

## Managing Growth in a High Technology Venture – the Fact-Tree Way

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In 1987, four aspiring entrepreneurs got together to start their dream venture ‘**Fact-Tree Global Solutions**’<sup>1</sup>, a software services company. Today, Fact-Tree is a 20,000 strong multinational company listed on the New York Stock Exchange. It has a global presence in 45 countries across 6 continents and has 18 development centers across the world. Pallav Murthy, the Chairman of Fact-Tree is a visionary who sees the increased role of software in everyday life. He is witness to the rapid growth of Fact-Tree from a small company to being one of the top IT players in the world with several business units and joint ventures and a great brand image.

### **The Journey:**

Fact-Tree Global Solutions was instituted as a private limited company with 15 developers and a few marketing experts. The core team consisted of Pallav Murthy, Irfan Mirza, Anu Joseph and Neil Sen who were classmates at the University of Texas, Austin, and McCombs School of Business Management. Irfan belonged to the first batch of the Information Systems Management program, and the other three were students of the masters program in Business Administration at the School of Management.

Most of the initial projects that they worked upon were acquired through personal contacts. The team used intuitive methods to work on projects and almost everyone was coding. What really mattered was the delivery of the software on time. This helped them acquire more clients owing to the goodwill created. Communication within this small group was simple and easy to manage.

Pallav firmly believed it was necessary to set goals, plan growth and streamline business processes, and keeping the ‘Customer’ focus, for sustained growth. Proper principles were needed to handle clients, technical changes and the market as the business grew. Though, it was not yet documented, the ‘Customer’ focus or orientation was one of the core driving principles.

It was during the Mid 80’s that many US companies started looking out for customized software solutions to meet their business needs, creating a great demand for software professionals, who were in short supply. Those available demanded prohibitively high prices. Software development companies were shifting to new locations in search of qualified work force that would cost less. Outsourcing was still a concept and was looked at as an emerging trend of business, but convincing clients was not easy, especially when showcase success stories were missing.

Fact-Tree got a break in 1991, when they initiated their first offshore project. Offshore meant, the customer could be any where in the globe and his work would get done at a geographically different location. This was a whole new way of doing business. Tom Riddle & Co., a major software company that provides manufacturing and financial solutions and tools was the first client. Though they initially had apprehensions about the model, soon these concerns melted out when Fact-Tree successfully simulated an offshore-onsite model. Fact-Tree sent its team on-site i.e., to the client’s location. The customer location and the Fact-Tree premises were linked through a 64 KBPS connection. Two teams were made. The first team at the client location called as the onsite team worked during the day, following the same working hours as the client. The second team, at Fact-Tree called as the off-shore team, worked during the night. This was done to simulate

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<sup>1</sup> All organization and people names have been changed

the onsite, offshore model and to demonstrate that work gets done round the clock due to the time difference, which was in fact advantageous to the client. Most importantly, Fact-Tree successfully proved that the “Onsite-Offshore” model worked. This experiment was christened ‘Little India’.

In 1992, Fact-Tree went public with its initial public offering. The recent success with the offshore-onsite model helped them get many overseas projects and establish themselves as one of the strong players in the field of IT. The visionaries of the company knew the needs, demands and the importance of moving up the value chain. They came up with the innovative yet challenging idea of using a 64 kbps satellite link to do business. No one had ever thought of using a satellite link to improve information and communication links with the clients. It was the commitment of top management to make it through, that encouraged employees to adapt and accommodate the change. This idea rapidly transformed the perspective of how business could be conducted. The impetus given by this innovation changed the direction in which Fact-Tree was moving in. The business processes gyrated and many changes had come in owing to the whole new approach. Pallav and his team foresaw these changes, required at all levels, and were prepared to manage them. This experience put Fact-Tree through the litmus test, where it had withstood a major organizational change, while moving up the value chain. A nostalgic Pallav says:

*“Business is like Formula One racing. Every year the technology changes, the skills improve. The car may look the same but internally it undergoes transformation. Change is the reality and being adaptable is the secret of surviving the competition.”*

Being fully equipped to face technical challenges, Fact-Tree headed towards Joint Ventures. The first breakthrough came in 1994, when the first joint venture materialized with B & D, the leading provider of global business information, tools, and solutions that help customers take critical business decisions. This was an excellent strategic move that fetched it projects as well as clients like Caterpillar. The client base increased many folds and this attracted people to join Fact-Tree, thus Fact Tree witnessed a sudden increase in the number of projects and employee base.

Managing a huge workforce was a bigger project when compared to the projects that Fact-Tree got from its clients. An ever-growing client list, mushrooming business, changing technology, marketplace and increased competition called for discipline, quality certifications and strong HR policies. VP(HR) Anu says:

*“Finding the right people for the right job will always remain a challenge! Maintaining the right ratio of technical, business people and leaders is important and this requires defining a way of doing it.”*

Fact-Tree so far focused on improvement of its infrastructure and technical strength. But this growth was appearing to be just insufficient to cope with the way the world developed software changed. Pallav and his group felt that as the company grew, it is not going to be easy to manage software development and even the day to day administration unless they came up with certain rules and procedures to be followed at each level in the company. These rules or procedures, technically called as “processes” were to act as the binding factor.

## **Phase I**

“Processes” and “Quality Certifications” were the buzz words now. It was not just the Fact-Tree management that felt a strong need to get the organization certified, the prospective customers, especially the European clients, preferred firms that could flash a Quality certification such as ISO.

It was to certify the quality of the services the organization offered in relation to analysis, design, construction, testing, delivery, installation, maintenance and re-engineering of software. Fact-Tree started planning for the ISO Certification under the guidance of Irfan, the quality head who firmly believed that the move will pay off in the long run. Irfan drove the initiative steadily but it wasn't an easy job. ISO 9000 certification required setting up systems that streamlined and systematized work in the organization, through documentation. The initial stages involved documenting each and every relevant process pertaining to the company's operations as well as software development. This initial process was to enable the organization to work on a virtual 'auto-pilot' mode. What this meant was that once the processes were in place newer projects would simply fit in the frame.

As all the work flow was being regulated by the set process and corresponding documentation, the employees were spending considerable time doing what they perceived as non-technical work. However, this excessive documentation was a painful procedure and it was a tough job to make people appreciate the long term gains. There were other concerns too. A number of surveillance audits were carried out to ensure that the procedures set up are being maintained and implemented. BVQI, the certifying authority, would conduct these audits every six months to check if the organization is achieving the high standards it has set for itself. The auditors would have a checklist that the project being audited should meet. Meeting these criteria was essential for the certification. But to make people see value and implement the process genuinely was an uphill task. The junior developers who were not smitten by processes saw these audits as a waste of valuable time. They did not follow the processes religiously and were not much concerned about quality issues. The developers were more interested in tweaking the code to make it work so that they could meet the so called 'unreasonable deadlines and aggressive schedules'. They just did not have enough 'bandwidth' as they called it i.e., the time and resources to implement processes. Most often they would do the documentation overnight just before the teams came for audit.

Prakash Rao was one of the dedicated software engineers at Fact-Tree, leading a team working for an important US client. His feedback, taken during one of the surveillance audits, (Exhibit 1) reflects the then pervasive feeling.

The management was concerned to see that the process was being adopted for the sake of it without realizing the core values. For example, during the testing phase of projects, the focus was on fixing bugs at any cost rather than to fill the documents to record the bugs. The employees were not inclined to make documentation worthwhile for later use to derive and benefit from previous work. The metrics often were not captured properly. For example, while filling the time sheets, the number of work hours were often misrepresented, this data was not relevant and eventually failed to become the basis for a subsequent project to understand things like the productivity factor of the resources or estimating how long it will take to accomplish similar work. Even for development related reviews, such as peer reviews of requirements or the source code, developers usually felt that it was more important to get things done in time, rather than giving time to these "petite" activities.

It appeared as if there was no end to these teething problems. Fact-Tree lacked proper skill base who could review the processes. The employees doing this job did not understand the importance of quality because they most often had only one or two years of experience or were put into quality department as they couldn't code properly. The general feeling was that quality and processes were not important enough to get trained or transfer knowledge to new entrants.

The development teams felt it was the job of the quality department to maintain quality and it was the head ache of the project manager to make sure there were no 'Non Conformance' reports from the quality section. The job of the quality department was felt to be *policing* rather than playing an important role in developing the system.

Irfan knew that there will always be a strong resistance to any new process. He was determined to convince employees that the efforts involved in certification are trivial compared to the benefits it would bring to the business.

He took employees into confidence to negate the resistance. He said that good quality comes from having good processes and time spent on processes or documentation is time saved but not wasted, as standard processes act as a tool for communication among stake holders and prevent rework. He explained that certifications add a lot of value to the image of the organization and to marketing strengths, though this value may not be tangible.

Irfan tried to seek out simple examples that could put forth powerful messages. His favorite being comparing the processes to the iron frames that hold glass windows at homes. They support the windows to keep the glass panes in place. If the whole structure was all glass and no frame, it would be too fragile to stay and if it were all panes and no glass there would be no light. "*Hence we need a right amount of processes to keep things in place*", he used to conclude from his analogies.

When other measures appeared to be not so effective, Fact-Tree management employed the 'Stick & Pride' method. It was made clear to employees that there was no choice but to make the certification happen as getting new business particularly from European clients was going to be difficult without it. The teams were told that Fact Tree is only a 300 people company with nine customers, eight project managers and only about twenty two projects. Hence, the future of the company was not guaranteed unless it acquired the certification. The teams were informed that any project could be picked up randomly for audit by the surveillance teams (the stick). This pushed employees to implement ISO standards and processes as no one wanted to be the reason for the not getting the certification (the pride). The surveillance audits were now seen as check points to bring the process back on track. There were a variety of audits, like the configuration audit that verified the 'code check-in-check-out process', whether the review comments have been closed, and whether proper versioning of baseline documents was being done or not. Pre-certification training programs were given to help employees get familiar with the concept of quality, set up quality systems in place and to be prepared for certification.

Finally, Fact-Tree got ISO certified in 1995, as a result of the sincere efforts put in to streamline the processes. Everybody could clearly see the benefits now. Software development was eased and the focus was largely on developing business, as day-to-day affairs were well organized now. ISO certification brought Fact-Tree several clients and it worked towards building customer trust and satisfaction.

To fully benefit from processes, Irfan felt that training is as important as getting certified. He planned Post-certification programs to equip themselves internally, and to keep the quality process going in the organization. He insisted that the quality should be inbuilt in the project and not seen as something that is added later. He felt that the certifications were merely an eyewash, maintaining in house quality was more important to create understandable and user friendly documentation.

## Phase II

Post ISO was a period of heavy growth for Fact-Tree, which is being flooded with projects. Indeed, Fact-Tree was growing tremendously inducting almost the size of a similar company every year. Fresh graduates were recruited in large numbers as the general attrition rate of fresh graduates was less. But this recruitment was also posing challenges with respect to process implementation. The new entrants felt that there was so much ‘good work’ to be done instead of ‘wasting’ time on training and implementing processes. They felt that what really mattered was that the customer was happy with the code and the need was to provide the required functionality alone and documentation was not required. It was clearly important for new recruits to be disciplined to be able to seamlessly align themselves to the value system of the company.

Each change brings its own challenges. The processes were in place, but the new challenge was to make sure that processes are followed consistently. Training systems were set up to train the new recruits. A mandatory Quality Management System (QMS) training program was introduced. But this was not the end of all troubles. Due to the rapid growth, there was not enough settling time for both employees and the processes. Think tank Irfan brought in a new strategy that allowed about 20% of people to move on a faster track and the rest in a normal track. Later, those 20% who were on faster track earlier were allowed to slow down and get comfortable with the processes. This was termed as the 80-20 strategy. Visualizing this was initially a bit difficult, but it appeared that the strategy was working amazingly well.

In addition to 80-20 and QMS, there were other measures to promote the process orientation in the organization. *“The processes should not be seen as a burden, but they should ease the burden”* and to accommodate this culture, the company decided to go for semi-automated and automated systems, such as time sheets, semi-automated appraisal systems, swipe card systems etc.

These were moments of pride, when Pallav felt that his dreams of creating a process-centric organization were shaping up.

Fact-Tree saw phenomenal growth in 1997 due to the impending Y2K problem. It was much ahead of competition in terms of processes and even developed a methodology to solve the Y2K problem. This methodology was the first process to be audited post ISO certification and Fact-Tree also received awards for its Y2K solutions. The year 1997 was very fruitful with lot of projects coming from fortune 500 companies and even from organizations such as Blue Cross. To handle these projects Fact-Tree hired extensively while maintaining a mix of fresh graduates and experienced people (lateral hiring) and grew to 10,000 in number. In 1998 it launched the joint venture with GE. This meant not only profits and reputation, but also a lot of new things were to be introduced into the organization, such as policy for client information security and corresponding changes in the human resource management. For example, GE insisted that the employees working on its projects should not be allowed to work on similar projects of its competitors.

With the sudden increase in business, and the need to plan and manage the growth meticulously, a decision was taken to review and update various policies. Process experts were hired, to critically analyze the current processes, suggest new ones, and alter old ones to be in pace with changing time.

Fact-Tree’s focus has been technology, but now a clear gap was shaping up; the need for domain experts. The customer wanted some one who could understand their pain points and knew the ins and outs of the domain. So, to gain the respect of the customer and also the lion’s share of the market, Fact-Tree had to get domain experts on board.

Another need was for people who could think like business people and were not restricted to technical issues. It was felt that the leaders should be grown internally as it was difficult to get the right set of leaders from the market who think and act inline with the business vision of the organization. This was like growing entrepreneurs within the organization. The core team thought that the organization should be divided into mostly-self governing profit centers to allow the organic growth. McKinsey, a reputed management consulting firm was engaged to develop a strategy for the same. The experts supported the basic idea and developed a detailed plan to implement the strategy. Organizational processes as well the culture was about to witness a huge change.

This decentralization initiative attracted some opposition within the boardroom. One senior vice president commented: “...with this division, we are heading towards self-destruction”. His view was that by dividing the company into smaller organic units, each having their own goals, it is difficult to achieve collaboration and cooperation. Some times two units might end up competing with each other. However, in the end, keeping in view the potential of decentralization in aiding growth, the company decided to implement the horizontal and vertical business unit strategy.

In 1998, the company was split into several verticals. Each vertical was to address a business domain such as banking, insurance, health care etc. The verticals aimed at serving end-to-end solutions to high value clients (at least 2 million USD worth of business). Each of these Vertical Business Units (VBUs) was purely a profit center and mainly concentrated on the US market. The regional units were started to spread the market to the rest of the world. Later Horizontal Business Units (HBUs) were created with the aim to build competency in various packages, platforms and processes.

The business and administration functions that were needed by the whole of the organization or by all verticals and horizontals were now defined as Strategic Support Units (SSU). Thus HR, accounts, network, security, auditing etc. were each a support unit. The outcome of these units was the processes that impact the whole organization. A non-hierarchical network organizational structure was followed in various relationships in each of these units to promote entrepreneurial engagement model. Owing to this model, entrepreneurship was now facilitated within the organization as every unit had the freedom to plan for its own growth.

This decentralization led to controlled growth of business units, with one CEO being responsible for the growth of each unit. This ownership issue pushed the leaders to take their units to newer heights. Neil, the CEO of one such unit, that was dedicated to build oracle competency within the organization, was extremely successful by making his business unit the single largest unit of Fact-Tree with the strength of about 2500 by 1999.

A set of parameters were decided to measure leadership capability. Each individual was to be judged on a two dimensional scale. The Y axis belonged to the ‘Hard factors’ i.e. the results achieved by using the organizational assets, the measurement was in terms of the revenues and the profits. The X axis pertained to the value or asset creation or Soft Factors. These included the newer set of offerings added by the individual and his/her attempts to delight the employees (colleagues, subordinates), the investors and the customer.

An online knowledge repository was setup with the aim to facilitate the knowledge sharing across all projects and at all levels. It contained the success and failure stories, best practices, pitfalls, RFPs (request for proposals), project reports, quality reports, various other experiences and lessons learnt. All employees were free to access the repository and contribute to it, while learning from

successes and failures of past experiences, of self and others. Process experts would critique and bring out commonalities in projects to come up with the best practices. This later became a part of the knowledge management initiative at Fact-Tree.

In 1999, the quality handbook called 'Quali-Tree' was made available online. This was a major step toward process automation. No hard copies were printed to avoid circulation of older copies and to have a centralized version control. Any changes to this central system were informed to the employees automatically via email.

By now, quality certifications had become common and most of the top Indian software service companies acquired ISO certification. ISO was needed to fulfill the business demands but was fulfilling its objectives only partially. Meanwhile, Fact-Tree's top competitors were going for SEI-CMM (Software Engineering Institute-Capability Maturity Model) certification and Fact-Tree did not want to stay behind.

The early ISO models (ISO 9000) were not internally driven or focused on process maturity. CMM proposed few key process areas at various levels of maturity. By focusing on these areas, the processes within the company could be moved steadily towards their benchmarked goals and standards. There were different levels of maturity ranging from 1-5 for processes. Some processes have been ingrained in the projects seamlessly and others find it hard to make a mark. This most sought after process improvement framework appraises an organizations capability to perform with predictability. To identify best practices useful in helping the company increase the maturity of its processes. CMM reduces the cost of performing appraisals and implementing improvements as it promotes enterprise-wide process improvement. (Exhibit 2)

Fact-Tree management was convinced that the profits being promised to business by CMM were immense. Neil said "*CMM was the way to go.*" The process experts in the company started to plan for tailoring and adopting the CMM processes to suit the organizational needs. They focused on leveraging existing ISO model and integrating the CMM principles at all levels.

SEI CMM level 5 assessments in the year 1999 brought Fact-Tree a lot of visibility, as it was one of the first few companies worldwide to get assessed. This transition from ISO to CMM wasn't an especially painful one for Fact-Tree, as ISO had already paved the foundation for process orientation within the organization.

Fact-Tree declared 'Continuous Improvement' as the motto and 'Quality' as a "Continuous Process". It became one of the first organizations in the world to be assessed by Bureau Veritas Quality International - BVQI under ISO 9001:2000; international standards, under the Tick IT scheme. ISO 9001:2000 was an improvement over ISO 9001. It also addressed the issues of process maturity that were missing in ISO 9001. The certification by BVQI Limited was granted after an extensive ten-day audit of Fact-Tree's offices across the country. This was an added feather in its cap and improved its image in the market.

### **Phase III**

Post Y2K the company was expanding its horizons. Fact-Tree went into joint ventures with small and big enterprises like i2, Ariba, CCMB, CSC, and even Ford. It was equipped with the latest certifications for Quality software development practices as well as bagged a number of awards at national and international level. These included the "National Quality Trophy, Golden Peacock award for excellence in corporate Governance, National award for "Bright Ideas" etc. Another

beautiful color in its palette was the Certification under BS 7799 part 2:1999: International Information Security and Management Standard.

Though not many organizations had seen such leaps and bounds of growth and world recognition, it was not all hunky dory for Fact-tree. Some initiatives at Fact-Tree have failed and there were several incidents that were source of concern for the Fact-Tree strategic group, headed by Pallav.

The Strategic group knew that moving up in the value chain by taking higher tasks like architecting and designing was important to grow in number and role. Thus, there was a need to switch from maintenance space to a consultancy based revenue model. But, they knew that Software Maintenance projects contribute lion's share of the total revenue so it was a hard choice to make. To address this concern the Strategy group, proposed a Global Competency Center to groom domain specialists. This unit had different non-IT business people, who were domain experts and did consulting for various business units. But sadly this did not work as anticipated because mainly these specialists were the only ones to interface with customers, but actually when it came to technological issues, there were conflicting views about feasibility of implementation. This was due to lack of people with sufficient domain knowledge, who were also technically strong and would take up new and challenging projects and provide innovative solutions to the problems posed.

The knowledge management (KM) initiative that was set up around 1999 was also not quite successful, as it did not achieve its intended goal of building communities and sharing knowledge across the organization. Many business units did not even actively make use of the information available on the KM server, let alone contributing their own experiences.

Though the various quality certifications added a lot of business value externally by attracting new customers, there was a deepening feeling that they brought little improvement to the way work was being done internally. The inner growth, if measured in terms of the quality work done by each employee was not very significant.

To promote the internal quality, a metrics driven model, christened as 'The Five Circles' was designed. Every software development related action was to be judged on the parameters or the value addition it brings in terms of faster, better, cheaper, larger (to facilitate scaling up of services) and consistent services (Maintaining Quality of Service). These 5 parameters were easy to be judged based on numeric values and gave a clear perspective of the individual's performance. This model tried to emphasize on internal quality but at times it was difficult to measure how well the projects met these criteria.

The need to groom entrepreneurs and entrepreneurial spirit within the organization was felt very strongly within the strategy team. Hiring entrepreneurs or domain experts from outside the organization was not the solution as they did not align with the Fact-Tree's culture quite easily. Leaders had to be developed from within the organization. The think tank of the Fact-Tree felt that mentoring is an effective way to groom new leaders. As Anu puts it.

*"A true mentor makes him self redundant by grooming three others who can replace him so that he can move up the ladder"*

How ever there were issues in implementing these ideas because, like any new change, this too found resistance and to make employees see value in this idea was difficult. Employees saw this as too trivial a task to be done. Another important aspect of mentoring was to do it selflessly.

Mentoring was visible in some business units of Fact-Tree but in other parts it was still not encouraged. Anu adds: (See Exhibit 3: Excerpts from Anu Joseph's interview on Mentoring)

*"Mentoring needs to be brought up from core but currently we are in an unstructured mode"*

Management was concerned about these issues, but there were other pressing issues too like addressing the growing competition which were overwhelming and commanded immediate attention.

Having entered the public domain, it was now like facing an exam every quarter for Fact-Tree. Every quarterly evaluation at stock exchange pushed them to perform better because investors and employees of Fact-Tree from across the world could participate in this evaluation and understand how it was performing. After much brain storming, to improve their performance Fact-Tree came up with a '*Maha Mantra*' that was to carry out the budgeting exercises for three years for each of the domain that they dealt with. Out of the three years, for the immediate year they would come up with a detailed plan and a brief plan for the next two years. With this 1+2 year planning, they could be prepared for the future. To leverage on the new markets and for a poised growth Fact-Tree needed to have maturity in handling alliances and flexibility in relationships. A global delivery model was designed to address the competition. The strategy was to strengthen enterprise applications and move from the simple 'Out-Sourcing' to the 'Right Sourcing' model. This meant to get into more of outsourcing of business processes. To manage this, the strategy team proposed a process to take care of delivery excellence, branding and managing resources.

With investors looking for improved share in profits and to sustain the growth it was important that the company had enough leaders who would treat their work as a business by itself. Fact-Tree's need for entrepreneurs was growing by the day. Need was for people who can show growth every quarter and bustling with energy to brew up ideas that would help the company surpass the competition. So, Fact-Tree hired and encouraged employees who could cater to these requirements using the infrastructure and means available to them. When on a hiring drive, the simple principle was '*to look for people with learning ability and skills because learning is a psychology and technology is incidental.*'

The employee strength of fact-Tree surpassed 20,000 by end of 2004. The employees hired were technically strong and willing to learn and explore, but Fact-Tree was confounded by questions like how should these new entrants be aligned with the business and development processes? A number of induction programs were put in place that gave new entrants a feel of processes at Fact-Tree. But the same old problems that are tackled every time a change comes in, surged up again.

Irfan had said, "*We can train them, but where is the time to settle? This change wave is riding us too fast.*"

The company started to strengthen the competitive and healthy work environment for its employees. Competency building, delighted employees, pursuit of excellence, corporate social responsibility was the new set of key words. A PMS (Performance Monitoring System) was put in place. This system was based on the delight parameters on three fronts: *Employee delight, Investor delight, Customer delight*. These parameters set the goals for the leaders and encouraged the individuals to take up leading steps. The parameters were further grouped according to the usual way, i.e. hard and soft factors, hence covering all; technical, managerial and soft skill aspects. Outcomes of the initiatives and performance appraisal decided the career paths, compensation, development of employee potentials and subsequently individual growth. Support and business

units had different hard and soft parameters. A minimal growth was to be achieved by the individual to access growth opportunities and be eligible for compensations. Best performers were rewarded in several ways, hence setting the goal for others as well as encouraging merit at Fact-Tree PMS.

Thinking and flawless execution were promoted as the corporate mantra. The focus was on building relationships and empowerment of the employees. This model promoted leadership with the underlying theme of balancing interests of the stakeholders.

### **Plan for future**

Fact-Tree planned to open offices in South Africa, Hungary and Canada. Adding more verticals and horizontals was in the 'to-do' list as well as the expansion of the SSU operations. The projected target for fact-Tree is to grow to employee strength of 30,000 by the year 2006.

Fact-Tree strategy team was setting higher goals for this growth plan. They wanted to be one the top five services companies in the world and the number two player in the country. This was called as the '*Dhruv –Tara*' goal.

In one of the board meetings, Pallav Said, "...*That was the time to lay the foundation, now it's the time to build the strong castle that will serve the needs for coming N years, at least.*"

Finding technically strong workforce is not a problem. Fact-Tree has seen a similar transition in the past, when they moved from 15 to 10000 and moved beyond CMM. Converting this workforce into assets for the organization is what seems to be a different and difficult task this time. Obstacles that should be tackled before stepping towards new horizons are numerous.

The perennial problem is that of employees not being too keen on the processes and treating processes as a burden. New entrants still feel that documentation is a hell of work and the tendency for last minute documentation is a common phenomenon.

A huge employee base, distributed development and decentralization brought in their own problems. Prominent among them are conflicts, cross-cultural issues, and differences in values. Each VBU was a profit center and self focused. Knowledge sharing between VBUs was minimal. Even the SSUs didn't work in tandem with other VBUs.

Pooling resources for any organization wide initiative or for initiatives taken by support units were not well received by all. It was proving to be a hard sell. Like in the case when a *Component Re-use* initiative was started, not many VBUs were ready to release resources that may work towards the common goal. It was analogous to living in a big joint family with several nuclear families within it, each having its own kitchen and commitments to meet.

The creation of horizontals (started in 1999) was a healthy but contradicting situation. This was because working in collaboration is now becoming a challenge. Fact-Tree has nearly 150 domains and technology offerings and working across all of these is a mammoth task. Every business unit was a profit center so could grow rapidly in time frames as small as 2 years. But same is not true for other units especially the cost centers like Corporate Communication or Finance.

Strategy group now felt that it was time to revisit these horizontals to set different targets for each of them, so that they grow at their own pace and make sure that everything has a larger value to add.

In addition to all these internal challenges, the external competition has become more than ever. Competition had never been so cut throat and so global until now. Not just national software majors, but industry giants from across the globe, including IBM Global Solutions, Accenture, CSC, and EDS were all now the competitors of Fact-Tree. Most of these players engaged in only consultancy five years back have now shifted their focus to being complete business solutions providers to the customers. Fact-Tree has to compete head-on with them. Fact-Tree realized that the gap was in the service offering and now they should move from maintenance kind of services to domain specific solutions and the end-to-end solutions including Business Process Re-engineering.

Earlier, the solutions provided by these foreign competitors were not cost effective for customers, hence very few, like those belonging to the Fortune 10 would go for them. The Fortune 500 companies and smaller organizations preferred solution providers like Fact-Tree. But with the advent of outsourcing to low cost countries and attracting the resources by offering higher salaries, these giants stand in direct competition with companies like Fact-Tree. On the employee front Fact-Tree should be able to retain talent by matching the stalwarts of the industry that pump in money to attract the talented. Now the major issues are high cost Vs low cost, overseas opportunities for employees, domain Vs services make the game complex and not an easy win for each side. Whoever gets to their goal faster gets the major chunk of the market and wins the race while it will be a struggle for the other to manage its empire with lesser revenue. This challenge stares in the eye of Fact-Tree at the juncture that the company is now in.

Most of the revenues for Fact-Tree come from the software sales; however the growth rates have diminished over a period of time. Earlier it used to be as high as 50% per year but now it is a struggle for them to maintain even 20-25% of growth rates. (Exhibit 6)

With mounting expenses due to commitments, increased competition and retreating growth rate, Fact-Tree is revisiting some of its decisions. It looked at the cost centers i.e., the support units and wondered how much of support is actually needed? They had about 10% of HR people to recruit the remaining 90% of developers. They wondered if that was excess or just right or more was to be added. This was an important question as fewer non-billable people simply meant soaring profits. Do we need the support, what are the alternatives, what processes could be needed if 70-80% of these people were not needed, should we create a virtual environment, etc. were some of the mind boggling questions for the strategic team. Moving towards a virtual environment could be a different ball game altogether. As Pallav put forth his concerns:

*“Customers prefer process-driven security environment than rely on companies that are not mature in their processes. Virtual operations are both a challenge and a great opportunity!”*

The quality department was on its prowl again. The plan was for a transition to new process frameworks like Six Sigma, Personal Software Process (PSP). This was a phase wise transition with Insurance VBU being the first one to go for it. Training began in right earnest and nearly 60% of the staff is on training rolls. The training process was going smoothly. When the feedback was taken from the employees there was a mixed response. Many short responses like “PSP will help us to work in a disciplined manner” were pleasant to receive. However, a few, but lengthy responses were in a sharp contrast. The key message all of them conveyed was that “Processes are limiting our creativity and making us less productive”. These responses caught the attention of the management.

The management wondered where all this emphasis on processes was leading the company to? The strategy team met to reassess the need for processes. Their notion was that *'process is like religion, one may not believe in it but it is bound to be there and if followed with the right spirit till the end, it can work wonders. Process by itself is not everything nor does it ensure the success of a project. But following processes definitely enhances the success rate multifold.'* Over years of experience they had found processes to be truly useful to manage the growth and again Fact-Tree was relying on the same for successful delivery of its future plans. However they felt that if mere compliance to the process is the objective it may become burdensome and false information may be cooked up to meet the criteria thus defeating the true spirit of having processes. The team observed that processes made more sense in projects with longer durations than those which have very short deadlines.

*"This is an Orange signal. Let us stop and think a while."* The strategic group decided to start the exercise once again, but now in a guided manner. They came up with guiding charter to plan the strategies and reach the projected growth. The charter is as follows:

- It is important to have simple but effective core values. Projects are not to be driven by procedures and rules but by core principles.
- Managing organizational growth by change does not mean a mere change in roles & responsibilities and adding more workforce and physical assets.
- Processes need to be planned, redefined and tailored to add value as per business demands.
- Numbers don't lie and speak more than words. We need effective ways to come up with metrics that capture the true picture

They now had to come up with an action plan that meets the goals of the charter and would direct the organization towards its objective of 30,000 and more. They have to weigh their options to make informed choices about strategies to deal with market conditions, competition, employees and process issues that the growth would bring along. The journey from 15 to 20,000 was some experience but the road ahead is a different one altogether. The rules of the game have changed!

### **Challenge:**

Fact-Tree is at a crossroad today where it needs to decide its plan of action to reach its target of 30,000 by 2006 and then later 50,000 by the end of 2007. This is not an easy task. In fact it is as good as starting afresh with a good balance between caution and risk like it did in its initial stages. Help Fact-Tree to come up with a plan to manage its growth en-route to its target of 50,000 employees and fulfill the business vision of Fact-Tree. You need to address the guiding charter that the strategy team drafted and come up with a plan. Support your solution with relevant details and bring out the role of processes in this new phase.

## Appendix

### Exhibit 1: Interview with Prakash, Project Manager Fact Tree

#### **Q1. How was the transition period from ad-hoc processes to ISO?**

*A. It took us a lot of time to get adjusted and was very tedious. It was difficult to make people see the benefits of having processes. There were no immediate or tangible benefits and most felt all the processes to be mere waste of time and the certificate as a marketing strategy. But today processes are in place and what remains to be done hence is to learn to adapt.*

#### **Q2. Does software process allow you to be innovative at work?**

*I don't think so. Processes leave very little space for creativity. Most of the things are bound and processes restrict your thought processes. Also managing resources becomes more critical as you have the calendar planned for the entire project. And at times its too constrained to have processes dictate how and what things have to be done and when, thus stifling innovation.*

#### **Q3. What is the time break up for various activities during the execution of a typical project?**

*A. We primarily spend time in determining ownership of the project, scheduling, tracking resources and deliverables and communicating with the customer. Typically we do:*

- a. requirements gathering for 40-50% of the time*
- b. 20-25% on developing the design framework.*

*Rest of the time goes in:*

- c. Tracking and monitoring in small stages*
- d. Customer communication and*
- e. Change request management.*

#### **Q4. What about culture related problems? Some times the way we consider a process may differ from how a client looks at it.**

*A. Generally we share details of our processes and the client's processes at the beginning of the project. The managers decide which processes of the client can be adapted, tailored or rejected. Example: we had a client who was very happy with his processes. They were not any standard compliant processes like the ISO. We found that their requirements document could be adapted but their design documents called for a change so we used our integrated design document. Their test plan templates were not up to the mark so we used our system templates and tailored it for their use. In cases like these we give reference, stating which templates have been used.*

#### **Q5. What is the percentage of process that is actually followed in a process oriented company? Why it is less and what can be done to increase it?**

*A. Frankly, though there is adherence to processes in process oriented companies, the spirit is lacking so there seems to be no apparent advantage of following processes. Its become more of*

*a marketing technique than a quality conscious initiative. The degree to which processes are used depends on many factors like time, cost, resources, customer support and flexibility and specially the person's mindset.*

***Q6. Though there is general resistance to processes, Project managers generally force team members to follow them. Why?***

*A. People often don't see the benefit of having processes initially. But, when a crisis strikes tracking the issues over a period of 4-5 months, reporting to the management or customer requires proper documentation explaining the turn of events which lead to such a situation. There is a need to quantify the knowledge base so that it is available for future projects as in larger teams where there are many project leaders, approval becomes a problem. Also It is difficult to understand if the customer needs are being understood in a similar fashion. There is a clear need for processes but the price we seem to be paying to have standards in place seems to be too high in terms of cost, time, effort and even productivity is compensated due to additional documentation.*

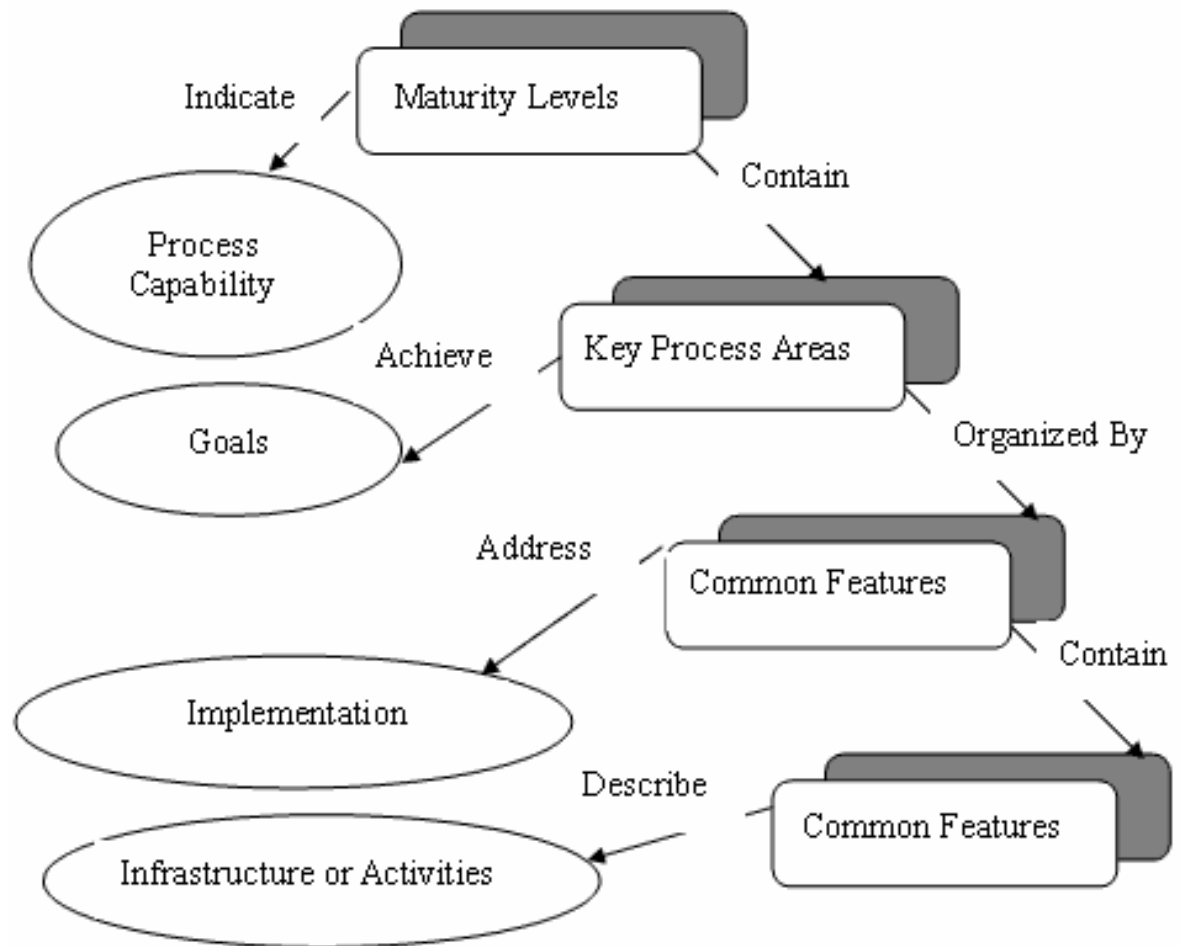
## Exhibit 2: Capability Maturity Model

The Capability Maturity Model for Software (CMM) is a framework that describes the key elements of an effective software process. There are CMM certifications for non software processes too. Originally it was invented to give military officers a quick way to assess and describe contractors' abilities to provide correct software on time. The CMM describes an evolutionary improvement path from an ad hoc, immature process to a mature, disciplined process. It is a common-sense application of general management and quality improvement concepts to software development and maintenance and is a community-developed guide for evolving a model for organizational improvement. When followed, these key practices improve the ability of organizations to meet goals for schedule, functionality, and product quality. The CMM establishes a yardstick against which it is possible to judge, in a repeatable way, the maturity of an organization's software process. The CMM can be used by an organization to plan improvements to its software process.

The Five Maturity Levels described by the Capability Maturity Model can be characterized as per their primary process changes made at each level:

- 1) Initial:** The software process is characterized as ad hoc, and occasionally even chaotic. Few processes are defined, and success depends on individual effort and heroics.
- 2) Repeatable:** Basic project management processes are established to track cost, schedule, and functionality. The necessary process discipline is in place to repeat earlier successes on projects with similar applications.
- 3) Defined:** The software process for both management and engineering activities is documented, standardized, and integrated into a standard software process for the organization. All projects use an approved, tailored version of the organization's standard software process for developing and maintaining software.
- 4) Managed:** Detailed measures of the software process and product quality are collected. Both the software process and products are quantitatively understood and controlled.
- 5) Optimizing:** Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.

The structure of the Capability Maturity model is as shown below:



The goals of CMM (Capability Maturity Model) are:

- ⇒ Address software engineering and other disciplines that have an affect on software development and maintenance
- ⇒ Provide integrated process improvement reference models
- ⇒ Build broad community consensus
- ⇒ Harmonize related standards
- ⇒ Enable efficient improvement across disciplines relevant to software development and maintenance

### Exhibit 3: Excerpts from Anu Joseph's interview on Mentoring

*"..... it is important not to burn people out. Time is money. People need to do top down thinking that is seeing how much business gets done in the time that just went by, keeping the big picture always in mind. So people need to realize that everybody has the same time and must use their bit wisely. Prioritizing and time management are simple aspects that people ignore. Every one needs to have a holistic view and spend equal time (1/3) for self, family and office and not let any dimension suffer at the expense of other. A good mentor guides the employee keeping all these aspects in mind and gives a constructive feedback. It is important not to give negative feedback upfront as it could be a hurdle in setting up a proper understanding. Instant gratification is a good way to motivate people but delegate work that is not your own, do not to do it yourself. Mentoring must also be seen as a business and considering the constraints on time and resources to run it we must look for options to virtualize it. Structured mentoring can be aided by real time conferencing and other tools."*

### Exhibit 4: Excerpt from Corporate HR Policy

*"The challenge is to drive people to give their best. Understanding the dynamics of people is important as retaining people is an issue. The employee turnover in this industry is as high as 17% per year. Every year almost 80% of the revenue is spent on employee salaries as a result the profitability goes down. There are several human issues that come up as a company grows. After the success of offshore model the issue is not just low cost or high cost countries. Almost, 600 of our employees are of foreign origin today and 4000 of our employees live outside the country. 90% of our investors are global; in such a scenario we need strong processes to be in place for survival to manage the growth and changing cultural dimensions. There is a need for cultivating leaders in the organization. This will happen only if everybody takes pride in the work they do."*

*=> **Informal culture** there is no boss, and every one is a partner and has a stake. Everybody can lead, there are paths available in the company to grow, all one needs to do is to paint a vision creatively and establish a set of followers.*

*=> **Three dimensions at work place:** Fact-Tree has identified three dimensions namely **Thinking, Acting and Communicating** and put them in their charter as we believe that good leaders should be able to appreciate all these dimensions. We feel that focusing on these issues becomes paramount when the company is growing tremendously by almost replicating itself in numbers in a short span of few years, with people and customers joining the company just anywhere in the world!*

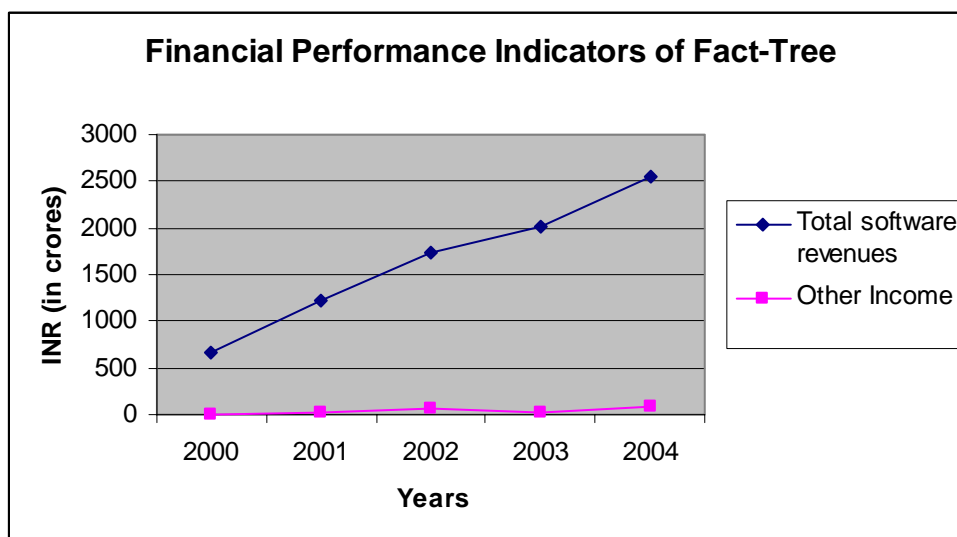
*1) **Thinking** dimension requires leaders to spend quality time in thinking about things that are not of relevance today but will add value at the end of 90 days. It is important to think about the issues in advance so that the unwarranted tensions and pressures can be avoided. The leader must be able to visualize what he wants to achieve at the end of 90 days. This is required as the market conditions change almost every three months. Hence, the leader must do a short term planning for one to three months down the line. This is the 30-60-90 day planning framework at Fact-Tree.*

*2) **Proactive and meaningful Communication** with different communities is the second dimension. Communicating with colleagues, customers and investors for relationship building, understanding revenue generation, research or risk prone areas is important. Hard factors like focusing on revenue and profit are important but at the same time the leader should have soft factors like*

*relationship building and spending enough time to develop services and build assets to delight the various stake holders.*

**3) Acting**, *the third dimension highlights a major issue that 95% of the time is spent in redoing. Time is mostly lost in determining what needs to be done and 80% of the time we end up doing other people's task. This is because we like to get down to handle lower level issues as we are able to solve them easily and that gives us a feeling of accomplishment. So Fact-tree encourages all employees to prioritize and manage their work as "Time is Money"*

**Exhibit 5: Financial Performance indicators of Fact-Tree in the recent past**



**Exhibit 6: Revenue Analysis of Fact-Tree in the recent past.**

**Break up of revenue between offshore and onsite (%)**

Location	FY 2002	FY 2003	FY 2004
Offshore	53	46	43.7
Onsite	47	54	56.3
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Revenue by region (%)**

Region	FY 2002	FY 2003	FY 2004
North America	76	76	75
Japan	4	4	2
Europe	10	12	13
Rest of World	10	8	10
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Revenue by service offerings (%)**

Technology	FY 2002	FY 2003	FY 2004
Software Design and Development	52	49	46
Software Maintenance	30	28	25
Packaged Software Implementation	14	21	26
Engineering Design Services	4	2	3
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Revenue by line of business (%)**

Lines of business	FY 2002	FY 2003	FY 2004
Banking & Finance	25	22	20
Insurance	15	14	13
Manufacturing	37	34	33
TIMES	10	12	13

Healthcare	2	3	6
Retail			1
Transportation	1	1	2
Others	10	14	12
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Existing Business and Repeat Business (%)**

<b>Particulars</b>			
Existing Business	86	85	91
New Business	14	15	9
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Other Information**

<b>Particulars</b>			
New customers added	103	99	109
Number of active customers	262	287	324
Receivable days	81	86	83