

WHITEPAPER

Quality in Software Engineering

Beyond Functional Requirements

3

Dimensions

TCO

Strategy

40-60%

Savings

87%

External

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1. Executive Summary

In the race to address IT talent shortages, many organisations focus solely on hourly rates when evaluating external talent sources. This approach systematically underestimates the true cost of poor quality and the hidden expenses of offshore engagements.

- Quality has three dimensions: Alignment, Verifiable History, and Ecosystem Mastery
- Total Cost of Ownership (TCO) often favors nearshore over offshore despite higher hourly rates
- 35% of offshore project failures are attributed to communication issues alone
- Cultural alignment accounts for 25% of project failures—often underestimated
- Nearshore delivers 40-60% savings vs. local while maintaining quality parity

2. The Quality Problem in IT Sourcing

When organisations face talent shortages, the natural response is to look externally. According to Deloitte, 87% of tech businesses now use nearshoring or offshoring.

2.1 The Price vs. Quality Trade-off

The allure of offshore talent—particularly from India—is primarily driven by significantly lower hourly rates. A senior developer in India might cost €25-40/hour compared to €80-120/hour in the Netherlands. However, this comparison ignores critical factors:

- Communication overhead due to time zone differences (8+ hours)
- Rework costs from misunderstood requirements
- Management time for coordination and oversight
- Knowledge transfer and onboarding delays
- Cultural friction affecting team dynamics

3. Three Dimensions of Quality

3.1 Dimension 1: Alignment

Quality of Alignment measures how well the delivered solution meets the actual business needs—not just functional requirements, but fitness for purpose.

- Requirements Mastery: Understanding of NFRs (scalability, security, performance)
- User Adoption: Solution is intuitive, solves real pain points
- Maintainability: Clean code, documentation, low technical debt
- Business Fit: Solution enables business objectives

3.2 Dimension 2: Verifiable History

Verifiable History examines the partner's track record:

- Reference clients: Can they provide contactable references?
- Project success rates: What percentage delivered on time and budget?
- Team retention: How long have key team members been with the organisation?
- Case studies: Detailed documentation of challenges and solutions

3.3 Dimension 3: Ecosystem Mastery

Ecosystem Mastery evaluates deep expertise in relevant technology platforms:

- Platform Depth: How many certified experts? Which specific services?
- Integration Experience: Enterprise integrations? APIs? Legacy systems?
- Technology Breadth: Full-stack? Multi-cloud? Hybrid scenarios?
- Innovation Capability: Open source contributions? Emerging trends?

4. TCO vs. Lowest Price

The most significant mistake in IT sourcing is optimising for hourly rate rather than Total Cost of Ownership (TCO).

Cost Component	Offshore Impact	Nearshore Impact
Base Hourly Rate	Lowest (30-40% of local)	Moderate (50-70% of local)
Communication Overhead	High (+20-30%)	Low (+5-10%)
Rework/Quality Issues	High (+15-25%)	Low (+5-10%)
Management Time	High (+15-20%)	Low (+5-10%)
Travel Costs	High (long-haul flights)	Low (2-3 hour flights)
Onboarding Time	Extended (cultural gap)	Shorter (cultural fit)
NET TCO	Often exceeds nearshore	Optimal balance

5. Nearshore vs. Offshore: The Quality Case

Factor	Nearshore (EU)	Offshore (India)
Time Zone	Same or +/- 1-2 hours	+4-5 hours (IST)
Language	Strong English; often Dutch/German	Variable English proficiency
Culture	European work ethics	Different communication norms
Legal/Compliance	EU/GDPR aligned	Complex data transfer issues
Travel	2-3 hour flights	8-10 hour flights
Real-time Collaboration	Full overlap possible	Limited overlap window

6. Measuring Quality: A Framework

Dimension	Metric	Target	Frequency
Alignment	Requirements accuracy rate	>90%	Per sprint
Alignment	User satisfaction (NPS)	>40	Quarterly
Alignment	Technical debt ratio	<15%	Monthly
History	On-time delivery rate	>85%	Per project
History	Team retention (>1 year)	>80%	Annual
Ecosystem	Platform certifications	Current	Annual
Ecosystem	Integration success rate	>95%	Per project

7. Recommendations

- Shift from hourly rate to TCO: Always calculate total cost including communication, rework, and management overhead.
- Evaluate all three quality dimensions: Don't accept a partner who excels in one dimension but fails in others.
- Prioritise nearshore for quality-critical projects: Reserve offshore for non-critical, well-defined tasks only.
- Demand verifiable references: Speaking with actual clients is more valuable than case studies.
- Test before committing: Start with a pilot project to assess quality firsthand.
- Include quality metrics in contracts: Make quality measurable and tie it to payment terms.

Sources & References

Deloitte

Global Human Capital Trends; Tech Talent Shortage Research

McKinsey & Company

Tech Talent Gap research; Total Cost of Ownership studies

Gartner

IT Outsourcing best practices; Quality metrics frameworks

IEEE Software

Software quality measurement standards

About HES Consultancy International

HES Consultancy International provides technology solutions, healthcare innovation, and data-driven growth services across Europe. Founded in 2021 and headquartered in Arnhem, The Netherlands.

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