# TMA Technology, Ltd.
# Return on Investment

The **TMA Technology, Ltd** web portal ([www.TMATech.com](www.TMATech.com)) and the Radiation Oncology Performance Enhancement (ROPE) Database work seamlessly to support the radiation oncology team.  Return on investment includes:

## I.  Documenting Rules and Processes
  a)  To remain in compliance with accrediting organizations, facilities require an annual review and revision of department policies and procedures.  Reviewing existing policies and writing new policies can take numerous hours of research as well as staff involvement.  The TMAT web portal offers a variety of administrative, clinical and technical policies that can be easily customized for each individual department, therefore, *eliminating many hours of research and development for the radiation oncology team*.
  b)  By providing updated policies, which clarify how procedures are to be executed, *employee retention is enhanced and efficiency and consistency in patient care is increased*.
  c)  Accrediting organizations are constantly updating regulations and standards to keep up with the rapid changes in treatment modalities. The documents provided on the TMAT web portal are constantly updated to remain current with these organizations, *a huge timesavings for the subscriber*.
  *Projected annual savings  ( FTE X hours = 40 $/hr x 80 HOURS /YR)     $3,200*

## II.  Measuring Actual Operations, Not Merely Charges and Payments
  a)  According to the Gartner Group, a leading consulting firm, 38-50% of office errors are caused by staff not knowing whether a task has been completed. [1] Such errors can lead directly to billing problems as well as errors in patient care.  The ROPE database provides a comprehensive patient QA section that requires input from all staff involved in the patient treatment process.  Reports can be generated to show which tasks have been completed, which haven't and why (great information to review during chart rounds).  *Such valuable information can be utilized by the RO team to prevent costly errors*.
  *Projected annual savings  ( 1 civil fine for CMS violation in billing)     $10,000*
  b)  Six Sigma outcomes tell us that hidden processes cause many operational issues. [2]  The ROPE has implemented ways of tracking several hidden processes in radiation oncology.  For example, the majority of clinics require the physicians to allow adequate planning time before the first patient treatment.  Failure to allow adequate time can lead to calculation errors, data transfer errors and setup errors, to name a few.  Tracking this process will provide the RO team with the data necessary to make sure this requirement is met. *Thus reducing the risk of potential liability issues*.

*Projected annual savings*  *(1 legal retainer re: liability / CMS violation in billing)*
*$10,000*

   c)  Staff productivity directly affects operations and outcomes.  The ROPE can track certain aspects of staff productivity that are not typically included in the charging statistics.  For example, the dosimetrist may charge for one treatment plan on a patient but may have actually run several plans.  By tracking all of the plans that were run and the time expended, *productivity statistics are more accurately accounted for and the need for additional staff can be better justified.*
*Projected annual savings*  *(FTE X hours = 20 $/hr x 400 HOURS /YR)    $8,000*

## III.  Accreditation and Compliance

   a)  The executive director of Network Accreditation Programs for JCAHO is quoted as saying, "In my mind, the question isn't, 'Can you afford accreditation?' but 'Can you afford not to be accredited?' " [3] Accrediting organizations focus their standards on specific issues in patient care.  The JCAHO accrediting organization requires certain information such as patient rights, privacy practices, advanced directives, abuse/neglect screening, etc. be provided for each individual patient.  The ROPE has added these items to the patient QA section to adequately document that this information was provided.  The ACR and ACRO standards for radiation oncology focus more on the technical issues.  The ROPE has implemented many of these standards to the patient QA section as well.  For example, all of the items in the physician section of the patient QA are ACR and ACRO standards.  *By implementing these items in the database, compliance reporting is made easy and efficient.*
*Projected annual savings*  *= PRICELESS*

   b)  Providing adequate documentation for personnel is a key requirement during the survey process for accreditation (JCAHO, ACR, ACRO).  The ROPE has a personnel section for the user to record licensure and certification information, in-services attended, and continuing education credits obtained. A comprehensive report showing all of this information can be generated for each employee or all employees in the department.  *By tracking this information online, it is easier to keep updated and compliant and the individual employee is empowered to be responsible for his or her own information.*
*Projected annual savings*  *= PRICELESS*

   c)  Maintaining compliance with state and federal organizations regarding equipment can be a tedious and time-consuming task for the medical physicist.  The ROPE provides several ways to meet compliance issues and make this process more manageable.

- The issues and maintenance section allows the user to generate reports documenting:
  - Timely preventive maintenance was provided for the equipment
  - Proper action and follow-up was provided in a timely manner for equipment problems

- o Revenue lost due to down-time for the equipment
- o Statistics necessary to justify equipment upgrades or replacement

*Projected annual savings  (FTE X hours =  $150/hr x 120 HOURS /YR)  = $18,000*

- ▪ The equipment QA section tracks what QA was done on the linear accelerator, simulator and treatment planning system.  If the items in this section are completed in a timely manner, the recommendations set by the AAPM Task Groups for radiation oncology equipment will have been met.

*Once again the report generation capabilities of the ROPE provide the documentation and guidelines necessary to maintain compliance.*

## IV. Access to New and Emerging Technologies

a) When researching information for new programs or new industry products, the TMAT web portal provides over 650 links, filtered by categories of interest for the radiation oncology professional to find what they need quickly and efficiently.  Again, *saving time and increasing productivity* is the key benefit to the subscriber.

b) Adding a new technology or service to a department requires a considerable amount of time to research:  what equipment and supplies are needed, what staff education and involvement are required, what things should be done before the procedure is implemented, what policies should be written, etc. TMA has done the legwork for you by providing that information as well as completed policies for the following special programs:  IMRT, Stereotactic Radiosurgery, Prostate Seed Implant and Vascular Brachytherapy.

c) The news section of the web portal, compiled specifically for radiation oncology, keeps staff informed of industry information, vendor product bulletins, press releases, and new products. Vendor safety issues for staff and patients can be addressed promptly and efficiently, therefore *reducing the chance for liability issues.*
   *Projected annual savings  = PRICELESS*

## V.  Utilizing an Application Service Provider (ASP) Database Solution

a) An ASP solution offers access to the TMAT web portal and the ROPE via any workstation, laptop or PDA with internet access.  This setup increases both flexibility and efficiency in the clinical setting.

b) All software upgrades for this ASP product are done remotely by TMA instead of onsite by the staff, therefore allowing staff to focus on other clinical issues.

c) Upgrades are seamless with minimal learning curve.

d) Hardware requirements for an ASP are minimal compared to many other applications in radiation oncology.

e) Data back up is done by TMA in an offsite, secured and controlled environment, therefore eliminating the need for assigning this task to onsite staff and the need for onsite server space.

f)  An article in PC Magazine recently compared Excel spreadsheets and real relational databases.[4]  Here are a few conclusions:

  - Databases are safer.  Excel, for example, does everything in memory so any unsaved data may be lost if your computer crashes.  Databases write data to the hard drive immediately.
  - Databases can handle more data.  Excel can technically handle more than 65,000 rows of data, but doing so will likely bog down even the fastest PC.
  - Databases can easily link tables of related data together.  This is where the words relational and database come together.  Storing related data together in a single table or spreadsheet can be unmanageable and invite errors.

*Total Projected Range of Annual Savings with the ROPE* = $49,200  to  PRICELESS

**REFERENCES**

1 Timothy McKeough. Taking Control. *Advance for Imaging and Oncology Administrators*. October 2003.

2 Mikel Harry, Ph.D.; Richard Schroeder.  Six Sigma: The Breakthrough Management Strategy Revolutionizing  the World's Top Corporations.

3 Gina Zimmerman. Network News.  Issue 1, 2004.

4 Helen Bradley, *PC Magazine*.  February 2004.