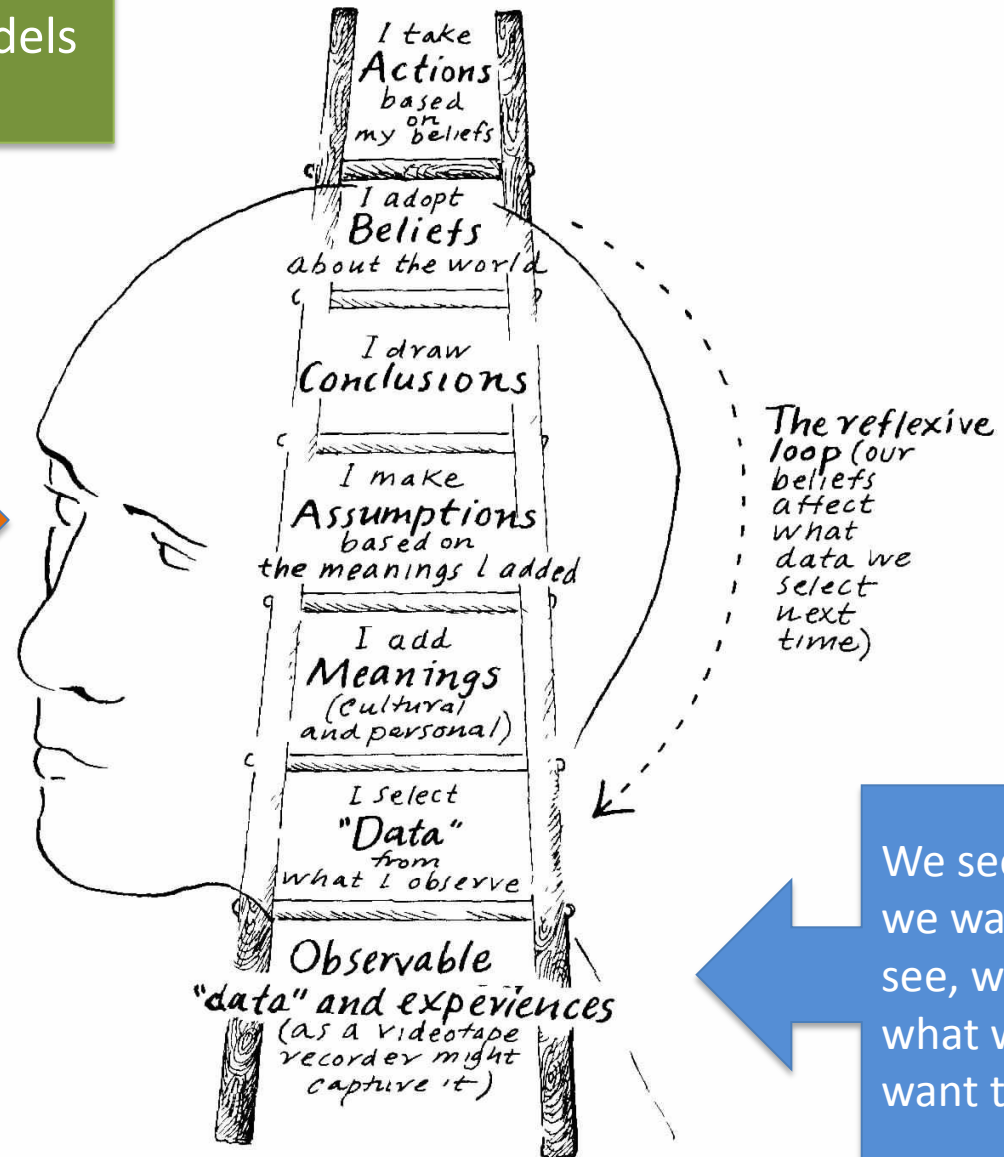
They are constantly reinforced through the Ladder of Inference and its reflexive loop (self-fulfilling prophecy—"I told you so," "Sinabi ko na nga ba, e").

INSANITY STREAK



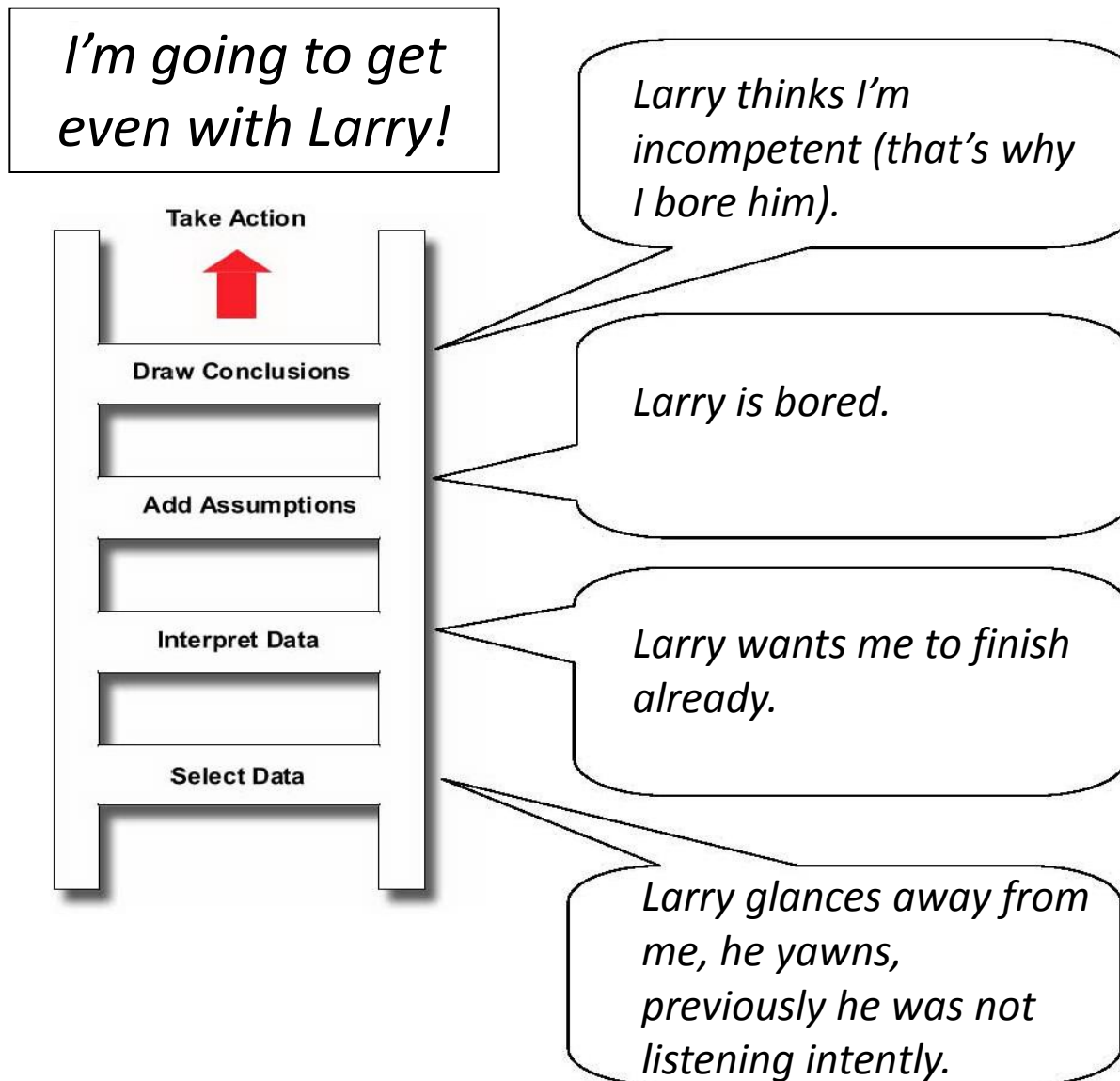
The Ladder of Inference
reinforces our mental models
in everyday life.

Mental
models lead
us to see the
same things in
the same ways
all the time.

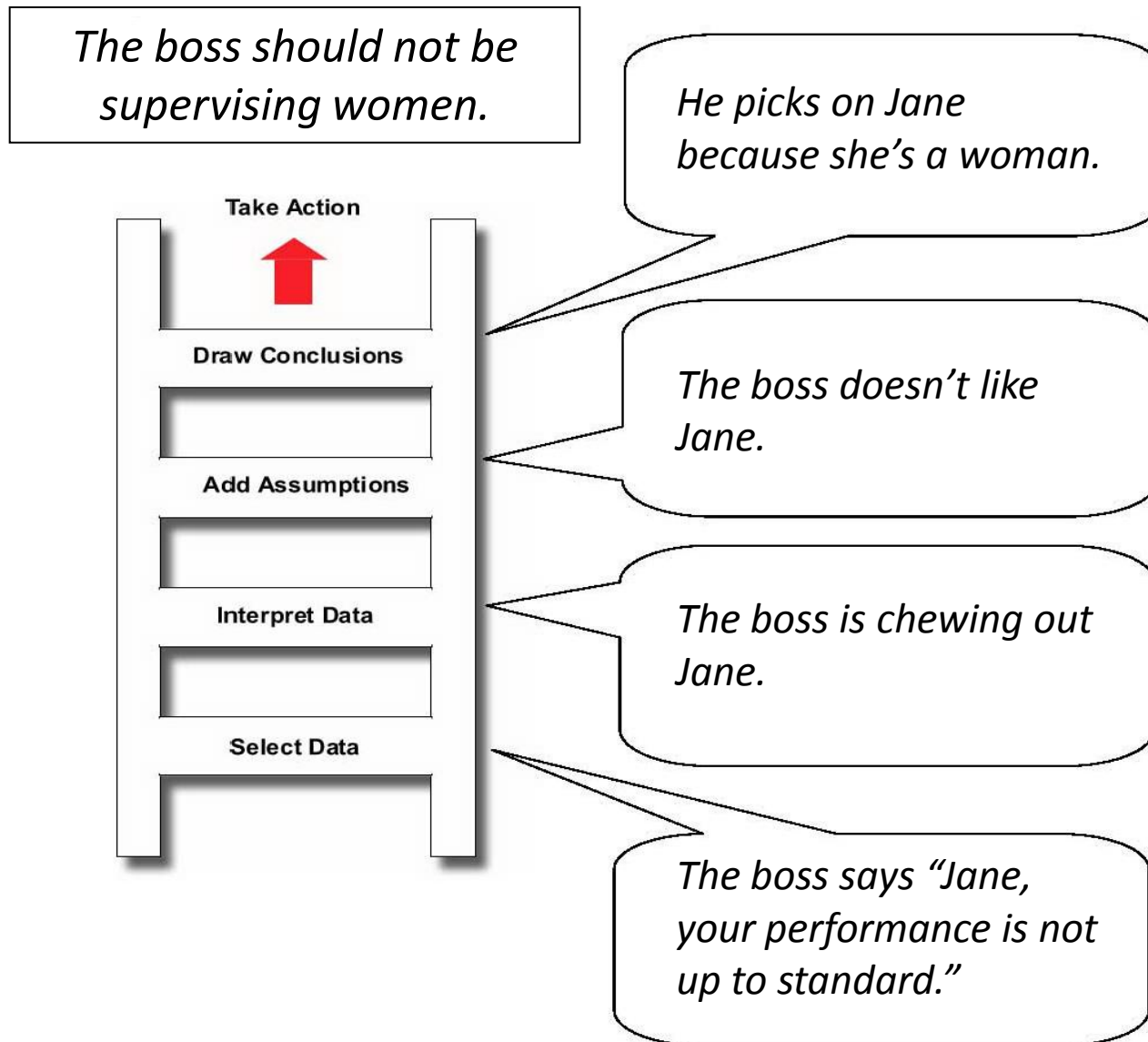


We see what
we want to
see, we hear
what we
want to hear.

Ladder of inference: Larry makes a comment

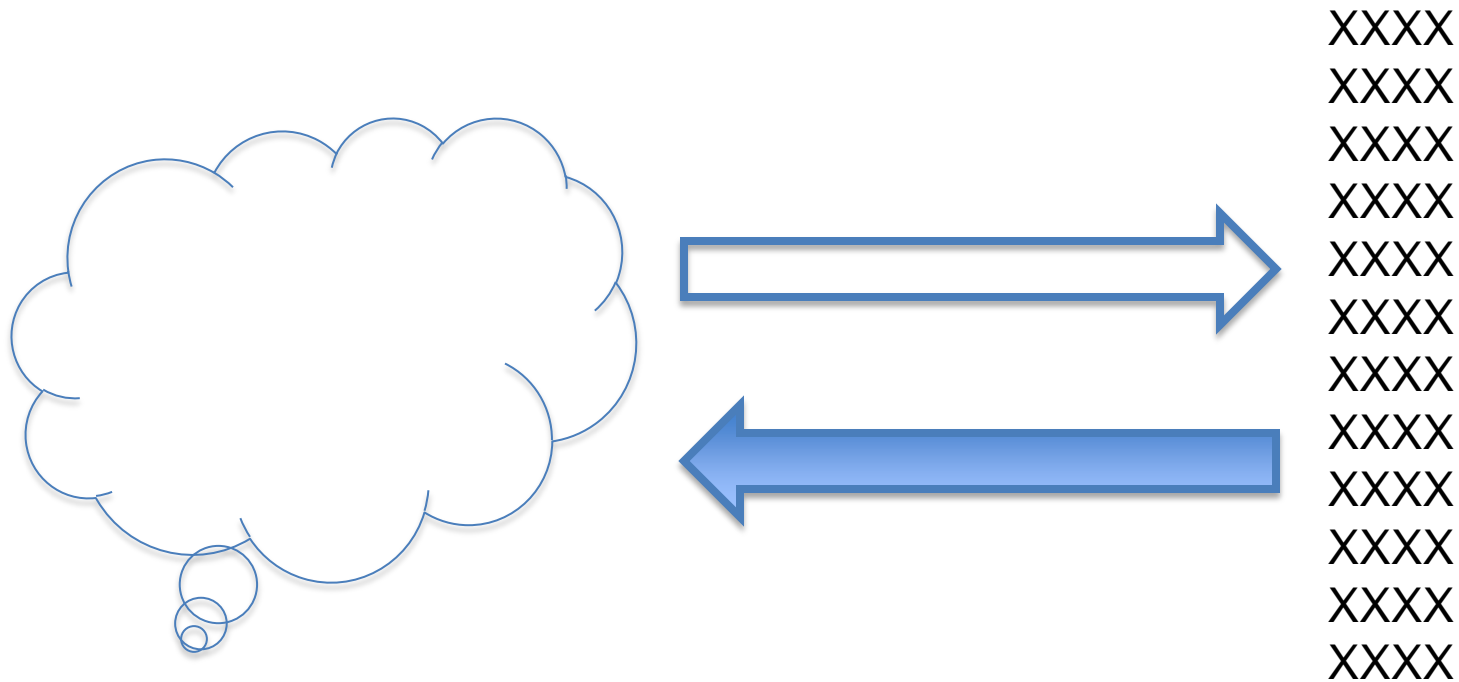


Ladder of inference: Boss conducts performance review



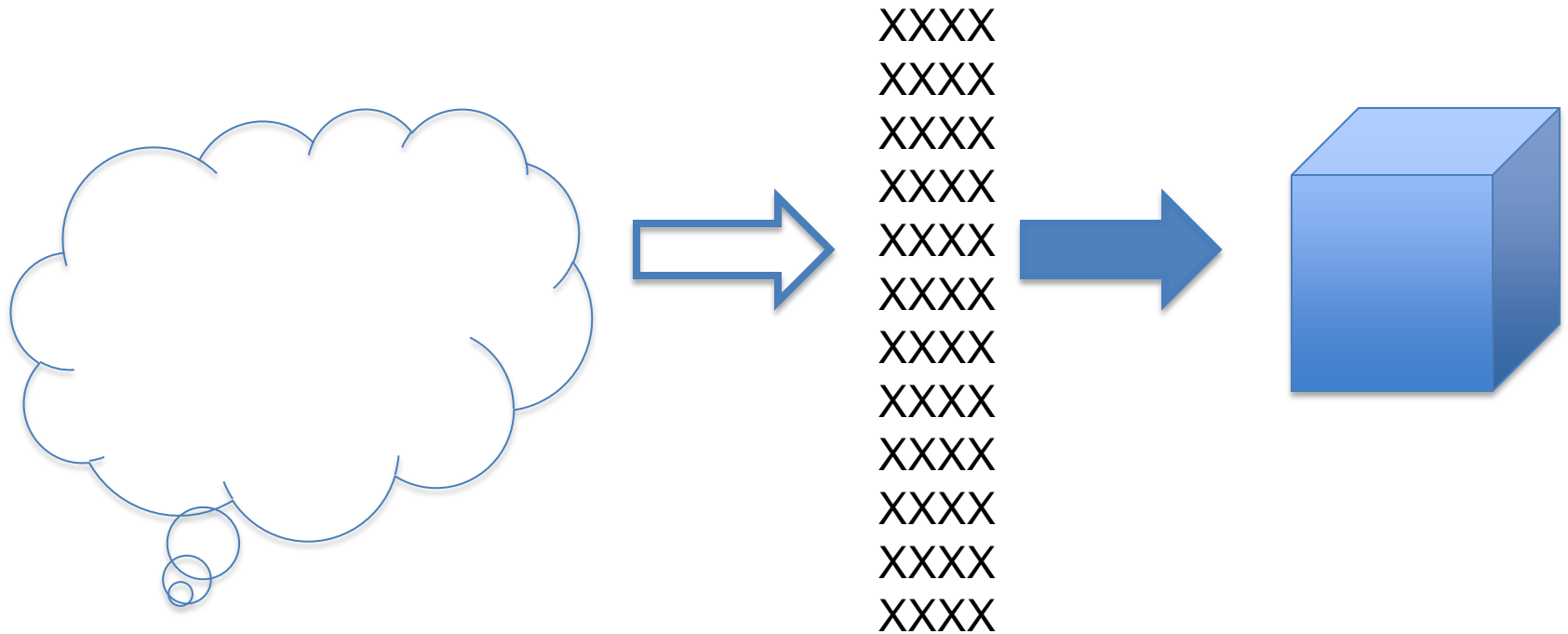
Organizations, like the people in them, also have mental models (embedded in the organization's "long-term memory," a.k.a. corporate culture--values, norms, practices, etc.).

Organizational mental models act as filters



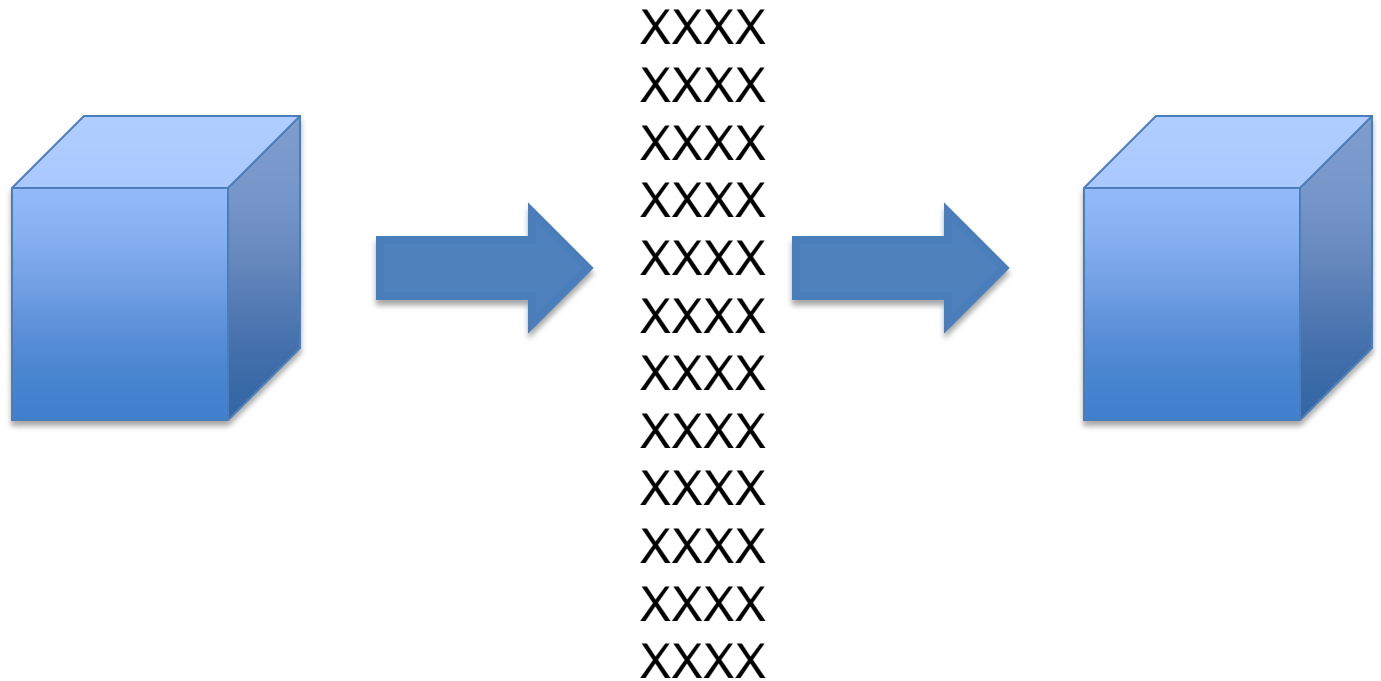
Much information outside the organization's boundaries do not get past the organization's mental models

Organizational mental models act as filters



Some information gets through but is altered by the mental models

Organizational mental models act as filters



Only the information that fits the “familiar ways of thinking and acting” gets through

- Would you like to give some examples from your organization/s?

Citigroup Goal

Our goal for Citigroup is to be the most respected global financial services company. Like any other public company, we're obligated to deliver profits and growth to our shareholders. Of equal importance is to deliver those profits and generate growth responsibly.

Statement from the Chairman and CEO of a leading FMCG company (to AIM MBA students)

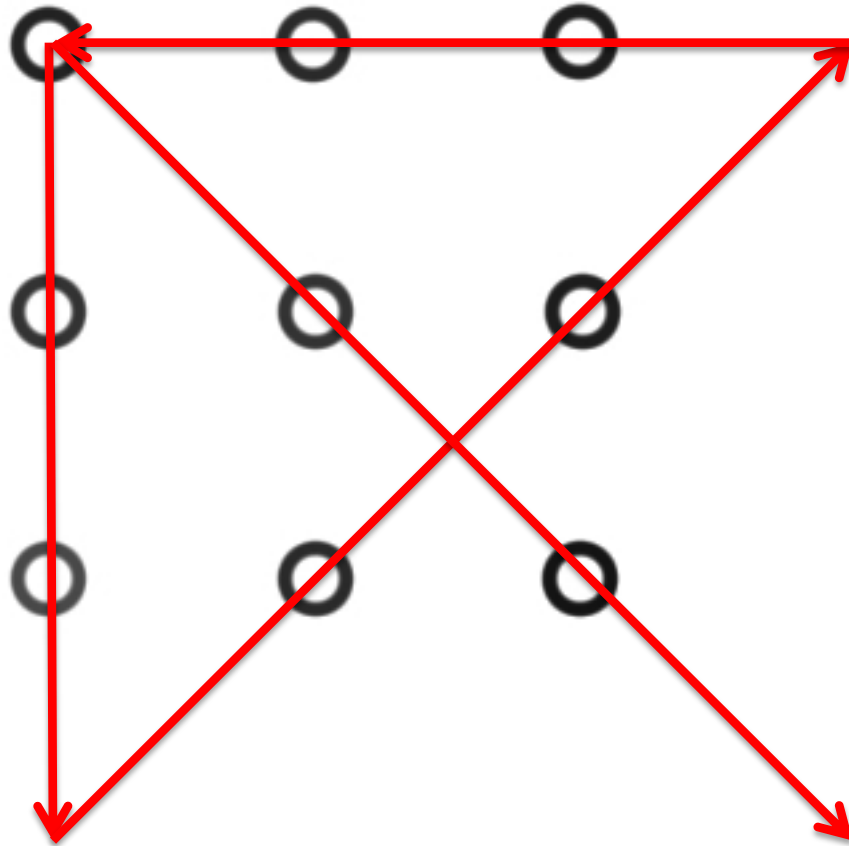
“The core of our business is the customer and the retailer. Therefore we will never outsource the marketing and sales functions.”

Why it is necessary to change organizational mental models*

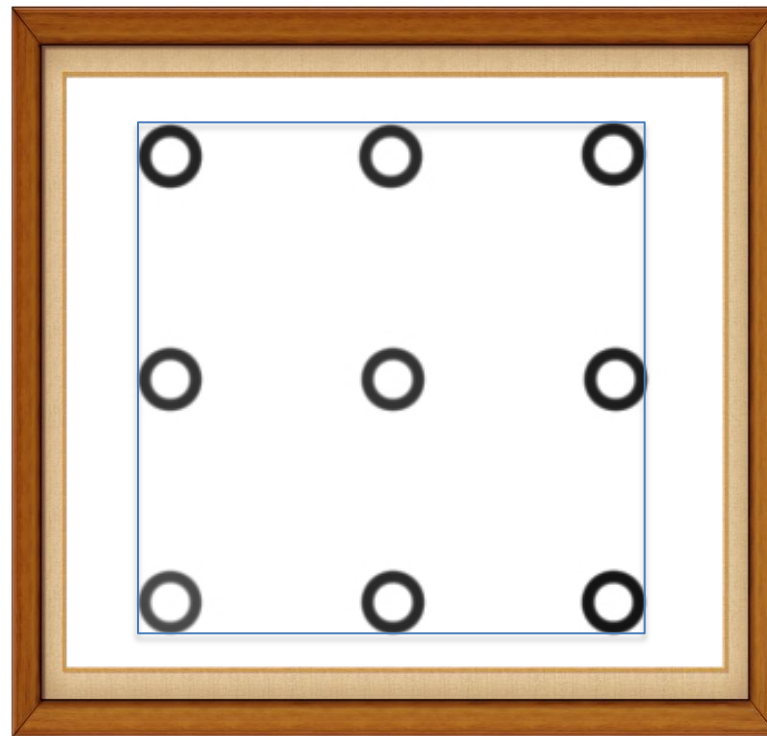
- Continuing changes in technology, biology, medicine, social values, demography, environment, international relations represent continuing challenges that will tax our collective abilities to deal with them.
- “Flavor-of-the-month” change programs fail, again and again, engendering cynicism.
- [Failures] cannot be remedied by more expert advice, better consultants, or more committed managers. **The sources [of failure] lie in our most basic ways of thinking. If these do not change, any new input will end up producing the same fundamentally unproductive types of actions.**

*Senge, P. (1999). The Dance of Change.

Without lifting your pencil, draw four lines that connect all nine dots

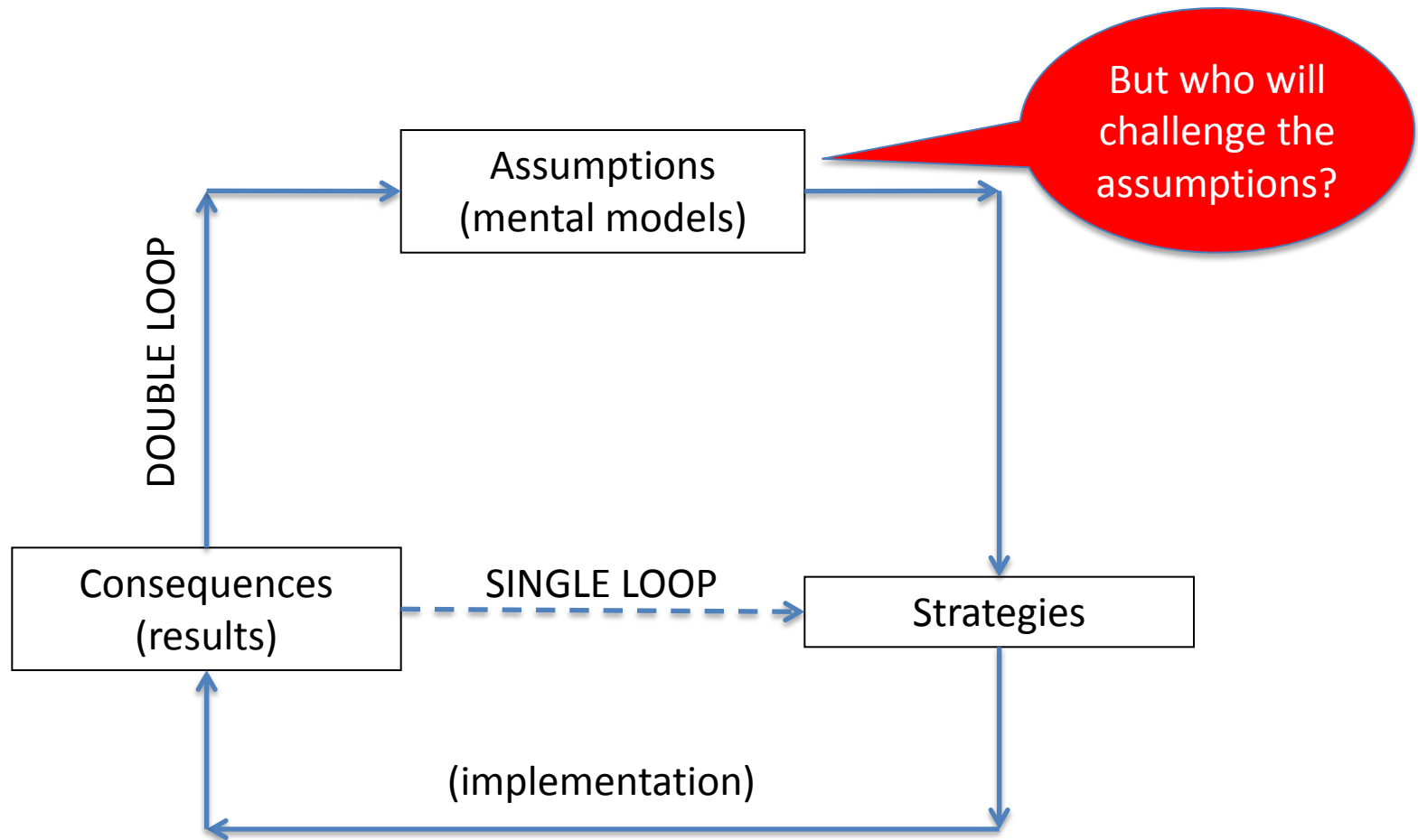


We unconsciously see an implicit border formed by the sides of the square, thus forming a “box.” The solution requires “thinking outside the box.”



The “box” can
also be a
“frame.”

Argyris' Single-loop and Double-loop Learning



Senge says...*

- Deep changes—in how people think, what they believe, how they see the world—are difficult, if not impossible, to achieve through compliance.
- It is not enough to change strategies, structures, and systems, unless the thinking that produced those strategies, structures, and systems also changes.

¹Senge, P. (1999). The Dance of Change.



Community of Truth

- To teach is to create a space in which the community of truth is practiced.



Community of Truth

- ...a rich and complex network of relationships to which we must both **speak** and **listen**, make claims on others and make ourselves **accountable**.

Parker Palmer, The Spirituality of Education



Workshop 1: Increasing Awareness of Biases & Mental Models

Phase 1: Personal Reflection (5 min)

1. Identify one prevalent mental model or bias within your organization culture . Give specific situations how this is manifested?
 - Is it in need of re-examination? Why, or why not?
 - If not, is it because it is “un-examinable” and “un-discussable”?
 - If yes, who should re-examine it, and how?
 - How can this mental model/bias might prevent your organization from adapting new business models arising from customer insights?

Workshop 1: Increasing Awareness of Biases and Mental Models

Phase 2: Learning Team Discussion

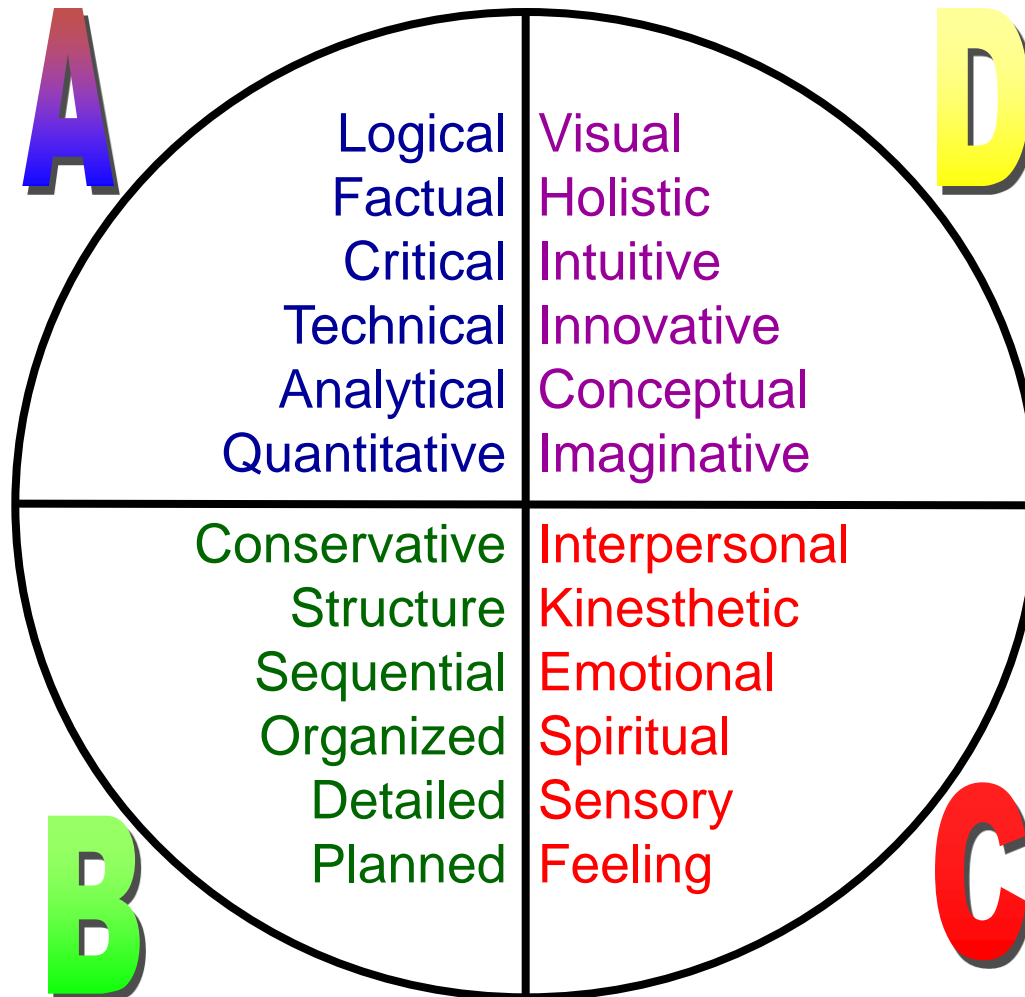
1. Share your answers to the personal reflection questions.
2. After all have shared, do the ff:
 - a. Identify the top 3 most frequently mentioned biases/mental models
 - b. Classify these based on the categories of cognitive biases (“List of cognitive biases”)

Phase 3: Co-Creating New Mental Models

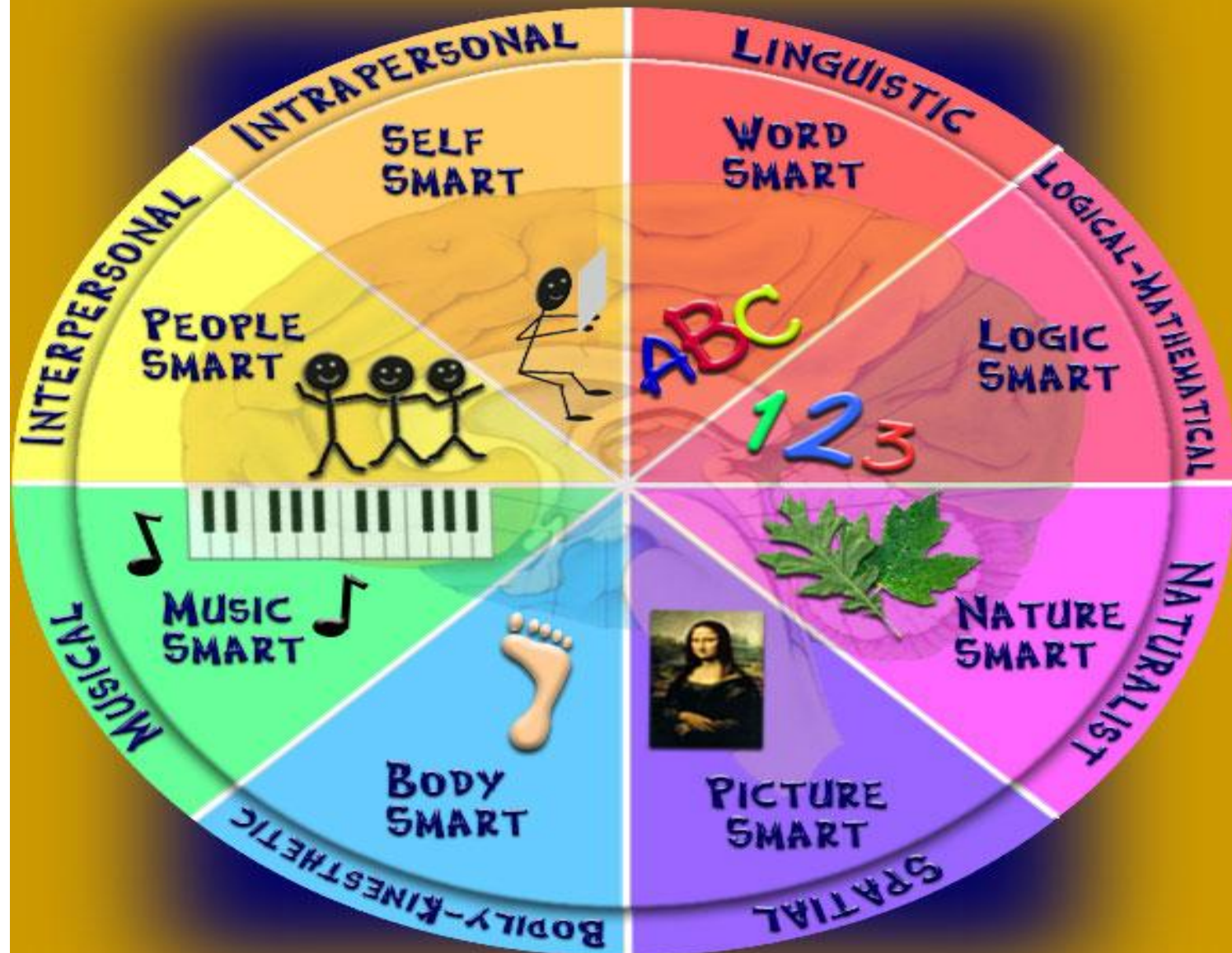
Learning Team Discussion:

1. From your top 3, choose one that is most **critical and urgent**—needs to be changed.
2. Using your “whole brain intelligence” co-create a new mental model.
3. Prepare a creative presentation (5-7 min.) that will demonstrate how your organization can begin to apply this in daily work life. Show specific BEHAVIORS.

The HBDI developed by Hermann yielded a brain dominance profile



MULTIPLE INTELLIGENCES



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