Agent Persona Positioning and Hierarchy

# Table of Contents

Executive Summary ............................... 2

**Part 1: Understanding Positional Bias** ................. 3

* Core Principle: Positional Bias in LLM Processing
* - Primacy Effect
* - Recency Effect
* - Middle Dilution
* Evidence from BOKF Agents

**Part 2: Best Practices and Patterns** .................. 4

* Positioning Best Practices
* - Tier 1: Top Position (Highest Priority)
* - Tier 2: Early Position (High Priority)
* - Tier 3: Middle Position (Standard Priority)
* - Tier 4: Late Position (Reinforcement)
* Hierarchy Patterns
* Emphasis Techniques

**Part 3: What to Avoid** ....................................... 5

* Common Anti-Patterns
* - Anti-Pattern 1: Buried Critical Constraints
* - Anti-Pattern 2: Wall of Text
* - Anti-Pattern 3: Contradictory Positioning
* - Anti-Pattern 4: Weak Final Position
* - Anti-Pattern 5: Critical Rules Only in Middle

**Part 4: Application Guide** .................................... 6

* Positioning Strategy by Agent Type
* - Orchestrator Agents
* - Specialist Agents
* - Validator/Reviewer Agents
* - Domain/Sequential Processing Agents
* Practical Checklist
* Conclusion

# Executive Summary

**YES, positioning matters significantly.**

The order of content in agent persona YAML files affects how LLMs interpret and prioritize information through positional bias, emphasis patterns, and cognitive load management.

# Part 1: Understanding Positional Bias

## Core Principle: Positional Bias in LLM Processing

### Primacy Effect

**What appears FIRST has outsized influence**

#### Mechanism:

* LLMs pay strong attention to early content in prompts
* First impressions establish context and framing
* Early rules create "mental model" for subsequent interpretation
* First-mentioned constraints often override later ones in conflict situations

#### Application:

* Critical constraints should appear early
* Mission/role statements benefit from top placement
* Non-negotiable rules belong near the beginning

### Recency Effect

**What appears LAST also has strong influence**

#### Mechanism:

* Final instructions are "fresh" when LLM begins reasoning
* Last-stated rules often win in ambiguous situations
* Concluding statements reinforce earlier content
* "Remember:" statements at end have high impact

#### Application:

* Repeat critical constraints at the end
* Final reminders of most important rules
* Closing emphasis on mission-critical behaviors

### Middle Dilution

**Middle content can be less influential**

#### Mechanism:

* Detailed procedures in middle can blur together
* Long sections reduce attention per item
* Context switching between topics reduces retention
* Procedural details compete for attention

#### Mitigation:

* Use clear section headers for middle content
* Bold/capitalize critical items even in middle
* Break long middle sections into digestible chunks
* Repeat critical rules if appearing in middle

# Part 2: Best Practices and Patterns

## Positioning Best Practices

### Tier 1: Top Position (Highest Priority)

#### What Goes Here:

* Critical stop rules ("STOP if X")
* Absolute constraints that override everything
* Emergency protocols
* Highest-priority behavioral rules

### Tier 2: Early Position (High Priority)

#### What Goes Here:

* Role and mission statement
* Authority relationships and signoff requirements
* Non-negotiable scope boundaries
* Critical coordination protocols

### Tier 3: Middle Position (Standard Priority)

#### What Goes Here:

* Detailed workflows and procedures
* Team coordination specifics
* Tool usage instructions
* Context management strategies
* Clone delegation details

### Tier 4: Late Position (Reinforcement)

#### What Goes Here:

* Success metrics
* Quality standards
* Final mission reminders
* Key principle repetition

# Part 3: What to Avoid

## Common Anti-Patterns

### Anti-Pattern 1: Buried Critical Constraints

**Problem:** Critical constraint appears too late, after agent has internalized complex workflows

**Solution:** Move constraint to top or early position

### Anti-Pattern 2: Wall of Text (No Hierarchy)

**Problem:** No visual breaks, everything equal priority, cognitive overload

**Solution:** Use headers, bullets, emphasis to create hierarchy

### Anti-Pattern 3: Contradictory Positioning

**Problem:** Primacy effect means early instruction wins, conflicts with later rule

**Solution:** Ensure critical rules don't contradict, position critical rule first

### Anti-Pattern 4: Weak Final Position

**Problem:** Wastes recency effect on structural information instead of mission reminder

**Solution:** End with mission reminder or critical constraint repetition

### Anti-Pattern 5: Critical Rules Only in Middle

**Problem:** Critical safety rule buried in middle dilution zone

**Solution:** Move to top AND repeat at bottom

# Part 4: Application Guide

## Positioning Strategy by Agent Type

### Orchestrator Agents

#### Priority Order:

1. 1. Stop rules and critical constraints (TOP)
2. 2. Mission and team composition (EARLY)
3. 3. Authority relationships (EARLY)
4. 4. Sequential workflow phases (MIDDLE)
5. 5. Quality gates and coordination (MIDDLE)
6. 6. Success metrics (LATE)
7. 7. Mission reminder (BOTTOM)

**Rationale:** Orchestrators need constraints first, then team coordination structure

### Specialist Agents

#### Priority Order:

1. 1. Role definition and focus (TOP)
2. 2. Critical constraints (EARLY)
3. 3. Deliverable requirements (EARLY)
4. 4. Detailed procedures (MIDDLE)
5. 5. Quality standards (MIDDLE)
6. 6. Success criteria (LATE)
7. 7. Role reminder (BOTTOM)

**Rationale:** Specialists need clear focus area, then detailed execution guidance

### Validator/Reviewer Agents

#### Priority Order:

1. 1. Independence requirement (TOP) - "Do not rely on X"
2. 2. Validation criteria (EARLY)
3. 3. Critical accuracy thresholds (EARLY)
4. 4. Validation procedures (MIDDLE)
5. 5. Escalation protocols (MIDDLE)
6. 6. Approval standards (LATE)
7. 7. Quality reminder (BOTTOM)

**Rationale:** Validators must establish independence first, then criteria

### Domain/Sequential Processing Agents

#### Priority Order:

1. 1. ONE at a time rule (TOP)
2. 2. Sequential discipline (EARLY)
3. 3. Assignment protocol (EARLY)
4. 4. Per-unit workflow (MIDDLE)
5. 5. Cross-unit tracking (MIDDLE)
6. 6. Completion signaling (LATE)
7. 7. Sequential reminder (BOTTOM)

**Rationale:** Sequential discipline is paramount, must be established immediately

## Practical Checklist

#### Top Section (Lines 1-50):

* ☐ Critical stop rules present?
* ☐ Absolute constraints clearly stated?
* ☐ Strong opening framing of mission/role?
* ☐ Authority relationships established if needed?

#### Overall:

* ☐ No contradictions between sections?
* ☐ Critical rules appear early AND late?
* ☐ Visual hierarchy clear (headers, bullets, emphasis)?
* ☐ Most important rules not buried in middle?

## Conclusion

**Positioning is a critical design element, not an afterthought.**

### Key Principles:

* Primacy: Put critical constraints and stops FIRST
* Recency: Reinforce mission and critical rules LAST
* Emphasis: Use formatting to prevent middle dilution
* Repetition: Repeat critical rules strategically
* Hierarchy: Clear structure prevents cognitive overload