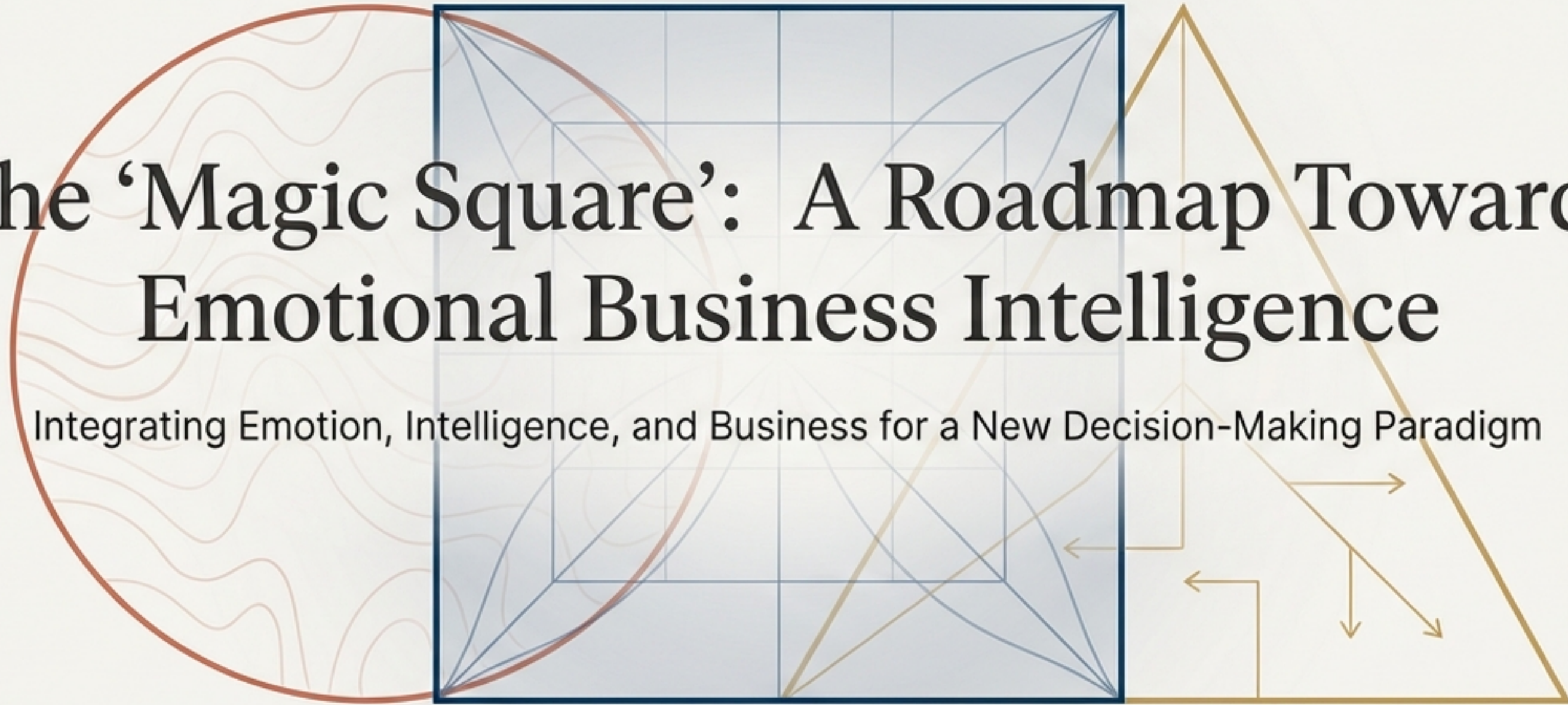


The 'Magic Square': A Roadmap Towards Emotional Business Intelligence

Integrating Emotion, Intelligence, and Business for a New Decision-Making Paradigm

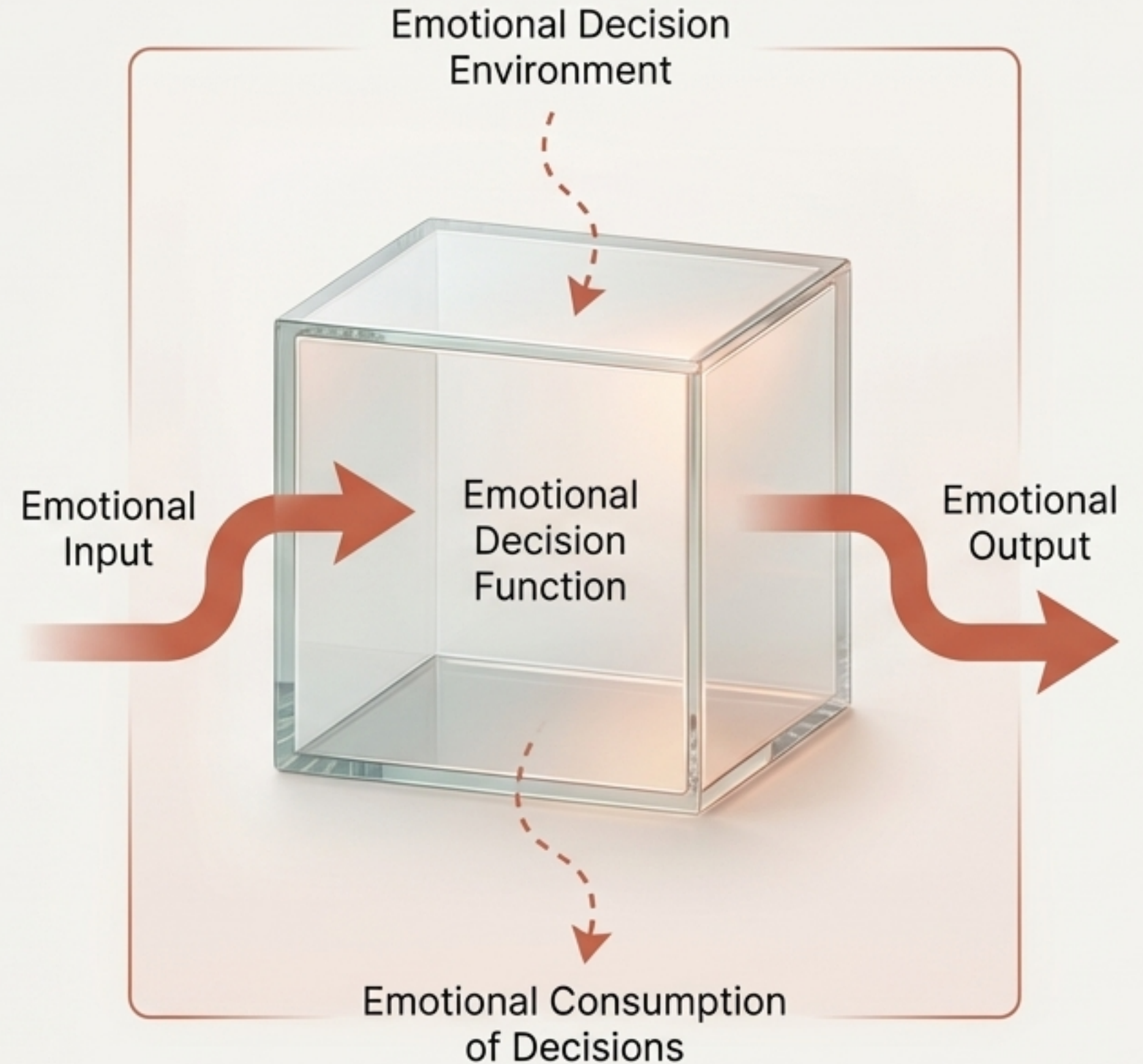


Based on the research by Vagan Terziyan & Olena Kaikova, Journal of Decision Systems (2015).

Business Decisions Are Pervaded by Emotion

We often treat emotion as noise to be filtered out of rational business processes. The “Magic Square” concept reframes this: emotion is an integral, ubiquitous part of the system. It is the context and the content of decision-making.

**Emotions from emotions
for emotions with
emotions around.**



Traditional Business Intelligence Operates with a Blind Spot

The BI Promise: Rationality

- Supports logical decision-making.
- Provides analytical processing of business data.
- Aims to “cleanse” decisions of emotional context.

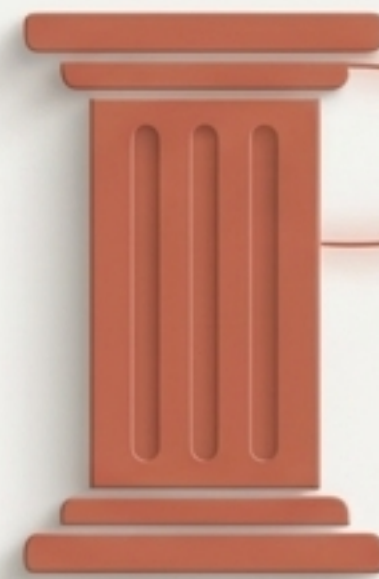
The Business Reality: Intuition & Emotion

- Dealing with complex problems where observing all relevant information is impossible requires intuition and emotional inspiration.
- Unhappy decision-makers prefer high-risk/high-reward options; anxious ones prefer low-risk/low-reward.
- Emotions are not an obstacle but an enabler for successful business, innovation, and creativity.

The gap between pure rationality and real-world decision-making requires a new intelligence bridge.

Emotional Business Intelligence: The Synthesis of Three Critical Domains.

$$\text{EBI} = \text{EB} + \text{EI} + \text{BI}$$



1. Emotional
Business (EB)



2. Emotional
Intelligence (EI)



3. Business
Intelligence (BI)

EBI is a new domain created through the 'smart integration' of these three evolving fields. It provides a framework to support emotion-aware decisions, intuition, and creativity within business environments for both customers and organizations.

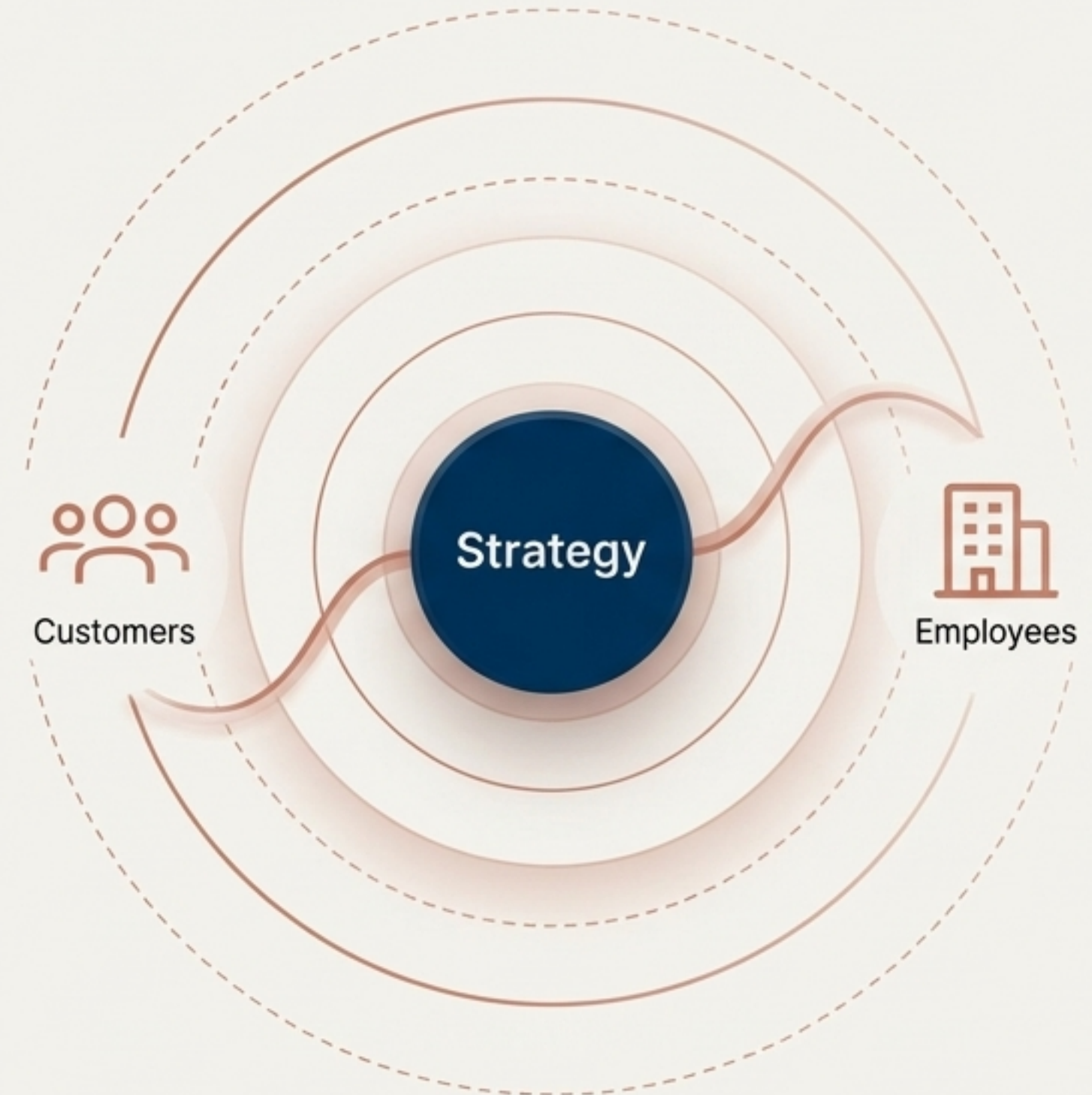
Pillar 1: Emotional Business (EB)

Building Emotional Connection Across the Value Chain.

For Customers: Evoke intense passion to boost sales by offering experiences that meet emotional needs.

For Employees: Excite employees to care for each other, ensuring organizational effectiveness and proactivity.

For Strategy: Design business models with deep emotional connections, transforming how value is created and perceived.



Pillar 2: Emotional Intelligence (EI)

The Ability to Recognize, Assess, and Manage Emotion.

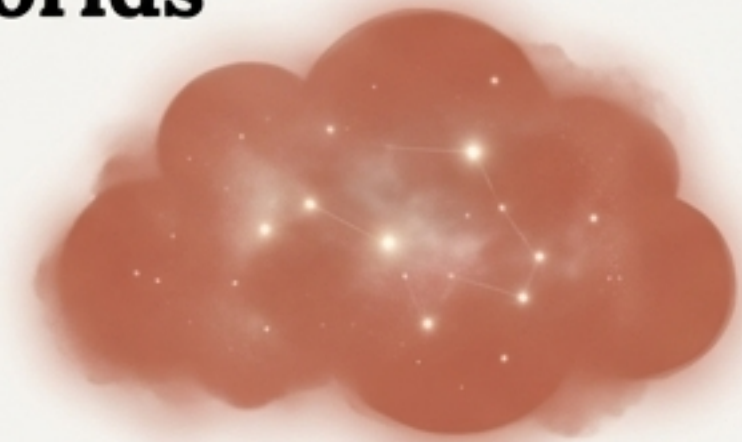
EI is the ability to read other people's signals and address implicit messages, encompassing self-awareness and self-regulation.

A Deeper View: Bridging Two Worlds



Closed-World Assumption (CWA)

The "left brain" view. Assumes anything not known to be true is false. Limits reasoning to predetermined outcomes based on *incomplete beliefs*.



Open-World Assumption (OWA)

The "right brain" view. Allows for ambiguity and unusual stimuli. Assumes the truth-value of a statement is independent of whether it is known.

Emotionally inspired intuition is the instrument that bridges the gap between CWA and OWA, allowing for creative leaps beyond one's immediate beliefs.

Pillar 3: Business Intelligence (BI)

Evolving from Pre-defined Reports to Dynamic Discovery.

Traditional Role

A set of tools used on top of business data to provide a consolidated view for rational decision-making, diagnostics, and predictions.

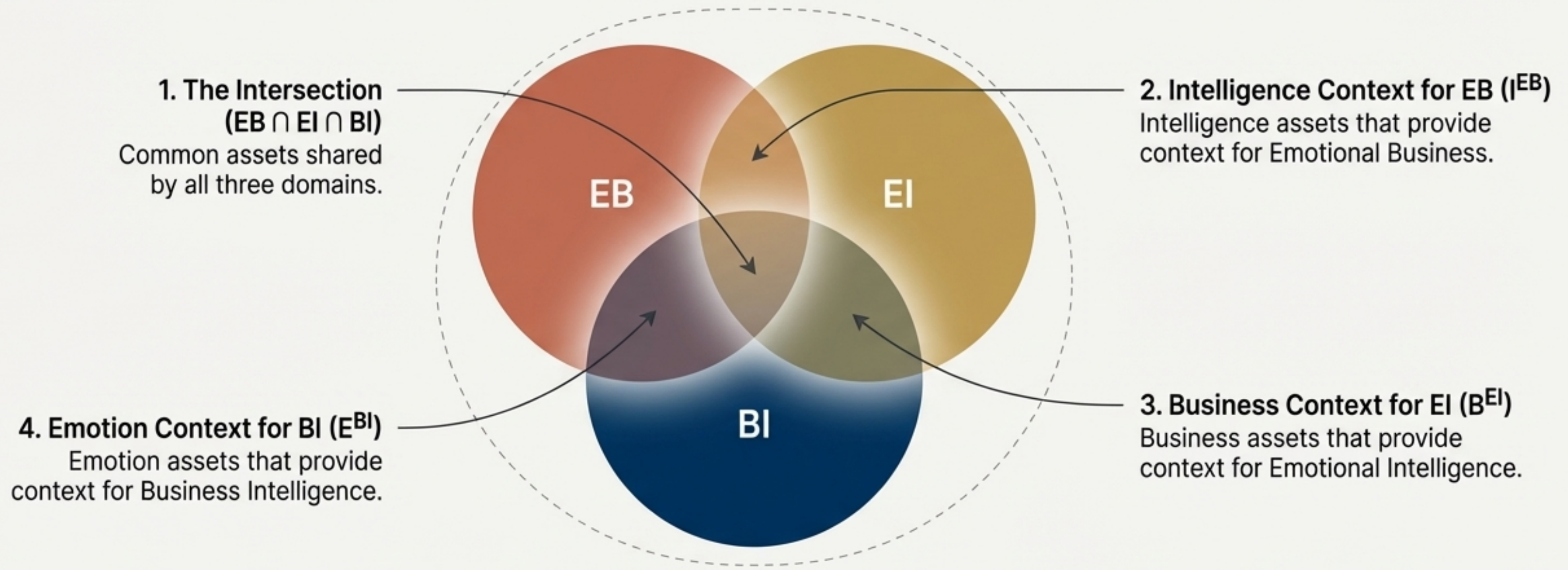
The BI 2.0 Evolution

- Moves beyond pre-filled reports to 'data discovery,' where users dynamically explore data to generate new questions.
- Recognizes that business data is deeply context-sensitive, including **emotional context**.
- The emerging need is for solutions that support *emotional* decision-making to drive true innovation in products and business models.



The Integration Is More Than a Sum; It's a Synthesis of Context.

The '+' in $EBI = EB + EI + BI$ represents a sophisticated **integration**. It combines not only the direct intersection of the domains but also the contextual influence each domain exerts on the others.



EBI's power comes from understanding these cross-domain contextual dependencies.

Six Strategic Questions EBI is Designed to Answer



1. Cross-Domain Processes

Which critical business processes and decisions span across EB, EI, and BI?



2. Common Predictive Features

What are the shared, decision-critical data features across all three domains?



3. Intelligent Emotional Business

How can AI and advanced knowledge models enhance the activities of Emotional Business?



4. Business of Emotional Intelligence

What new business models can be built to support and leverage Emotional Intelligence activities?



5. Emotion-Aware Business Intelligence

How do emotions (from data or from users) directly influence the process of data discovery and visualization?



6. A Unified Ontology

How can we create a single, coherent knowledge model for EBI that represents predictive features, contextual data, and decision functions?

The Engine Powering Emotional Business Intelligence

EBI is enabled by a suite of technologies designed to manage and interpret complex, context-aware information in a proactive, self-managed ecosystem.



1. Global Understanding Environment (GUN)

A semantic web of things, people, and abstractions where entities can interact emotionally and act autonomously. Includes tools like Ubiware for "emotional things."



2. Executable Reality

Augments reality with real-time, context-aware (and emotion-aware) analytics and BI, delivered directly to user terminals



3. Linked Communication

A semantic layer over multichannel communication that integrates rational and emotional content, enabling BI on top of conversations themselves.

Modeling Knowledge: Separating Fact from Emotional Context

Model: Semantic Metanetwork: A multi-level model representing knowledge and its context in separate but linked layers.

How It Works for EBI



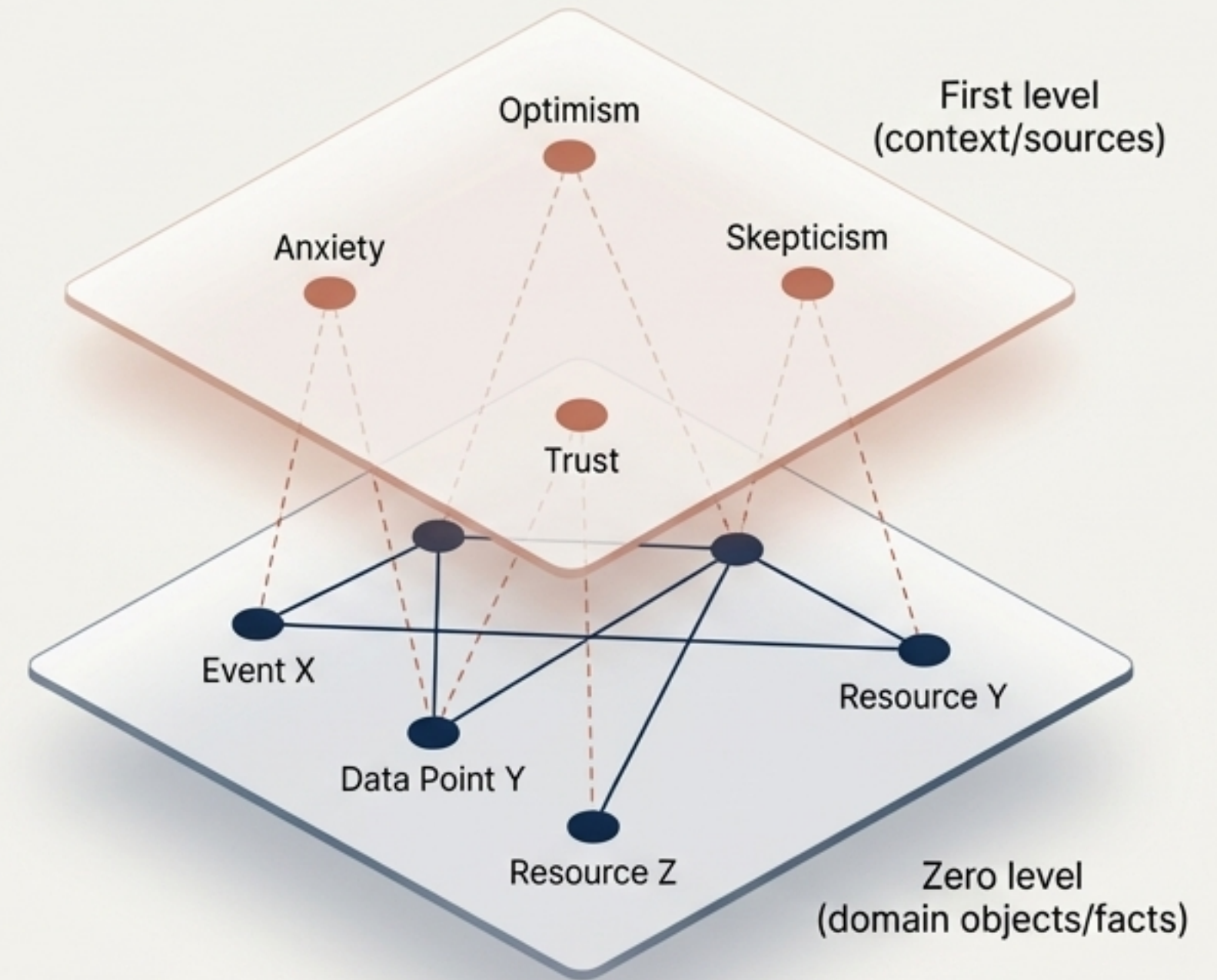
- **Emotional Decontextualization:** If a colleague in a known emotional state describes a situation, the model can infer the unbiased "real" situation by "washing" it of the emotional context.



- **Emotional Contextualization:** Predict how a person with a known emotional profile will describe a specific event.



- **Emotional Context Recognition:** By comparing a known situation with an anonymous description, the model can deduce the emotional state or motivation of the source.

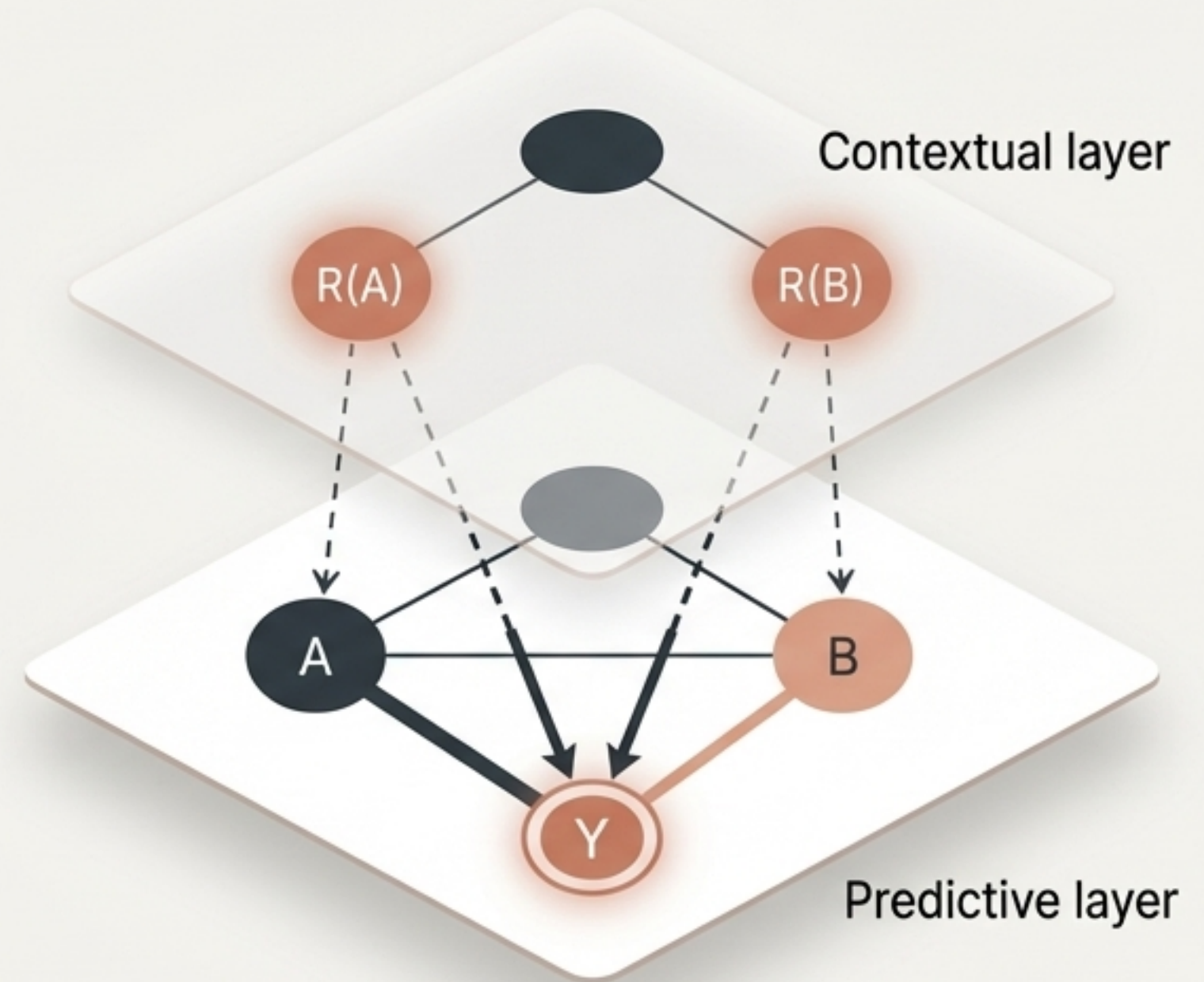


Modeling Uncertainty: Quantifying the Impact of Emotion on Decisions

Model: Bayesian Metanetwork: A multi-level extension of Bayesian networks where the structure and probabilities of one layer are controlled by a higher 'contextual' layer.

How It Works for EBI

- ❖ Models how the emotional context changes the causal relationships between data features.
- ❖ Determines which data inputs are most relevant to a decision, depending on the prevailing emotional state.
- ❖ Enables robust, probabilistic decision-making in environments where emotion creates uncertainty.

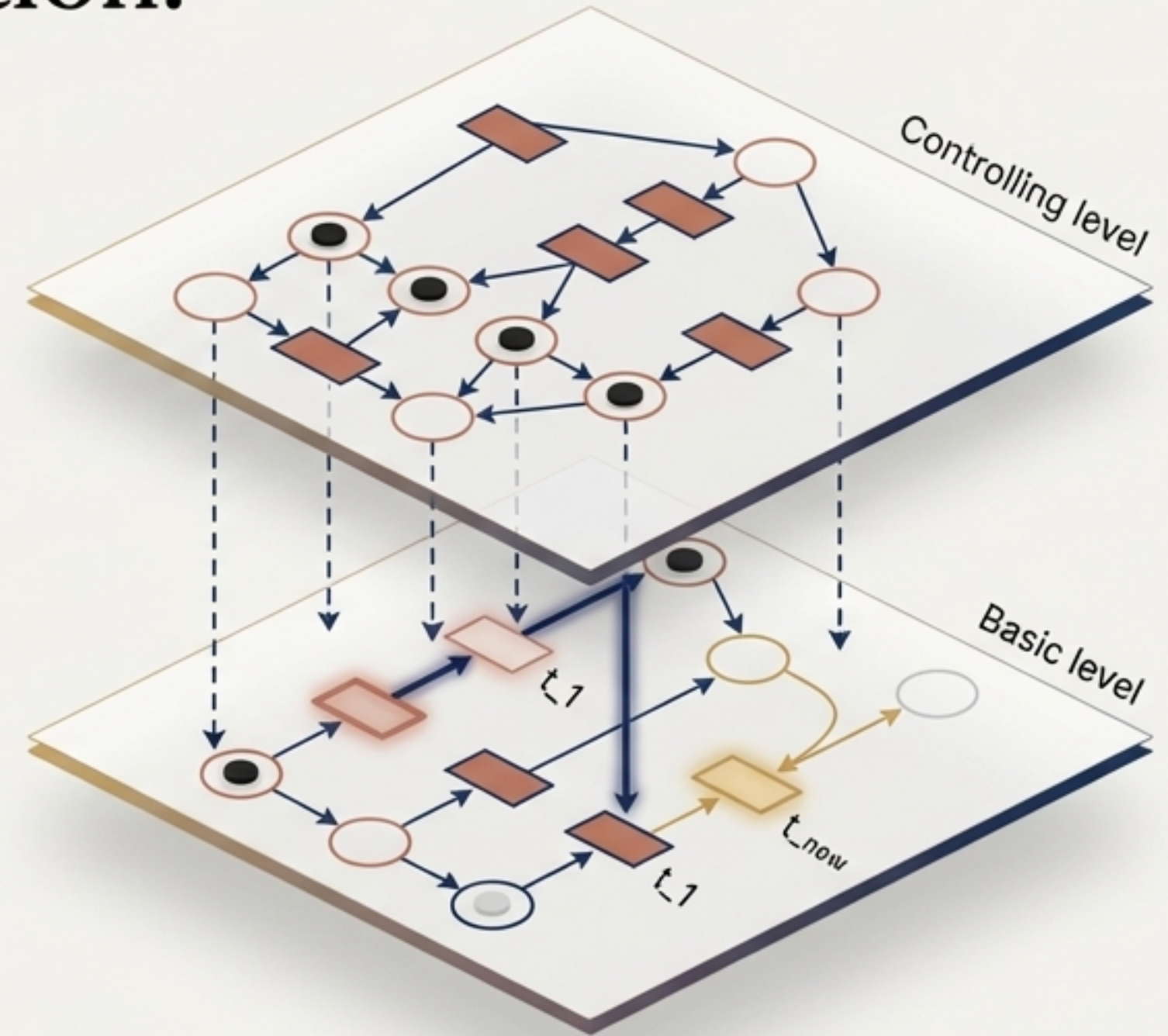


Modeling Processes: Creating Business Workflows that Adapt to Emotion.

Model: Metapetrinet: A multi-level process model where a higher-level “controlling” net can dynamically reconfigure the structure (places, transitions, rules) of a lower-level “basic” process net.

How It Works for EBI

- ⚙️ Simulates business processes where the workflow itself must change based on the emotional state of customers or employees.
- 🔄 Allows for the creation of truly dynamic systems where emotional processes can reconfigure operational parameters, rules, and even the structure of the process in real-time.



The Next Frontier: A Roadmap for Exploration



Emotional Business Intelligence provides the formal models, technological basis, and strategic framework to move beyond purely rational decision-making. It treats emotion not as noise, but as a critical driver of intuition, creativity, and success in an evolving, open world.

**The work to discover the “killer application” of EBI is the next great challenge.
This framework is the starting point for that exploration.**