

COMPLEXITY MANAGEMENT ENGINE v2.0

Codename: *SIMPLEXITY* — The Intelligent Complexity Navigator

Classification	TIER 1 — FOUNDATION
Status	PRODUCTION READY
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What's New in v2.0

Enhancement	Purpose
Module 5: Complexity Dynamics	Track complexity over time — growth, decay, tipping points
Module 6: Cognitive Load Calibration	Match output to audience capacity
Module 7: Transfer Detection	Catch when simplification moves complexity elsewhere
Module 8: Minimum Viable Complexity	Find the least complexity needed for the goal
Reversibility Scoring	Know which simplifications can be undone
Anti-Fragility Checks	Protect against removing beneficial complexity
Threshold Alerts	Warning system for danger zones

Core Modules (1-4)

Module	Purpose	Key Concept
1. Abstraction Layering	Navigate detail levels	5 levels: Component → Paradigm
2. Emergence Detection	Find system-level behaviors	Weak / Strong / Adaptive
3. Problem Decomposition	Break into sub-problems	MECE + Reversibility
4. Simplification	Reduce complexity	80/20 + Anti-Fragility

New Modules (5-8)

Module	Purpose	Key Concept
5. Complexity Dynamics	Track change over time	Growing / Stable / Decaying / Explosive
6. Cognitive Calibration	Match to audience	Expertise × State × Time × Stakes
7. Transfer Detection	Catch hidden moves	Balloon squeeze effect (0-10 score)
8. MVC	Find minimum needed	Least complexity that works

Complexity Scoring

Dimension	Description	Range
Scale	Number of components	1-10
Coupling	Interdependence	1-10
Dynamics	Rate of change	1-10
Uncertainty	Unknown unknowns	1-10
Emergence	System-level novelty	1-10

Composite: $\sqrt{(\text{sum of squares})}$ → 1-5: LOW | 6-10: MODERATE | 11-15: HIGH | 16+: EXTREME

Threshold Alert System

Alert	Trigger	Action
Complexity Ceiling	Score > 15	Immediate simplification
Fragility Floor	Anti-fragility < 3	Verify robustness
Transfer Warning	Transfer score > 6	Re-evaluate approach
Cognitive Overload	Output > capacity	Recalibrate
Irreversibility	Cannot undo	Confirm before proceeding
Explosive Trajectory	Out of control growth	Immediate intervention

Cognitive Load Calibration

Output Level	When to Use	Content
Level 1: Single Insight	Crisis, immediate	1 takeaway, 1 action
Level 2: Executive Summary	Stressed, limited time	3-5 key points
Level 3: Standard	Normal conditions	Full decomposition
Level 4: Deep Analysis	High stakes, time available	Multiple perspectives
Level 5: Complete	Critical, research	Full complexity

Usage Syntax

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SIMPLEXITY v2.0 ANALYZE:  
Problem: [Your complex problem]  
Goal: [What you need to decide/understand]  
Audience: [Who will use this analysis]  
Tolerance: [LOW/MEDIUM/HIGH simplification acceptable]
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Mode	Duration	Modules	Use Case
QUICK	5 min	Core + MVC	Fast triage, crisis
STANDARD	15 min	All 8	Most problems
DEEP	30+ min	All 8, full depth	Critical decisions
MONITOR	Ongoing	Dynamics + Thresholds	Long-term tracking

Module-Specific Calls

Syntax	Function
[SIMPLEXITY:DYNAMICS]	Complexity trajectory analysis
[SIMPLEXITY:CALIBRATE]	Cognitive load calibration
[SIMPLEXITY:TRANSFER]	Transfer detection only
[SIMPLEXITY:MVC]	Minimum viable complexity

[SIMPLEXITY:FRAGILITY]	Anti-fragility assessment
[SIMPLEXITY:FULL]	Complete 8-module pipeline

Version History

Version	Date	Changes
v1.0	Nov 2025	Initial release with 4 modules
v2.0	Nov 2025	Added Modules 5-8, reversibility, anti-fragility, thresholds

SIMPLEXITY v2.0 — Make the complex manageable without making it wrong or fragile.
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