

Calculating ROI for a Hospital on the implementation of Fixed Assets Physical tracking with Bar-coding

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Introduction

The fixed asset management of the hospital's property and resources is dictated by the financial accounting procedures of the government laws that the Hospital / Trust operates in & the individual accounting practices of the Hospital / Trust.

Technically, all recorded assets of the organization are those goods that cost over a certain bench mark pricing dictated by the Trust or Hospital's accounting policy, although they tend to group things like IT equipment together.

The most expensive items on their register are probably:

- ▶ the radiology equipment (like a CT or MRI or PET / SPECT scanner), where they have scanners that cost in excess of 6-8 Crores each,
- ▶ closely followed by the operating theatre equipment
- ▶ portable scopes (like Endoscopes)
- ▶ and scanners (like Ultrasound).

In order to manage the growing number of assets for accounting purposes as well as to keep track of their whereabouts, Hospitals need a specialist system that would competently handle all the items throughout their life cycle.

Ad hoc asset management systems are very labor intensive and add considerably to the total cost of asset management.

Usually trusts & hospitals have a system that is difficult to deploy and fails to handle the increasing amounts of items (like multiple Spread sheets); what they need is a professional solution that could build confidence and that which would enable them to keep more accurate records.

The Solution should provide them with:

1. The ability to hold as much information about their assets as they want to,
 - ▶ including serial numbers,
 - ▶ location details
 - ▶ as well as accounting information on purchase cost,
 - ▶ replacement value
 - ▶ and book price.
2. They must hold every accountable asset on it
 - ▶ from non-medical kitchen equipment,
 - ▶ vehicles,
 - ▶ soft furnishings,
 - ▶ to the contents of their latest up-to-date operating theater.
3. It must contain all the items of equipment needed to run a modern hospital.
4. Every piece of hospital equipment is now to be accounted for in the database.
5. Hospitals must be made to become confident that their asset management system and procedures now represent an accurate picture of the hospital's assets.

Policy must be place in the organization, so that every item purchased must come through Assets department and that it is automatically entered onto the register.

Annually, a detailed asset list report can be produced which allows custodians to confirm to the management team about

- ▶ the location,
- ▶ correct ownership
- ▶ and value of each item of equipment.

The Assets Management system is to be designed to quickly build an accurate, centralized database of assets, and to keep it up to date the organization must also have a scheduled, rolling programme of physical checks, because:

- ▶ items get moved,
- ▶ transferred
- ▶ or even disposed of,

Without the management being informed.

Return on Investment (ROI) analysis is one of several approaches to building a financial business case. The term means that decision makers evaluate the investment by comparing the magnitude and timing of expected gains to the investment costs.

Decision makers will also look for ways to improve ROI by reducing costs, increasing gains, or accelerating gains.

The Simple Return on Investment

Return on investment is frequently derived as the “return” (incremental gain) from an action divided by the cost of that action. That is “simple ROI”. For example, what is the ROI for a new Assets management program that is expected to cost Rs.5, 00,000 and deliver an additional Rs.7,00,000 in increased profits during the same time?

$$\text{Simple ROI} = \frac{\text{Gain} - \text{Investment cost}}{\text{Investment costs}} = \frac{\text{Rs.700000} - \text{Rs.500000}}{\text{Rs.500000}} = 40\%$$

Simple ROI works well in situations where both the gains and the costs of an investment are easily known and where they clearly result from the action.

Here's an example of the results for a ROI analysis:

Duration of Project including the training	25-30 days
Estimated numbers of man hour days	720
Period over which benefits are calculated	12 months

Costs

Software costs for 5 user WAN version	Rs.1,25,000
Tracking of approx.10,000assets@20-30/= per asset	Rs.3,00,000
Bar-coding @ Rs.5/= per asset for app.10,000 assets	Rs.0,50,000
Cost of Data Mining & Porting for app.10,000 assets	Rs.01,20,000
Implementation and support for 6 months	Rs.0,00,000
Annual Software Maintenance	Rs.0,25,000
Training	Rs.0,00,000
Evaluation of project	Rs.0,00,000
Total cost	Rs.06,20,000

Benefits for an assets capitalization of Rs.10,00,00,000

Labour savings due to non-deployment of company staff @5,000 X 8 X 30	App.Rs.12,00,000
Productivity increases due to identification of missing & under-utilised assets Like identifying an unused UGI Endoscope, unserviced CT machine	App.Rs.1,60,00,000

Here's an example of the results for a ROI analysis:

Insurance of Assets, Service & Maintenance of Expensive assets etc.,	
Total benefits	App.Rs.2,07,00,000
Return on investment	3338.70%
Payback period	12 months

Other Intangible Benefits

- ▶no need for deployment of staff for annual assets tracking &management
- ▶Complete knowledge of all transfer of assets between, unit between departments, between custodians etc., leading to complete control and ZERO loss of assets
- ▶Complete history of each asset with the service, repairs, AMC, Insurance and inward-outward movement leading to control on costs and negotiation power with service providers (like repeated replacement of radiological radiation bulbs)
- ▶Master & Sub-Assets registers with ability to deploy assets as per needs preventing non or under-utilization and repeat purchases
- ▶Identification of temporary needs of expensive machinery or equipment and arranging for Lease hire and cost control on leased assets
- ▶Identification of excess assets and under-utilized assets fit for hiring to units needing them for short periods, bringing in much needed other incomes
- ▶Asset Image captured register useful for training new recruits

Simplifying the process

If you've been following through all of these steps, then you'll have realised just how many calculations are involved in conducting a thorough Fixed Assets management analysis.

Some may start to look at areas such as opportunity costs and productivity benefits, which are beyond the scope of this project.

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