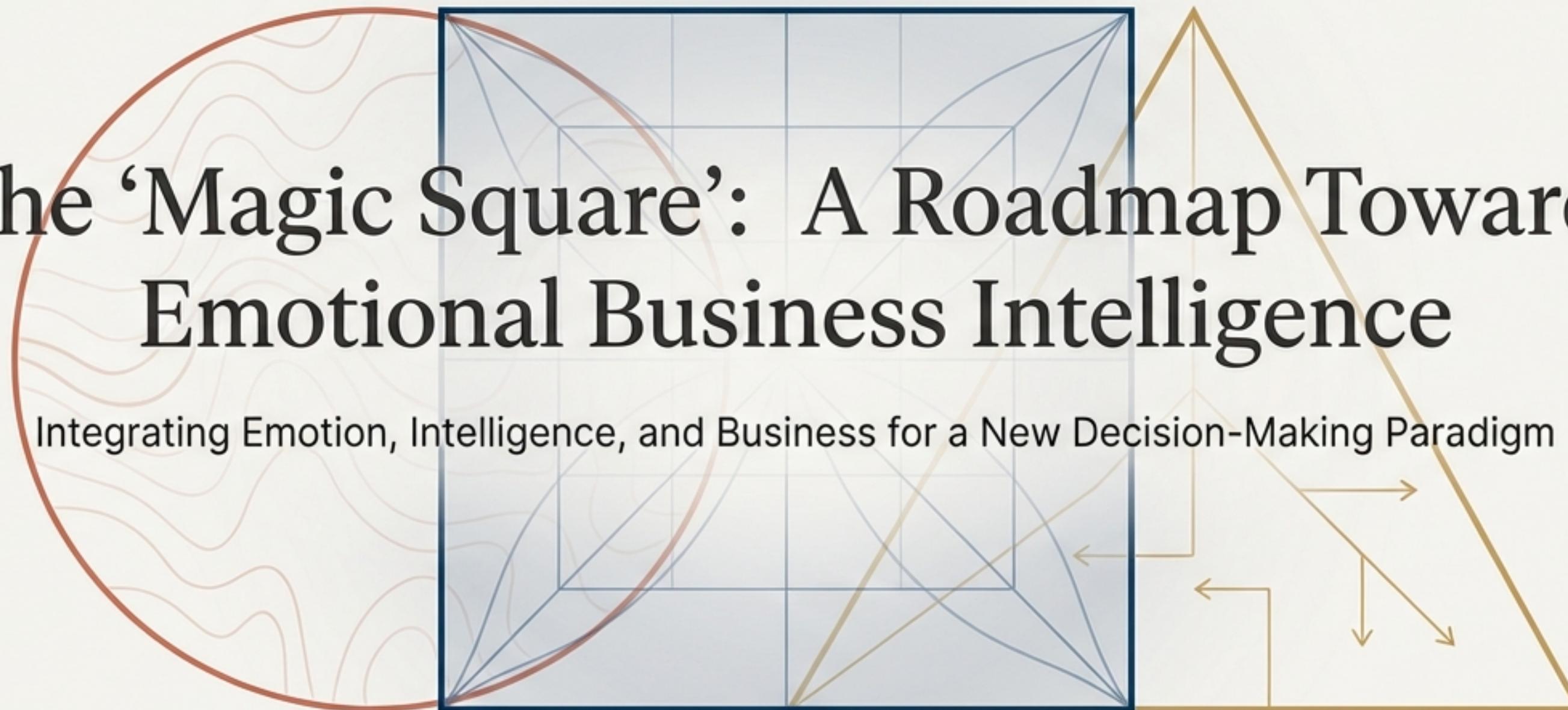


# The ‘Magic Square’: A Roadmap Towards Emotional Business Intelligence

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

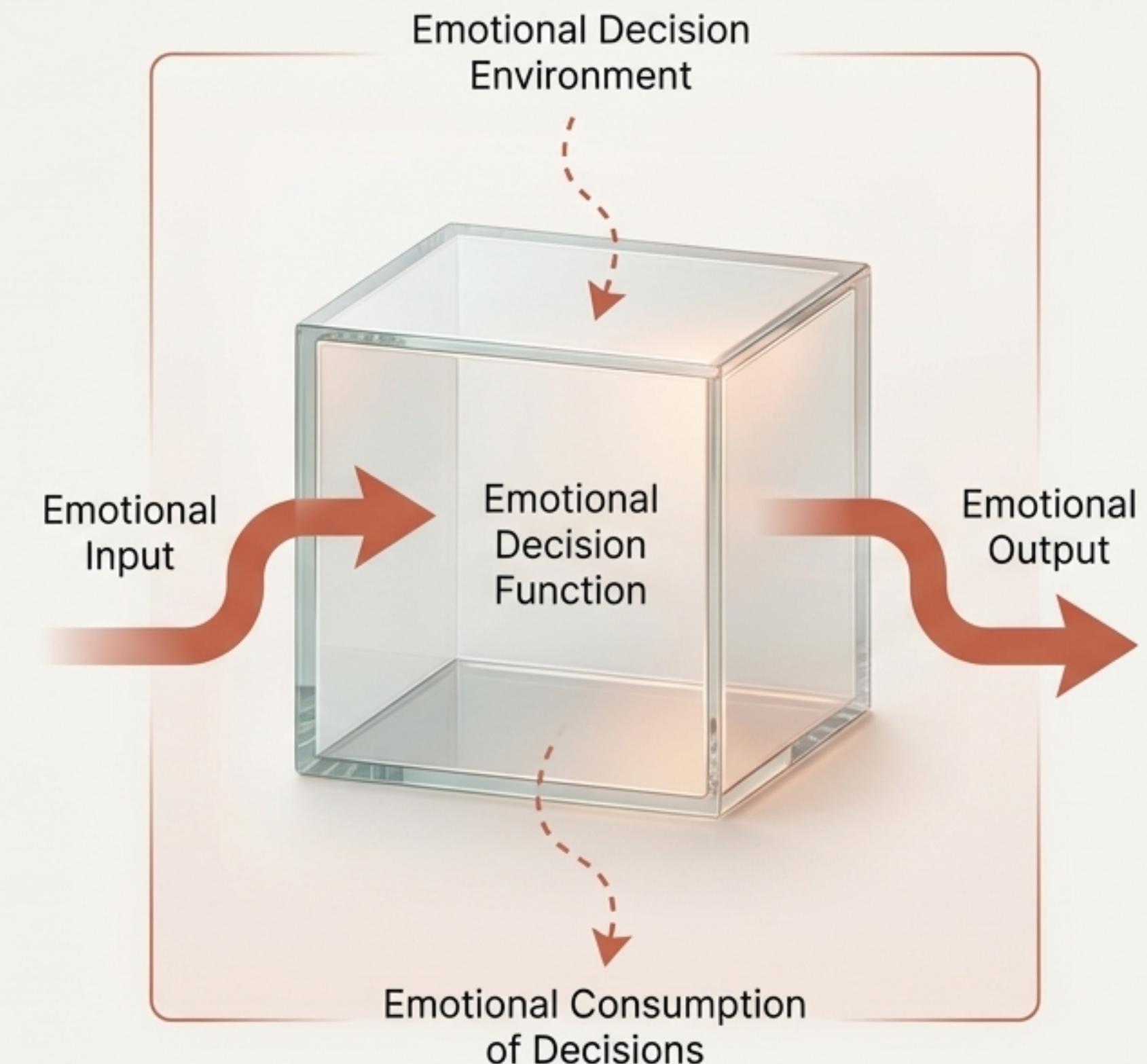


Based on the research by Vagan Terziyan & Olena Kaikova, Journal of Decision Systems (2015).

# 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.

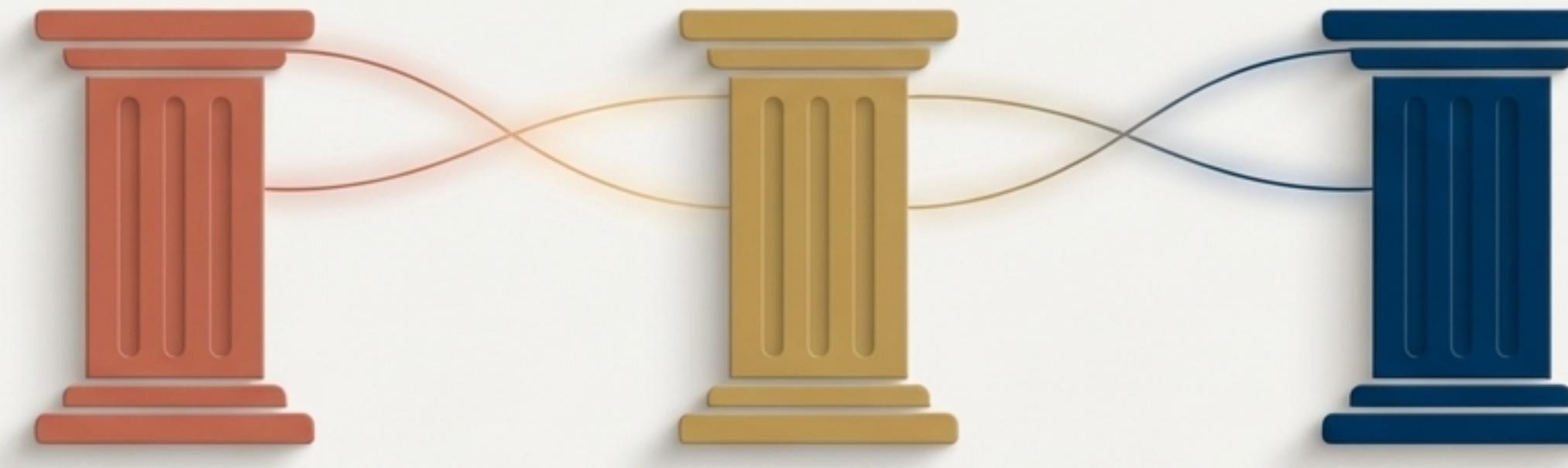
## The Business Reality: Intuition & Emotion

- 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.

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



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.

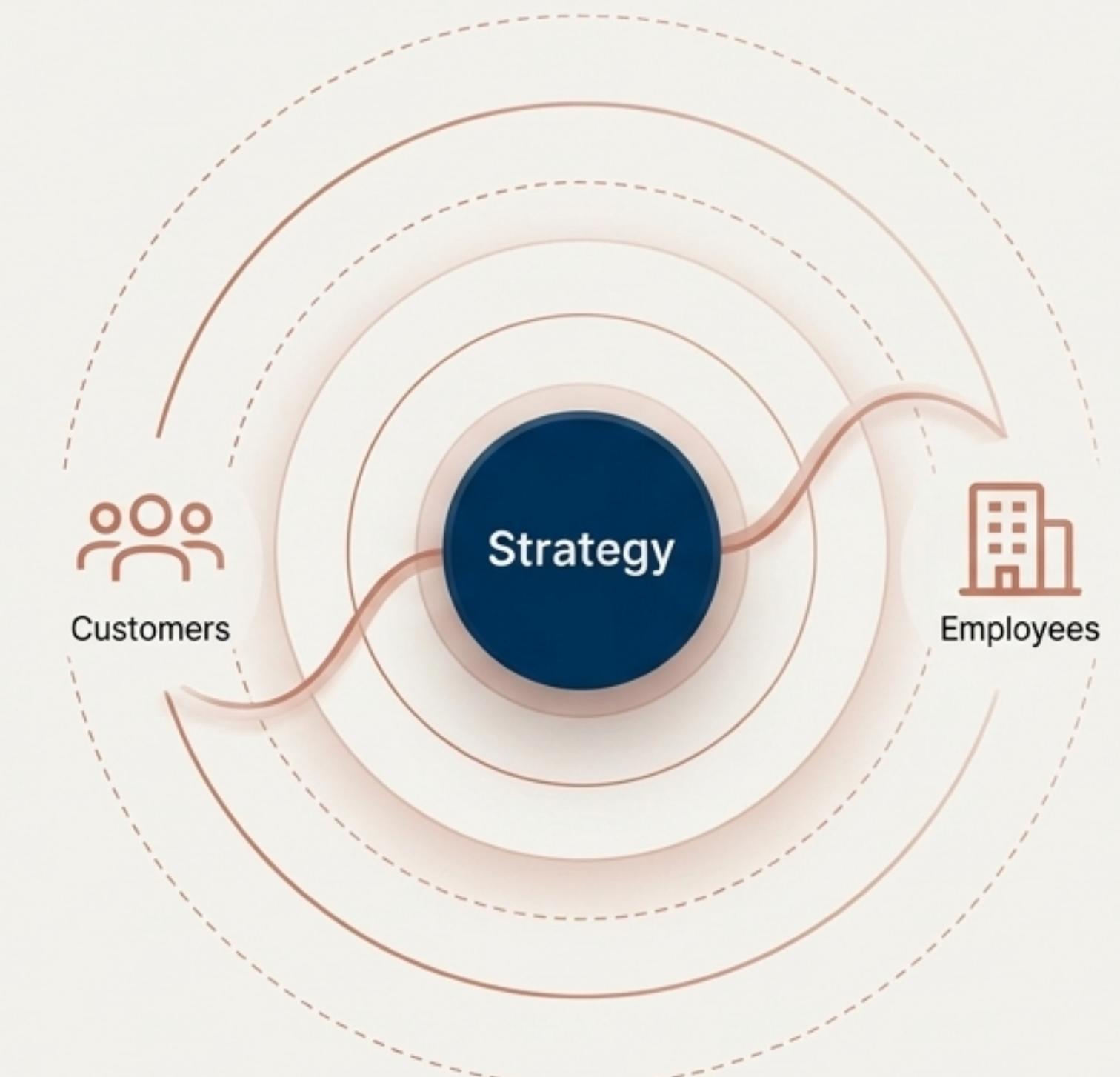
# Pillar 1: Emotional Business (EB)

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.

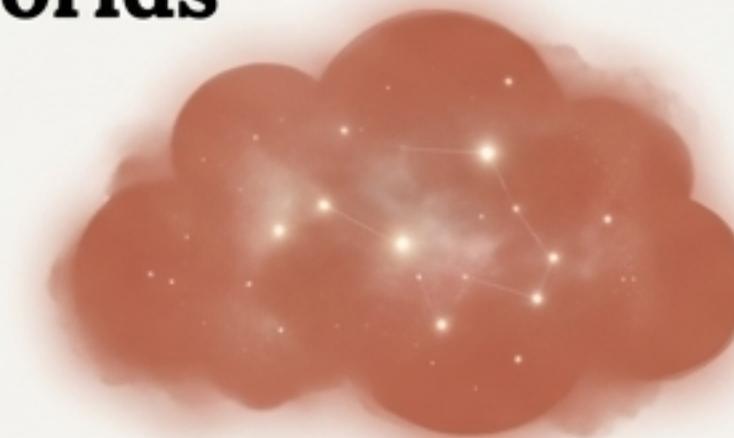


# Pillar 2: Emotional Intelligence (EI)

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.

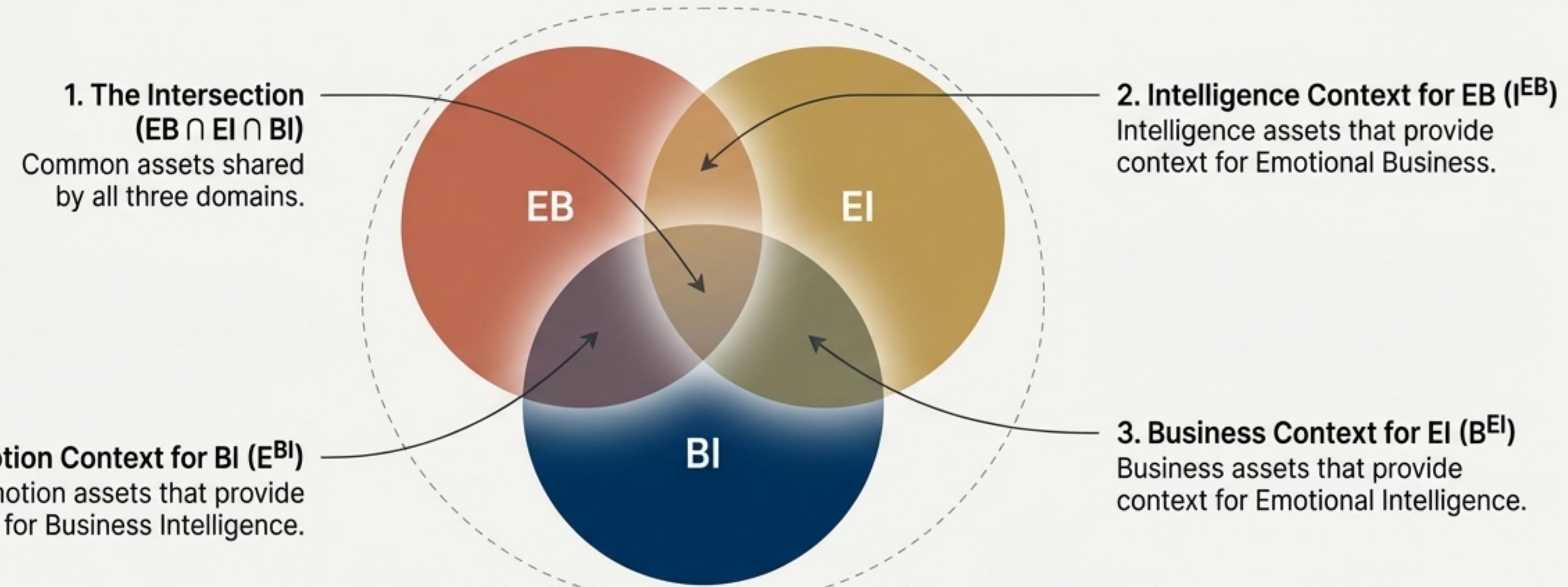
## The BI 2.0 Evolution

- 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.

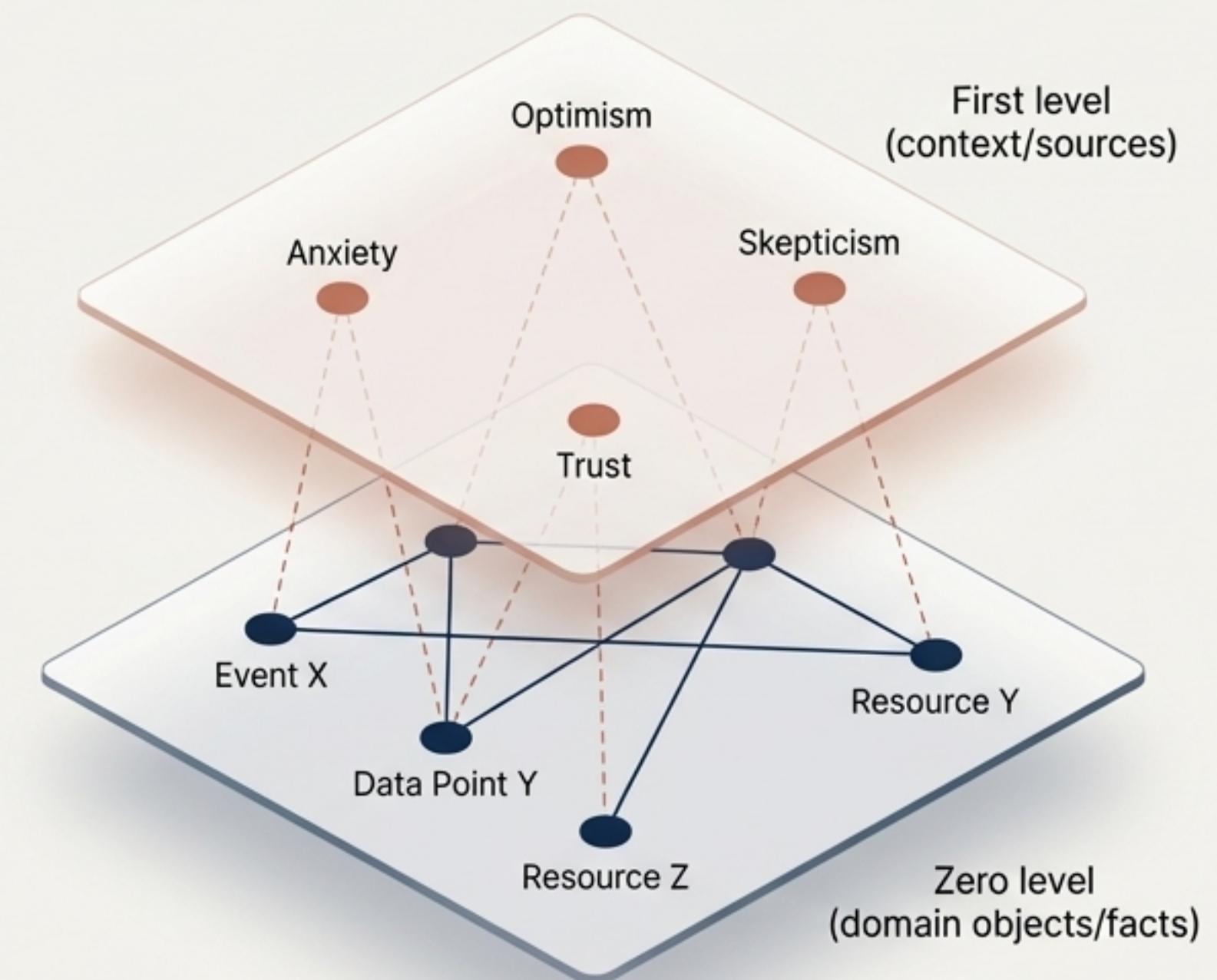
# Modeling Knowledge: Separating Fact from Emotional Context

**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.

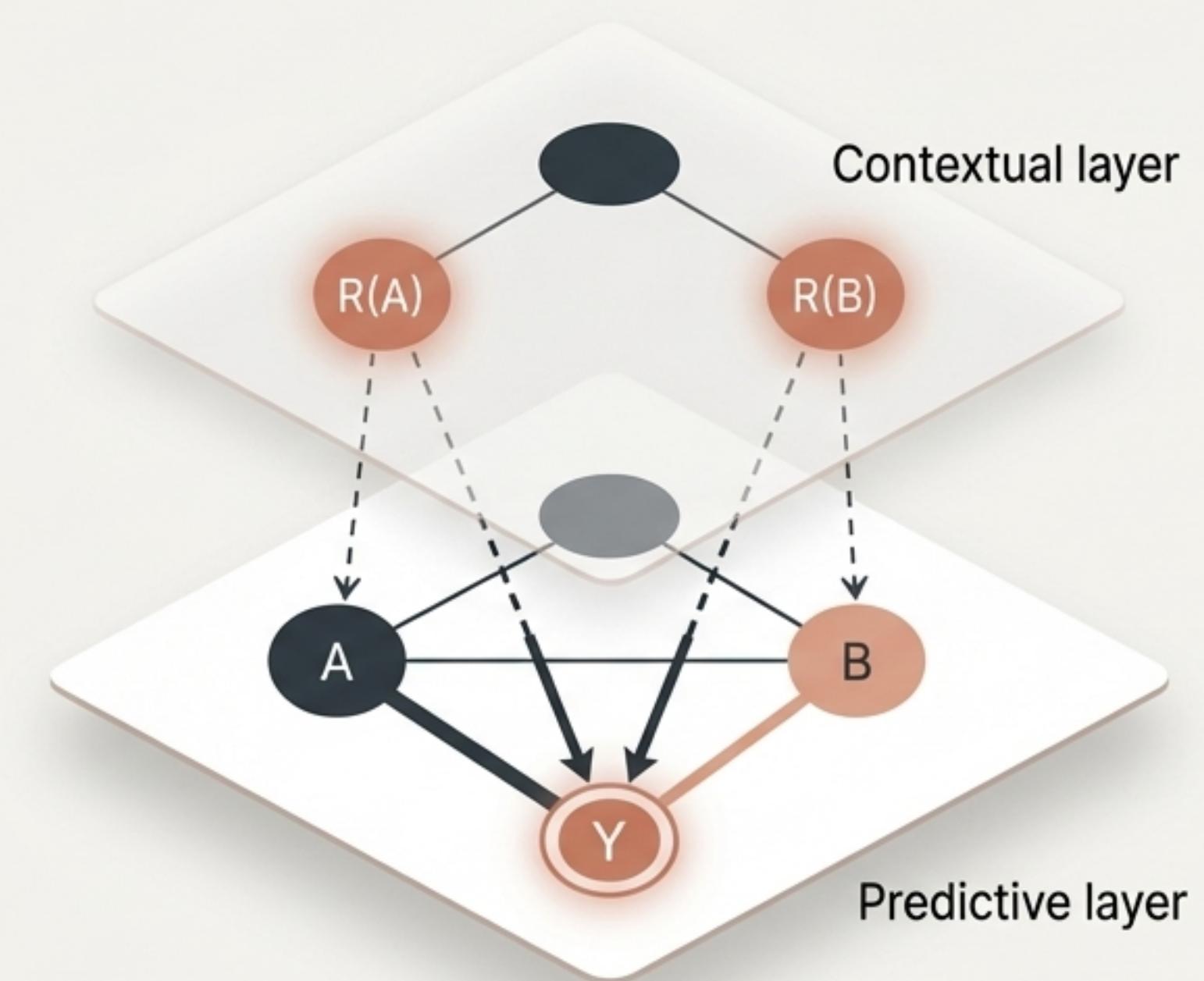


# Modeling Uncertainty: Quantifying the Impact of Emotion on Decisions

**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.

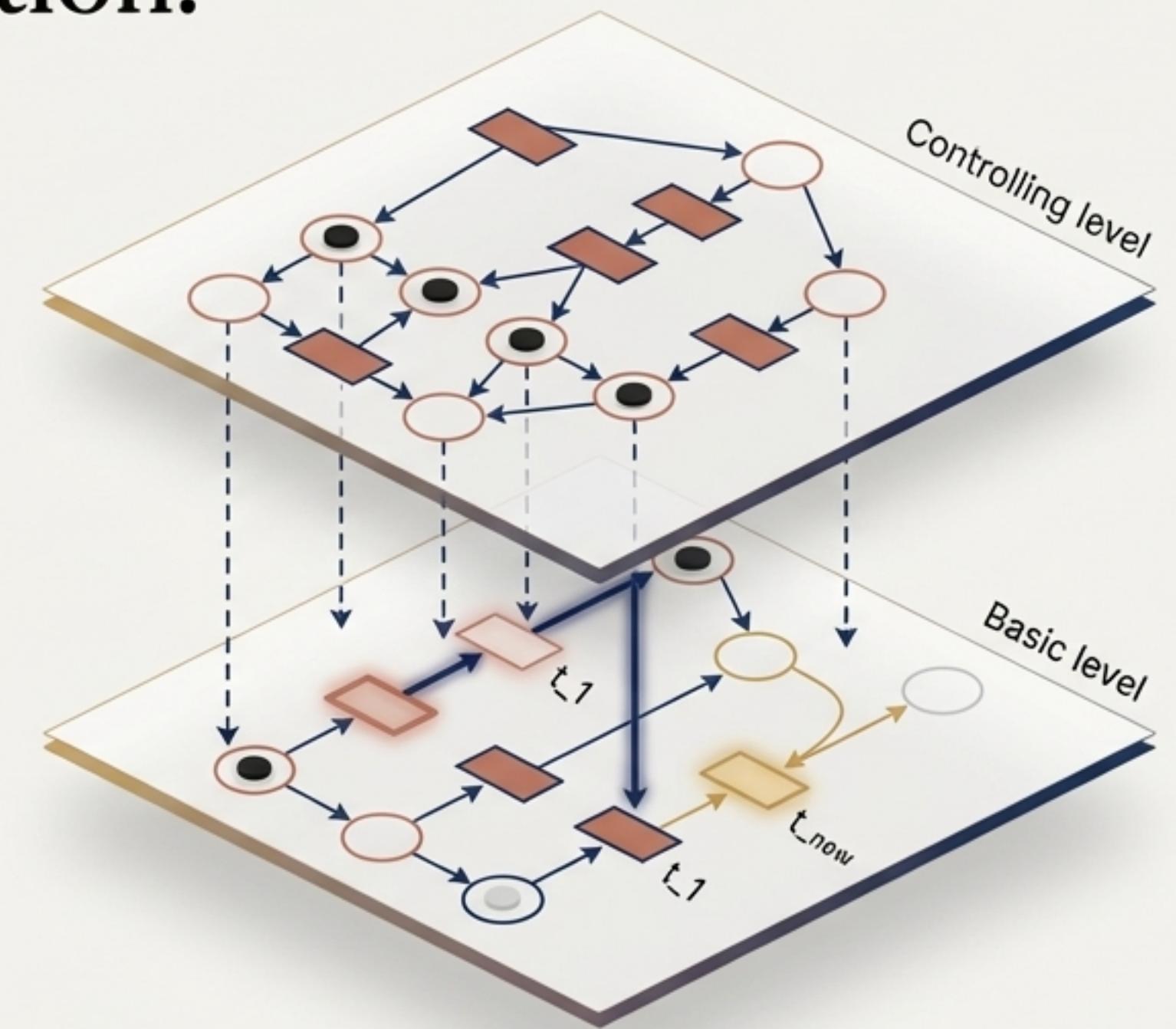


# Modeling Processes: Creating Business Workflows that Adapt to Emotion.

**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.**