Documented return on implementation of traceability system
September 2007
OBJECTIVE OF PRESENTATION

A traceability system is not simply a costly tool
Rather an investment in the upgrade of your CSSD
Qualifying it to meet the ever expanding demands of increased productivity and quality – while saving you money!
BACKGROUND

- Most people working in the CSSD can see the value of having a traceability system
- Often times more difficult to persuade management to carry the cost
- T-DOC developed over the course of the last 10 years with more than 400 installations in more than 30 countries across 5 continents
- This experience has made the advantages of a traceability system very clear
- A Return on Investment (ROI) Calculation translates these advantages into sound, financial arguments
• Listing the cost of the T-DOC investment vs. the benefits and savings obtained through the system, a measure of the ROI can be achieved

• The results of the ROI, when customized to a specific customer, are not a guarantee

• Rather an indication of the implicit and explicit savings a hospital can expect as a result of implementing T-DOC
CASE STUDY

• T-DOC installed at Valle del Lili in Cali, Colombia in January 2007
• Prior to the installation certain parameters where measured
• 4 months after installation the same parameters were measured again to monitor the effect
• Other parameters can be measured, but require a longer lapse of time
A Savings Indicator describes the improvement of a specific process through the use of T-DOC and how this improvement instigates savings for the hospital.

The level of improvement to be expected from the Savings Indicators will vary from hospital to hospital and be dependent on the methods of work, size and familiarity with T-DOC.

**DEFINITION OF ICONS**

- **Signifies in which way the work processes are improved**
- **Signifies the savings obtainable through an improvement of processes**
SAVINGS INDICATOR A

PACKING TIME

THE AVERAGE TIME SPENT ON PACKING A TRAY/SINGLE PACKED INSTRUMENTS WILL BE REDUCED WITH T-DOC

T-DOC will provide improved tools for tray assembly thus decreasing the amount of time spent on packing trays/single packed instruments while heightening the quality level.

The improved labor efficiencies spurred by the use of T-DOC will directly instigate cost savings due to the liberation of technician time, which then can be activated for other areas of the production.
25 to 17 minutes = 8 minutes

x

Technician cost per minute = $0.03

x

Number of trays per year = 233,480

Total saving per year $56,035

32% IMPROVEMENT
Savings Indicator B
Sterilizer Documentation

The average time used for sterilizer documentation will decrease with the use of T-DOC.

T-DOC will automate the data logging process by electronically storing process documentation, as well as through batch registration where registration of entire loads is done through a few swift barcode scans.

The improved labor efficiencies spurred by the use of T-DOC will directly instigate cost savings due to the liberation of technician time, which then can be activated for other areas of the production.
15 to 2 minutes = 13 minutes

Technician cost per minute = $0.03

Loads sterilized per year = 10,051

Total saving per year $3,894

87% IMPROVEMENT
Instead of having to manually compile management reports, T-DOC will automatically generate reports on any information stored in the database.

The improved management reporting options with T-DOC will directly instigate cost savings due to the liberation of management time and indirectly serve as a valuable tool for improving future production processes.
480 to 10 minutes = 470 minutes

x

Manager cost per minute = $0.1

x

Management reports compiled per year = 39

Total saving per year $1,706
SAVINGS INDICATOR D
TIME RELATED EXPIRATION (I)

Instead of having to manually check every single sterile good for expiration date, with T-DOC it is possible to centrally monitor expirations and be warned of instruments about to expire.

Not having to dedicate resources for days a month to check expirations will directly instigate cost savings due to the liberation of technician time, which then can be activated for other areas of the production.
60 to 0 minutes = 60 minutes

\[ \times \]

Technician cost per minute = $0.03

\[ \times \]

Number of expiry checks per year = 360

**Total saving per year $644**
SAVINGS ON TIME RELATED EXPIRATION IN TERMS OF REPROCESSING WITH THE USE OF T-DOC.

By having a quick and effective system to warn of time related expirations, fewer trays/single packed instruments will have to be reprocessed without use.

Diminishing the amount of times instruments require reprocessing, instigate direct cost savings related to the decreased processing and indirect - due to the decreased wear of instruments as a result of over-processing.
TIME RELATED EXPIRATION (II)
VALLE DEL LILI PERSPECTIVE

Number of trays processed annually = 233,480

Average cost of processing a tray = $4

Trays reprocessed per year due to expiry = 3%

Total saving per year $26,262

100% IMPROVEMENT
THE AVERAGE TIME SPENT ON DISPATCHING TRAYS/SINGLE PACKED INSTRUMENTS WILL BE REDUCED WITH T-DOC

Dispatching goods to customers only requires a few scans with T-DOC thus decreasing the amount of time spent on dispatching while ensuring the instruments are registered as delivered to the correct customer.

The improved labor efficiencies spurred by the use of T-DOC will directly instigate cost savings due to the liberation of technician time, which then can be activated for other areas of the production.
25 to 12 minutes = 13 minutes

\[ \times \]

Average number of trays dispatched at the time = 5

\[ \times \]

Technician cost per minute = $0.03

\[ \times \]

Number of trays per year = 233,480

**Total saving per year $18,093**
OTHER INDICATORS
NOT MEASURED
THE AVERAGE NUMBER OF INSTRUMENTS PER OPERATION WILL BE REDUCED WITH T-DOC

T-DOC will provide improved tools for tray assembly, as well as an improved overview of the location of various instruments. Consequently the amount of misassembled trays is decreased, subsequently lowering the average need of instruments per operation.

Diminishing the amount of trays/single packed instruments required per operation, instigates direct cost savings related to the decreased processing and indirect - due to the decreased wear of instruments as a result of over-processing.
SAVINGS INDICATOR (H)
CANCELLATION OF OPERATIONS

The number of operations cancelled due to missing or defect instruments will decrease with the use of T-DOC.

Usage of T-DOC will result in an improved process and quality control of tray assembly/processing as well as provide an improved overview of the location of various instruments, thus ensuring that instruments can be supplied sterilized and fully functional in due time for an operation.

If critical instruments are missing or not supplied fully functional in due time, operations may in extreme cases be cancelled, thus eliminating the revenue for the operation for the hospital. With T-DOC, however, this risk is diminished.
SAVINGS INDICATOR (I)
DELAY OF OPERATIONS

THE NUMBER OF OPERATIONS DELAYED DUE TO MISSING OR DEFECT INSTRUMENTS WILL DECREASE WITH THE USE OF T-DOC

T-DOC will provide improved tools for tray assembly, as well as an improved overview of the location of various instruments. Consequently the amount of misassembled trays is decreased, thus ensuring that critical instruments can be located in due time and in correct shape for an operation hereby optimizing hospital operation planning.

Every minute an operation is delayed capitalizes lost revenue for the hospital, as this means that the operation planning is not optimized. Consequently every minute T-DOC saves by providing the correct trays and instruments to the OR in time in effect means gained revenue.
RETURN ON INVESTMENT
SAVINGS OVERVIEW

- Packing: $56,035
- Sterilizer Documentation: $3,894
- Management Reporting: $1,706
- Expiry Labor: $644
- Expiry Reprocessing: $26,262
- Dispatching: $18,093

- Total Savings per Year: $106,270

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CONTINGENCIES

- Never perfect return
  - Investment
  - Installation time
  - Learning curve
  - New employees
  - Manual mistakes
RETURN ON INVESTMENT

• Pay-back and Timing
  • 50% first year
  • 70% 2nd and 3rd year
  • 90% 4th year
  • Never 100%
  • Pay-back time for Valle del Lili = 2.4 years
This presentation has been focused on emphasizing the financial returns of an investment in T-DOC, however the financial savings are merely side effects of what should be the primary goal - the streamlining of your work processes and thus ultimately, improving the relationship with your customers!
FINANCIAL RETURNS

INCREASED QUALITY

IMPROVED PROCESSES

Increased efficiency

Heightened accuracy

IMPROVED DOCUMENTATION

Reducing over-processing

INCREASED QUALITY

Traceability

RECORD

CUSTOMER SATISFACTION

Improved

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Thank You For Your Time

Johanne Brændgaard
Sales Manager
JLB@T-DOC.com