

Professional Opportunities for CAs In Information Technology Sector

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< EXECUTIVE SUMMARY >

◆ With the changing Economic Scenario and globalisation several opportunities are opening up new sectors like Insurance, Telecom and E-governance for Chartered Accountants. This places a demand on the CAs to rapidly change their role from an Accountant to a Tech Savvy Advisor and partner to his client. While

Technological changes have proved to be a boom for the Corporate, on the flip side, any lapse and control and security can prove disastrous for them. It is here that the Chartered Accountants come into picture. The article below recognises the various opportunities available to Chartered Accountants in Information Technology Sector.



raditionally the role of Chartered Accountants was limited to financial accounting and its audit, management accounting, income tax, consultancy services and the like. But with the changing economic scenario and globalisation, several opportunities are opening up in new sectors like insurance, telecom and e-governance. In these and in traditional areas, technology is binding all functions be it strategic, operation or financial. This places a demand on the CAs to rapidly change their role from an accountant to a tech savvy advisor and partner to his client. Amidst such fast paced developments, where even the small enterprises function in a computerised environment it is imperative

The author is member of the Institute. The views expressed herein are the personal views of the author and do not necessarily represent the views of the Institute.

that we Chartered Accountants become techno savvy.

Gartner Dataquest predicted that the IT spending worldwide will reach \$ 2100 billion in 2003. This is a 4.9% increase when compared to \$1 300billion in 2002. Though the industry will experience budgetary constraints, insufficient return on investment and the like, there still will be 67% growth in worldwide business spending. This growth will be mainly seen in manufacturing industry, financial services government and communication sector.

While technological changes have no doubt proved to be a boon for the corporate, on the flip side, any lapse in controls and security can prove disastrous for them. It is here that we Chartered Accountants come into picture. We can provide the necessary assurance to management that the controls and security are in place and ensure accountability.

Besides the Garnter's analysis, a report on the Top

Ten Technology issues released by AICPA (American Institute of Certified Public Accountants) reveals that business and financial reporting applications are among the top ten tech areas. The top ten tech issues among the 42 are:

1. Business and financial reporting applications
2. Training and technological competence
3. Information security and controls
4. Quality of service
5. Disaster recover (including business continuation and contingency planning)
6. Communication technology and bandwidth
7. Remote connection tools
8. Web based and web enabled applications
9. Quality of IT personnel
10. Messaging applications (email, faxing, voice mail, instant messaging)

The above analysis is based on the responses from 195 people. Out of these 195 CPA's, 135 were CITP (Certified Information Technology Professional). This shows that technology has become an integral part of our business and our personal lives. The main concern now is to ensure that it is used effectively and efficiently.

PRACTICE/ SPECIALITY AREAS

The primary concerns of an auditor operating in a technology environment are

- Security: Ensuring that the systems are protected against unauthorised access i.e. physical and logical security
- Availability: The data, information and systems are available as planned for operations
- Confidentiality: The critical information of the organisation is confidential and appropriately protected
- Integrity: Ascertain that information, data and process are accurate, complete, timely and authorised

The areas where a Chartered Accountant can practice and specialise are

- System Development Life Cycle
- Information Security
- Performance measurements and monitoring
- Emerging standards
- e-Governance

SYSTEM DEVELOPMENT LIFE CYCLE

The role of CAs

In the system development life cycle, the auditors

can play a significant role by helping the management in the process of:

1. Requirement definition: Analysing and determining the requirements.
2. System selection: Whether the proposed system will suit the requirement of the company System development and implementation: Facilitating the development and implementation of the designed system.
3. Functional testing: Testing the developed system to ensure that it is working as desired and able to sustain the actual work load when implemented in production environment system /data migration: When the company wants to move from one application to another, to ensure that no data is lost in the migration process.
4. Post implementation review: To ensure that the process is working as envisaged. Last but not the least is the systems control assessment where the auditor needs to ensure that all the controls are implemented in the system.

The client segment

The targeted clients will comprise of large corporates- where all the above mentioned services can be delivered and small and medium size business- where the functions will be limited to systems selection and data migration process. Besides them the most lucrative clients are software companies and banks, which provide a scope for functional testing.

Practice categories

Proprietary concerns: Can provide services in selection of packaged software Small and medium sized firms: Can provide services in requirement definition, system selection and data migration Large firms can provide packaged services besides functional testing

INFORMATION SECURITY

According to the survey conducted by Confederation of Indian Industry (CII) in 2002, information security breaches are increasing in the country. This is on the basis of 80% of the industries surveyed by them. Of these 47% of the industries operate without any formal security policy. When a security is breached the company cannot ensure security, confidentiality, availability, and integrity of information. Such situation can lead a company to a very disastrous position and ultimately to its close down.

The role of CAs

The areas where the auditors can play a pivotal role

in information security are risk assessment - determining the risk that the company is exposed to, doing a cost-benefit analysis and advising the management on the levels of risk it faces by not implementing a security measure; review of application controls - this can be done while the system is being developed, post implementation review or as a regular audit of the application. The auditor provides an assurance that the application provides the required control when the data is being processed. The controls may in the form of input controls, processing controls, output controls and the like. Disaster recovery and business continuity is another area where the auditors can provide services.

The client segment

The targeted clients will be banks and financial institutions, corporates having online business or providing services online.

Practice categories

Large and medium sized firms may usually provide information security services. These services may usually require complementary skills of other professionals. Proprietary concerns and other small firms can specialise in evaluation of disaster recovery plans and its testing, in computer fraud detection and the like.

PERFORMANCE MEASUREMENT AND MONITORING

Companies today are measuring their performance in terms of customer satisfaction, technological growth and advancement. Such measurement does not just depend on the correctness and timeliness of data and information generated by the companies but also on other parameters like security, response time, downtime, cost, service.

Role of CAs

The auditor can provide the performance measurement and monitoring services by performing the task of ROI assessment, performance management services for software development, system development for time measurements and benchmarking. Softwares are now available which help in improving the productivity and profitability of the company. These products aim to lower the cost of developing new products, to introduce the products in the market as soon as possible, cut down the cost of managing supplies, reduce project overruns and the like. One such product that is available is product life cycle management (PLM) systems. They combine the advances of supply chain management with the traditional R&D and marketing concerns. There are

other products that help in budgeting and planning like those offered by Hperion, Comshare, Adaytum, Sytems Uion and SAS Institute. These products add a lot of value especially in case of big companies.

The client segment

The targeted clients for providing such services will be corporates where ROI analysis is important considering the heavy investment made in the IT and software companies. Practice categories Small and medium sized firms can specialise without much competition from large firms.

EMERGING STANDARDS

Many standards have been developed for information technology and its implementation. Though they are not mandatory, compliance with them provides an assurance to the management that the assets are safeguarded and proper control and security measures are implemented. It also helps in effectively communicating security and control requirements across different levels and different departments within the organisation. Some of the standards are COBIT, BS7799, ISO, SET guidelines and the like.

The client segment

The services of implementation of standards, assessment, audit and documentation can be delivered to banks, software companies and the like.

Practice categories

These can be niche areas for small and medium sized firms. Individuals can shine by associating with Standards setting body, presentation in seminars, training employees to adhere to standards and the like.

E-GOVERNANCE

E-governance is the use of tools of Information and Communication Technology to enable the citizens and other bodies to participate in the process of democracy. The Central and State governments are keen on implementation of such projects. The services which can be delivered can be system selection, feasibility and viability studies, RFP for BOT model services, control assessment, implementation support for roll-out, BOT assurance and the like. In e-governance interfaces are many: bureaucrats, employees, service providers, vendors and the general public. There needs to be a person who can interface and intermediate with them. The Chartered Accountants can be the best person who can provide the

consultancy service as he has knowledge of finance, technology and is also the general public who will use such services.

Role of CAs

Risk analysis: This will involve assessment of operational risk, financial risk, technological obsolescence and the like.

Training: Training of employees in basic IT, operations involved, using the software, handling disaster and the like.

Preparation of documents: This will involve preparing the manuals and technical documents He could even review operation reports as also identifying areas of difference and improvement

The client segment

These services can be mainly provided to State and Central governments and large firms in government services.

Practice categories

In this sphere there is a wide variety of opportunities for large and small firms. Small firms can also provide local implementation support.

OTHER AREAS

Besides those mentioned above, there are a few related areas where the Chartered Accountant can play a significant role. These include:

1. **Preparation of polices:** Organisational policies provide the basis for functioning of the organisation and the use of its resources. The policies relate to network, security, email, LAN and the like.
2. **Review of IT organisational structure:** The role in this case would include appropriately establishing organisational structure with inbuilt control and security system like segregation of duties, designing of preventive, detective and corrective controls including compensating controls.
3. **Risk analysis:** It involves various areas viz., software risk, hardware risk, financial risk, technological risk and the like. The service that can be provided will include a risk assessment of various areas that exist in the organisation and a corresponding review of control and security measures that are implemented.
4. **Framing of long term and short term plans:** The IT plans of the organisation both long term and short term should be in alignment with the overall organisation goals and strategies. The service could include

both preparation and review of such plans.

5. **Internal control assessment** Like in manual environment, internal controls are important in computerised environment. The controls in latter are completely different from the former since they are inbuilt. The role could be that of initial implementation of the controls, their periodical review and recommendation of the measures where internal controls can be implemented using the IT.
6. **Continuous and concurrent auditing:** Continuous and concurrent auditing will help the management in identifying the areas where controls are weak, implementation of appropriate measures, identification of areas where errors and fraud have been committed and the like.
7. **External assurance:** The information system will also help the management in obtaining an assurance from the third party that all controls and security are effective and functioning as desired by them. External assurance will also serve the purpose when the company is associating itself with a third party.
8. **Contractual agreements:** Many contractual agreements are drafted in the organisation such as service level agreements, vendor agreements, escrow agreements and the like. Here services like drafting and review can be extended. Besides request for proposal can also be reviewed.
9. **Selection of software tools:** Many software tools are required in the company where the auditor could help the management in analysing the areas which can be automated, analysing of the off-shelf tools, identification of the vendors, purchase negotiation and implementation of the software. Examples of the software tools are access control software, anti-virus software.
10. **Outsourcing:** This will include identification of appropriate areas where the development of software or operations can be outsourced cost effectively along with the required security and control measures.
11. **Incident identification and intrusion detection system:** The information system audit will help the management in identification of computer incidents and analysing the effectiveness of intrusion detection systems. An information system auditor can effectively perform this function.
12. **Disaster recovery planning:** Disaster recovery plans are essential for every organisation as the comput-

erised environment is more prone to security lapses than the manual systems. This does not mean that we should avoid technology. In fact proper implementation can make technology truly a boon. The service that can be rendered will be providing guidance in framing of plans, evaluation of disaster recovery plans and evaluation of the result of testing of such plans.

13. Document retention plans: A company generates lot of information and data. The entire data cannot be stored for years together. There needs to be a document retention policy that states as to the period for which the data should be retained. The auditor can help the management in deciding the time frame for retention of policy, guidance in framing the policy and its implementation.
14. Audit of quality check: This will include providing an assurance to the management on the quality of the information generated by the organisation, functioning of the system and the like.
15. Audit of application controls: Companies today implement many application controls in the organisation. Some may be developed while others may be purchased off the shelf. The auditor can review them and assure that the controls and processes are functioning effectively.
16. Audit of emerging technologies: Emerging technologies are the PKI, digital signatures, SSL (Secure Socket Layer), EDI and the like. The CA can review the systems and evaluate the functioning of the technologies.
17. Physical, logical and environment controls: The computerised environment requires the implementation of physical, logical and environmental controls for its smooth functioning. The auditor with his knowledge in this area can effectively perform these services.
18. IT budgeting: Many new software and hardware products are available in the market today. These make the technology obsolete very soon. In such scenario management needs to effectively plan its resources for IT expenditure. Role of a CA will be to help the management in framing such budgets and their review.
19. Web trust assurance: With so many companies going online, the public at large needs an assurance that the business is legitimate, which an auditor can assure.
The list is endless. It is for the individuals to identify

more opportunities by taking an active role as a partner to his client.

SOME STRATEGIES FOR SUCCESS

- Get out of “First time” fear. There is a first time for everything
- Get out of “Where to start syndrome”. Offer services to the existing clients, even if this requires providing them free of cost initially
- Focus on “presentation” as much as you focus on the actual work
- Don’t get overawed by technology - “Look at its application”. Focus on how best it can be applied to a given business situation’
- “Team based approach” to Service Delivery - employ minimum of two people even in cases where payment is for one. This helps in expanding skill sets of staff as well as in risk management
- Prepare and use “standard templates and tool”. This can result in substantial time saving and efficient service delivery. It can also become a USP for marketing the services
- Prepare “marketing collaterals” such as case studies, service briefs, capability presentations and the like
- “Collaborate and partner” with other CA firms with contemplating capabilities. Steer clear of the ‘can do it alone attitude’. This attitude is an effective barrier for practice development
- Focus on “delivering and measuring” value of services delivered
- In abstract services learn to “manage client expectations”. If required take specialised training on these
- “Invest in technology” and have a good infrastructure for development of knowledge and in turn professional opportunities and practice

ROLE OF ICAI

ICAI is providing valuable training to the members and conducting seminars, conferences and workshops at majority of the places. For this purpose it has also come out with IT harmony, a periodical that updates the members on the latest happenings. The main aim of ICAI is to focus on technology, inform the members of best technology practices and get the pay back for the investment made.

The future belongs to the tech savvy accountant. Are you geared to the challenge? ■