

Emerging Challenges in Tech Adoption for OR Integration

by Dipti Kerkar



Indian hospitals are accelerating OR digital transformation, but adoption stalls when new systems clash with existing realities. Here are the eight key hurdles—each with targeted, proven solutions from real-world deployments.

1. Legacy Systems and Interoperability

Many hospitals rely on legacy software and equipment, which don't "speak" easily to new digital OR platforms. Integrating these new systems—whether for imaging, patient records, or device control—often requires complex IT workarounds. This slows projects and sometimes results in fragmented workflows that negate the clinical benefits of integration.

2. Workforce Readiness and Upskilling Needs

Sixty percent of hospitals report that IT upskilling and clinical user training are their biggest hurdles. Even well-designed digital systems see slow adoption if frontline teams feel unprepared, unsupported, or overwhelmed by changes in daily protocols.

3. Organizational Culture and Resistance to Change

Hospital stakeholders—including clinicians, administrators, and IT—may resist new tech if they're not involved early or if their concerns aren't addressed. Resistance can come from workflow disruption, concerns over automation, or simply unfamiliarity with digital systems and dashboards.

4. Data Security and Privacy

The rise in data breaches and ransomware attacks makes robust cybersecurity and compliance with frameworks such as HIPAA, NABH, and India's DPDPA non-negotiable. Yet constant new threats and patchwork infrastructure keep CIOs and compliance officers on high alert.

5. Data Integration and Management

Hospitals struggle to move from isolated databases and manual record-keeping to seamless, unified data flows—a prerequisite for real-time analytics, AI alerts, and predictive care. Nearly 60% admit ongoing issues with integrating and managing data across clinical systems.

6. Financial Constraints and ROI Clarity

OR integration projects require significant capital investment, but many hospitals—especially in Tier 2/3 cities—lack the budget or a clear business case for how digital transformation will save time, reduce errors, or boost long-term efficiency.

7. Regulatory Compliance and Changing Standards

Regulations are tightening, and frameworks are evolving (like ABDM in India). Digital adoption is often delayed by the need to align with new reporting, privacy, and quality compliance rules.

8. Vendor Lock-In and Scalability Issues

Many hospitals face difficulties when proprietary integration solutions restrict future upgrades, expansion, or compatibility with new medical equipment. Vendor lock-in can limit flexibility, increase long-term costs, and hinder adoption of emerging technologies.

Hospitals increasingly seek open-architecture, modular platforms that support both current and future clinical needs, ensuring systems can scale and evolve without being tied to a single manufacturer or technology.

The Esbee Promise

At Esbee Dynamed, we don't just sell software; we build ecosystems that solve these specific challenges. Whether bridging legacy gaps or ensuring ironclad data security, our mission is to make the complex simple. From single-OR pilots to network-wide deployment, CREA and UCP deliver NABH-ready integration trusted by India's frontline surgical teams.

Esbee Dynamed specialises in OR integration and connected surgical instrument tracking solutions. To learn how we can support your operating theatre, contact our team.

Write to us at info@esbeedynamed.com for more info.