



What Hospital Leaders Should Consider Before Investing in OR Integration

by Editorial Team

What Hospital Leaders Should Consider Before Investing in OR Integration

An operating room is one of the most technology-intensive environments in a hospital.

Imaging systems, surgical cameras, displays, patient information, recording, communication and hospital IT systems all come together around a single clinical workflow.

As hospitals modernise their surgical infrastructure, OR integration is increasingly becoming part of the conversation.

But for hospital leadership, the decision is bigger than choosing an integration system.

It is a **capital investment, an operational decision and a long-term technology commitment.**

The important question is not simply:

“Which OR integration system should we buy?”

It is:

“What should this investment achieve for our hospital, and how do we make sure it continues to deliver value over time?”

1. Start With the Business Objective

OR integration can serve different priorities.

A hospital may want to improve surgical workflow, create a premium operating environment, support teaching and remote collaboration, or build infrastructure for future surgical technologies.

Before evaluating vendors, leadership should define what the investment needs to achieve.

For example:

- Improve OR utilisation
- Support new surgical specialties
- Improve access to surgical information
- Strengthen documentation and archiving
- Enable teaching and remote collaboration
- Standardise technology across multiple OTs
- Prepare for future technologies

Without a clear objective, OR integration can become an equipment purchase rather than a strategic investment.

2. Look at the Total Cost of Ownership

The purchase price is only one part of the investment. Consider the total cost over the expected life of the system, including:

- Installation and commissioning
- Infrastructure requirements
- Software licensing
- Annual maintenance
- Upgrades
- Training
- Technical support
- Future expansion

A system that appears less expensive initially may become costly if every upgrade or expansion requires significant additional investment.

The better question is:

“What will this system cost us to operate, maintain and expand over its useful life?”

3. Understand What You Are Actually Buying

Not every system described as “OR integration” delivers the same capabilities.

Some focus primarily on video routing, while others bring together video, recording, communication, data and workflow.

Hospital leaders should therefore look beyond specifications and ask vendors to demonstrate the **complete clinical workflow**.

Instead of asking:

“How many inputs does the system support?”

Ask:

“Show us how this system works during an actual surgical procedure.”

That difference can reveal a lot.

4. Consider Your Existing Equipment

Most hospitals already have significant investments in endoscopy systems, microscopes, surgical cameras, monitors and other medical devices.

Replacing functional equipment simply to accommodate an integration platform may not make financial sense.

Understand how the proposed system works with the hospital's **existing equipment mix**, and what additional interfaces or infrastructure may be required.

Also ask how easily new equipment can be added in the future.

5. Think Beyond a Single Operating Room

A hospital may initially plan to integrate one OT, but the technology strategy should consider future expansion.

Can the same platform extend to additional rooms?

Can configurations be standardised while allowing individual specialties to have different workflows?

Can the hospital avoid creating separate technology silos?

A good OR integration strategy should support the hospital's growth plan, not just its immediate project.

6. Plan for Technology Changes

Medical technology evolves faster than hospital buildings.

The OR being designed today may eventually include robotic systems, advanced imaging, AI-enabled applications or new hospital information systems.

Leadership should therefore ask:

“How easy will it be to adapt this system when our technology changes?”

A flexible platform can help protect the value of today's investment while preparing the hospital for tomorrow.

7. Don't Underestimate User Adoption

A technically advanced system is of little value if the clinical team finds it difficult to use.

Surgeons, nurses, technicians and biomedical teams interact with technology differently.

Evaluate:

- Ease of use
- Interface simplicity
- Training requirements
- Workflow disruption
- Technical support
- Feedback from existing users

A simple test is:

Can the clinical team understand the workflow without needing a technical expert beside them?

Technology should reduce complexity in the OR, not add to it.

8. Evaluate the Vendor, Not Just the Product

An OR integration system becomes part of the hospital's clinical infrastructure.

Leadership should therefore evaluate the organisation behind the product.

Consider:

- Experience with similar hospitals
- Technical support and service response
- Product and software capabilities
- Upgrade roadmap
- Installation and implementation expertise
- Customer references
- Long-term support model

The vendor relationship may continue for years after the procurement process is complete.

9. Demand a Real Demonstration

A presentation can show what a system is capable of. A demonstration shows what it is like to use.

Ask vendors to demonstrate scenarios relevant to your hospital, such as:

- Switching between surgical sources
- Displaying different sources on multiple screens
- Recording a procedure
- Retrieving surgical media
- Connecting with hospital systems
- Supporting remote consultation
- Adding a new device
- Expanding the system to another OR

The closer the demonstration is to the hospital's actual workflow, the more useful the evaluation will be.

10. Ask About Failure and Downtime

Technology in an OR should not be evaluated only when everything works perfectly.

Ask:

“What happens when something doesn't work?”

What happens if a video source fails, a display stops working, the network goes down or technical support is required during a procedure?

The goal is not to find a system that can never fail.

It is to understand **how quickly normal operation can be restored** and what support is available.

11. Make Security and Compliance Part of Procurement

An integrated OR can interact with patient information, surgical records, hospital networks and other clinical systems.

Cybersecurity and compliance should therefore be evaluated alongside clinical functionality.

Hospital IT and information-security teams should be involved early.

Questions should cover:

- Access control
- Data protection
- Surgical media storage
- Software updates

- Security testing
- Network architecture
- IT documentation

Security should not become an issue discovered after procurement.

12. Consider a Phased Investment

Not every hospital needs to integrate every OR at once.

A phased approach can allow hospitals to start with a priority OR, evaluate adoption and workflow, and then expand.

For example:

Phase 1: Integrate a priority OR

Phase 2: Evaluate usage and outcomes

Phase 3: Expand to additional rooms

Phase 4: Connect broader systems and workflows

This can reduce implementation risk while giving leadership a clearer view of actual value.

13. Define How Success Will Be Measured

The project should not end when the system goes live.

Depending on the hospital's objectives, useful measures could include:

- OR utilisation
- Workflow interruptions
- User adoption
- Surgical media usage
- Documentation efficiency
- Remote consultation usage
- System availability
- Service response time
- Cost of future expansion

The metrics will vary by hospital, but the principle remains the same:

Technology investment should have measurable outcomes.

The Bigger Decision

OR integration should not be viewed simply as another line item in an OT equipment list.

It is part of the hospital's **digital infrastructure**.

The right system can connect existing technologies, support new clinical capabilities and create a more consistent digital environment across operating rooms.

The wrong system can create another technology silo, increase long-term costs and make future upgrades more complicated.

For hospital leadership, the decision comes down to five questions:

1. **Does it solve a real operational need?**
2. **Will it work with our existing environment?**
3. **Can it scale as the hospital grows?**
4. **Can our teams actually use it?**
5. **Will the vendor support it as our needs change?**

If the answer to all five is yes, OR integration becomes more than an upgrade to the operating room.

It becomes an investment in the hospital's long-term surgical infrastructure.

A Final Thought for Hospital Leaders

The best OR integration system is not necessarily the one with the longest feature list.

It is the one that fits the hospital's clinical priorities, existing technology, infrastructure, people and growth plans.

Before signing a purchase order, look beyond the equipment.

Look at the **workflow, lifecycle, vendor, people and future of the hospital.**

That is where the real value of an OR integration investment is determined.

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.