
Intuition's Role in Decisions and Innovation

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Agenda

3 Frameworks in 20 minutes

- Perception & Cognition**
- Space & Time**
- Truth & Beauty**

Agenda

Implications & Applications for KM

1. **Decisions**
2. **Innovation**
3. **Knowing**
4. **Skills & Tools**

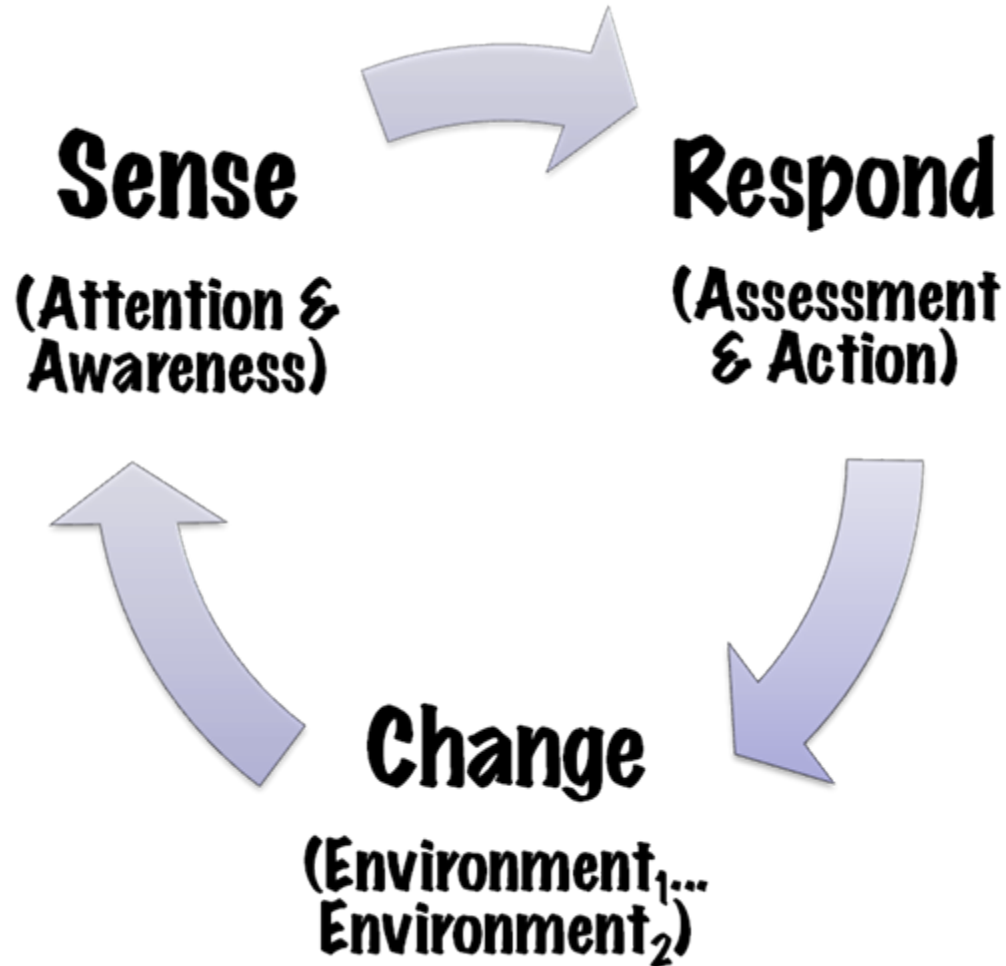
But First: Pop Quiz!

- **Does more analysis make for more certainty?**
- **Does more certainty make for better decisions?**
- **Do better decisions make for lower risk?**
- **Does lower risk make for better strategy and innovation?**

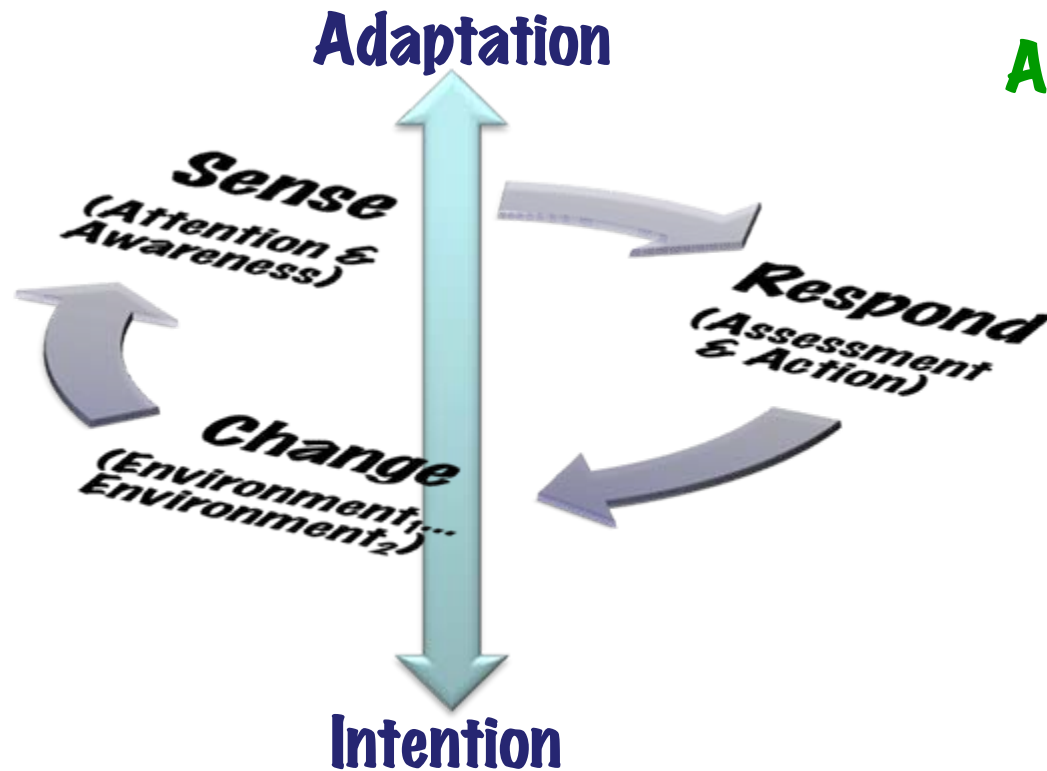
Perception & Cognition

- **Sense & Respond Loops**
- **Bandwidth, Intuition & Expertise**
- **Context & Trust**

Learning Loops



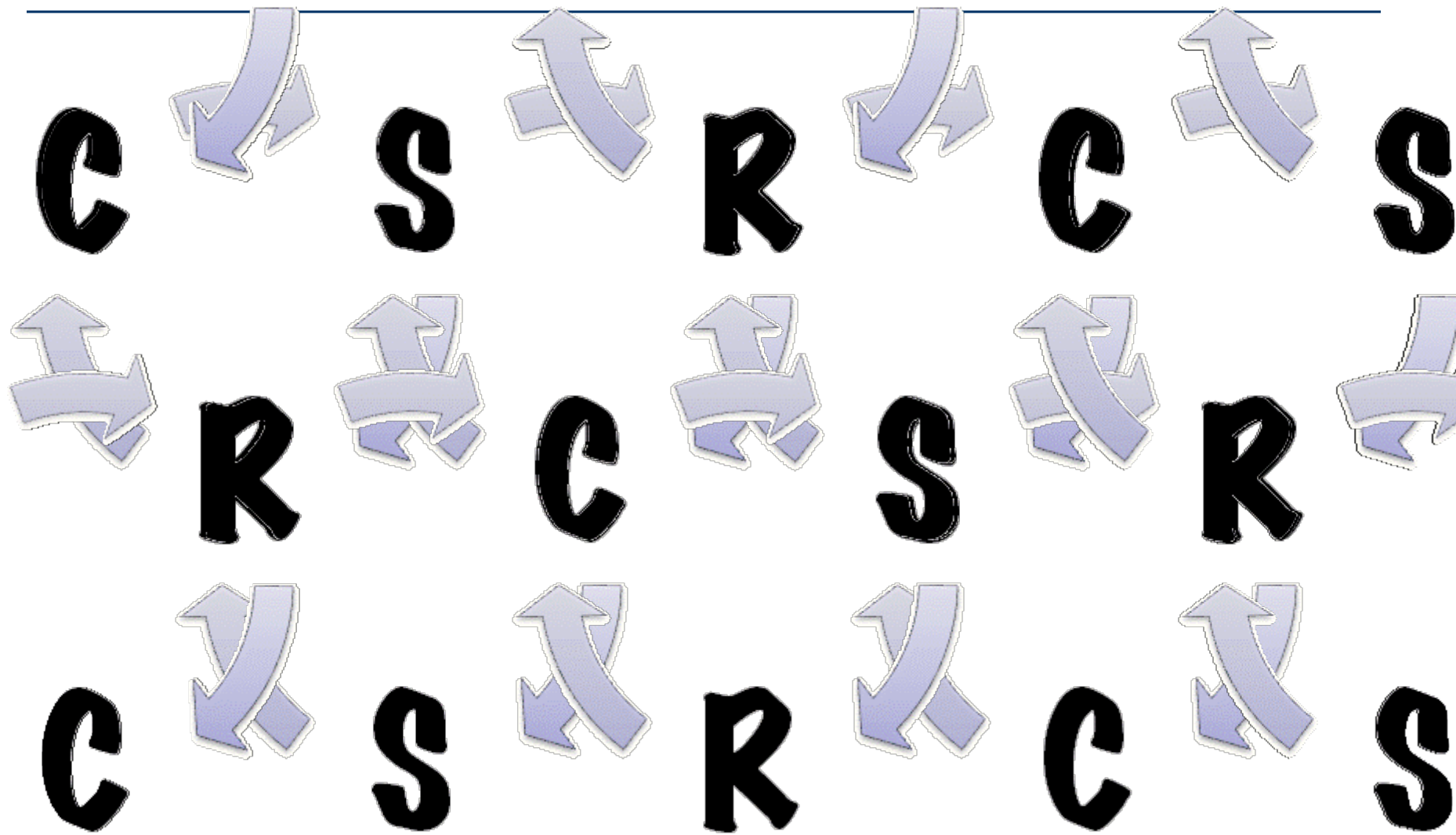
Learning Loops



Adaptation = Learning?
Adaptation = Innovation?
Intention = Strategy?

R C S R

Complex Learning Loops



Intuition & Expertise

- **The Bandwidth of Experience**
 - **How we are really designed to operate in our information environments**

11,000,000bps

16bps

- **Sense-making and decision-making happen faster and at a higher bandwidth than we realize.**

Intuition & Expertise

- **Intuition:** knowing or sensing without the use of rational processes; immediate cognition
- **Expertise:** skillfulness by virtue of possessing special knowledge
- **Cognition:** acquiring knowledge by the use of reasoning, intuition or perception
- **Culture:** collective assumptions that evolve as people solve internal and external problems

Perception & Cognition

- **Preconscious sense- & decision-making**
 - **Data becomes information before we are aware of it.**
 - **Information creates decisions before we are aware of it.**
 - **Applies to reflex, intuition, gut feeling, etc.**
 - **Organizational parallels to individual behavior**

The Nature of Knowledge Work

What is Knowledge?

- Explicit knowledge
- Tacit knowledge
- Implicit knowledge
- Ambient knowledge

education
+ experience
= expertise

+ information

= pattern recognition

Intuition & Expertise

- Intuition is the “tacit” knowledge articulating itself faster than conscious awareness—the hand & the candle.
- Reactive is often more efficient and/or effective than proactive?
- How do you make intuitive leaps when you are working with past patterns?

Cognition is Socially Distributed

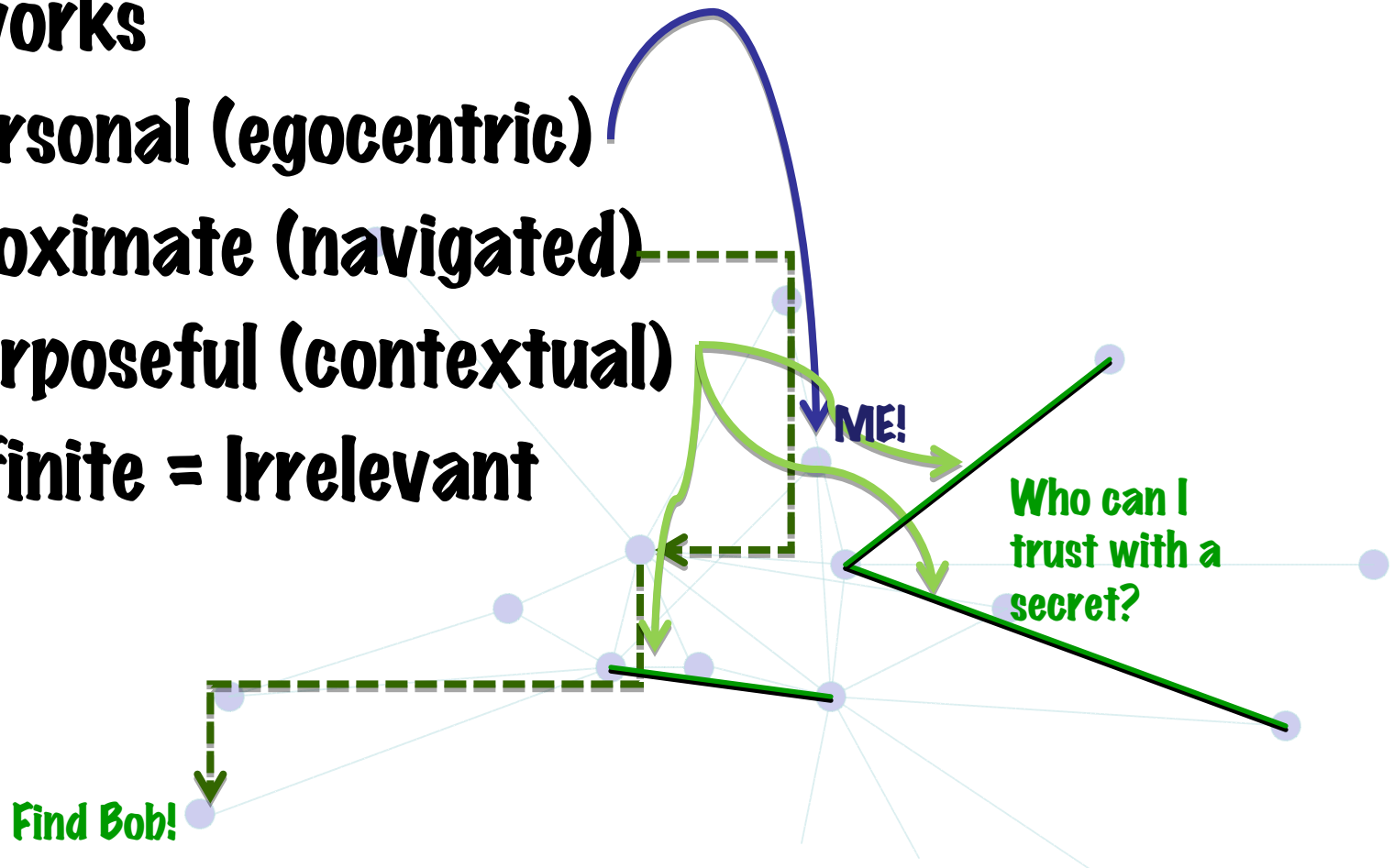
- **Maintaining bandwidth depends on:**
 - **Context**
 - **language, experience, culture**
 - **exformation (explicitly discarded)**
 - **Trust**
 - **yourself, others, power**
 - **Both must be built in advance**

Space & Time

- **Space**
 - **Virtuality**
 - **Networks**
- **Time**
 - **Pace Layering**
 - **Uncertainty & Knowledge Tenses**

- **Networks**

- **Personal (egocentric)**
- **Proximate (navigated)**
- **Purposeful (contextual)**
- **Infinite = Irrelevant**





Space

- **Networks must be built in advance**
 - **But they cannot be defined in advance**
 - **Identify through mapping**

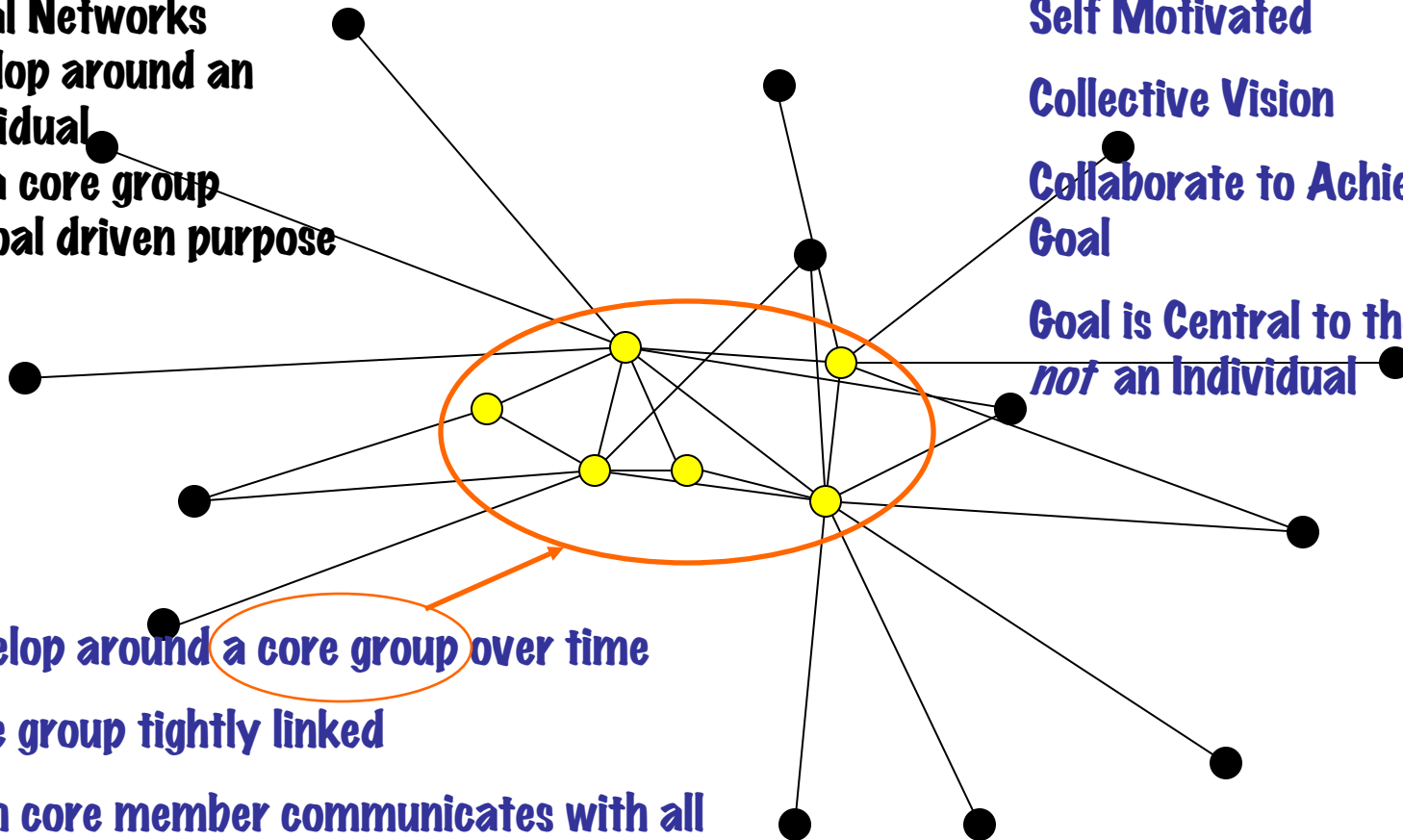
Example: CoIN Network

Social Networks
Develop around an individual
Not a core group
No goal driven purpose

Self Motivated
Collective Vision
Collaborate to Achieve a Common Goal
Goal is Central to the Network, not an Individual

Develop around a core group over time
Core group tightly linked
Each core member communicates with all other members

Some members linked to only 1 or 2 core members



From: Gloor & Cooper 2007

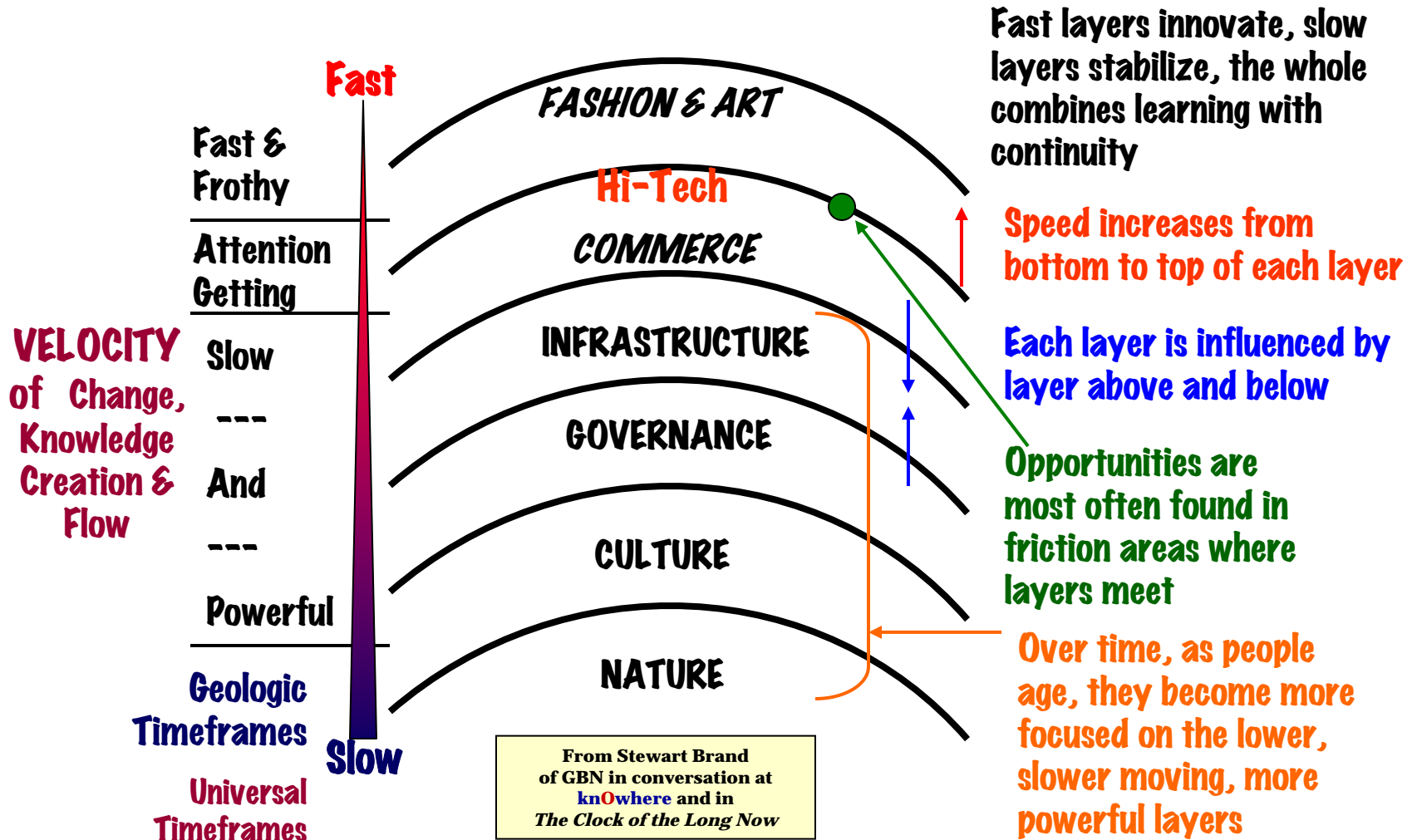
Time

- **Knowledge Tenses**

- **Past Tense (tacit, implicit & explicit)**
- **Present Tense (inquiry & discovery)**
- **Future Tense (possible, plausible, probable)**



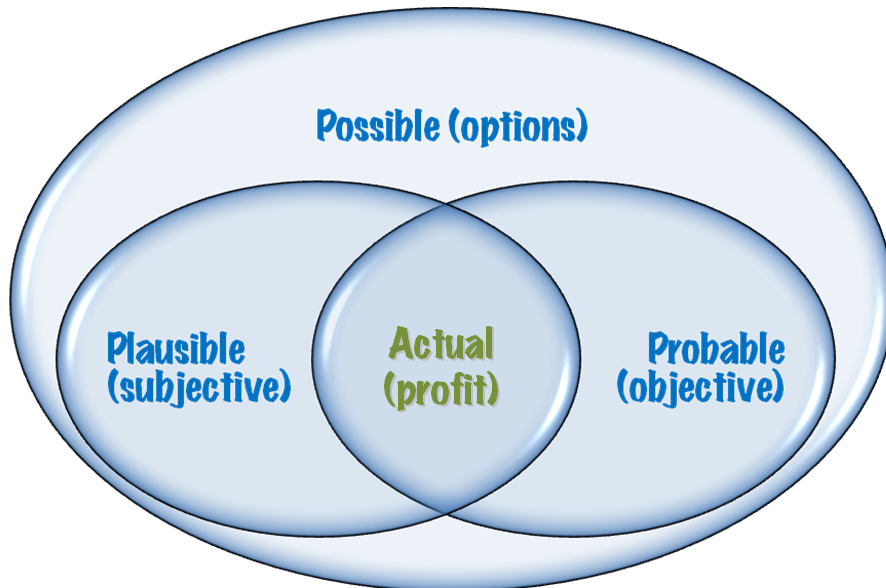
A Civilization's Pace Layers



Truth & Beauty

- **Knowledge**
 - **Justified**
 - **True**
 - **Belief**

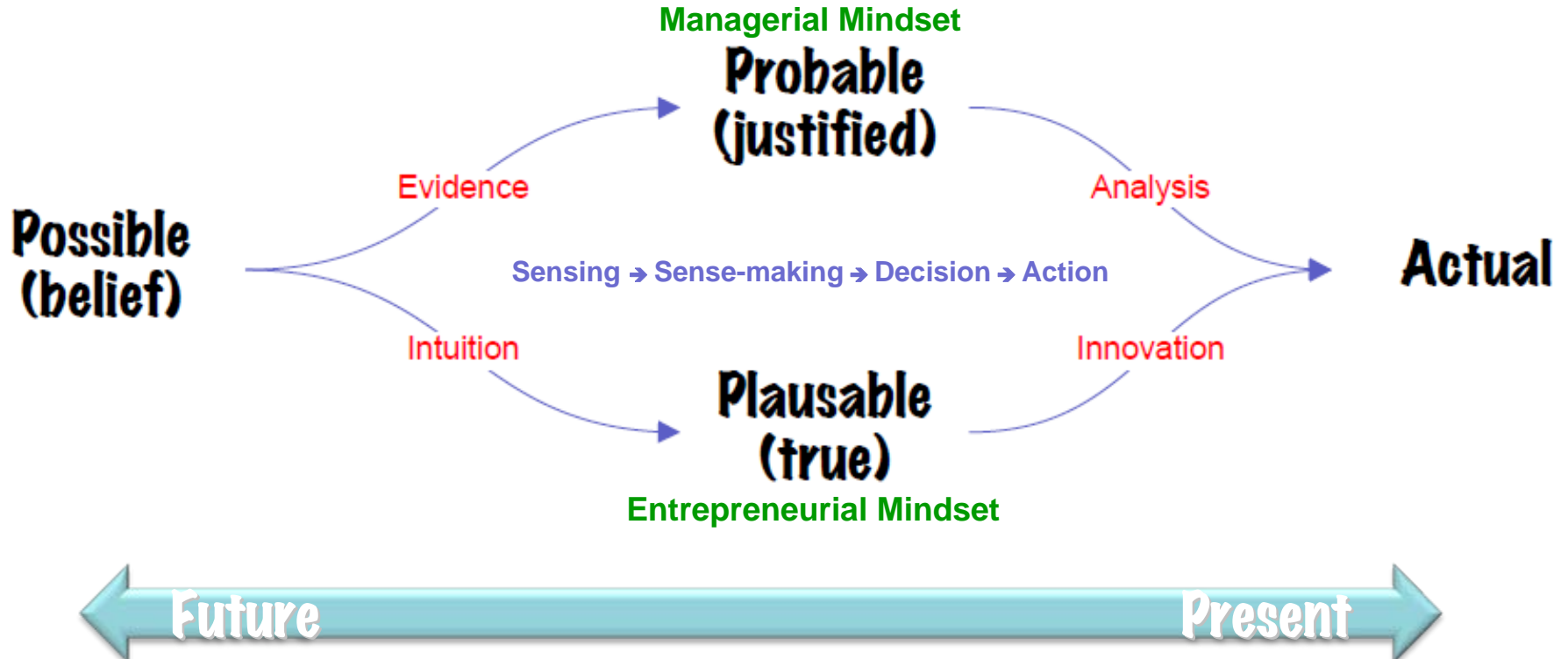
- **Possible**
 - Doesn't violate laws of physics
- **Probable**
 - Objective data... convincing to others
- **Plausible**
 - Narrative coherence... if only to me



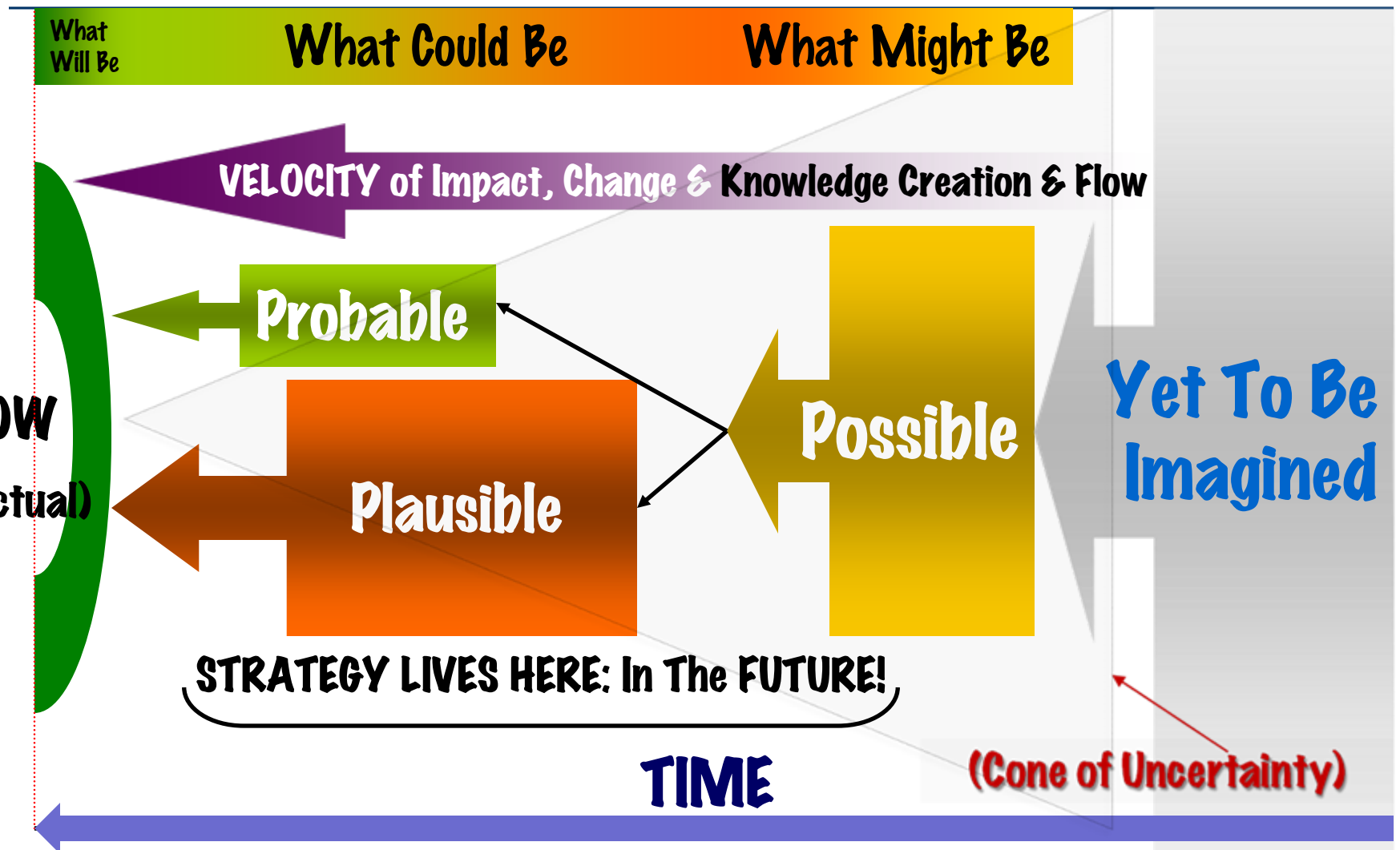
Truth & Beauty

Boisot's Worlds

Knowledge = Justified True Belief



Back to the Future



Cone of Uncertainty

- **Uncertainty:**
 - **Possibility**
 - **Opportunity (& Threat)**
 - **Knowledge in the Future Tense**
 - **Don't know what you don't know**
 - **Don't know what you know**
 - **What you need to know**

Decision Making

Strategy Lives in The Future:

- Changes & Differences
- Windows of opportunity (& threat)
- No clear cause & effect

Strategic Decisions

Tactics Live in the Present:

- 3-5 year rolling budgets, resource plans with market share assumptions
- "Maintenance plans"

Tactical Decisions

Day to Day Ops Live in Past Based Data

- Business Intelligence & Analytics
- Tweaks and continual improvements

Day to Day Operating Decisions

INTUITION

DATA &
ANALYTICS

Strategic Decisions

- **Anticipating future changes & differences:**
 - **In worlds filled with ambiguity**
 - **No clear connections between positions we take and economic outcomes**
 - **Cause and effect only clear through hindsight**
 - **See the open window, jump through it and**
 - **Exploit!**
 - **Take advantage of uncertainty**
- **Be first to “Get it Right” (*not necessarily first mover*)***
- **Future-knowledge driven**

*Richard Rumelt, UCLA

Collaborative Innovation

- **Collaborative Innovation:**
The recursive interaction of co-creativity, knowledge, and mutual learning between two or more people working together toward a common goal of generating new sources of growth or wealth in an organization.
- **Six Types of Innovation:**
 - **Process Improvements**
 - **System Solutions**
 - **Business Models**
 - **Market Extensions**
 - **Product Improvements**
 - **Technology Inventions**

Collaborative Innovation Process

Collaboration

Intuition

IDEA

CONCEPT

PROOF of
CONCEPT

INNOVATION ADOPTION

Past Tense Knowledge:

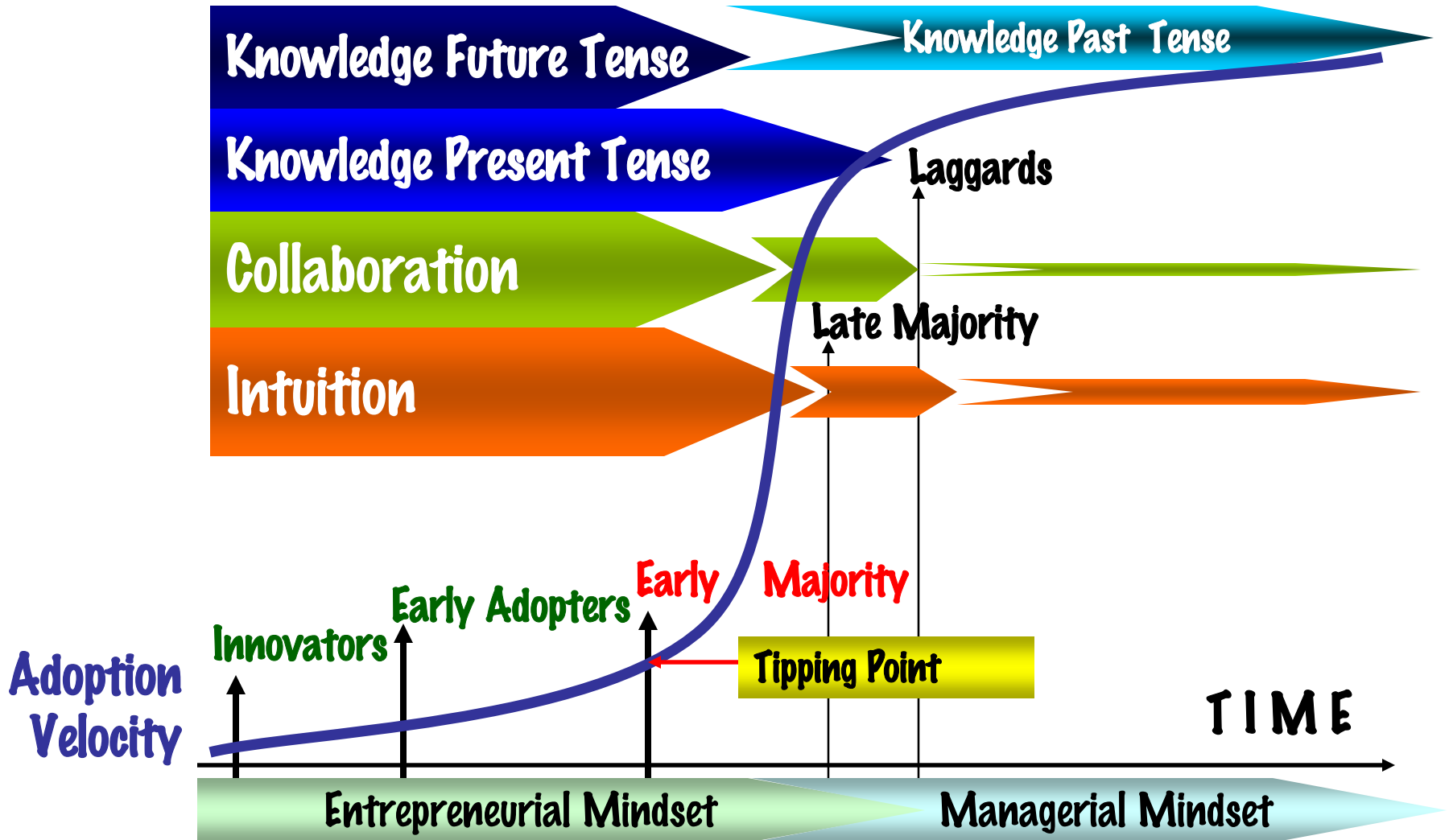
Present Tense Knowledge

Future Tense Knowledge

Entrepreneurial Mindset

Innovation Adoption Curve

Sensing-> Sense Making->Decision->Action



Knowledge and Knowing

1. What you *need* to know
2. What you *think* you know
3. What you know you don't know
4. WHO knows or *could* know it
5. What don't know you know
6. What you don't know you don't know
7. What you know (and WHO knows it)

This is where
you get bitten:
There be
Black Swans here!

Cognitive
Diversity

Knowing & Learning

What you *need* to know

What you *think* you know

What you know you don't know

WHO knows or could know it

What you don't know you know

What you don't know you don't know

- Sensing & Sense-Making
- Intuition and Insight
- Experience & Expertise
- Cognitive Diversity
- Networks & Communities
- Outcome/Goal Driven Teams
- Scenarios & Models
- Patterns

Knowledge Barrier

What you know (and *WHO* knows it)

Tacit to Explicit, Explicit to Implicit
Repositories, taxonomies, ontologies...

What You Need to Do: Skills & Tools

- **Networks = informal to formal**
- **Identify/Map purposeful teams/networks**
 - **Stimulate**
 - **Process facilitation**
 - **Team design for cognitive diversity and compatible differences**
 - **Support with infrastructure for**
 - **Knowledge Generation (not just capture and archiving)**
 - **User created/managed Wikis, Blogs, etc.**
 - **Collaborative Innovation SaaS tools, e.g., Brightidea, Imaginatik, TheBrain**
 - **Narrative capture tools and processes**

Implications & Applications for KM

- **Intuition & analysis cannot be completely separated**
- **Information & ideas need to flow through more individual and collective channels—not bottlenecks**
- **Don't try to eliminate overload; embrace the richness of knowledge-intensive collaborative environments**
- **Creating value is more about organizational culture and human cognition than business technologies and corporate structures**

Implications & Applications for KM

- **Cultivate the network**
 - Role of the environment in knowing
- **Cultivate the context**
 - Common maps, metaphors and narratives
 - But diversity yields multiple perspective
- **Support cognition**
 - Don't simply dismiss emotion, intuition, buzz
 - Everything gives off information; knowledge depends on context

But Wait, There's More!

- **Your role is not to manage the past, but to facilitate the present and future**
- **Differentials in thinking and cognitive diversity is paramount for faster innovation & decision making!**

Final Thoughts:

- **To accelerate innovation and decision making:**
 - **Manage for intuition**
 - **Manage for future tense knowledge**
 - **Past tense focus keeps you *behind* the curve,
Present tense puts you *on* the curve,
Future tense puts you *ahead* of the curve**

About the Speakers

Steve Barth is a recognized authority on knowledge management and organizational learning, especially the dynamic relationships between individual knowledge workers and their peers, teams, organizations and communities. Steve currently serves as an advisor to international corporate, government and university clients, including the Office of the Prime Minister in Thailand and Coemergence Inc. in Canada. Steve was a founding editor of Knowledge Management magazine (www.destinationKM.com), KM World's "Personal Toolkit" columnist, editorial director for the Cynefin Centre for Organisational Complexity (www.cynefin.net) and visiting scholar at Harvard's Learning Innovations Lab (<http://lila.pz.harvard.edu>). An award-winning business writer for more than 25 years, he was senior editor of World Trade magazine and managing editor of Asia Pacific Economic Review.

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Richard Marrs is Managing Director at the Warren Company, specializing in strategic alliance and collaborative innovation architecture.

He was a founder and VP for Customer Solutions at Halifax-based Coemergence. Richard has 30 years' experience in the worldwide mining industry, mergers and acquisitions, strategic alliances and partnerships, knowledge management and collaborative work practices.

Richard later served as president of knOwhere Inc., a Silicon Valley-based consultancy specializing in collaborative work processes and creative problem solving. Richard holds a BA in Psychology from the University of South Alabama in Mobile and an MBA from the University of Phoenix in Tucson, Arizona. From 1986 to 1990, Richard served as an adjunct faculty member at the University of Phoenix.

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The Warren Company works with senior executives in organizations That are committed to achieving extraordinary results through Breakthroughs generated from a foundation of collaborative innovation. We are dedicated to the universal adoption of the architecture, skills and philosophies of strategic alliances and collaborative innovation to think, create and work together, producing results far beyond what would otherwise be possible.

References and Additional Readings

- *Gut Feelings* by Gerd Gigerenzer, Viking
- *Cognition in the Wild* by Edwin Hutchins, MIT
- Tor Nørretranders: *The User Illusion: Cutting Consciousness Down to Size*. Viking Press
- *Blink & The Tipping Point* by Malcolm Gladwell, Little Brown
- *The Wisdom of Crowds* by James Surowieki, Anchor Books
- *The Art of the Long View* by Peter Schwartz, Currency Doubleday
- *The Springboard* by Stephen Denning, Butterworth Hienemann
- *Coolhunting* by Peter Gloor and Scott Cooper, Amacom
- *The Black Swan* by Nassim Nicholas Taleb, Random House
- *Clock of the Long Now* by Stewart Brand
- “Intuition’s Role in Making Decisions” in *Competitive Intelligence* by Barth & Marrs
- “Disruptive Innovation” in *Why Buy the Cow* by Steve Barth & Dave Snowden
- Max Boisot, Ian MacMillan: “Crossing Epistemological Boundaries: Managerial and Entrepreneurial Approaches to Knowledge Management” *Long Range Planning* December 2004
- Bonnie Nardi, Steve Whittaker and Heinrich Schwarz: “It’s not what you know, it’s who you know: Work in the information age.” *First Monday* (May 2000).