

# From Static to Adaptive: The Nested Learning Paradigm for AI

## The High Cost of Static AI



Prohibitive Retraining Costs

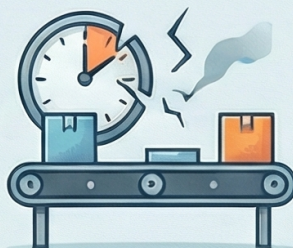
**\$2.3 MILLION+**

A single model refresh can cost over \$2.3 million annually in compute resources.

Operational Lag & Missed Opportunities

**2.1% REVENUE LOSS**

A 6-8 week retraining cycle caused one retailer to lose 2.1% of revenue.



Eroding User Trust and Adoption

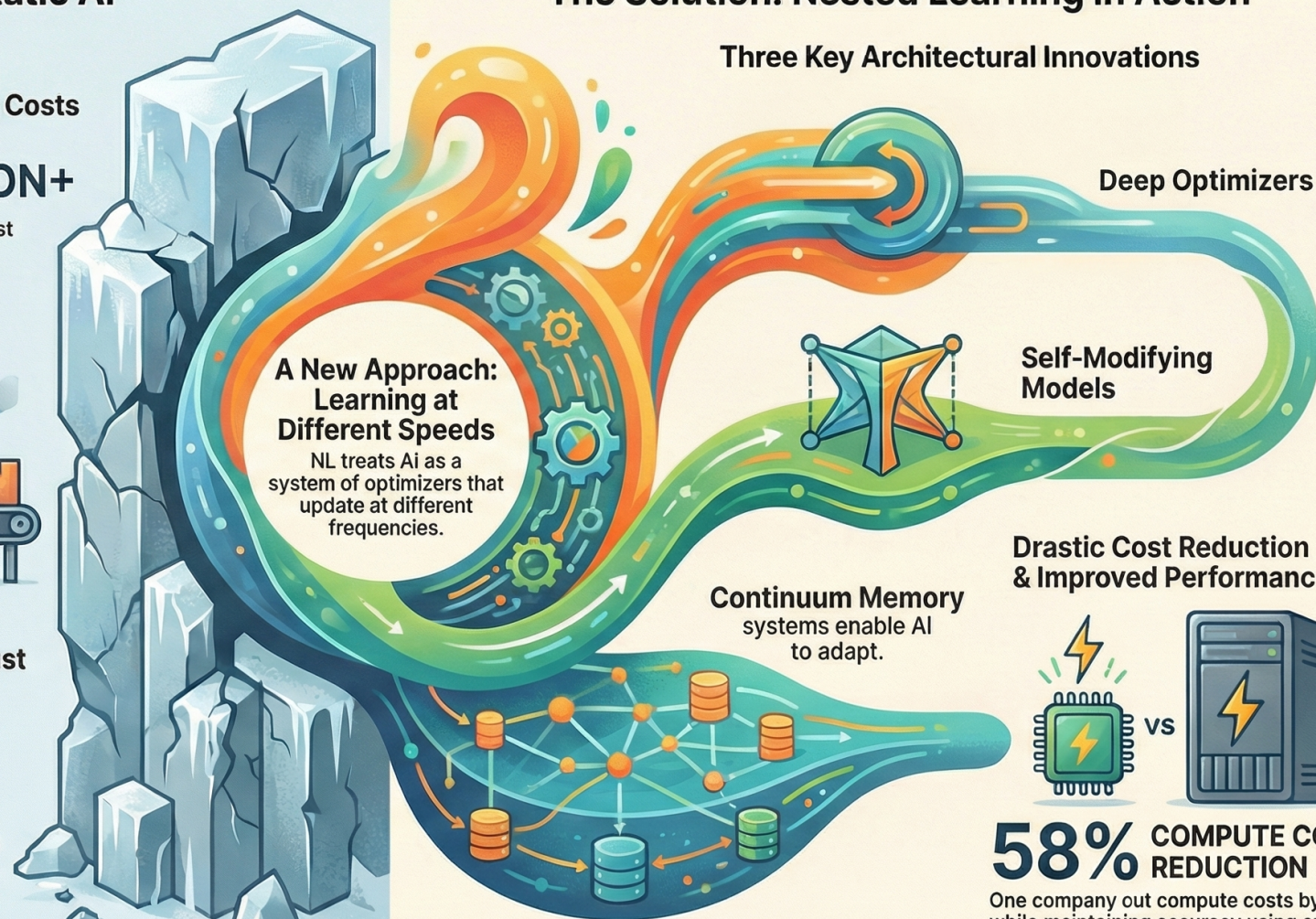
**43% RESISTANCE**

43% of AI deployments face resistance from users due to outdated information.



## The Solution: Nested Learning in Action

Three Key Architectural Innovations



**A New Approach:  
Learning at  
Different Speeds**

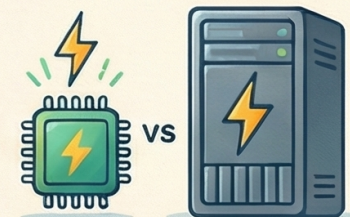
NL treats AI as a system of optimizers that update at different frequencies.

Deep Optimizers

**Self-Modifying  
Models**

**Continuum Memory**  
systems enable AI  
to adapt.

**Drastic Cost Reduction  
& Improved Performance**



**58% COMPUTE COST  
REDUCTION**

One company cut compute costs by 58% while maintaining accuracy using an NL architecture.