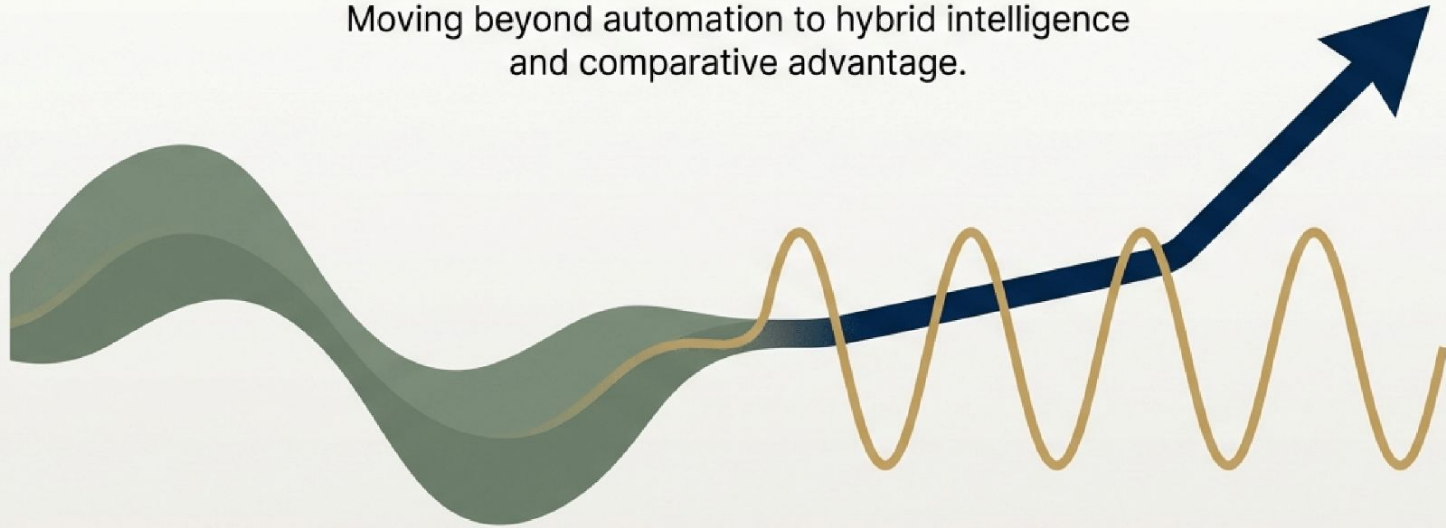


# Choice-as-Signal: The Strategic Design of AI Hiring Systems

Moving beyond automation to hybrid intelligence and comparative advantage.



## Executive Summary

- **Substitution View:** Using AI to replace human labor to cut costs.
- **Design View:** Using AI to generate novel signals about candidate quality.

# Effective AI adoption requires a shift from simple substitution to signal design.

<b>The Status Quo:</b>	Most firms treat AI screening as a scalability tool for high-volume hiring (e.g., call centers, logistics) to solve for efficiency.
<b>The Hidden Insight:</b>	When candidates are given autonomy to choose their interviewer (Human vs. AI), that choice itself reveals hidden ability. High-potential candidates prefer the precision of AI; lower-potential candidates prefer the 'noise' of humans.
<b>The Strategic Value:</b>	Combining Human and AI signals creates a 'Hybrid System' that outperforms either alone.

**+7%**

Increase in  
Job Offers

**-24%**

Reduction in  
Involuntary Separations

## The Context

Current adoption is driven by labor market tightness and the commoditization of written applications (GenAI résumés).

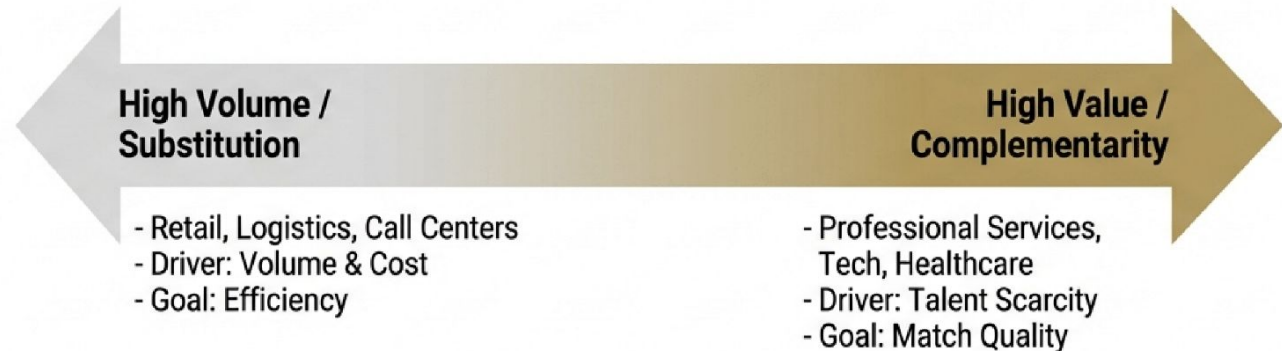
The Pinmet complementarity in (GenAI screens).

## The Pivot

The question is no longer *if* AI can interview, but *how* to combine it with human judgment.

# Current AI adoption solves for scale, but hybrid design solves for precision.

## The Screening Landscape



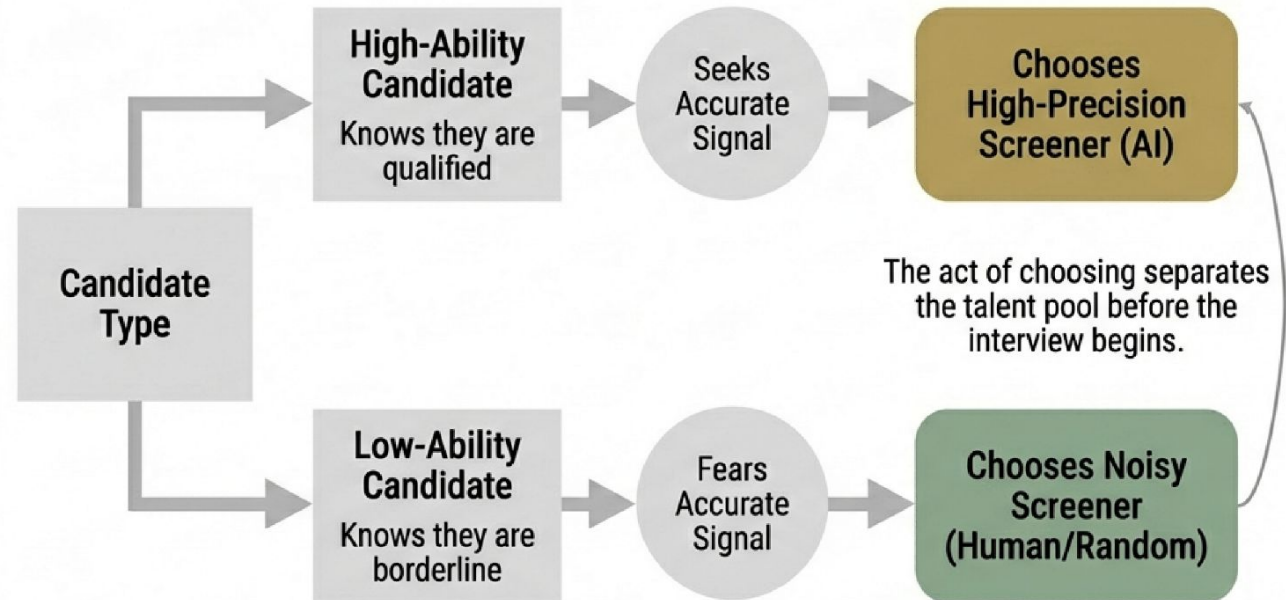
*“Optimal AI adoption involves designing complementary roles for human and algorithmic judgment rather than wholesale substitution.”*

## The Mechanism

### Choice-as-Signal:

The phenomenon where an applicant's selection of a screening method reveals their confidence in their own underlying ability.

# Candidate choice is not just a preference; it is a revealer of private information.



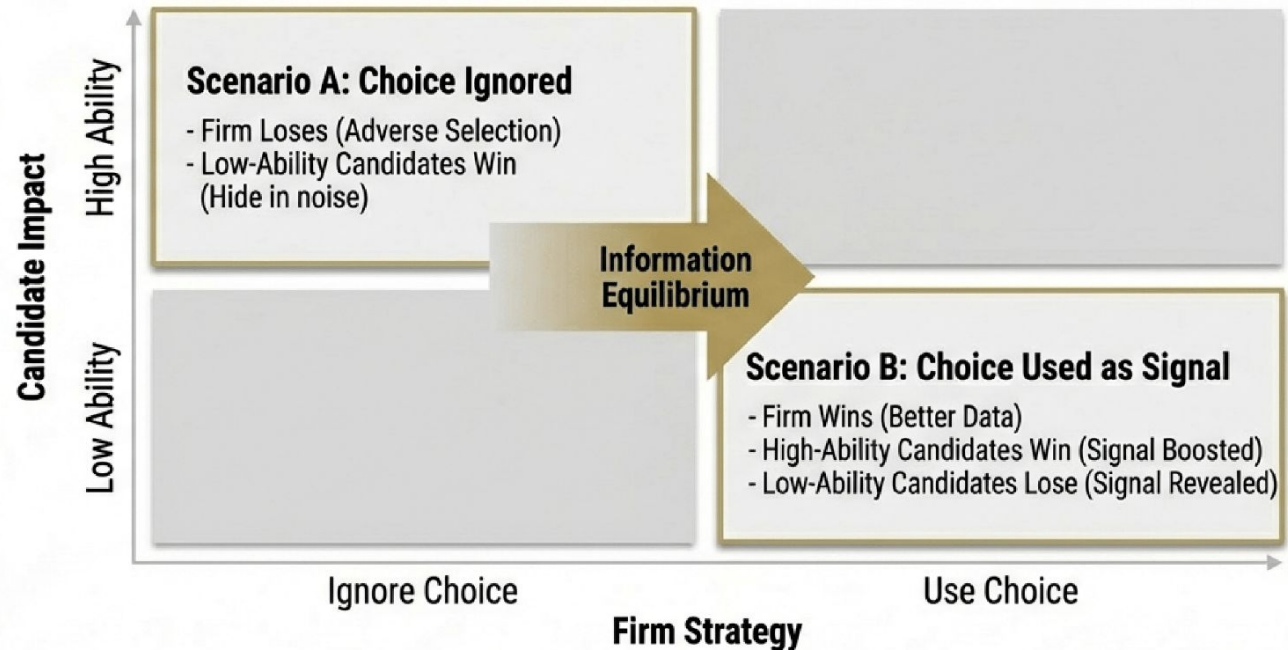


## The Welfare Paradox

### The Tension:

"Right to Human Review" policies are framed as worker protection. However, if firms rationally update their beliefs based on who *opts out* of AI, those opting out send a negative signal about their technical competence.

Paradoxically, granting autonomy can disadvantage the very candidates it aims to protect.



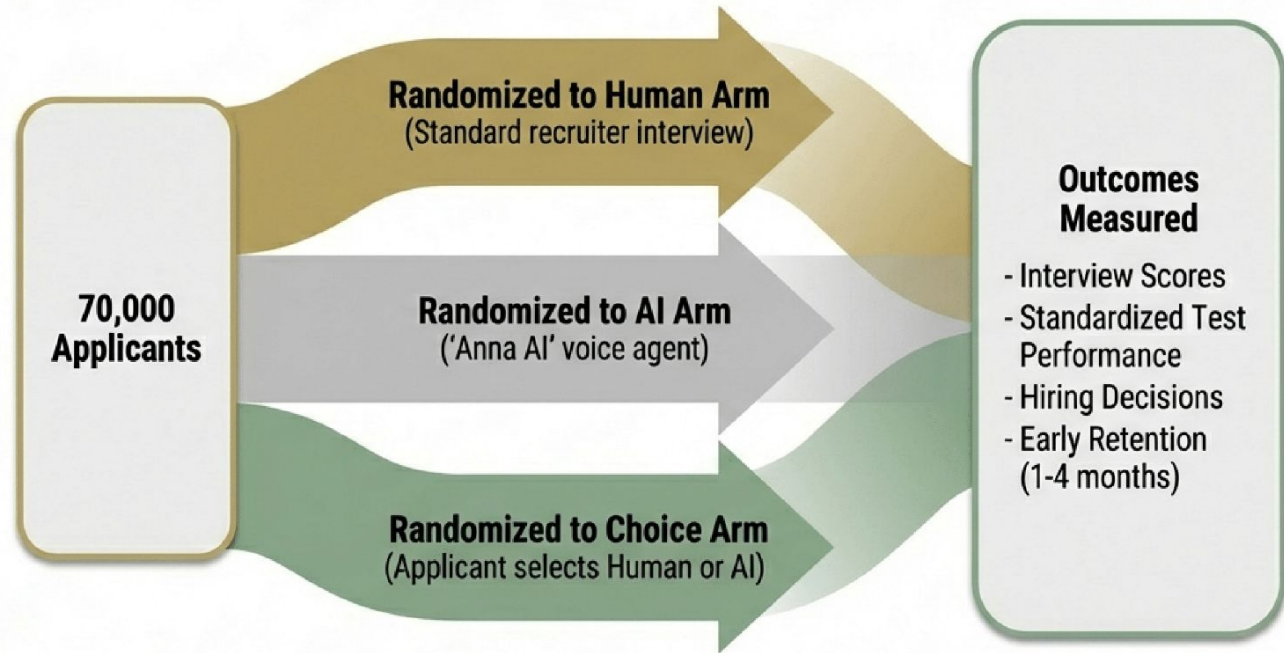
## Study Parameters

**Partner:** PSG Global Solutions (RPO)

**Sample:** 70,000 Job Applicants

**Role:** Customer Service & Technical Support

# Evidence from 70,000 applicants proves the value of signal differentiation.



## Tiempos Headline

# Humans and AI possess distinct, quantifiable comparative advantages.

### Language & Interpersonal Skills



Humans have a slight edge in nuance and fluid communication.

### Analytical & Technical Skills



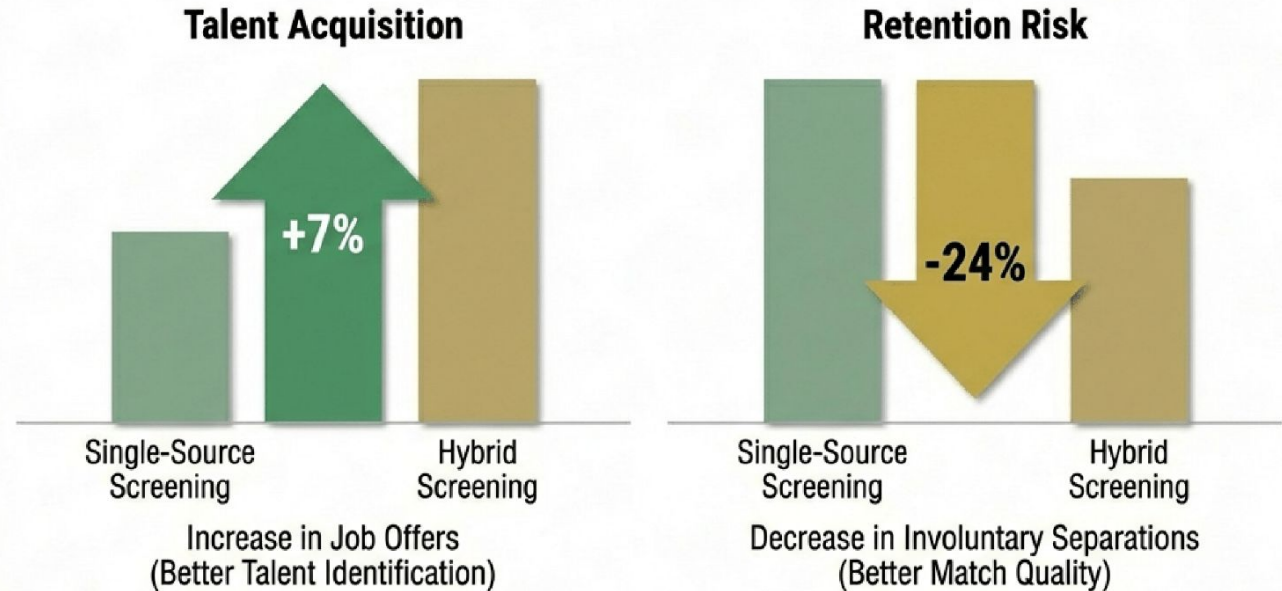
AI has a significant advantage in structured evaluation and logic.

**Conclusion:** Neither is "better" overall. They measure different dimensions of talent.

## Hybrid Definition

A system where the firm observes *both* human and AI signals, or combines them strategically, reducing uncertainty about candidate type.

# Hybrid systems significantly improve match quality and retention.



Simulated results based on experimental data (Jabarian & Henkel, 2025).



## Design Strategy 1

# Integrating signals through structural workflows.

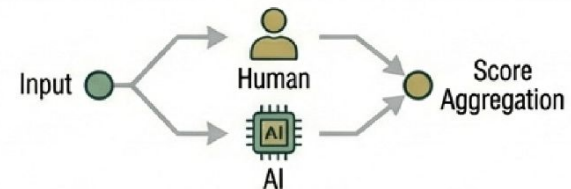
### Sequential (The Funnel)



AI conducts scalable initial screen -> Human conducts final fit interview.

Scale + Control

### Parallel (The Audit)



Human and AI evaluate independently -> Scores aggregated.

Prevents anchoring bias; maximizes signal independence.

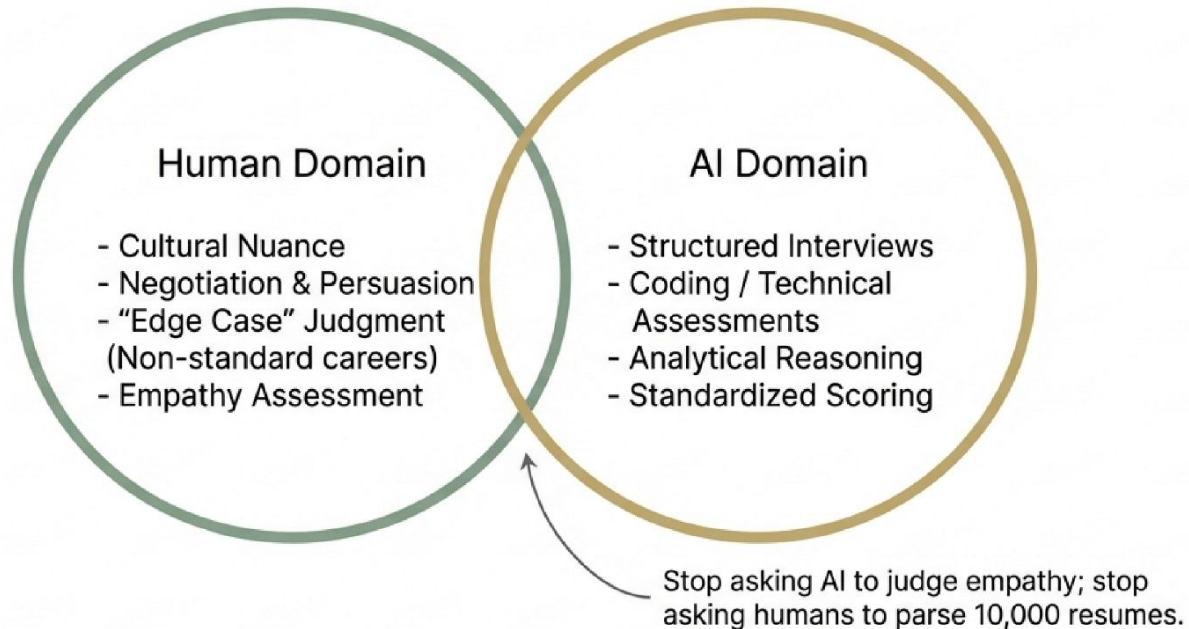
### Weighted Aggregation

$$\text{Total Score} = \left[ (\text{Weight A} \times \text{AI Technical Score}) + (\text{Weight B} \times \text{Human Cultural Score}) \right]$$

Mathematically optimized for role-specific needs.

## Design Strategy 2: Specialized assignment based on comparative advantage.

Domain Map visualization



Example: Financial Services firm using AI for quantitative reasoning sets and Humans for client communication assessments.

# Operationalizing signal theory across industries.

## RPO / PSG Global

### Transparent Disclosure

**Mechanism:** “Anna AI” explicitly discloses non-human identity.

**Result:** Maintained procedural fairness while scaling to 100k+ applicants. Human review of final decisions ensures safety net.

## Retail Sector

### Choice Architecture

**Mechanism:** Applicants offered Human vs. AI interview.

**Adaptation:** Firm observed AI-choosers performed better; adjusted hiring model to positively weight the *choice* of AI as a confidence signal.

## Technology

### Dimension Partitioning

**Mechanism:** AI for coding output; Humans for system design.

**Workflow:** Strict separation of duties based on the 9.66 vs 7.55 precision gap in analytical skills.

# Transparency and procedural justice are prerequisites for sustainable adoption.

## Procedural Justice

The perceived fairness of the decision-making process, crucial for applicant acceptance and legal compliance.



### Explicit Disclosure

Clearly state when an agent is non-human (e.g., "You are speaking with an AI assistant").



### The "Human-in-the-Loop"

Assure candidates that a human makes or reviews the final hiring decision to act as a safety valve.



### Feedback Mechanisms

Provide insights on performance to transform the interview from a "test" to a "learning opportunity".



### Opt-Outs

Allow opting out for genuine reasons to preserve inclusivity, while monitoring for adverse selection.

*"Fairness isn't just about the algorithm; it's about the feeling of being heard."*



# Building the organizational capability for AI-augmented hiring.

## Data Governance

- Robust privacy policies.
- Retention agreements.
- Ensuring vendors cannot exploit proprietary applicant data.

## Recruiter Upskilling

- Shifting from “conducting interviews” to “interpreting signals.”
- Training humans to know when to override the algorithm and when to trust it.

## Continuous Calibration

- Retraining models as labor markets shift.
- Adjusting for economic cycles that change candidate quality distributions.

# The future of screening is not automated; it is augmented.

## **From Substitution to Design**

Stop asking 'Can AI do this?' and start asking 'What signal does this design generate?'

## **From Autonomy to Information**

Recognize that candidate choice is a data point, not just a courtesy.

## **From Efficiency to Match Quality**

Focus on the -24% turnover reduction, not just the speed of hire.

Treat AI adoption as a complex mechanism design problem. Build systems that leverage the distinct comparative advantages of human and machine.