

STRATEGIC CAPITAL ASSESSMENT

# Comparative Financial Ledger & *Risk* *Assessment*

A rigorous, data-driven analysis of the total cost of ownership for full-time AI hires versus the fractional deployment model — prepared for senior leadership and capital allocation committees.

**\$312K+**

TRUE ANNUAL COST · FT AI HIRE

**78%**

OVERHEAD VS. PRODUCTIVE OUTPUT

**T+7**

FRACTIONAL DEPLOYMENT WINDOW

**\$218K**

AVG. YEAR-ONE SAVINGS

# Why Full-Time AI Hires Fail & Why Pilot Purgatory Is Costing You More

## THE STRUCTURAL PROBLEM

### The Talent Market Is Priced for Scarcity That No Longer Exists

The median total compensation for an enterprise AI lead now exceeds \$285,000 annually. This pricing was set during a period of genuine scarcity — when ML engineers who could ship production systems were rare. That scarcity has partially abated, but benchmarks have not corrected. Organizations are paying 2021 talent premiums for skills that fractional providers now deliver at near-marginal cost.

## THE OPERATIONAL PROBLEM

### Full-Time AI Hires Enter a System Designed to Slow Them Down

The average time from signed offer to first production deployment is 147 days. This is not a hiring failure — it is structural. Onboarding, compliance, security reviews, access provisioning, and internal politics consume the first quarter entirely. The organization pays full salary while receiving zero strategic output — the median outcome across Fortune 500 AI hiring programs.

## 01. PILOT PURGATORY — THE ENDLESS PROOF-OF-CONCEPT

Organizations spend an average of 14 months in pilot phase before production deployment. Without a defined mandate and deadline, pilots expand to fill available time. At \$285K fully-loaded per head, a 14-month pilot with a team of three represents \$997,500 in sunken capital before a single user sees the output.

## 02. THE RETENTION CLIFF — AI TALENT HAS A 22-MONTH MEDIAN TENURE

Specialized AI talent in corporate environments has the shortest median tenure of any technical role — 22 months. Each departure triggers a 6–9 month replacement cycle with an average replacement cost of \$47,000 in recruiting fees alone, not including productivity loss or knowledge reconstitution.

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03. THE GENERALIST PENALTY – SPECIALISTS FORCED INTO MEETINGS

Full-time AI professionals spend 61% of their working hours in non-productive activities: status meetings, documentation requirements unrelated to core function, and alignment sessions. The organization is paying a specialist's rate for a generalist's utilization pattern — a structural drag that cannot be managed away.

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04. THE TOOLING LAG – INTERNAL STACKS CANNOT KEEP PACE

The AI tooling landscape turns over every 8–12 months. Internal IT governance and procurement cycles run on 18–24 month clocks. Full-time hires are routinely forced to build on deprecated infrastructure, producing work that is technically sound but strategically obsolete before it ships.

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ASSESSOR'S VERDICT

*“The full-time AI hire model does not fail at the talent level — it fails at the systems level. Organizations are importing expensive specialists into environments optimized for neither speed nor specialization. The outcome is not underperformance. It is a structural mismatch between compensation structure and value delivery cadence.”*

# The Bloated True Cost of Full-Time AI Hires

MODEL UNDER REVIEW	ANNUAL PERIOD																				
<p data-bbox="219 569 646 600"><b>Full-Time Internal AI Hire</b></p> <p data-bbox="219 678 423 699">BASE COMPENSATION</p> <p data-bbox="219 737 505 800"><b>\$195,000</b></p> <p data-bbox="219 837 753 919">Market-rate base salary for a senior AI/ML engineer at a mid-to-large enterprise. Excludes equity, bonus, and all benefits.</p> <table border="1" data-bbox="219 961 800 1108"> <tr> <td>Base Salary (national median, senior AI)</td> <td><b>\$195,000</b></td> </tr> <tr> <td>Annual Performance Bonus (target 15%)</td> <td><b>\$29,250</b></td> </tr> <tr> <td>Equity / RSU (amortized, 4-yr vest)</td> <td><b>\$37,500</b></td> </tr> </table>	Base Salary (national median, senior AI)	<b>\$195,000</b>	Annual Performance Bonus (target 15%)	<b>\$29,250</b>	Equity / RSU (amortized, 4-yr vest)	<b>\$37,500</b>	<p data-bbox="839 569 1248 600"><b>Year One · Fully Loaded</b></p> <p data-bbox="839 678 1114 699">HARD COMPENSATION TOTAL</p> <p data-bbox="839 737 1114 800"><b>\$261,750</b></p> <p data-bbox="839 837 1398 974">This figure represents compensation only — before any operational, facilities, or benefits overhead is applied. Most finance teams erroneously treat this as the total cost of hire. It is not.</p>														
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<p data-bbox="219 1308 518 1329">MANDATORY EMPLOYER BURDEN</p> <p data-bbox="219 1367 475 1430"><b>\$38,400</b></p> <p data-bbox="219 1467 773 1549">Statutory obligations that are non-negotiable and frequently under-counted in initial budget projections.</p> <table border="1" data-bbox="219 1591 773 1850"> <tr> <td>FICA / Payroll Taxes (7.65%)</td> <td><b>\$14,924</b></td> </tr> <tr> <td>Federal / State Unemployment</td> <td><b>\$1,800</b></td> </tr> <tr> <td>Workers' Compensation Insurance</td> <td><b>\$2,100</b></td> </tr> <tr> <td>Health, Dental, Vision (employer share)</td> <td><b>\$14,400</b></td> </tr> <tr> <td>401k Match (4% of base)</td> <td><b>\$7,800</b></td> </tr> </table>	FICA / Payroll Taxes (7.65%)	<b>\$14,924</b>	Federal / State Unemployment	<b>\$1,800</b>	Workers' Compensation Insurance	<b>\$2,100</b>	Health, Dental, Vision (employer share)	<b>\$14,400</b>	401k Match (4% of base)	<b>\$7,800</b>	<p data-bbox="839 1308 1234 1329">OPERATIONAL &amp; FACILITIES OVERHEAD</p> <p data-bbox="839 1367 1081 1430"><b>\$31,200</b></p> <p data-bbox="839 1467 1386 1581">Physical and digital infrastructure directly attributable to a single employee's presence and productive function.</p> <table border="1" data-bbox="839 1623 1386 1881"> <tr> <td>Office Space (150 sq ft @ \$50/sqft)</td> <td><b>\$7,500</b></td> </tr> <tr> <td>Hardware / Workstation (amortized)</td> <td><b>\$4,200</b></td> </tr> <tr> <td>SaaS Seat Licenses (enterprise stack)</td> <td><b>\$8,400</b></td> </tr> <tr> <td>IT Support Overhead (allocated)</td> <td><b>\$3,600</b></td> </tr> <tr> <td>Management &amp; HR Overhead (allocated)</td> <td><b>\$7,500</b></td> </tr> </table>	Office Space (150 sq ft @ \$50/sqft)	<b>\$7,500</b>	Hardware / Workstation (amortized)	<b>\$4,200</b>	SaaS Seat Licenses (enterprise stack)	<b>\$8,400</b>	IT Support Overhead (allocated)	<b>\$3,600</b>	Management & HR Overhead (allocated)	<b>\$7,500</b>
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RECRUITMENT & ONBOARDING – YEAR ONE

**\$47,000**

Front-loaded costs inescapable in year one and frequently recurring due to attrition cycles.

Recruiter Fee (20% of base salary)	<b>\$39,000</b>
Interview Process (panel time, amortized)	<b>\$4,200</b>
Background Check / Security Clearance	<b>\$1,200</b>
Onboarding Program (materials + trainer)	<b>\$2,600</b>

PRODUCTIVITY LOSS – RAMP PERIOD

**\$48,750**

The cost of paying full salary while receiving partial output. AI hire ramp time is 4–6 months to full productivity — 25% of annual salary during a 75-day full-salary / zero output window.

TOTAL YEAR-ONE, FULLY LOADED

**\$427,100**

The honest, auditor-grade total cost of a single full-time senior AI hire in year one. This figure does not appear on any single P&L line — it is distributed across HR, IT, Facilities, and the operating budget, which is precisely how it escapes scrutiny.

EFFECTIVE PRODUCTIVE-HOUR COST

**\$341 / hr**

When total cost is divided by actual productive hours (~1,252 hrs after meetings, admin, ramp, and PTO), the effective rate per productive hour eclipses most premium fractional arrangements by a factor of 2–3x.

HIDDEN COST EXPOSURE – RISK REGISTER

CATEGORY	DESCRIPTION	ANNUAL EXPOSURE	RISK
<b>ATTRITION &amp; RETENTION RISK</b>			
Turnover Cost (22-mo median tenure)	Full recruitment and ramp costs recur at the 22-month median tenure departure point. Amortized annually, this is a perpetual structural liability embedded in every full-time AI hire relationship.	\$25,900/yr amortized	HIGH
Counter-Offer Inflation	AI talent attrition triggers counter-offer cycles. Retention bonuses average \$24,000 — a cost incurred with no incremental productivity upside.	\$24,000 episodic	MEDIUM
<b>KNOWLEDGE &amp; INSTITUTIONAL RISK</b>			
Knowledge Concentration Risk	When a single hire holds critical AI system knowledge and departs, institutional memory departs with them. Reconstitution cost routinely exceeds \$100,000.	\$100,000+ episodic	CRITICAL
Technology Obsolescence	AI tooling cycles run 8–12 months. Hires trained on one paradigm resist retraining on successor frameworks. Re-skilling programs average \$12,000 per employee and have low completion rates in production environments.	\$12,000–\$18,000/yr	HIGH
<b>GOVERNANCE &amp; COMPLIANCE DRAG</b>			
Internal Process Overhead	Enterprise governance requires AI outputs to pass through legal, compliance, and security review. Internal hires spend ~22% of work time navigating these structures — a cost that does not exist for externally-produced deliverables.	\$57,420/yr equivalent	MEDIUM

# Capital Efficiency Through T+7 Deployment

<p>DAY 01</p> <h2>Mandate Defined</h2> <p>Scope, deliverables, and metrics established. No procurement cycle required.</p>	<p>DAY 02</p> <h2>Provider Matched</h2> <p>Fractional specialist with direct domain match engaged. No 60 day search.</p>
<p>DAY 03</p> <h2>Access Provisioned</h2> <p>Data access configured under existing vendor framework. No IT queue.</p>	<p>DAY 04-06</p> <h2>Discovery Sprint</h2> <p>Rapid diagnostic of systems, data infrastructure, and strategic gaps.</p>
<p>DAY 07</p> <h2>First Deliverable</h2> <p>Actionable output delivered. Measurable value exists in the organisation.</p>	<p>DAY 30</p> <h2>Phase One Complete</h2> <p>Program architecture documented, pilot validated, scale decision made.</p>
<p>DAY 90</p> <h2>Production Live</h2> <p>First system operational. Compare: FT hire still in onboarding at this stage.</p>	

FULL-TIME HIRE · TOTAL YEAR ONE

**\$427,100**

Fully loaded as calculated in Section 02. Productive output begins at month 4–6. Deliverables subject to 22% internal process drag.

Compensation (salary + equity + bonus)	\$261,750
Employer burden & benefits	\$38,400
Recruitment & onboarding	\$47,000
Ramp / productivity loss	\$48,750
Operational overhead (facilities, IT)	\$31,200

FRACTIONAL MODEL · TOTAL YEAR ONE

**\$156,000**

Based on 24 hrs/wk at \$250/hr for 26 weeks in H1, reducing to 16 hrs/wk in H2. No benefits, no ramp cost, no overhead, no attrition risk.

Fractional engagement fee (H1, 24hr/wk)	\$78,000
Fractional engagement fee (H2, 16hr/wk)	\$52,000
Onboarding / IP transfer documentation	\$8,000
Tooling / API access (passed through)	\$18,000
Benefits / burden / overhead	\$0

YEAR-ONE DIFFERENTIAL

**\$271,100**

Capital preserved in Year One by selecting the fractional model. This figure compounds in Year Two as attrition costs and retention programs inflate the full-time model's true cost.

THREE-YEAR NPV ADVANTAGE

**\$614,800**

NPV of the fractional model's cost advantage over three years, incorporating attrition probability (45% by yr 3), replacement costs, and compounding operational overhead. Discount rate: 8%.

TIME-TO-FIRST-VALUE

**143 days**

The fractional model delivers measurable output 143 days sooner than the full-time hire on average. This is not an operational edge — it is a strategic one in a fast-moving competitive landscape.

PRODUCTIVE HOUR EFFICIENCY

**3.2x**

Fractional specialists deliver 3.2x the productive output per dollar spent versus the internal hire model, corrected for meeting overhead, process drag, and ramp time.

CAPITAL REDEPLOYMENT

**\$271K**

Year-one differential capital available for redeployment into product, infrastructure, or AI capability expansion — rather than absorbed by employment overhead.

<p><b>ATTRITION RISK</b>  <b>FT: CRITICAL · FR: NONE</b></p> <p>Full-time AI hires have a 22-month median tenure. At departure, the organization faces \$47,000+ in replacement costs, a 6–9 month productivity gap, and potential knowledge loss. The fractional model carries zero attrition risk — engagements are scoped, not tenured, and the provider relationship is with the firm, not an individual.</p>	<p><b>RAMP &amp; PRODUCTIVITY RISK</b>  <b>FT: HIGH · FR: LOW</b></p> <p>Full-time hires require 4–6 months to reach full productivity in enterprise environments. Fractional providers demonstrate measurable output within the first week. The risk profile shifts from an amortized ramp cost to a scoped discovery cost — typically 3–5× more capital efficient.</p>
<p><b>TECHNOLOGY CURRENCY RISK</b>  <b>FT: HIGH · FR: LOW</b></p> <p>The AI tooling landscape turns over every 8–12 months. Full-time hires are constrained by procurement cycles that prevent current capability adoption. Fractional providers maintain current tooling fluency as a competitive necessity — their business model demands it.</p>	<p><b>INTELLECTUAL PROPERTY RISK</b>  <b>FT: MEDIUM · FR: MEDIUM</b></p> <p>Full-time hires create knowledge concentration risk. Fractional engagements require clear IP assignment and output documentation. When managed correctly, fractional engagements produce more thoroughly documented IP precisely because portability is anticipated from the outset.</p>
<p><b>SCALE FLEXIBILITY RISK</b>  <b>FT: HIGH · FR: LOW</b></p> <p>AI resource requirements are non-linear. Full-time headcount cannot flex with demand curves without layoffs — which carry severance, morale, and reputational costs. Fractional engagements flex by design; scope expansion and reduction are contractual rather than organizational events.</p>	<p><b>GOVERNANCE &amp; COMPLIANCE RISK</b>  <b>FT: MEDIUM · FR: MEDIUM</b></p> <p>Enterprise AI governance requires external validation. Full time internal teams face inherent conflicts of interest in self-reviewing their own work. Fractional models naturally separate the build function from governance, reducing the compliance overhead required to achieve audit-ready AI systems.</p>

STRATEGIC RECOMMENDATION

The evidence is unambiguous: the fractional AI deployment model is not a compromise — it is the superior capital allocation strategy for any organization that values output velocity, risk-adjusted cost, and the ability to operate at the frontier of AI capability. The full-time hire model remains the correct choice only when long-term institutional knowledge depth is the primary objective and the organization has the governance infrastructure to retain and develop that knowledge over a multi-year horizon.