2008 Singapore Quality Award Winner
Application Report Executive Summary

SINGAPORE
QUALITY
AWARD
for business excellence

2008 WINNER

AVI-TECH ELECTRONICS LIMITED

Contents

SQA 2008 Winner

Mr Lim Swee Say, Minister, Prime Minister's Office
Mr Lim Eng Hong, CEO Avi-Tech Electronics Limited

Foreword

There have been many milestones in our company's history. However, being conferred the prestigious Singapore Quality Award, the only SME to receive it in 2008, is an achievement and an honour that will be hard to better. Fortunately, at Avi-Tech, we believe in striving to attain ever greater heights of excellence in all areas of our business – in delivering consistently high standards of products and services that surpass customer benchmarks, in providing an organisational environment that nurtures and develops our workforce to their fullest potential and in building upon our core competencies to innovate and move into new areas of opportunities in terms of products and markets. Such a corporate mindset and attitude can only propel us forward.

We consciously decided to embark on the business excellence initiative in 1993. This framework helped us focus on continuous improvement in all areas of organisational development while keeping pace with the dynamics of the business environment. It also crystallized what we were already practising in terms of our corporate values of 'advancement through technology', 'value-added and customer-centred services' and 'innovation'. The results of our efforts were gradual but evident - faster turnaround time, reliability, quality, optimum production cost and the capability to meet customer demands and their unique specifications. Along the journey towards the Singapore Quality Award, we received the Singapore Quality Class in 1998 and Enterprise 50 No. 1 ranking in 1999. We continued onward, never taking our eye off the prize – to attain the Singapore Quality Award.

The road towards this award was exacting, long and at times very challenging. The journey challenged us to strengthen our systems and processes for continuous improvement, never allowing us to rest on our achievements or stagnate in complacency. As a result of this journey, we are now a stronger, more resilient organisation with well-defined processes and systems and a winning mindset.

Of course, the starting point to the attainment of business excellence has to be a real commitment by every single person in the organisation to this goal, with the first adopters being management. If you set the example, people will follow. In this aspect we have been very fortunate; our people at every level of the organisation have embraced the business excellence journey wholeheartedly, showing tremendous spirit and drive. Without them, we would not have achieved all we have.

We are happy to share our experiences, learnings and approach towards organisational and business excellence through this executive summary of the application report with all future applicants. We hope that you will be able to benefit in some manner from the journey we have embarked on. It only leaves me to wish all applicants the very best in their endeavours towards achieving the Singapore Quality Award.

Lim Eng Hong
CEO
Avi-Tech Electronics Limited

About The Award

The Singapore Quality Award (SQA) was established in 1994 to help Singapore organisations strive for and attain world-class standards of business excellence.

What is the Singapore Quality Award

The SQA is the highest accolade given to organisations for business excellence. The Award is conferred upon the "best of the best" in recognition of their attainment of world-class standards of business excellence. The Prime Minister is the Patron of the Award.

SQA in Relation to Other International Awards

The business excellence model underpinning the SQA is based on universally accepted standards that are found in the US Malcolm Baldrige National Quality Award, the European Quality Award and the Australian Business Excellence Award. As a symbol of world-class business excellence, the SQA encourages organisations to strengthen their management systems and capabilities to enhance their competitiveness.

Benefits to Organisation

The SQA criteria provide a comprehensive framework for organisations to compare themselves against world-class standards of performance. Organisations can assess their performance against the criteria requirements so as to gather useful feedback to help them in the journey to world-class performance.

Award recipients are accorded the use of the exclusive SQA symbol in their publicity and corporate materials. The symbol marks the recipients as world-class organisations. Each award recipient will be presented with a specially crafted trophy at an annual award presentation ceremony attended by industry leaders and chief executives.

All applicants will receive an assessment of their performance in the form of a feedback report. The feedback report contains the applicant's scoring summary and range, and detailed strengths and areas for improvement relative to the SQA criteria.

Industry and Public Support

The strong support of industry and government is fundamental to the success of the SQA programme. Many organisations from both the private and public sectors contribute to the programme in terms of finance and expertise.

SQA Governing Council

The SQA is managed by the Governing Council which draws up policies and guidelines for the award programme and approves the award recipients. The chairman of the Governing Council is Dr Cham Tao Soon, Distinguised Professor of the Nanyang Technological University. Members of the Council are drawn

from the Award Member organisations, which provide financial support to the award through the Productivity Fund. These organisations are Ernst & Young, Baxter Healthcare Pte Ltd, DHL International (S) Pte Ltd, Housing & Development Board, Micron Semiconductor Asia Pte Ltd, and Sony Group of Companies in Singapore.

SQA Management Committee

The Governing Council is supported by a Management Committee, comprising experienced assessors and business practitioners from the Award Members and Award recipients.

The Committee reviews the Award criteria, develops the system for training and certifying the assessors and shortlists Award applicants.

SQA National Assessors

The SQA National Assessors evaluate the Award applications, conduct site visits and prepare feedback reports. Assessors are nominated from organisations in both the public and private sectors, including the past Award recipients and Award Members. They volunteer their time in the assessment process without being paid for their services. To ensure integrity and objectivity of the SQA evaluation process, assessors abide by a code of confidentiality and conduct. Assessors also attend a compulsory preparatory training programme before they can evaluate Award applications.

Standards, Productivity and Innovation Board

The SQA is administered by SPRING Singapore (Standards, Productivity and Innovation Board). A statutory board under the Ministry of Trade and Industry, SPRING Singapore's mission is to raise productivity so as to enhance Singapore's competitiveness and economic growth for a better quality of life for our people. To execute its mission, SPRING Singapore adopts two broad thrusts – developing world-class industries and creating a favourable environment for productivity improvement and innovation. SPRING Singapore has three areas of focus: Productivity and innovation; standards and quality; and small and medium-sized enterprises (SMEs) and the domestic sector. Under the area of productivity and innovation, SPRING Singapore assists organisations to attain world-class standards of business excellence. Through the SQA and Singapore Quality Class, Singapore organisations are encouraged to establish systems that drive continuous improvements and to achieve business excellence.

Global Excellence Model Network

SPRING Singapore is a member of the network of Global Excellence Model (GEM) organisations which include administrators of the US Malcolm Baldridge National Quality Award, the European Quality Award, the Australian Business Excellence Award, the Japan Quality Award, the South African Excellence Award, and the CII-EXIM Bank Award for Business Excellence in India. This affiliation ensures that the SQA Framework reflects the world's best validated management principles and practices.

Organisational Profile

1. Organisational Environmental
Nature of main products and services

Avi-Tech is principally engaged in the provision of services and products to the semiconductor industry. The principal business activities of our Group can be broadly categorised into the following three segments:-

a)   Burn-In and Related Services
b)   Design and Manufacture of Burn-In Boards and Boards Related Products; and
c)   Engineering Services and Equipment Manufacturing

1.   Burn-In and Related Services
There are two business activities within this segment:-

i)   Burn-In Service – Static Burn-In, Dynamic Burn-In and TDBI (Test During Burn-In) for the semiconductor industry; and

ii)   Tape and Reel Service – For customers who need their finished products to be delivered in a reel form.

2.   Design and Manufacture of Burn-In Boards Related Products

Design, manufacture and assembly of Burn-In Boards for different types of Burn-In.

3.   Engineering Services and Equipment Manufacturing

Our services and business activities under this segment are as follows:-

•   Full turnkey system integration services (built to design) and equipment manufacturing (design and build) services including parts procurement and fabrication, assembly and verification.

•   Technical services such as field service and application support for all third party equipment distributed.

Organisation's purpose, vision and values

Avi-Tech was incorporated in Singapore in 1981. We are one of the region's leading "one-stop" total Burn-In solutions providers to the semi-conductor industry.

Avi-Tech's Business Excellence Pledge is as follows:-

a) **Vision**

We aspire to be a local multinational company, with capability to provide efficient support services to Electronics and Life Science manufacturers for any state of the art devices developed

b) **Mission**

We aim to excel as the best service provider for Electronics and Life Science manufacturers with faster turn around time, reliability, quality, optimum production cost and an extension of our facilities to meet any upsurge in capacity from our customers.

c) **Values**

Advancement through technology.
Value added and customer centered services.
Innovation

D) **Quality Policy**

"BUILDING QUALITY" As Part Of Our Life

Employee Profile

a) In financial year FY2006 / 2007, there were 362 employees

b) Type:-

	FY2006 / 2007
Executive Directors and officers	8
Middle Management	22
Engineers and Technicians	76
Administrative and Finance	34
Production Workers	222
	362

c) | **Educational level** | **Percentage of staff** |
|---|---|
| Degree | 11.0% |
| Diploma | 31.1% |
| Post Secondary / A Level | 13.2% |
| Secondary | 27.0% |
| Lower secondary / below | 17.3% |

Major equipment, facilities and technology used.

Major equipment
• Burn-In System
• Auto handlers
• Tape and Reel machine
• SMT machine
• Wave-soldering machine
• Engineering support test machine

1: Burn-In Service
2: Tape and Reel Service
3: Board Manufacturing

Facilities
– Main facility is located at 19A Serangoon North Avenue 5 Singapore 554859.
Total built up area: 12,000sq meters. 10,000sq meters occupied.

– 2,045sq meters leased in the PRC (Suzhou).

Technologies used
i.   Product
Burn-In System
   - Next generation of burn-in system (High Power Type)

Burn-In Board
   - Next technology capability Burn-In Board.
   - Double Data Rate (DDR)
   - High power microprocessor

Engineering Services
   - As the main product design is developed by our technology partners, we undertake product enhancement and cost improvement to widen our manufacturing capability in order to meet the increasingly demanding needs of our customers.

ii. Quality
   - SQC
   - ISO 9001 Quality Management System
   - ISO 14001 Environment Management System

iii. Information
   - Financial / Manufacturing related info – SAP software package
   - Employee related info e.g. Annual Leave Status using customised software, Dataflex

iv. Technical Development
   - A software Protel / Altium Designer 6.9 was installed to enhance the burn-in board design capability.
   - Up to date computerized burn-in systems with test status monitoring functions.
   - Full turnkey system integration capabilities for high power burn-in equipment.

Regulatory Environment (including occupational health and safety, environmental, financial and product regulations).

Avi-Tech was incorporated in Singapore on 31st December 1981 under the Companies Act.
On 09th July 2007, Avi-Tech was converted into a public company and subsequently, on 25th July 2007 was admitted to the official list of Stock Exchange of Singapore.

We are governed by the provision of the Companies Act as well as the regulation of the Singapore Exchange Limited.

Avi-Tech's operational environmental in Singapore are developed and managed based on ISO 9001 : 2000 and ISO 14001 : 2004 environmental management system.

1: Board Design
2: Equipment Manufacturing 1
3: Equipment Manufacturing 2

2. Organisational Relationships

Relationship with Parent Organisation

- Avi-Tech is a parent organisation.
- In Singapore, Avi-Tech serves as the business and operational headquarter for the group.
- It employs more than 300 employees.

Relationship with Customer

- Major markets for FY06/07 and FY05/06 are as follows:-

	FY 06/07	FY 05/06
Singapore	62.3%	87.7%
Malaysia	1.71%	3.65%
Taiwan	1.25%	2.97%
China	0.48%	1.21%
USA	32.1%	2.06%
Others	0.02%	2.42%

– Key customer and market requirement for product and services:-
   a) Competitive Pricing
   b) Delivery
   c) Quality
   d) Technology
   e) Services

Relationship with supplier and / or Partnership

Avi-tech processes products and services from more than 80 suppliers and subcontractors both locally and overseas.

Organisational Challenge

1) Competitive Environment

– Number and types of competitors
   Avi-Tech has few peers in this highly competitive industry.

– Organisation's competitive position in the industry and the key factors determining its competitive success.

– Competitive position (strength)

   - Our competitive strengths are as follows:-

   * **Proven strong record with customer centric business processes**
      • Over 20 year track record as one of the region's leading providers of total Burn-In solutions.

   * **Long-term close working relationship with customers**
      • Established close working relationships with major customers who are key players in the global semiconductor business.
      • Repeat customers testify to the confidence and synergistic long term partnership forged.

* **Award testifying to our brand equity**

  Received numerous awards and certifications testifying to our commitment towards business excellence including SQC award, E-50 award and customer appreciation awards.

* **Highly qualified and experience management, engineering and sales teams**
  * Our management team, supported by our engineering and sales teams, is familiar with our business and understands our customers' need and preferences.

* **Provision of cost-effective 'one-stop' total Burn-In solutions to our customers**
  * Excellent technical infrastructure, coupled with a team of experienced engineers, provides one-stop, cost effective total Burn-in solutions which reduces our customers' need to engage multiple suppliers.

* **A niche position in the industry as a provider of system integration services for high power Burn-In Systems**
  * We have established working relationships with technology partners that have strong track records and who occupy niche positions in the semiconductor industry with their superior thermal design capabilities for High Power Burn-In Systems.

Key factors that determine our competitive success:-

* Customer centric business operation
* Cost competitiveness: Giving customers the ability to compete and attract a large market.
* Innovations and continual improvement to sustain competitive advantage.
* Best delivery and good quality to give customer a high level of manufacturability and reliability.

Changes taking place that affect competition:-

* **We are dependent on the semiconductor industry**

  The business of our Group is affected by the demand for semiconductor devices which in turn is dependent on demand for electronic devices.

  Historically, the semiconductor industry has seen wide fluctuations in both demand and supply. Downturns in the semiconductor industry have in the past occurred owing to macroeconomic influences such as economic slowdown, regional financial crisis and terrorist attacks. The industry is also susceptible to microeconomic influences such as product obsolescence and changes in product life cycles.

* **We may be affected by a change in our customers' manufacturing strategies**

  Our customers may change their manufacturing and marketing strategies in the future by curtailing or limiting outsourcing. If any of our major customers change their manufacturing strategies and ceases to place orders with us, our business will be adversely affected.

* **Rapid technological changes may affect our ability to compete effectively**

  The semiconductor industry is characterised by rapid technology changes that are driven, in part, by the changes in demand for electronic devices. These technology changes may cause high capital investment within a short span of time due to earlier obsolescence of equipment and could cause our capabilities to be less competitive or obsolete. If we fail to keep pace with technological changes, our competitiveness will be adversely affected.

* **We face competitive pressures**

  Our business is competitive and we face competition from players in the market. In the event that we are unable to retain our existing customers and/or attract new customers amidst the competition, our business may be adversely affected.

2) Organisational Directions

In response to the rapid changes affecting global competition, our major thrusts to grow our business are as follows:-

a) Stay competitive through excellence commitment.
   Strategy
   - Upgrade existing capabilities through investment in relevant technology.
   - Strengthen our operations through benchmarking, and continuously improvement.

b) Expansion and diversification
   Strategy
   - To explore and capture new markets and customers.
   - To develop new products/service needed by the market.

c) Regionalising into new markets
   Strategy
   - Expanding our network of overseas office for better coverage.
   - Sharpen our focus by directing our resources to regional opportunities for growth.

d) Continuous Innovative Breakthrough
   Strategy
   - Innovations and application of relevant technology
   - Skill upgrading
   - Co-develop or acquire the relevant technologies especially from original developers in USA who have no intention or capacity to come to Asia and also for competitive cost.

e) Expertise and dedication
   Strategy
   Continued attention to human resource management and development through:
   - Training
   - Career development

3) Strategic Challenges

Key strategic challenges are:-

Strengthen market position and expand customer base
- Strengthen market position through higher productivity from innovation and economies of scale.
- Widen our customer-base to cover a diversified range of markets.

Widen our operational and technical capabilities in respect of products and services.
- Develop capabilities to offer a wider range of products and services to our customers across three business segments.
- Expand operations by pursuing activities within and beyond and outsourced processes.

Enhance competitiveness
- Explore more synergistic and strategic alliances, M&A with new technology partners to expand customer network, lower operational risks and increase our service offerings.

Expansion of overseas operation
- Establish new overseas facilities depending on customer needs.
- Plan to set up Burn-In facilities for specialised semi-conductors as well as move system integration facilities to new factory in Suzhou, PRC.

Leadership

Senior Management Team

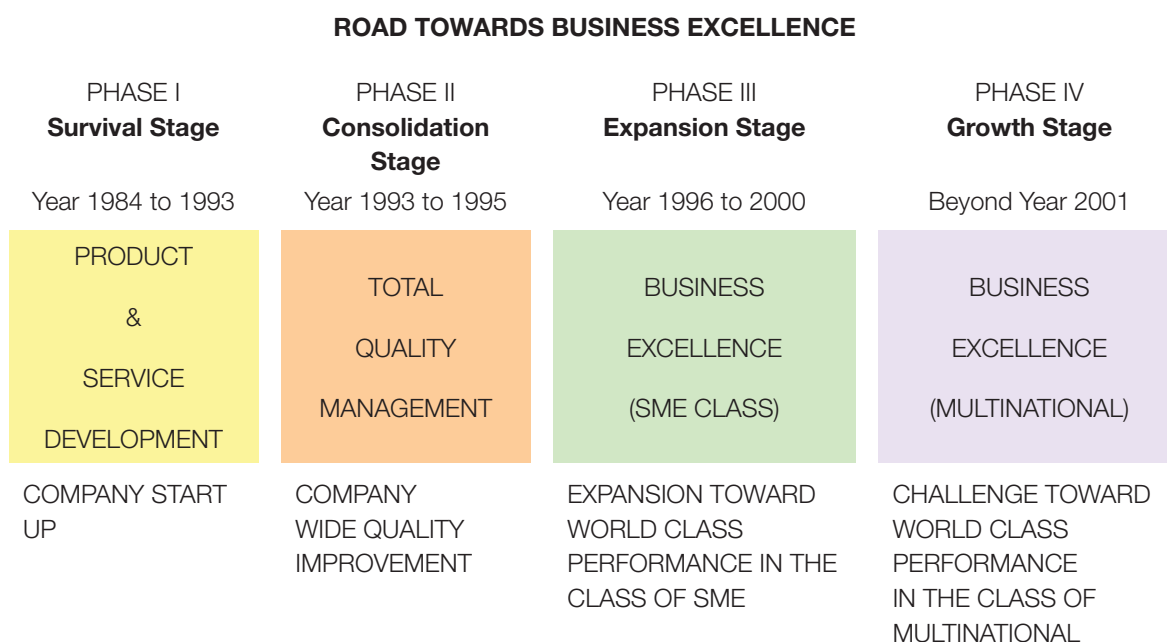|		
Mr Lim Eng Hong	-	CEO
Mr William Wong	-	CFO
Mr Tan K S	-	Director of Burn-In Operations
Mr Philip Kwok	-	Director of Engineering
Ms Jenny Lee	-	Human Resource and Security Director
Mr Alvin Lim	-	Special Project Manager
Mr Robin Low	-	Manufacturing Manager
Mr Lau T H	-	QA Director (Management Representative)

Leadership

1.1   Senior Executive Leadership

Avi-Tech's senior management is committed to drive the organisation toward business excellence with a vision coupled with values that include customer focus, continuous improvement by suppliers, employees as well as shareholders and the desire to strive for the best performance.
In 1993, CEO, Mr Lim Eng Hong personally initiated the business excellence journey. Since then, the senior management team through personnel involvement in activities such as planning and performance reviews, plays an active role in the implementation. We have served as role models in the organisation.

The driving force behind the organisation is the top management leadership and commitment. We were effective in developing a vision that incorporates values and customer focus. Over the past 24 years, the company has undergone 4 phases of culture evolution.

ROAD TOWARDS BUSINESS EXCELLENCE

PHASE I **Survival Stage**	PHASE II **Consolidation Stage**	PHASE III **Expansion Stage**	PHASE IV **Growth Stage**
Year 1984 to 1993	Year 1993 to 1995	Year 1996 to 2000	Beyond Year 2001
PRODUCT & SERVICE DEVELOPMENT	TOTAL QUALITY MANAGEMENT	BUSINESS EXCELLENCE (SME CLASS)	BUSINESS EXCELLENCE (MULTINATIONAL)
COMPANY START UP	COMPANY WIDE QUALITY IMPROVEMENT	EXPANSION TOWARD WORLD CLASS PERFORMANCE IN THE CLASS OF SME	CHALLENGE TOWARD WORLD CLASS PERFORMANCE IN THE CLASS OF MULTINATIONAL

The transformation has been self led by the senior management team and has continued on the journey to business excellence.

Phase I (Year 1984 to 1993)
Survival stage - Company start up

Our Vision: Profit growth was the main driver and the primary organisational loyalty was to the investors.
The management's approach was to handle tasks and problem as they arose and to ensure that sales orders were met and we relied on our wits and personnel styles to be effective.
Thus, continuing increase in volumes was expected to provide continuing growth in profits.

Phase II (Year 1993 to 1995)
Consolidation stage - Company Wide Quality Improvement

The evolution of our organisation culture took off in the Year 1993 with the commitment from the CEO that the company was implementing Total Quality Management System (QMS).
During this period, our vision was to aspire to be a Quality Organisation.

The QMS selected was ISO 9000 which is a widely accepted international standard. It gave us a platform of integrating all the company's quality improvement activities and tying together diverse issues such as management commitment, process control. An external consultant, NOVO, was engaged to assist in its implementation. They helped us to structure our training program, provide external perspective and objectively share experiences of other clients and supplement our company's internal expertise. Management staff attended the training to understand the QMS.

This restructuring of our system had also provided a better response to our customer needs.

> *In July 1994, we received the ISO 9000 certification award which has been a critical success factor. It also exposed our employees to quality related disciplines and gave us the experience of working together co-operatively. These provided us with a good foundation.*

Phase III (Year 1996 to 2000)
Expansion stage - Expansion toward world class performance in the class of SME

In keeping pace with changing needs, the concept of quality had to be broadened. It had to extend from just emphasis on efficiency and assurance to a wider focus on excellence that embodied every aspect of an organisation's performance management system.

A new management system had to be developed and utilised to drive better and more comprehensive planning with alignment of business, quality and customer satisfaction goals into one cohesive set of process management goals and objectives.

Senior management embarking on the business excellence journey had to focus on the Singapore Quality Award criteria as a framework to drive the organisation toward world class standards. Quality was now to be synonymous with excellence, where the pursuit of quality was to be more innovative, flexible and faster.

Through leadership by example and to seek a smooth implementation, senior management attended the SQA training course conducted by the external training centre, NOVO.

Armed with this new knowledge, we drafted our Business Excellence Pledge, Vision & Mission. It started with dialogue session in Year 1997 with employees sharing their thoughts and views on Avi-Tech led by our CEO who then deliberated and developed the organisational vision and mission based on the feedback from employees. Henceforth, our Vision & Mission were developed.

After some intense discussion, we realised that we were not similar to Multinationals in terms-of our financial strength but were rather in the SME category. We concluded that our winning formula would be to develop a SME model that addressed our business needs and to benchmark ourselves to world class SMEs. The guidelines given were as follows:-
a)   Approach and deployment must be cost effective.
b)   Results achieved must be of a world class standard.

Our vision was World class SME Company in the class of SME.
The most indicative recognition of our success which endorsed us as world class SME were:-
1)   Our ranking of 41st and 31st position in Enterprise 50 for year 1997 and 1998 respectively.
2)   Admission into the Singapore Quality Class.

> *The main award that affirmed our position as the "Best of the Best" in the class of SME was the achievement of number 1 ranking in Enterprise 50 for year 1999.*

Minister Mentor Mr Lee Kuan Yew presented the prestigious E50 Enterprise Award to Mr Lim Eng Hong, CEO

Phase IV (Beyond Year 2001)

Growth stage - Challenge toward world class performance in the class of Multinational

We were now in the phase IV of our cultural evolution in which we were targeting for higher standards, World class Local Multinational. SQA criteria were adopted as a model for continuous improvement and achievement of business excellence.

The essence of SQA criteria framework is continuous improvement in all areas of organisational development while keeping pace with constant changes in the business environment. It is also focuses on learning and innovation.

We adopted the same approach and believed that it is a journey and is not a destination towards business excellence and improvement. Innovation, coupled with flexibility and speed was our focused objectives.

During this period, the senior management team continuously reviewed and refined our Vision, Mission, Core Values and Quality Policy in our Business Excellence Pledge.

The pledge enabled a customer centric culture of excellence, continuous improvement and innovation among our employees with our aim to be a local multinational organisation.

To help realize our Vision and Mission, senior management developed objectives, strategies and performance measurement indices to support and guide us in our daily practices. Our Aim was to achieve a world class performance in the class of local multi-national.

As a further indication of our success and, that the company was approaching world class level of performance, we garnered the following awards which affirmed our position and commitment toward business excellence are:-

– In year 2001, we were certified to QS9000 Quality Management System.

– In year 2003, we were certified to ISO 14001 Environmental Management System by TUV PSB Certification body.

– For year 2004 / 2005, we were conferred a Certificate of Supplier award for backend subcontracting by one of our customers for excellent performance in quality, technology, cost, logistics and management commitment.

In year 2007, we were listed on the SGX Main board.

These achievements provided tremendous fulfillment and motivation to all employees and will definitely inspire us to reach for greater heights and new boundaries in our pursuit of business excellence.

Looking ahead, the growth prospects for Avi-Tech appear to be bright. The trend of outsourcing Burn-In services by semiconductor manufacturers and the continual increase in demand for semiconductor devices should create demand for Burn-In services. Furthermore, the greater complexity of such devices, particularly those used in the automotive and microprocessor sectors, will require more complex and longer Burn-In processes, fabrication of more intricate and sophisticated Burn-In Boards and more system integration of high Power Burn-In systems, all of which are within Avi-Tech's expertise and core competencies. We will continue to leverage on our strengths in charting Avi-Tech's next growth phase as a listed company, expanding our operational and technical capabilities and widening our customer base both in Singapore and abroad.

The Senior Management uses a variety of platforms to communicate, demonstrate and reinforce our mission, vision and value to all our stakeholders.

The clear demonstrations of their involvement are shown below:-

Stakeholder	Communication Platform	Senior Management Involvement	For Whom	Frequency
Employee	Half yearly meet the staff session.	Chaired by CEO	For all employees	Half yearly
	Floor walks	CEO and the senior management team through management by walking	For all employees	Daily
	- Yearly goals setting - Quarterly Management Review	Driven by CEO and cascaded down to employees by senior management team	For all employees	Yearly, Quarterly, as and when
	- Monthly Financial Review	CEO and business unit	For senior management	Monthly
	- Weekly Performance meeting	Chaired by CEO	For senior management team	Weekly
	- Daily meeting (Operational issue)	Dept. Head and management staff	For all employees	Daily
	- Team / safety / audit	Team leader and members	For all employees	As and when
	- Training	Senior management team, management staff and trainer	For all employees	Half yearly for non-management staff As and when
	Reward & Recognition	Senior management	For all employees	- Half yearly staff meeting - Monthly Birthday celebration - As and when

Stakeholder	Communication Platform	Senior Management Involvement	For Whom	Frequency
Customers	Periodic Review meeting	Senior management, management staff	Customer management staff	Monthly, Quarterly, as and when
	Audit / assessment / negotiation	Senior management and management staff	Customer management staff	As and when
	Operational issues update	Management staff	Customer management staff	As and when
	Knowledge sharing session	Senior management and management staff	Customer management staff	As and when
	Visits / Exhibitions / shows	Senior management and management staff	Customer management staff	As and when
	Entertainment	Senior management and management staff	Customer management staff	As and when
Partners	Review meeting	Senior management and management staff	Strategic partners, Joint ventures	Annually As and when
	Visits / Exhibitions / Shows	Senior management and management staff	Strategic partners, Joint ventures	As and when
	Knowledge sharing	Senior management and management staff	Strategic partners, Joint ventures	As and when
	Operational Issues	Senior management and management staff	Strategic partners, Joint ventures	As and when
	Entertainment	Senior management and management staff	Strategic partners, Joint ventures	As and when
Suppliers	Negotiation	Senior management and management staff	Supplier management staff	As and when
	Periodic Review Performance	Management staff	Supplier management staff	As and when
	Knowledge sharing session	Management staff	Supplier management staff	As and when
	Audit	Management staff	Supplier management staff	As and when
	Visits / Exhibition / Shows	Management staff	Supplier management staff	As and when
Board of Director	Periodic review meeting	CEO	Board of Directors	Quarterly
Investor	Shareholders meeting	CEO	Investors	Annually

Senior management understands the implication and is looking at a variety of channels to gauge their effectiveness of their leadership. Evaluation used is as follows:-

S/No	Indicators	Channels	Assessment
1.	Company Performance	Management Review System Effectiveness of Business and Quality system	Assess actual result against goal
2.	Customer Feedback	Customer Satisfaction System	Assess customer result indicator
3.	Employee Feedback	Employee Satisfaction System	Assess people result against industry standard

L: CEO addressing the employees in communication session
R: Daily Management By Walking

1.2   Organisational Culture

The senior management team understands the importance of creating the right culture and to cultivate the right attitudes and perceptions in every employee in order for the organisation to thrive into the 21st century. Through seizing our challenging opportunities to change, grow, innovate and improve, we allow and support responsible risk taking and help our employees to learn from their success and mistake. The innovation and learning will help us in achieving the organisation's objectives.

Avi-Tech values are represented by AVI which stand for:-

A – Advancement for technology.
V – Value-added and customer centered services
I – Innovation.

These values are translated into policies and practices and behaviors to foster the desired culture in the organisation. The translation is mapped out to bring the values into reality which is shown below.

Values	Policies	Practices	Desired Behaviors
Advancement through technology	Learn from the best, adapt best practices, be industrious and innovate new products and services	- Create an environment that encourage innovation, value-add and risk taking - Adapt Best Practice - Benchmarking	Trendsetter in our business always one step ahead of competition
Value – added and customer centered services	To adopt SQA criteria methodology	- Customer satisfaction - Continuous learning and training - Quality Programme	Cultivate lasting relationships with our customer who value our technology and our execution toward excellence in delivering world class services and products
Innovation	- Attract, retain and develop people - Set target - Reward and recognition of performance	- Human Resource System - Set target and review result - Reward and recognition of employees	- Value people as a key asset - Encourage innovative technology through the creativity of our people and create value for our customer

Figure 1.1

To permeate and reinforce Avi-Tech's core values to all employees, the senior management team adopted the three strategy approach as depicted below:-

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                    ┌──────────────────────────────────────────────┐
                    │          Vision, Mission and Core Value       │
                    └──────────────────────────────────────────────┘
                          ▲                              │
                          │                              ▼
┌──────────────────────────────┐   ┌──────────────────────────────────────────┐
│ Reinforcement & Reward        │   │ Orientation Training Program               │
│ Mechanism used                │   │  •   For all new employees                 │
│  •   Performance Bonus        │   │  •   Introduce our company as well as      │
│  •   Promotion opportunities  │   │      provide overview of our culture,      │
│  •   Hiring guidelines.       │   │      rules and regulations                 │
│                               │   │  •   Distribution of Policy card           │
└──────────────────────────────┘   └──────────────────────────────────────────┘
                          ▲                              │
                          │                              ▼
                    ┌──────────────────────────────────────────────┐
                    │ Communication / awareness                     │
                    │ Enhancement through                           │
                    │  •   Display poster                           │
                    │  •   Policy Card                              │
                    │  •   Communication meeting                    │
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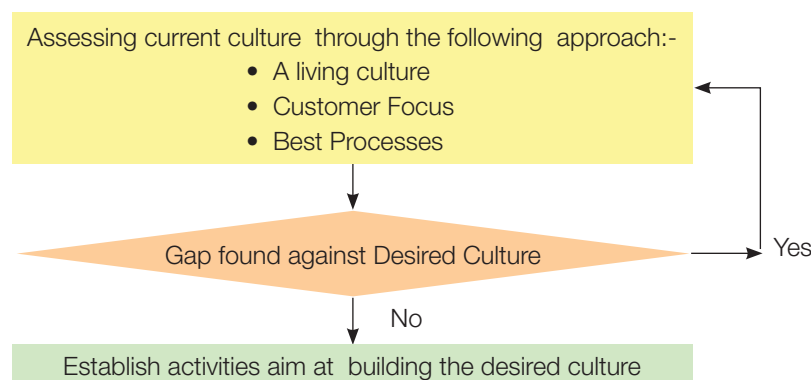
Avi-Tech understood the importance of having a strong corporate culture to steer the organisation toward its business objectives.

We have created an organisational culture where our people can face the challenges, learn from their experiences and make the necessary changes to adapt in a way which will support their success.
Our desired culture is one which is consistent with our core values. These desired behaviors are mentioned in Figure 1.1.

We used several approaches to identify the gap in the current culture and to chart out the action plan conducive for our desired culture:-

```
        ┌──────────────────────────────────────────────────┐
        │ Assessing current culture through the following  │◄──────┐
        │ approach:-                                        │       │
        │            • A living culture                    │       │
        │            • Customer Focus                      │       │
        │            • Best Processes                      │       │
        └──────────────────────────────────────────────────┘       │
                               │                                    │
                               ▼                                    │
              ◇───────────────────────────────────◇                │
               ◇   Gap found against Desired Culture ◇ ──────► Yes ─┘
                ◇─────────────────────────────────◇
                               │
                               ▼  No
        ┌──────────────────────────────────────────────────┐
        │ Establish activities aim at building the desired  │
        │ culture                                           │
        └──────────────────────────────────────────────────┘
```

1.3   Responsibility to Community and the Environment

Our organisation believes that a world-class organisation has a responsibility to the community within which it operates. It would fulfill its obligation in a practical and effective way within our capabilities and resources.

The work we do is focus on protecting people, increasing their comfort and maintaining their safety and protecting the environment.

In our capacity, we stress to have a positive impact on our environment and community through continuous attention to our daily work practices.

Our commitment to environmental and community responsible is reflected in the table below:-

Area	Policy	Program	Goals
Environmental Protection	Comply with legislations and regulations	Environmental Management System	- Maintain ISO 14001 EMS - Environmental complaince - Electrical energy conservation
Community Involvement	Community Participation	Human Resource Management program	Active participation in local community initiatives (student attachment)

Avi-Tech has put in place various mechanisms to facilitate communication of our responsibilities. They include.

Policy	Communication channel	Target Group
Environmental	* Internal Communication - General awareness training - Environmental activities. eg. Fire drill, internal audit, management review - Policy reminder - Environmental Management Programme	All employees
	* External Communication - Audits include customers, third party - Environmental commitment pledgew - Special requirement compliance like RoHS	Interested parties / customers Customers / suppliers / interested parties Customers / suppliers
Community Involvement	* Internal Communication - Student orientation programme - Training on process and technical skill - Project submission / presentation	Department involvement
	* External Communication - Community involvement - Visits	Education institution

We ensure that there is a continuity and consistency in our involvement in the community, society and the environment in which we operate through evaluation and improvements:-
Quarterly, the senior management team meets and discusses the environmental issues. This allows the department Heads to share their concerns, provide feedback as well as to raise new ideas / changes for the activities.

On top of this, the human resource department reviews the community involvement and gets feedback from educational institutions, departments and students. These will be collated and evaluated.

Evaluation and improvement on the involvement and contribution is as follows:-

S/N	Indicator	Addressing System	Assessment
1	Environmental	Environmental Management System	- Environmental complaints result - Assess new/changes to environment requirement - Environment aspect assessment
2	Community Involvement	Human Resource	Assess the effectiveness of the community result

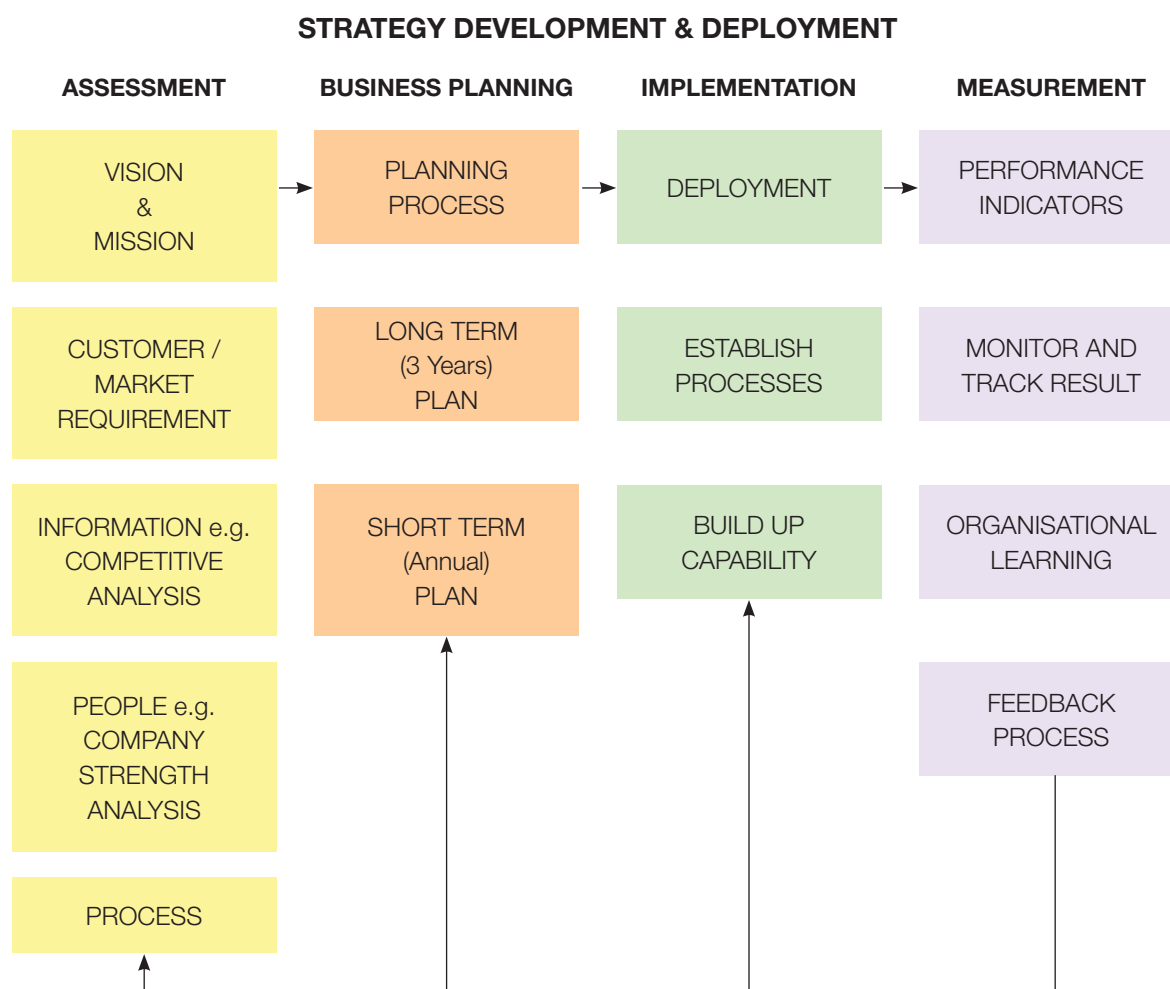*Prime Minister Lee Hsien Loong with Mr Lim Eng Hong, CEO*

Planning

2.1   Strategy Development & Deployment

Strategy development and deployment is recognised as a key business practice toward business excellence. It addresses our revenue growth and all operational improvements that are vital to our continuous business viability. We have to work harder to bring ourselves up to a new level of competence which will enable us to stay in this competitive market.

The vision and mission of Avi-Tech drives the strategy development process. Our planning process is an annual cycle to develop and deploy short and long term strategic plans. This involves every employee in varying degrees, from senior management right down to the lower levels of the organisation.

The overall view of our strategy development and deployment is   shown below which consists of 4 processes:-
i)   Assessment
ii)   Business Planning
iii)   Implementation
iv)   Measurement

STRATEGY DEVELOPMENT & DEPLOYMENT

ASSESSMENT	BUSINESS PLANNING	IMPLEMENTATION	MEASUREMENT
VISION & MISSION	PLANNING PROCESS	DEPLOYMENT	PERFORMANCE INDICATORS
CUSTOMER / MARKET REQUIREMENT	LONG TERM (3 Years) PLAN	ESTABLISH PROCESSES	MONITOR AND TRACK RESULT
INFORMATION e.g. COMPETITIVE ANALYSIS	SHORT TERM (Annual) PLAN	BUILD UP CAPABILITY	ORGANISATIONAL LEARNING
PEOPLE e.g. COMPANY STRENGTH ANALYSIS			FEEDBACK PROCESS
PROCESS			

A Planning Success Story

After our organisation was awarded the Enterprise 50 ("E-50") No. 1 ranking in year 1999, we have undergone a major transformation since year 2001 and the significant achievements were:-

1) In year 2007, we from a private into a public limited company, we were admitted to the official list of Stock Exchange of Singapore.

2) Revenue rose from S$36.6 million (Yr 2006) to S$70.4 million (Yr 2007), a tremendous 92.4% increase. This was due to our planning in year 2005 to invest in a unique business operation segment, Engineering Services and Equipment Manufacturing.

These achievements are not coincidental. They are the result of forward and rigorous planning through our strong foundation and infrastructure which have been put in place over the last few years.

This year, Avi-Tech launched its new business strategic planning which intent to utilise our proceeds from our issue of the new shares and is well positioned to capitalise on growing demand for Burn-In solutions driven by the continual increase in demand for semiconductor devices, used in automotive products and microprocessors used in desktops, notebooks and servers and industrial electronics.

We have developed four main strategic directions to achieve the company's mission and vision.
They are as follows:-
i)   Strengthen market position and expand customer base
ii)   Widen our operational and technical capabilities in respect of products and services
iii) Enhance competitiveness
iv)   Expansion of overseas operations

The salient initiatives under the four strategic directions are summarised below:-

i)   Strengthen market position and expand customer base
      We will strive to strengthen our position with existing customers by being responsive to their needs and offer cost effective solutions which will sustain the current business. We intend to offer cost effective solutions by having lower costs and then passing the benefits of the lower costs to the customers. Lower costs can be achieved by higher productivity through innovation and economies of scale as an outsourced service provider. We also intend to widen the coverage of our business to include all new devices in our customers' production and manufacturing pipeline that require our services. We also seek to widen our customer base so as to achieve a well-diversified group of customers that operate in various markets, especially in the automotive, communications, memories and the computer markets. We will endeavor to strengthen our market position and expand our customer base in Singapore and overseas.

ii)   Widen our operational and technical capabilities in respect of products and services
      –   We aim to further our strategy to be a comprehensive one-stop total burn-in solution provider by developing capabilities in new technologies and expanding our current portfolio to offer a wider range of products and services to our customers.

– Expand our local operations by pursuing activities related to our products and services as well as non-core outsourced processes.

iii) Enhance competitiveness

Consider and explore more synergistic alliances, mergers and acquisition, collaborative partnerships and joint ventures and explore more projects with new technology partners to enhance competitiveness.

This would allow Avi-Tech to expand our core business and network of customers, lower our operational risks and to increase our range of services and products to our customers. In particular, we intend to expand our core business into providing our engineering services to the life sciences industry.

In addition, in order to keep pace with the semiconductor technology trend, we will explore more projects with new technology partners from abroad. In doing so, we will able to enhance our competitiveness through niche products and services.

iv) Expansion of overseas operations

We intend to set up new facilities overseas after reviewing the customer base and their needs at that location. In particular, we set up Burn-In facilities by transferring some of our existing burn-in system from our Singapore operations to our new factory in the PRC.

We measure our achievement of our strategic direction / objectives through the achievement of strategic goals which are as follows:-

S/No.	Strategic Directions	Strategic Goals
i)	Strengthen market position and expand customer base	Revenue and volume from customer
ii)	Widen our operational and technical capabilities in respect of products and services	A set of key performance indicators
iii)	Enhance competitiveness	- Enter partnership and alliances in international markets - Acquire new technologies and capabilities
iv)	Expansion of overseas operations	Established presence in major international markets

We are aware of market trends and competitive direction; by reviewing our performance relative to plans from time to time so that we can perform well in this business environment.

Our approach is as follows:-

Business Plan & Annual Plan

↓

Weekly review operational issue by senior management and highlight on major changes in our business environment.
Quarterly management review on result against plan, market trend and competitive direction

↓

Senior management discussion, review and modify plan to meet the changing business environment

↓

Quarterly management review on the modified / current plan

Senior management monitors and reviews the implementation of the long and short term strategic plan carried out on a weekly, monthly and quarterly basis. During the quarterly management review, the actual performances are checked against planned targets, the deviation of actual performance from the plan reflect the effectiveness of the planning technique.

We have a weekly senior management review meeting on operational issues which link with our strategic plan. In the event, there is a business changes, the senior management shall discuss and modify the plan to cater for this new business environment

Our mechanism to evaluate and improve our strategic planning process is as follows:-

–   **Periodic Strategic Review**
    Our Board of Directors is entrusted with ensuring good corporate governance, setting strategic guidance, establishing effective controls, overseeing management and setting company values and standards.

    With the directors' vast working experience and expertise in different business, this has strengthened our strategic planning process, hence helping the company to grow its business.

–   **Quarterly Strategic and Operational Review**
    The work achievement progress of our annual plan and performance indicators would be reviewed at Management Review on a quarterly basis.

    The actual result against planned goals which was presented during the review, the deviations of actual performance from plans reflect the effectiveness of our planning technologies.

    During the process, the planning framework would also be reviewed to identify possible new areas of improvements to enhance our strategic thinking and learning process.
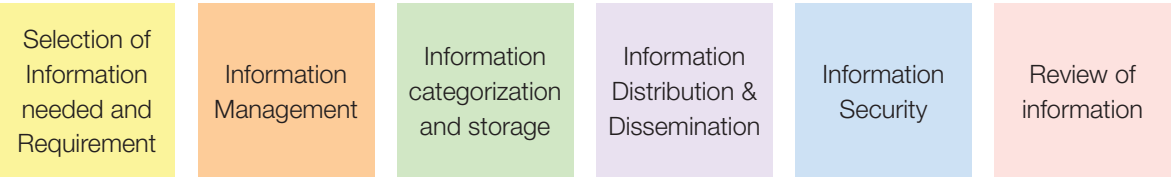
Information

3.1   Management of Information

Managing the information technology is becoming increasingly more challenging in this knowledge-based economy. The dependency of our business process on the effective collection and dissemination of information is a business reality in the industry.

We have realised that instituting a comprehensive process in selecting and managing information for planning will offer the greatest hope and will be the winner in the future.

Avi-Tech manages its information across the organisation using a systematic process which is described as follows:-

Selection of Information needed and Requirement	Information Management	Information categorization and storage	Information Distribution & Dissemination	Information Security	Review of information

Selection of Information needed and Requirement

The information needed to drive the planning, day to day management and improvements is selected and managed based on the following requirements:-
–   Strategic Direction and Objective
–   Day to day management
–   Improvements

The selection criteria are:-
i)   Customer
ii)   Human Resource
iii)   Financial
iv)   Internal Operation
v)   Supplier Chain

Customer   -   Avi-Tech's objective of maximising customer satisfaction and providing customers with a positive and satisfying experience whenever they interact with us.

Human Resource   -   This employee related indicators envision our environment that truly and totally values people. This places the need of our employees at the heart of everything, ensuring their satisfaction is met and that they will have a desire to contribute to our continuous improvement.

Human Resource Department tracked the performance of the employee and reviewed by management team.

Financial   -   As a public listed company, Avi-Tech aims to develop a strong public standing and promote the company's relationship with its partners and financial community.

Internal operation   -   Internally, self driven performance indicators are to ensure the company performance is in pace with the industry.

These measures are tracked at every level and are reviewed by department or by team. Any unresolved issue is brought up in the weekly Management team meeting.

Supplier chain   -   Besides improvement on our internal performance, our supplier performance is also important and is contributing to our success.

We tracked their performance, maintain an information database and drive them for continuous improvement.

Information Management

Our approach to information management is supported by a state of art, computer technology which is maintained by two external sources. One is good on the software and another on hardware. Because of their expertise in their own field, these resources keep us abreast of changing technology, acquire and test appropriate software and hardware improvement and maintain our systems. These outsourcing activities had dramatically reduced the time and effort on IT investments. These also assure us that we are always one step ahead of our competitors. We believe that the users know their business best. Hence, the development of Information system is always done jointly by the user and the 2 external sources which have the technological know how on the feasibility of using technology to enhance the business. It is a marriage that often results in systems creating value for the company.

Information Categorisation and storage

Categorisation and storage involve figuring out how best the users will be able to retrieve the information they need and determine the best place to store this information.
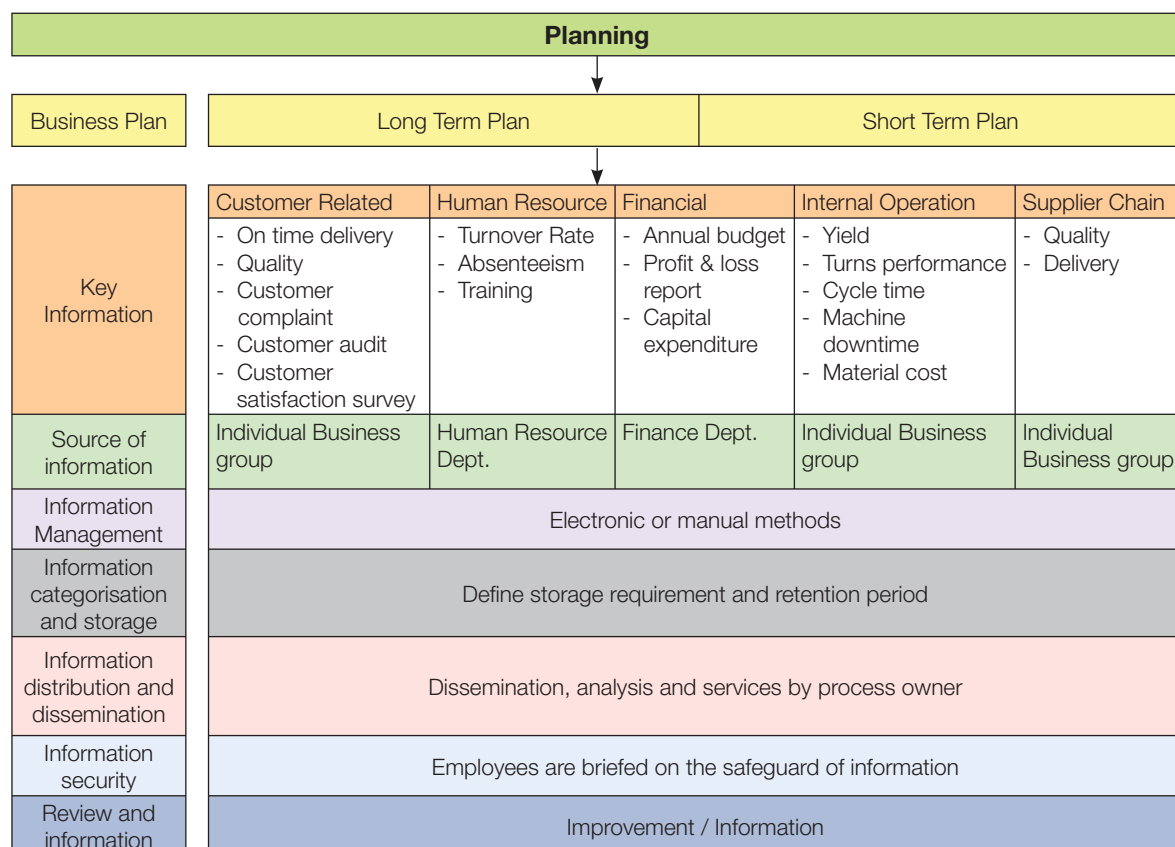
Information Distribution and Dissemination

Information is always routed to the interested department who will then circulate internally. Any individual can find out the responsible department that generates the report through our procedure and can request for it. Information that requires immediate attention is distributed as quickly as possible to people responsible for resolution. For operations data, hardcopy reports are used and circulate Electronic Media like email system is used.

Information Security

Basic rules on Information Security are established and documented. The information are classified and handled according to the level of sensitivity. Employees are briefed on the safeguard of information, intellectual property, intellectual capital and knowledge resources.

Review of Information

Quarterly, information is reviewed by the management team for effectiveness. The process is to identify new information, review existing ones for elimination or enhancement and update the sources. Below shows the relationship between key information and our organisation's performance and goals.

Planning				
Business Plan	Long Term Plan		Short Term Plan	
Key Information	Customer Related	Human Resource	Financial	Internal Operation	Supplier Chain
	- On time delivery - Quality - Customer complaint - Customer audit - Customer satisfaction survey	- Turnover Rate - Absenteeism - Training	- Annual budget - Profit & loss report - Capital expenditure	- Yield - Turns performance - Cycle time - Machine downtime - Material cost	- Quality - Delivery
Source of information	Individual Business group	Human Resource Dept.	Finance Dept.	Individual Business group	Individual Business group
Information Management	Electronic or manual methods				
Information categorisation and storage	Define storage requirement and retention period				
Information distribution and dissemination	Dissemination, analysis and services by process owner				
Information security	Employees are briefed on the safeguard of information				
Review and information	Improvement / Information				

We ensure that our information is reliable, accessible and disseminated quickly to employees, suppliers / partners and customers as follows:-

Information Reliability

Avi-Tech's philosophy is that those who drive the business process must own and take the pro-active lead in collecting and managing the vital data and information within their business processes. Our people are entrusted to maintain data accuracy and enhance the information reliability by the following methods:-

Key type of info / data	Ensure Reliability	Examples
Financial / Accounting Information	- Financial & Accounting Information through stringent accounting controls system - Confidential information vetted by Top Management - Other information through the checks of the respective business Department Head	In our financial system, we have engaged third party audit before the information is released to the public This also serves as a means to surface any irregularities in the data
Operation / Quality Data	Check and balance performed by individual immediate superior	- Daily, monthly and quarterly operation / quality reports collected by process owner. Immediate superior perform data validation before report is published.
Specification / procedure	Document Control System	- Owner of the specific specification / procedure shall generate and submit to their Department Head and QA for approval - QA shall release and control the specification / procedures version
Process Lot Traveler Information	Use bar-code technology to eliminate manual data entry error	In our production process bar code technology is used to scan lot traveller

System Reliability

Our information system reliability is also ensured by the following means:-

– Backup Server

If the server is down, data from the hardisk is transferred to a backup server and the process is restarted.

– Contingency Plan

A contingency plan is developed in advance to ensure that our operations will continue even if the system crashes.
Our 2 external suppliers will respond within 24 hours to assist in our recovery plan.

– UPS System

If there is power failure, the UPS system will be activated to ensure that the production still continues without any obstruction.

– Software Control Procedure

All our software used in our production are controlled by password access; various levels of information access is subject to appointment e.g. Engineer will have a higher accessibility than a technician.
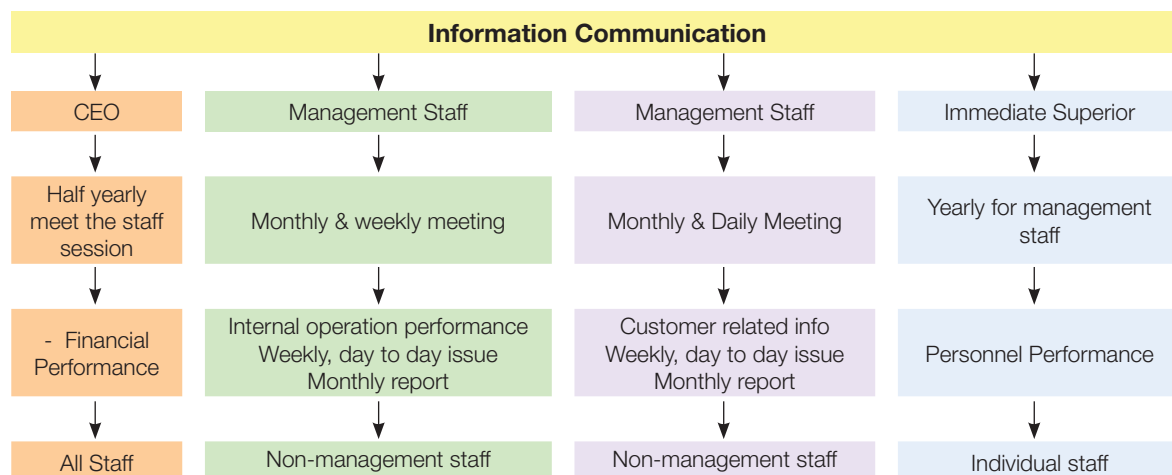
Information Accessibility & Dissemination

Avi-Tech recognises that having a sophisticated process and system to collect and ensure information reliability is not a sufficient condition for successful management of information. It is just as important that information is disseminated to relevant parties in a timely manner. The accessibility and dissemination of information to employees, supplier / partners and customers are as follows:-

Dissemination of information		
Employees	**Suppliers / Partners**	**Customers**
- CEO meet the staff session - Quarterly Management Review Meeting - Weekly Performance Meeting - Daily Production Meeting - Training Programme - Website - Email / Memo / Briefing - Specification / Procedure easily to access. - Performance Indicator Report - SAP System - Data flex System	- Purchase Order - Supplier Visit / Meeting - Website - Email / Memo - Specification / Procedure - Monthly Performance report - Audit - Entertainment	- Customer Visit / Meeting - Customer Purchase Order - Website - Specification / Procedure - Monthly Performance Report - Audit - Entertainment - Contact Personnel matrix

System Accessibility and Dissemination

The system of information, access and dissemination to different level of employees are as follows:-

Information Communication			
CEO	Management Staff	Management Staff	Immediate Superior
Half yearly meet the staff session	Monthly & weekly meeting	Monthly & Daily Meeting	Yearly for management staff
- Financial Performance	Internal operation performance Weekly, day to day issue Monthly report	Customer related info Weekly, day to day issue Monthly report	Personnel Performance
All Staff	Non-management staff	Non-management staff	Individual staff

Sharing of information to encourage innovation and learning.

We worked to create an environment that promotes the sharing of information so as to encourage learning and innovation.

Our activities are:-
1) Knowledge sharing session.
2) Project Sharing Session.
3) Electronic Platform like Email.
4) Training.
5) Conference & Seminar.
6) Meeting.
7) Information exchange with customer / suppliers / partners.

Avi-Tech has established a rigorous process of collecting and incorporating a wide range of information into our management system. With this rich collection of information, we perform data analysis using various analytical tools so that projections can be made and meaningful representations can be formed to facilitate decision making.

Listed below are several way that various techniques method used:-

S/N	Indicators	Techniques Used
1.	Strategic	Projection, Pie chart trend analysis
2.	Customers	Trend analysis, comparison, Sampling Plan method
3.	Processes / Product / Services	Trend analysis, Statistical technique such as SPC, Control Plan, 8-D analysis, corrective and preventive action
4.	People	Trend analysis, comparison, Projection

In order to keep our information up to date, the management team reviews quarterly existing information points for elimination or enhancement and also to identify new data measurements.

We recognise that to stay competitive, we continuously need to review our information management system to stay ahead and that we will require a more efficient process of managing our information. Hence, we evaluate the needs of the organisation with regards to the management of information. Evaluation and improvements are addressed as follows:-

Quarterly Management Review

The management of information is evaluated and improved from "top-down" during our quarterly review of the performance indicator result. This is reviewed and improved upon to ensure the relevance and alignment with our business objectives and goals.

Annual Customer Review

As we are part of customers manufacturing processes, our customers give a joint review annually with us to identify new information, review existing information for elimination or enhancement. Once we have agreed on the selection of information, we monitor and execute for improvement together,.

Individual Department Review

On the department level, process and system owners are responsible for reviewing their performance indicators and determining how best to select, collect and disseminate information. During the monthly department performance review, they discuss and improve on the management of information.
This improvement is from the "Bottom Up".

3.2   Comparison and Benchmarking

Competitive pressure has driven Avi-Tech to look at the business processes using benchmarking and comparison indices.It has enabled us to assess our relative strength and weakness as well as what it would take to turn the situation around.
The result has lead us to achieve quantum improvement against our competitor and approach to "World Class".

The search and selection of best practices and performance benchmarks are based on three driving principles:
1) To gain a better understanding of the efficiency and effectiveness of our business processes and policies.
2) Adopt an external focus to understand and compare against other companies that have established excellent practices.
3) To seek continuous learning from others and to improve ourselves.

Below is our comparative and benchmarking process employed:

PLAN
Identify key indices to benchmark

ANALYSE
Gather and analysis of information

APPROVAL
Senior management approved of benchmark Goal set / Break through improvement

IMPLEMENTATION
Deployment to all employee and established action-plan

REVIEW
Implement & Monitor Results (Evaluate Effectiveness)

1) PLAN

Before the start of a new financial year, we identify and establish benchmarking needs.
Considerations of these needs are:-
- Performance indicators related to strategic objectives.
- Values add to our stakeholders and customers.
- Challenge for break through improvement.

Individual process owners will scan the environment to identify the benchmark source for best practices.

2) ANALYSE

Based on the data and information collected, the individual department Head will review with his team members and identify the gap (performance indicators) between Avi-Tech and the comparative partner.

3) APPROVAL

The department Head shall present at the senior management meeting. Discussion on the information and explanation on the gaps is sought so that we know exactly how to improve our performance. Once accepted, relevant functional goals will be set.

4) IMPLEMETATION

Once the new goals are approved, the Department Head shall disseminate it to the team members and to challenge them to learn new ways to do things more effectively. They also develop and implement the required action plans.

5) REVIEW

Individual departments monitor their performance result against goals set on monthly basis and establish action to address any issues.

Quarterly, senior management shall review the result and ensure the effective implementation of action to meet the goal set.

We have encouraged benchmarking activities to implement breakthroughs to better our performance against our competitors.

Figure 3.1 showed the summary of our past comparative studies.

Figure 3.1

Topic	Benchmarking Organisation / Partners	Breakthrough Improvements.
Brand Equity	E-50 Organisations in Singapore	Adoption of process to achieve E-50 set of performance indicators. This was in line with the nation's desire to internationalise its local enterprises. We have been awarded 3 times and ranked as 1st in the list of E-50 companies in Year 1999.
People Recruitment	Recruitment Agency	Implementation of recruitment process to hire foreign workers This improves our turnover rate result.
Competitors and its financial status	Competitors	Comparative analysis on the competitor's financial status. Used as information to develop new business strategies.
Customer Complaint Resolution	Customers	Implementation systematic 8-Discipline problem solving methodology for external customers. The problem solving methodology enhances the process of solving complaints.
Manufacturing Process	Internal	One of the breakthroughs was implementation of automation to replace the manual loading / unloading process. This improvement resulted in better quality and the quantity (increase in unit per hours). Implementation of SAP software to streamline and automate our business process to improve efficiency.

Annually, comparative information relating to the performance of our product and process is obtained from our customers / industry to benchmark our performance. The individual business segment is to identify leading performance levels as benchmarks and use a consensus to establish meaningful and challenging stretch goals if applicable. Periodic reviews are conducted to assess and re-calibrate goals.

Benchmarking information has been used to improve on internal efficiency, set goals, and accelerate learning and improvement.
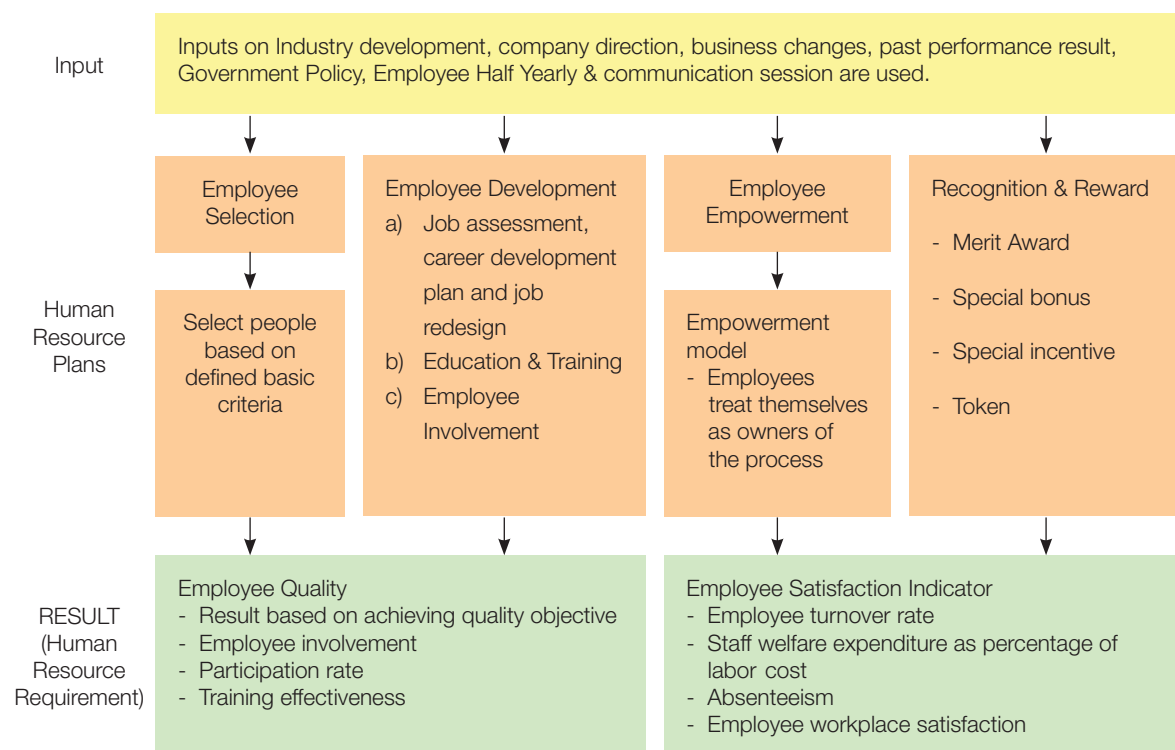
People

4.1   Human Resource Planning

Human resource requirements and plans have closely aligned itself with the business goals of our organisation. We are aware of and concerned with the person and his/her capabilities, development and satisfaction.

We see each employee as a prize partner with the potential to be creative and actively by taking personal ownership in his/her work, finding satisfaction in its practice and expressing the ability and desire to contribute to continuous improvement.

Our human resource requirement and plans has its own set of key indicators which support the organisation's overall business goals.

The overall Human Resource Requirements and Plans are as follows:-

Input	Inputs on Industry development, company direction, business changes, past performance result, Government Policy, Employee Half Yearly & communication session are used.

Human Resource Plans	Employee Selection	Employee Development a) Job assessment, career development plan and job redesign b) Education & Training c) Employee Involvement	Employee Empowerment	Recognition & Reward - Merit Award - Special bonus - Special incentive - Token
	Select people based on defined basic criteria		Empowerment model - Employees treat themselves as owners of the process	

RESULT (Human Resource Requirement)	Employee Quality - Result based on achieving quality objective - Employee involvement - Participation rate - Training effectiveness	Employee Satisfaction Indicator - Employee turnover rate - Staff welfare expenditure as percentage of labor cost - Absenteeism - Employee workplace satisfaction

L: Employee received her 20th year's service award R: Bonding event across the company

L: Employee suggestion to CEO
R: Senior management team Q&A session with employees

The human resource plans are implemented and executed accordingly is as follows:-

S/No	HR Plan	Implementation	Execution	Involvement
1	Employee Selection	Recruitment process	HR and department involved to select the right person to the right job	Management staff
2	Employee Development			
	- Job assessment and career development plan and job redesign	Assessment based on performance appraisal	HR and department involved to assess the employee performance	All management staff
	- Education & Training	Yearly, review of training needs and develop training plan	HR and department involved to execute accordingly to training plan	All management staff
	- Employee Involvement	Develop employee responsibility and use team concept to meet the company goal	Team formed to address issue like problem improvement etc	All employees
3	Employee Empowerment	Empowerment model is developed	Senior management gives the employee the authority as they are the process owners	Senior Management
4	Recognition and Reward	Recognition and reward system is developed	Recognition and reward given to employees for their achievement	All management staff

The review of our human resource plans are through various platform which are as follows:-:-

| Platform	Frequency	Description	Purpose
Performance Meeting	Weekly	Review of human resource need and requirement. Update status	To review and revise human resource plans as and when on changing business environment
Listening to Employees	Daily	Supervisors conducts daily meeting and provide informal feedback	To gather staff feedback and review for improvement
	Twice a year	CEO conducts communication session with all the staff	To provide a channel for staff to feedback their concern and also for management on the improvement made for previous session
Management Review	Quarterly	Review of trend data for human resource. Recommend actions on changing business needs	Update human resource result and recommend action to address the changing environment
Strategic Planning	Annually and monthly update at Financial review	Business segment collates manpower requirement	To prepare manpower requirement to meet business need

4.2 Employee Involvement & Commitment

The initiation of employee involvement and commitment as a concept and a way of life is certainly a major contribution that helps to shape our workplace.

With technology changing rapidly, product having shorter life cycles and the equipment becoming more complex and expensive, there is a need for conscious, concerted and integrative effort to meet the goals and objectives. The most effective mechanism to response to this change is to encourage employee involvement and commitment.

The following strategies have been adopted to foster employee involvement and commitment.
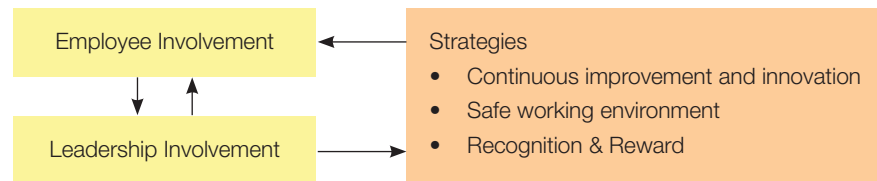
The mechanisms to support these strategies are follows:-
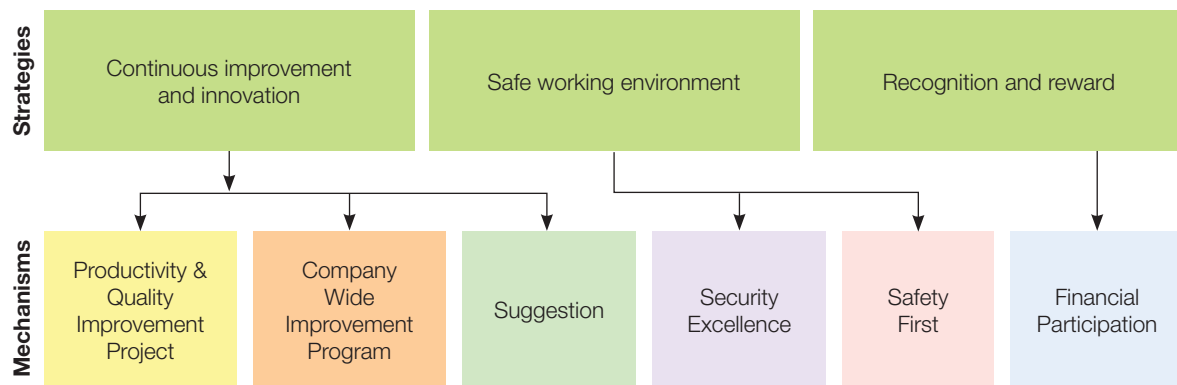
The implementation of the mechanisms for employee involvement and commitment is as follows:-

Mechanism	Champion	People Involvement	Objective
Productivity & Quality Improvement Projects	Individual Business Segment team	All employees	Promote innovation and continuous improvement mindset
Company Wide Improvement Program	QA Department	All employees	To support company wide initiatives on business excellence
Suggestion	HR Department	All employees	Employees are strongly encouraged to raise ideas to improve any aspect of our business operation
Security Excellence	HR Department	All employees	Promote security improvement
Safety First	Facility	All employees	Promote conducive and safe working environment
Financial participant	Finance Department	All employees	To motivate employees to optimise their performance standards and efficiency and to maintain a high level of contribution

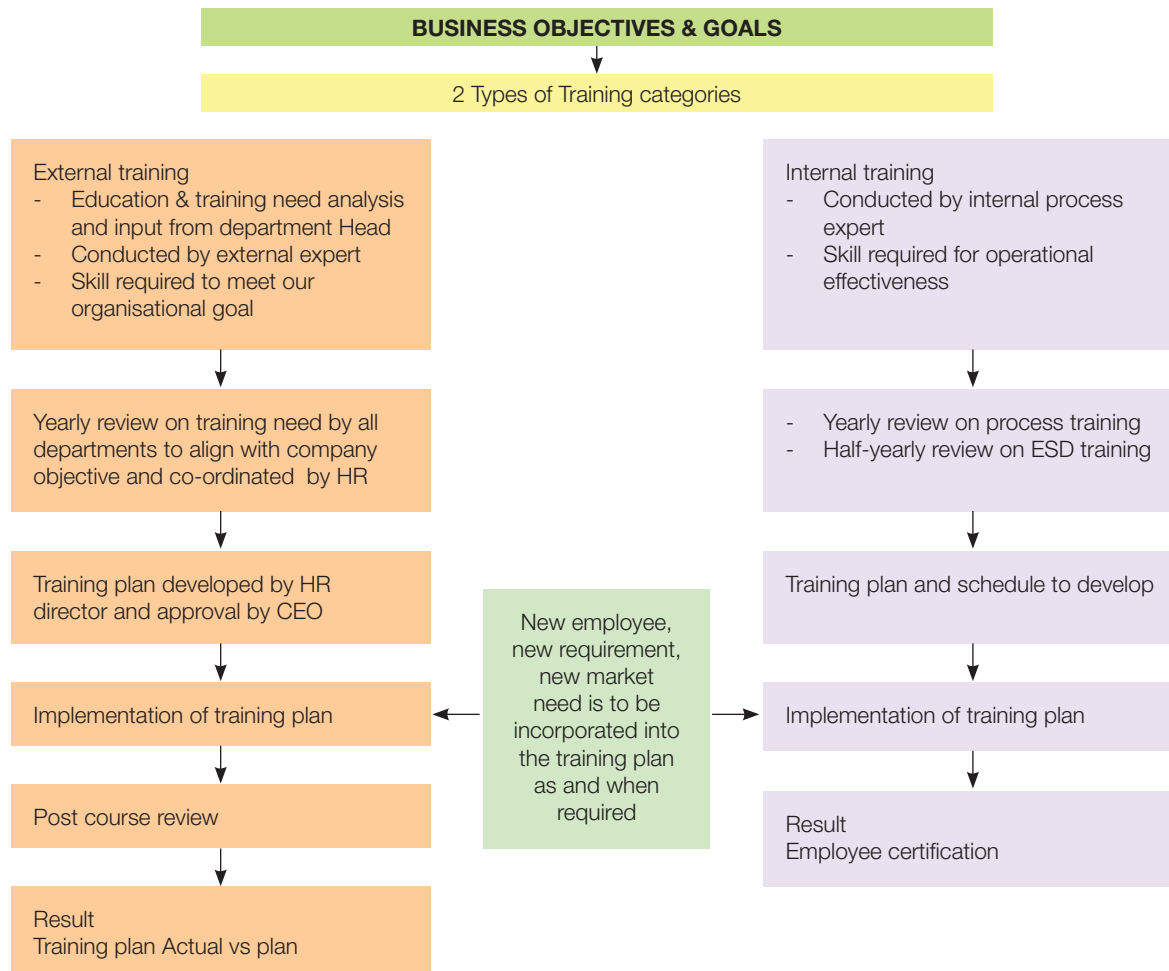Evaluation used to improve employee involvement process is:-

S/N	Indicator	Addressing System	Assessment
1	Performance Indicator Employee Involvement Indicator	Human Resource System	To evaluate the effectiveness of current processes
2	Third party assessment / feedback	Management Review System	To review the overall processes and take action for improvement

4.3   Employee Education, Training and Development

In our quest for excellence, training employees in skills and knowledge necessary to perform the job effectively has always been a challenge. With the business environment becoming more competitive, we treat training as a competitive weapon that will help us to survive and prosper.

Our approach in managing employee education, training and development are as follows:-

Training System

BUSINESS OBJECTIVES & GOALS

2 Types of Training categories

| External training |
| - Education & training need analysis and input from department Head |
| - Conducted by external expert |
| - Skill required to meet our organisational goal |

Yearly review on training need by all departments to align with company objective and co-ordinated by HR

Training plan developed by HR director and approval by CEO

Implementation of training plan

Post course review

Result
Training plan Actual vs plan

New employee, new requirement, new market need is to be incorporated into the training plan as and when required

| Internal training |
| - Conducted by internal process expert |
| - Skill required for operational effectiveness |

- Yearly review on process training
- Half-yearly review on ESD training

Training plan and schedule to develop

Implementation of training plan

Result
Employee certification

Our system on implementation of employee education training and development plans and the review for its effectiveness are as follows:-

S/N	Education, Training & Development	Implementation	Review Effectiveness	Record
1.	External Training	a) Training plan developed on yearly basis by HR department. b) Employee attends the course as per plan. c) Employee submits the course evaluation d) Employee recommends action-plan to determine effectiveness	Dept. Head follow up on the result on implemented action during performance review	a) Training plan b) Course Education Form c) Effectiveness Form
2.	Internal Training	a) Schedule for internal training is documented. b) Training conducted by internal staff as per schedule c) Test is conducted to determine the effectiveness d) Result is recorded in Employee Training record	Effectiveness is based on the test result. Re-training is done when the employee did not meet the criteria	Employee training record

Evaluation used to improve education, training and development process is as follows:-

S/N	Indicator	Addressing System	Purpose
1.	- Certification test - Test result for internal training	Training System	To evaluate the effectiveness of specific training course
2.	Training Performance Indicator - Training Plan (Assess Actual against Plan) - Training hours per employee - Training expenditure	Human Resource	To evaluate the impact of training on the business
3.	Third party assessment / feedback	Management Review System	Assess report, review the process and improve on it

4.4   Employee Health and Satisfaction

Employees, as much as machine and equipments, represent a valuable asset to the organisation.

Our recognition of this value is embodied in the concept of employee health and satisfaction which considers that employees posses skill, experience and knowledge that have economic value.

We don't believe that you can have happy customers unless you have intensely happy employees.
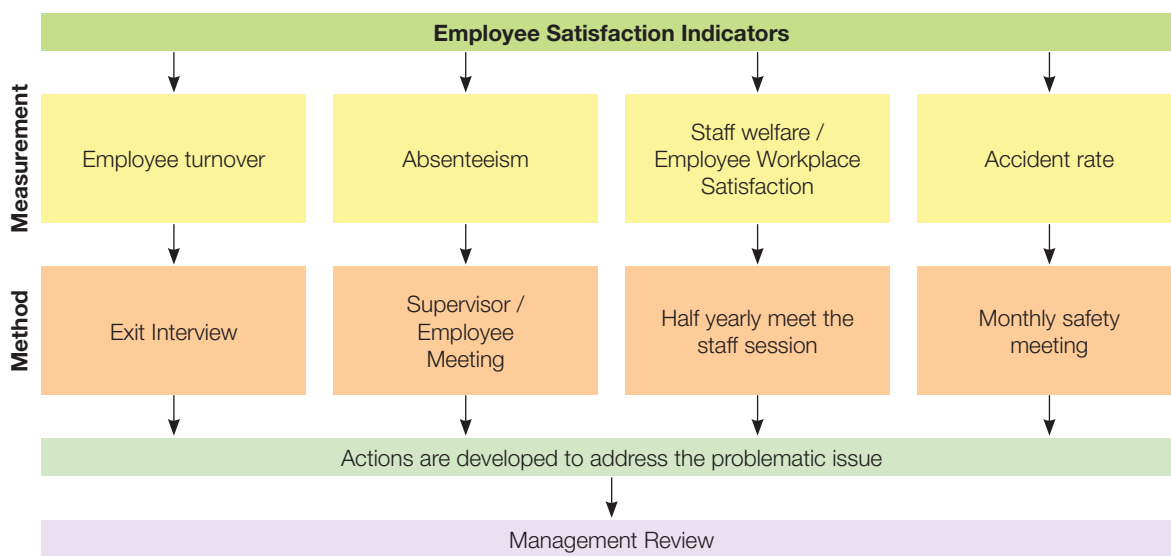
To support our commitment, we have identified the major components as listed below that affect employee health and satisfaction and the mechanism that is implemented.

Components Affecting Employee Health and Satisfaction	How Mechanism is Implemented
Job expectations	• Job description – A clear well-written job description is issued to all employees so that they are aware of their roles and responsibilities • Interviews – During interviews, both favorable and unfavorable aspects of the job are presented by the interviewer
How employee is inducted	• New Employee Orientation (NEO) – All new hires are required to attend an orientation program beginning on the first day at work • New hires are briefed on Human Resource policies and procedures
Regular performance feedback	• Clear goal setting • Feedback session – conducted regularly between employee and supervisor
Relationship with immediate supervisor	• Leadership attributes – Supervisors' performance are assessed against the leadership attributes
Training and development opportunities	• Training, development and education schemes
Competitive compensation & benefit package	• Pay for performance, not seniority • Financial and non-financial incentives
Workplace health, safety and security	• Safety committee – To ensure plant-wide health and safety practices • 24-hour security – Provided by in-house security officer and outside security agency • Safety inspection – Monthly mandatory safety inspections • In-house canteen
Open and honest communication	• Company-wide communication meeting – Sharing of information on company performance, including financial information and direction
Leadership styles	• Leadership attributes – Leadership attributes through an open and participative management style
HR policies and procedures	HR policies and procedures have been developed to cover the major areas of: - Employment - Development - Reward - Handling of grievances - Discipline - Equal opportunities - Promotion - Redundancy

Health Screening Programme

The measurement on employee satisfaction indicators are based on industry practice and also data from government bodies such as MOM.

Method to understand the employee satisfaction performance is developed and action is taken on the problematic issue.
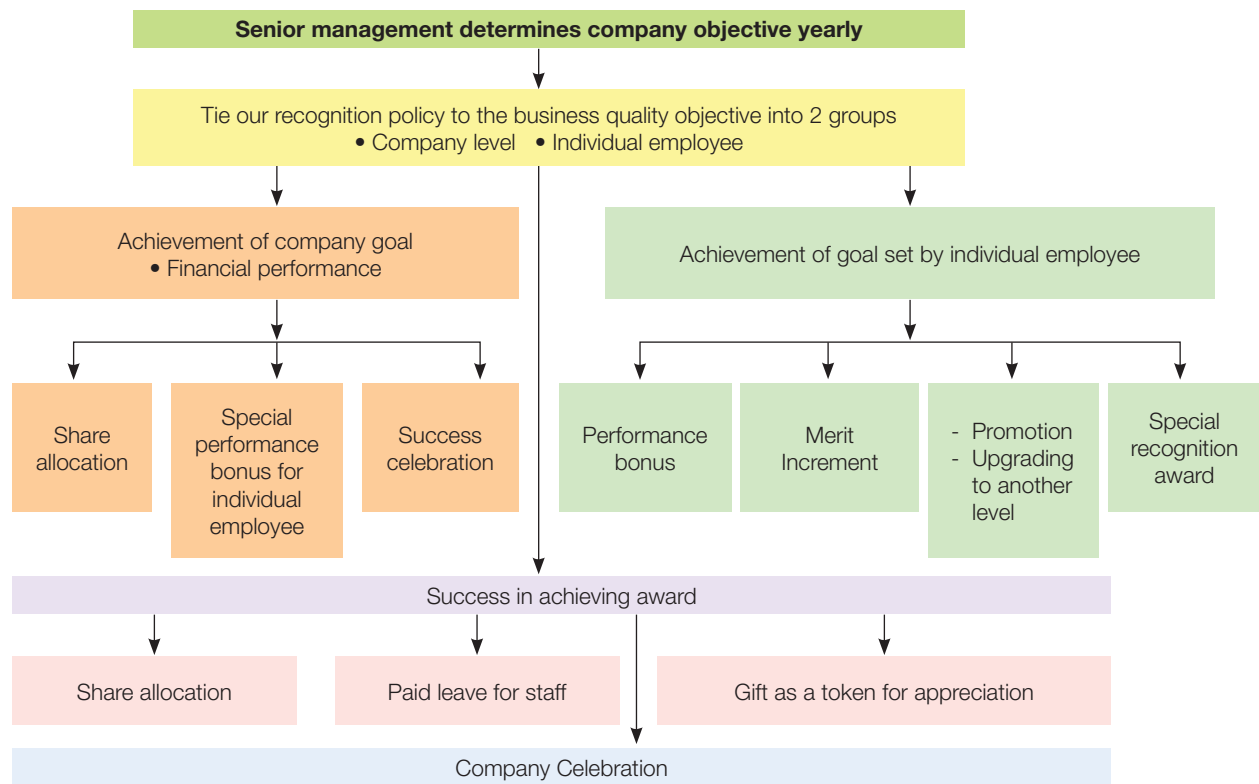
Employee Satisfaction Indicators			
Measurement			
Employee turnover	Absenteeism	Staff welfare / Employee Workplace Satisfaction	Accident rate
Method			
Exit Interview	Supervisor / Employee Meeting	Half yearly meet the staff session	Monthly safety meeting
Actions are developed to address the problematic issue			
Management Review			

Evaluation used to improve its approach to ensure employee health and satisfaction is as follows:-

S/N	Indicator	Addressing System	Objective
1.	Performance Indicator Employee health and satisfaction indicator	Human Resource System	To assess the current processes against market information
2.	Third party assessment / feedback	Management Review	To review the overall processes and take action for improvement

4.5   Employee Performance and Recognition

We believe in creating a motivational environment for each of our employees. The motivational factor for the employee is identified and used to recognise and reward their effort.

Our employee performance and recognition system support the company objectives which are as follows:-

Senior management determines company objective yearly

Tie our recognition policy to the business quality objective into 2 groups
• Company level   • Individual employee

Achievement of company goal
• Financial performance

Achievement of goal set by individual employee

| Share allocation | Special performance bonus for individual employee | Success celebration | Performance bonus | Merit Increment | - Promotion - Upgrading to another level | Special recognition award |

Success in achieving award

| Share allocation | Paid leave for staff | Gift as a token for appreciation |

Company Celebration

Approach used to evaluate and improve our performance and recognition systems:-

S/N	Indicators	Addressing System	Assessment
1.	Employee Feedback	Half yearly meet the staff session, walk about	Review existing performance and recognition process
2.	Performance indicator Human Resource	Human Resource System	To assess the overall processes and to make improvement

1: Bonding event across the company
2: Employee received her 5th year's service award
3: Senior management celebrating birthdays with employees
4: Manager in action giving out gift as a token of appreciation
5: Employee received retirement award from CEO
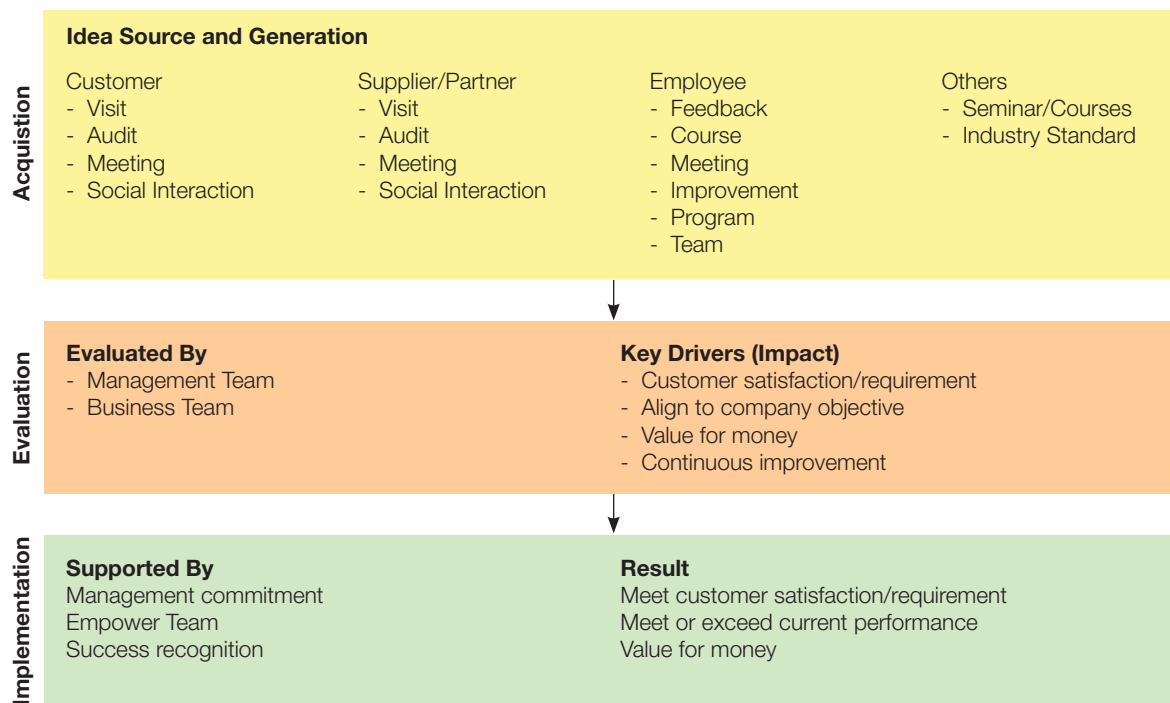
Processes

5.1   Innovation Processes

In our effort to offer customer with a "perfect" product and services, our processes need to be creative, innovative and achieve continuous improvement that will deliver to the customer what he wants, when he wants it-as demand requires.

We ensure that the process is continuously managed, measured, supported and improved through creative ideas.

Our innovative framework was put in place to promote a flourishing innovative culture and reflect our commitment culture as shown below.

Life Science Manufacturing Process

Innovation Framework

Acquisition	**Idea Source and Generation**			
	Customer	Supplier/Partner	Employee	Others
	- Visit	- Visit	- Feedback	- Seminar/Courses
	- Audit	- Audit	- Course	- Industry Standard
	- Meeting	- Meeting	- Meeting	
	- Social Interaction	- Social Interaction	- Improvement	
			- Program	
			- Team	

Evaluation	**Evaluated By**	**Key Drivers (Impact)**
	- Management Team	- Customer satisfaction/requirement
	- Business Team	- Align to company objective
		- Value for money
		- Continuous improvement

Implementation	**Supported By**	**Result**
	Management commitment	Meet customer satisfaction/requirement
	Empower Team	Meet or exceed current performance
	Success recognition	Value for money

Acquisition

Idea source and generation are identified to facilitate the creativity for the birth of an initial idea and its development further as new process.

Evaluation

This process is where the ideas / new concept are refined and assessed on the impact to the company. This also ensures that the key driver is reviewed against the idea / new concept generated.

Implementation

With the idea supported and the framework is developed to ensure that the new process, product / service / concept / system takes off and meets the result.

APQP	Key Process		Output	Responsible Dept
Planning	Contract Review		- Product Production Request - Feasibility Consideration	Sales, Design, Production, QA
Product Design & Development	Design		- Design	Sales, Design, Customer (where required)
Product & Process Validation	PPAP Procedure		- Assembly Drawing - Bill of Material - MSA - Test Programme - Process Capability Study - PPAP Approval Document - Engineering Change - Request	Production, QA, Design, Purchasing
Production	Production		- Product Acceptance - Auto Schedule & Performance Tracking - Production Flow Chart - Production Control Plan - Process FMEA	Production, QA
Feedback, Assessment & Corrective Action	Corrective & Preventive Action Procedure	Customer Satisfaction Procedure / Statistical Technique	- Customer Satisfaction Survey - Delivery - SPC record - Management Review - Corrective Action	Sales, Production, QA

Involvement from employees, customers and suppliers on the processes are as follows:-

| APQP	Employee (Dept)	Customer	Supplier
Planning	Sales, Engineering, Production, Maintenance QA & Purchasing Process Determine customer / market requirement	Customer (End-user) Process Define customer requirement	Suppliers Process Avi-Tech to activate the supplier in advance on the new product/service and required them to prepare
Product Design & Development	Sales, Engineering & Design Process Customer / market requirement and processing change are translated into engineering and product specification	Customer (End-user) Process Buy off the design	Supplier Process Translate out requirement into their production phase
Product & Process Validation	Design, Engineering, Production, Purchasing, QA Process To validate the production process	Customer (End-user) Process Avi-Tech to inform customer on the production and process status	Supplier Process Proceed with production
Production	Production, QA, Engineering Process Proceed with production	Customer (End-user) Process Acceptance of product	Supplier Process Acceptance of product
Feedback, Assessment & Corrective Action	Sales, Engineering, Design, QA, Production, Purchasing Process Evaluate effectiveness of product	Customer (End-user) Process Provide feedback	Supplier Process Evaluate effectiveness of product

The innovation and design processes are evaluated through:-
–   Innovation Process Review.
–   Product & Services Design Process Review.

5.2   Process Management and Improvement

Our process management and improvement concept is to focus our attention and resources on prevention rather than dealing with problems.

We constantly review and identify our key and supporting processes requirements and their interconnection. These processes form the value chain which contributes values to customers in meeting their requirements and satisfaction which is as follows:-

Business & Support Processes
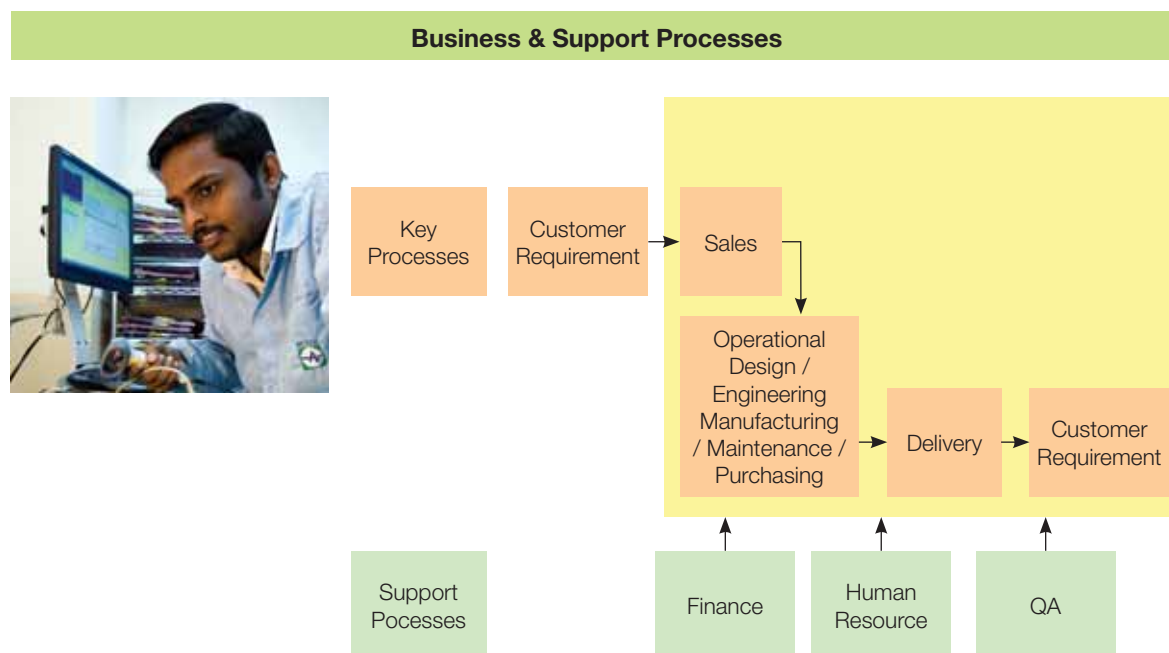
The adoption of this approach when developing, implementing and improving the effectiveness of our Business and support process, is to enhance customer satisfaction by meeting customer requirements.

The illustration showed that customers play a significant role in defining requirements as inputs Monitoring of customer satisfaction requires the evaluation of information relating to customer perception as to whether the customer requirement has been meet.

This approach requires:-
–   A clear definition of process owners for key processes.
–   Quality manual and a set of procedures which are generated to calibrate the company practices.
The performance indicators linked to the key processes are identified and tracked to ensure job targets; requirement and standards are not compromised. When gaps or area of improvement are surfaced, action is initiated to study the situation and recommend rectification.

The processes and key measurement and requirement are shown belows:-

Process	Requirement	Measurement
Sales	Customer Requirement	- Sales - Customer Satisfaction
Operation	Consistency and predictability of production operation.	- Cycle time - Inventory turn - Maintenance Downtime - Electrical yield - Supplier Performance
Customer Satisfaction	Meet customer requirement on quality and service.	- On Time Delivery - Quality Performance - Customer Complaint
QA	- Quality Assurance - System Effectiveness	- Quality Performance - Certification to international standard - Audit
Human Resource	- Staffing - Training	- Absenteeism Rate - Training Performance
Finance	Accuracy and timeliness	Financial Performance - Profit and loss - Balance sheet - Key financial ratio

The description of the key processes

Sales

Sales process oversees a good working relationship with all customers by emphasising total customer satisfaction from pre-sales to post sales customer support services.

Operation

The operation process covers the demand of forecasting and planning order taking in production scheduling, manufacturing activities and finally shipment of customer's products.

Customer Satisfaction

This process focuses on collection, analysis and use of information for improving the performance of our overall business.

Description of support Process

Finance

Process covers according policies and procedures to ensure compliance to Financial requirement.

Human Resource

Process focuses on planning, organising and administration of human resources as well as planning and direction of human resource development, performance and career management programmes.

Quality Assurance (QA)

This process concentrates on the activities to meet the high quality of the product and services. Also include in the design and implementation of management system to achieve, maintain and improve overall organisational performance and capabilities.

Review and improves key process to achieve better process performance and improvement are as follows:-

Process	Review & Improvement System
Sales	- Customer Satisfaction Survey - Management Meeting - External / Internal Audit
Operation	- External / Internal Audit - Seminar / Industry Feedback - Project management - Benchmarking - Management Meeting - Employee Feedback
Customer Satisfaction	- External / Internal Audit - Management Meeting
QA	- External / Internal Audit - Management Meeting
Human Resource	- Industry Human Resource Group Meeting - Management Meeting - Seminar - Employee Feedback
Finance	- Industry Feedback - Seminar - External / Internal Audit

The processes are reviewed by the respective process owners through the review and Improvement system and where necessary changes will be evaluated and ensured that the requirement is met.

5.3   Supplier and Partnering Process

Long term competitive advantage is the ultimate goal and can be achieved in a supplier and partnership process.

Our framework for a successful working relation focuses on value creation capabilities; proactive partners who share a common approach of pursuing continuous improvement on manufacturing and service excellence.

This must be acceptable in the partnership progress and move toward a long-term relationship of loyalty and trust.

To be successful in meeting customer's requirements on quality, cost and delivery, supplier management process is part of the critical success factors. This system is part of our ongoing programme to nurture strategic supplier / partners partnerships to enhance our mission and vision.

Our supplier identification and selection criteria for direct material suppliers are as follows:-
–   Pricing
     Value competitiveness, long term viability and financial stability.
–   Supply Chain
     Lead time inventory management capability
–   Engineering / Quality
     Ability to meet or exceed our requirements and specifications and quality management system

Our purchasing department co-ordinates with other departments evaluates all potential suppliers. While pricing is an important factor, our primary focus is on assessing the overall value proposition represented by the potential new supplier.

Visit to Supplier

The supplier needs to go through a qualification process by submitting First Article. Upon qualification, the supplier will be placed on our "Approved Vendor List".

Key supplier performance requirement is as follows:-

S/N	Requirement	Performance Indicator	Responsibility	Communication Frequency	Monitoring Frequency
1	Product Performance	a) Quality Result b) Delivery Result	QA / Purchasing	Monthly	Monthly
2	Supplier Quality System	Audit Result	QA	Yearly	Monthly
3	Supplier Development	Improvement Process	Purchasing / QA	Yearly	Quarterly

Our expectations from the supplier are:-
1) Product Performance
2) Quality system that meet the international standard
3) Supplier development through continuous quality, capability and performance improvement

The Department Head of manufacturing together with purchasing and QA team is to steer and communicate this requirement and performance.

The task of this team is to ensure:-
1) A system is in place to communicate our requirements such as specification, quality standard and purchase order, to the suppliers and to ensure their acceptance
2) Joint agreement on the measurement process for evaluating the effectiveness of the partnering process. Performance feedback is given to supplier for improvement
3) To assist the suppliers to improve through auditing process
4) Annually, a formal visit to suppliers to disseminate our organisational policy and to work toward the objectives set

Our supplier / partner's management system which ensure that the requirements are communicated and are met by suppliers / partners are as follows:-
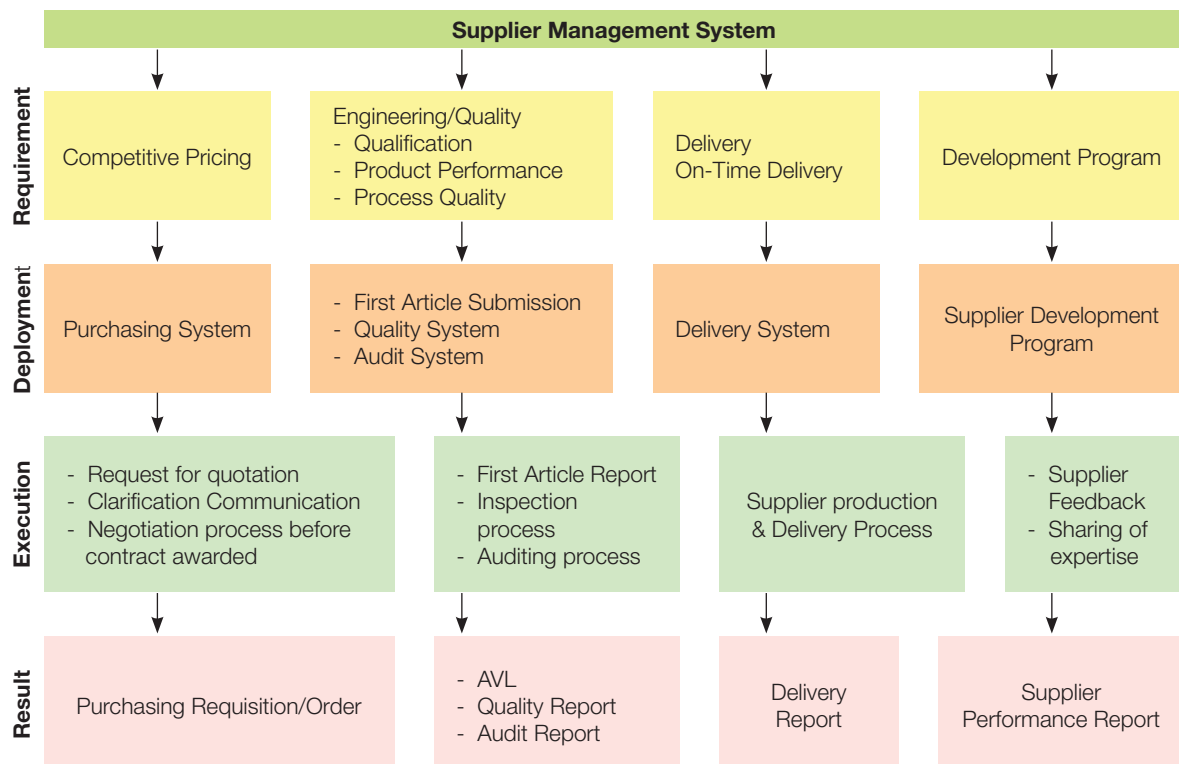
The requirements are defined in such a way that Avi-Tech and its suppliers must meet to fulfill our customers' need and expectation.

The deployment phase is to establish a system to support these requirements and execute through communication with supplier to achieve the result.

Requirement	Execution (Actionable feedback)	Result	Expect Timeliness
Competitive Pricing	Request for Quotation Clarification communication Negotiation process before contract award	Purchase Order Issue to supplier	Individual job requirement timeliness
Engineering / Quality	First Article Submission	First Article Report	Schedule establish for individual first article to complete
	Inspection Process	Quality Report	At the point of receipt
	Auditing Process	Audit Report	Yearly
Delivery	Supplier Production and Delivery	Delivery Report	Individual job delivery date commitment
Supplier Development Program	Supplier feedback	Audit Report	Audit report issue after the audit is performed
	Sharing of expertise	Ad-hoc Issue	Timely depend on the issue

Avi-Tech understands the importance of helping suppliers to improve their quality systems and capabilities in order to ensure that they can provide consistently good quality and reliable delivery.

Activities to understand the supplier's need and to achieve the objective to improve the goods and services:-

Activities	Objective
Supplier meeting, corrective action response, technical / engineering / design communication	- Qualified suppliers - Delivery of good quality part - Technical support to supplier - Drive to improve quality system
Quality Audit / Process Support	- Consistent quality for supplier - Recommendation for area of improvement - Process support for abnormality event

Customers

6.1 Customer Requirements

Customer satisfaction is one of the great aims of our organisation.

What customers want and require in terms of quality of product / services shape the way we conduct our businesses.

We recognise and create markets by seeing patterns of customer requirements and eventually delight the customers.

Avi-Tech segments customer and market by the differentiated solutions provided and business activities.

The principal business activities can be broadly categorised into following three segments.

1) Burn-In and Related Services
2) Design and Manufacture of Burn-In Boards and Boards Related products
3) Engineering Services and Equipment Manufacturing

All our customers have the same customer requirements, namely,

a) Competitive Pricing
b) Delivery
c) Quality
d) Technology
e) Services

a) Competitive Pricing

Customers expect Avi-Tech to minimise costs by paying the most competitive price and to assist them to increase their competitive performance in the global presence position.

b) Delivery

The expectation is no operations disruption in customer site through our 100% on time delivery.

It is believed that assurance of supply is the strategic competitive advantage and Avi-Tech is expected to be logistically capable of delivering to the point and time of need.

c) Quality

The quality goal is to ensure that its products / services meet customer expectations and supply quality is a critical element of this overall strategy.

The essential supply quality elements are:-

– Quality System Assessment
  The assessment is conducted by customers and a third party certification body
– Specifications
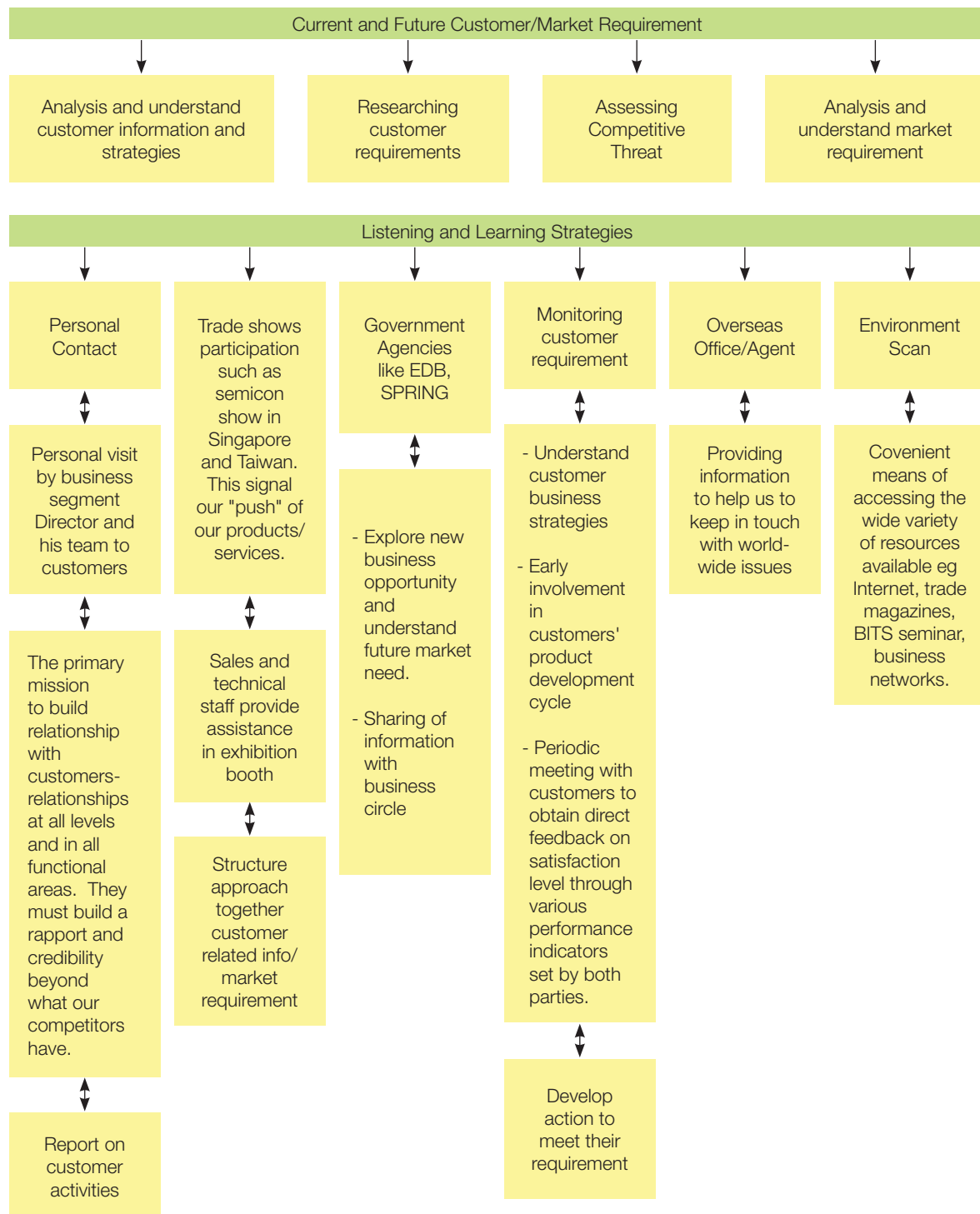 To understand, implement and meet customers' specifications

d) Technology

Avi-Tech plays an important role in providing some of the enabling technology.

We work with customers to ensure we deliver new technologies on time, every time and that they meet the end customer requirements. As a partner to our customers, together, we continuously improve processes to respond to end customers' need faster than our competitor.

e) Services

Customer expectation is promptness in response to requests such as quotation, service request, product query, and engineering support. To be successful involves not only meeting the desired technical solutions, but also providing unsurpassed service support to customers.
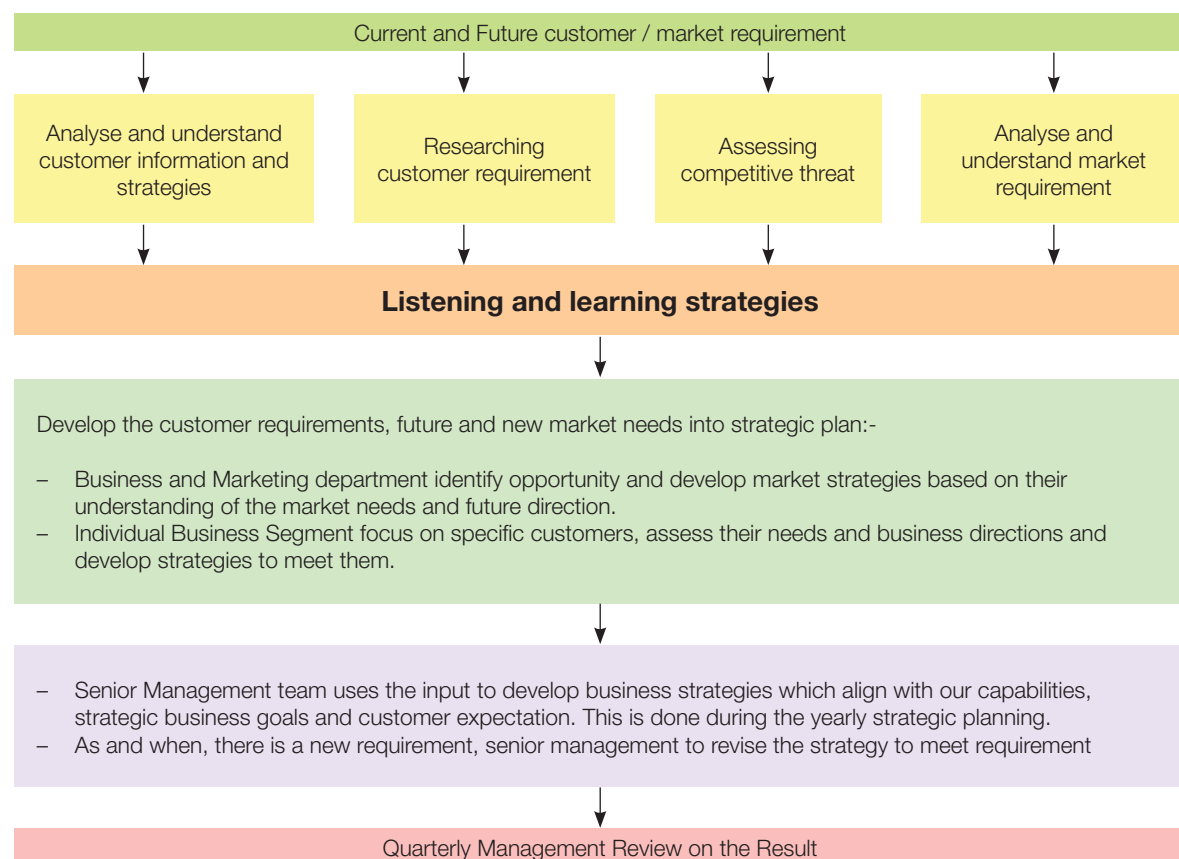
The platform deployed for using different listening and learning strategies to analyse and anticipate future and new customer / market needs come from the following areas :-

Current and Future Customer/Market Requirement

Analysis and understand customer information and strategies	Researching customer requirements	Assessing Competitive Threat	Analysis and understand market requirement

Listening and Learning Strategies

Personal Contact	Trade shows participation such as semicon show in Singapore and Taiwan. This signal our "push" of our products/ services.	Government Agencies like EDB, SPRING	Monitoring customer requirement	Overseas Office/Agent	Environment Scan
Personal visit by business segment Director and his team to customers		- Explore new business opportunity and understand future market need. - Sharing of information with business circle	- Understand customer business strategies - Early involvement in customers' product development cycle - Periodic meeting with customers to obtain direct feedback on satisfaction level through various performance indicators set by both parties.	Providing information to help us to keep in touch with world-wide issues	Covenient means of accessing the wide variety of resources available eg Internet, trade magazines, BITS seminar, business networks.
The primary mission to build relationship with customers-relationships at all levels and in all functional areas. They must build a rapport and credibility beyond what our competitors have.	Sales and technical staff provide assistance in exhibition booth				
	Structure approach together customer related info/ market requirement		Develop action to meet their requirement		
Report on customer activities					

We recognise that customer requirements, and future and new market needs are instrumental in formulating strategic and improvement plans. Information from various listening posts are reviewed and analysed thoroughly.

The following is the process of incorporating customer requirements, future and new market needs into strategic plans:-

Listening and learning through participating in trade shows

Current and Future customer / market requirement

Analyse and understand customer information and strategies	Researching customer requirement	Assessing competitive threat	Analyse and understand market requirement

Listening and learning strategies

Develop the customer requirements, future and new market needs into strategic plan:-

– Business and Marketing department identify opportunity and develop market strategies based on their understanding of the market needs and future direction.
– Individual Business Segment focus on specific customers, assess their needs and business directions and develop strategies to meet them.

– Senior Management team uses the input to develop business strategies which align with our capabilities, strategic business goals and customer expectation. This is done during the yearly strategic planning.
– As and when, there is a new requirement, senior management to revise the strategy to meet requirement

Quarterly Management Review on the Result

Customers' requirement and future market needs are instrumental in formulating strategic and improvement plans. Processes to evaluate and improve determine current and future requirements as follows:-

– Senior Management Review
  Quarterly, management review allows the senior management an opportunity to review the process of determining current and future requirement.
– Inputs from all mechanism consolidated and findings of all customer feedback are discussed.

– Business Segment Review
  Monthly, the business segment reviews provide an avenue to review if the need and requirement of the different customer segments are addressed based on financial indicators, direct feedback and customer performance indicators.

– Customer Satisfaction Survey Review
  Customer satisfaction surveys are conducted to provide a direct means for customers to feedback on their satisfaction and needs. This survey finding are reviewed by senior management and improvements identified and implemented.

6.2   Customer Relationship

Maintaining good customer relationships help the company to focus on a well planned and continuous improvement direction to become World Class.

In the relentless battle for market share, profitability and survival in today's fiercely competitive business environment, the winners will be companies with a deep and dynamic understanding of customer relationship management and effectively deploy a long term commitment to keep up with the pace of change.

Easy access procedures provides for customers to conduct business, seek assistance and information and make complaints as follows:-

1)   Dedicated sales personals
      Each business segment has a team of sales personals to provide easy access to the customer representatives. Personal contact is the primary way to determine the important requirements of our customers.

      The role of this sales force is to develop effective long term relationships with customer. Support services become important to ensure that the sales force have the skill to meet customers' changing requirements.

2)   Supply chain support for customers
      Avi-Tech manufacturing team is available 24 hours per day, 7 days/week to provide customers easy access to information required. They also make pro-active calls to ensure that customers are satisfied with our performance, holding regular review meetings to discuss issues and setting up projects to further enhance customer relationship. Customers are also being assured that our level of technical support provided is always above of our competitors as we have the support of our USA strategic alliance. This has strengthened our link with our customer technical department and raised our profile within their organisation.

3)   Open door management style
      Customers have open and direct access to our CEO / Department Head.

4)   Avi-Tech website
      Provide a channel to readily give contact / feedback facility, emails and follow up.

5)   Participate in local and overseas exhibitions
      These exhibitions provide an opportunity to reach out to new customers, facilitate interaction with overseas customers, allowing direct feedback.

6)   Marketing
      Our marketing strategy is to establish a good working relationship with all customers by emphasising total customer satisfaction from pre-sales customer support services. We achieve this by keeping our customers regularly informed of latest market developments, providing and evaluation systems to offer alternative products and service solutions to our customers, having regular sessions with our customers to obtain feedback on the latest market developments and to attend to customer complaints, and participating in our customers' product enhancement/cost reduction projects or assisting them in reviewing their product specifications and proposing lower cost alternatives.

      Our rapport with our customers is crucial to our customer satisfaction and to promote long-term relationships. With our total quality and total customer satisfaction approach, we are able to enjoy repeat orders from our existing customers as well as garner new orders from potential customers.

Key customer contact requirements

Through listening and learning platforms, key customer contract requirement have been derived from customer expectations. The service standards ensure that the key customer requirements are met.

Interface Points	Customer Contact Requirements	Service Standard
Service / Operation Activation	Responsiveness - Prompt support - 24 accessibility - Able to make decision - Sound product / technical knowledge	Contactable 24 x 7 within stipulated response time.
Request for Quotation	Responsiveness - Excellent customer service.	Within agreed response time.
Products and Service Acceptance	Delivery & Quality Turnaround Time	Compliance to specification within defined turnaround time.
Quality	Accessibility - Excellent customer service. - Contact ability - Sound product / technical knowledge	- Compliance to customer requirement. - Manufacturing site access to customer as and when.

These requirements are determined in accordance with customer requirements and operational needs.

Deployments to these requirements are as follows:-

– All customer contact personnel are provided with hand phone, email to our customers.
   They will provide prompt support to customer problem or issues within 24 hours depending on the level of urgency.

– Customer contact personnel assigned to assist the customers are given certain degree of authority to satisfy customers. This helps in their responsiveness in decision making.

– Our production and support personnel are given on the job training in customer service. They are briefed on the specific customer requirements and also on product / technical knowledge. This enables them to respond expeditiously to all queries and request for information.

At Avi-Tech, every complaint is treated with the high priority and QA department is assigned to effectively handle and resolve the problem. The customer complaint process flow is as follows:-
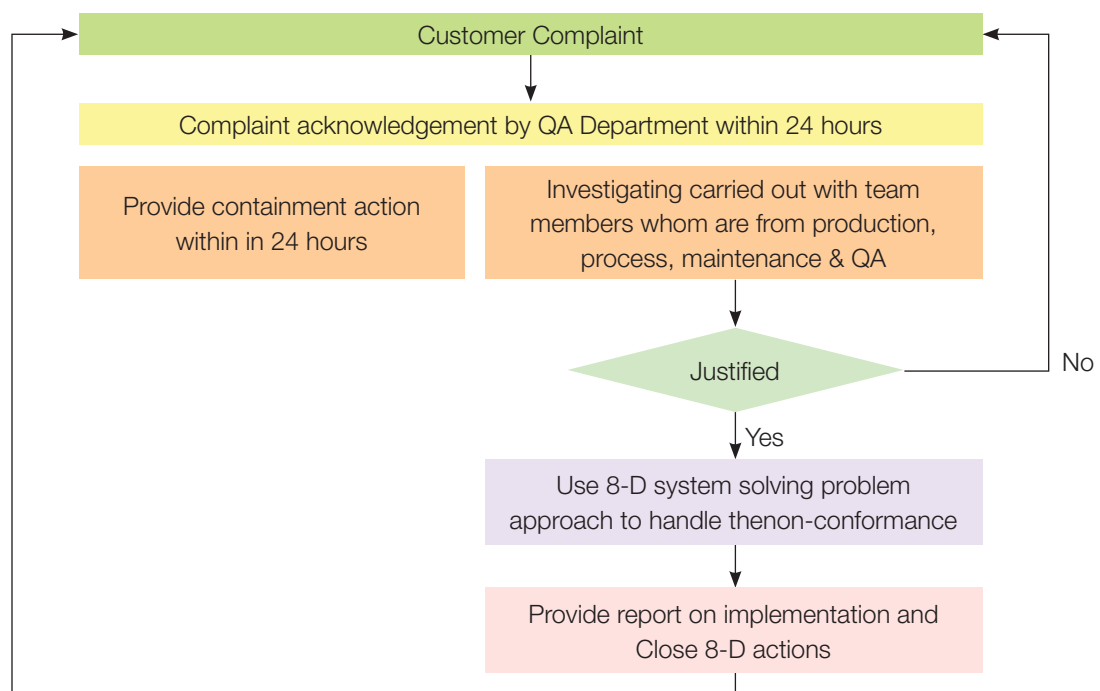
All complaints are acknowledged within 24 hours by our customer contact personnel and followed up by the Quality department to co-ordinate the investigation and develop corrective and prevention action. A containment action report will be given to customers within 24 hours to ensure that the problem is under control. A systematic 8-D problem solving methodology is used to ensure root causes are identified and eliminated with effectiveness corrective and preventive action.

Individual complaint is tracked until its closure with customers.

Customer complaints report is published monthly and reviewed quarterly by senior management for repeated incidences.

We evaluate and improve our customer relationship management through the following ways:-
1)   Management Review / Weekly Management Meeting
2)   Feedback through customers' visit / meeting
3)   Audit Feedback
4)   Customer Organised Event
5)   Joint project with customer

6.3   Customer Satisfaction

Quality product and services have become a normal requirement, from the customer's perspective; we need to focus on delighting our customers.

Our customer satisfaction process is required to measure, improve and sell excellence from the customer's perspective with the goal of a completely "Delighted" customer.

Avi-Tech deploys multiple channels to gather reliable data about customer satisfaction. It is determined through.

1)   Business Review
      We monitor various business indicators / Revenue / Sale growth to gauge customer satisfaction.

      In our monthly financial meeting, the CEO and his senior management meet to discuss and analyse the financial result for each customer.

      Fluctuations in the monthly indicators are reviewed; the environment understood and action taken to address the issues.

2)   Performance Indicators
      Performance indicators are used to measure how well we serve our customers in meeting their requirements. Together, with the customers, we have a system in place to establish yearly goals for our performance indicators. Upon agreement, individual business segment work and track the performance indicators. Meeting the number of performance indicators and also against our competitors will determine the level of customer satisfaction.

3)   Customer Satisfaction Survey
      This survey assess what our customers value; identify marketing support, technical support, manufacturing excellence and business effectiveness issues where improvement would increase customer satisfaction; and determine how our customers compare us with our competitors.

4)   Customer Retention
      Customer contact personnel often have the most contact with customers. They are a tremendous source of first hand customer feedback. This indicator is to ensure customer retention.
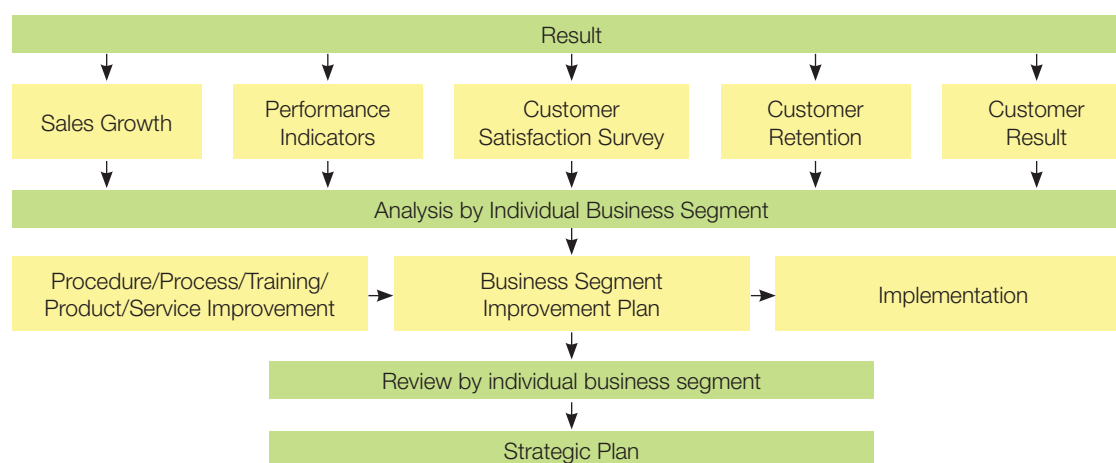
5) Customer Result

Customer satisfaction can be measured through customer audit and complaint result.

The purpose of the customer audit is to assess our process and quality systems, identify opportunities for improvement and reinforced strong performance.

There is a process to monitor customer's complaint and ensure that their concerns are addressed quickly and to the satisfaction of customer:

Translating customer feedback into strategic and improvement plans are critical to increasing our performance level and exceeding beyond customer expectations. Below outlines the process for translating customer satisfaction feedback into strategic and improvement plans.

Result				
Sales Growth	Performance Indicators	Customer Satisfaction Survey	Customer Retention	Customer Result

Analysis by Individual Business Segment

Procedure/Process/Training/ Product/Service Improvement	→	Business Segment Improvement Plan	→	Implementation

Review by individual business segment

Strategic Plan

Customer satisfaction results are analysed by individual business segments. Plan includes improving existing procedure / process and implementing new requirement to address customer concerns. Improvement plans can be incorporated into strategic plan such as changing work processes application of new technology to existing product and services. Analysis of customers feedback and improvement plan is reviewed by individual business segments.

Avi-Tech has in place several mechanisms to evaluate and improve its overall process of determining customer satisfaction.

They include:-
1) Annual Third Party Audit
We engaged TUV PSB Certification Body to perform our annual ISO 9001 audit. As customer satisfaction is part of ISO 9001 requirement, their feedback report if any on customer satisfaction is used, evaluated and improved.

2) Annual Internal Audit
Annually, we conducted internal audit to ensure that our management system complied with ISO 9001 requirement. This audit system evaluates the process for customer satisfaction survey, customer complaint / audit. The internal audit result is used and improves / enhances our customer satisfaction process.

3) Annual performance indices are reviewed
Annually, we reviewed the performance indices for each individual customer.
These performance indices are catered to individual customers and the result is used to gauge the customer satisfaction.

4) Work Review
Work reviews are an important component of continuous improvement efforts. Processes are often improved after a review.

Results

7.1   Customer Result

We work with customer to understand their business needs and to meet them with a wide range of high quality product and services.

Key measurements are:-
* Customer satisfaction survey
* Customer audit result
* Customer complaint
* Repeated customer
* Product quality
* On-time delivery

Customer Satisfaction Survey

Customer	Customer A		Customer B		Customer C	
	AVI	Competitor	AVI	Competitor	AVI	Competitor
Y2005	6	8	8	6	-	-
Y2006	7	8	8	6	8	-
Y2007	7	8	9	7	8	-
Assessment	Actions established on the area of improvement required by customer.		Overall rating is better than competitors		Retain the sole source supplier status.	

Note: Ranking is from 1 to 10 with rank 1 rated as poor to rank 10 as Great.

Customer satisfaction survey was our pro-active initiative to seek our customers to rate their satisfaction level on our products and services and also against our competitors.

Customer Audit Result
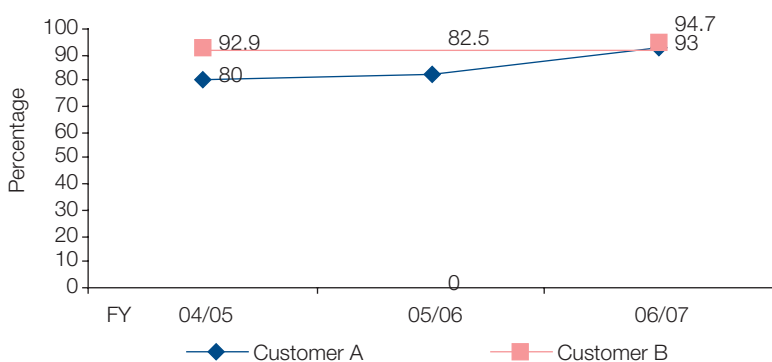
Customer audit result was used to assess the level of our customer satisfaction on our management system.

7.2   Financial and Market Results

Avi-Tech believes that managing financial and market results have helped to manage our current business more efficiently and to invest more effectively in building future value.

Key measures of financial performance:-
•   Profit and Loss
•   Balance Sheet
•   Key Financial Ratios
•   Value – Added
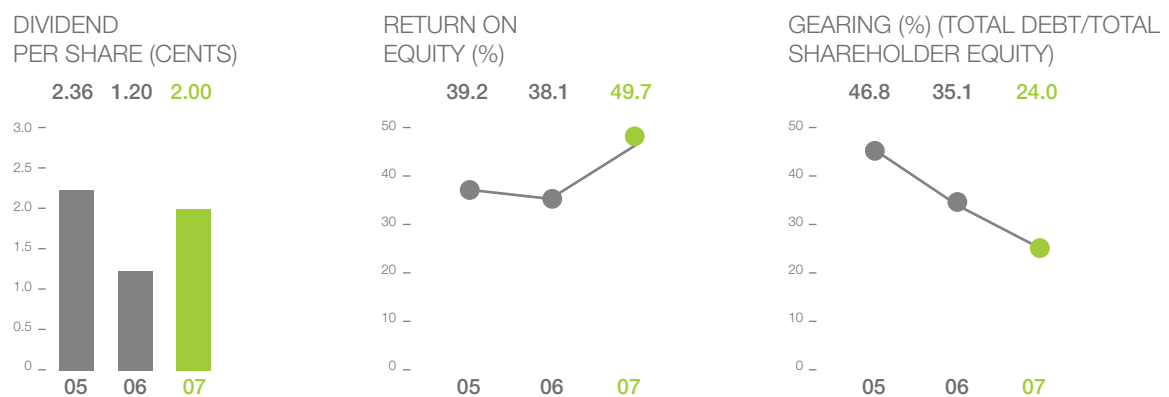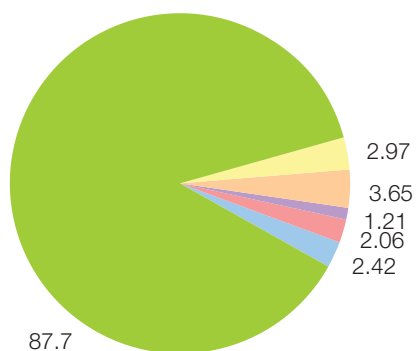•   Market Place Performance

Profit and Loss ($'M)

	REVENUE	PROFIT BEFORE TAX	PROFIT AFTER TAX	EPS (CENTS)
	28.5 36.6 70.4	8.5 11.1 18.8	7.3 8.8 15.5	2.0 2.39 4.19

Balance Sheet ($'M)

	TOTAL DEBT	TOTAL ASSETS	SHAREHOLDERS' EQUITY	NAV PER SHARE (CENTS)
	8.7 8.1 7.5	34.7 41.1 54.9	18.6 23.1 31.2	5.07 6.26 8.45

Key Financial Ratio

	DIVIDEND PER SHARE (CENTS)	RETURN ON EQUITY (%)	GEARING (%) (TOTAL DEBT/TOTAL SHAREHOLDER EQUITY)
	2.36 1.20 2.00	39.2 38.1 49.7	46.8 35.1 24.0
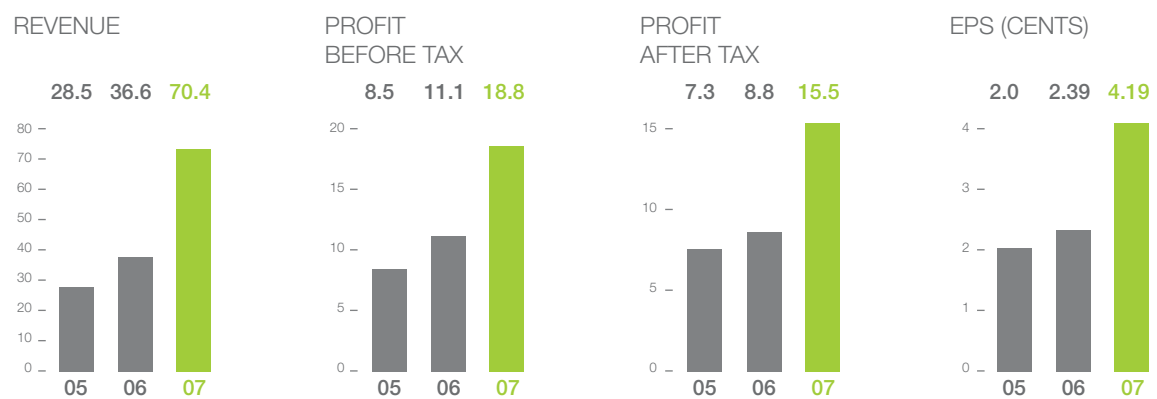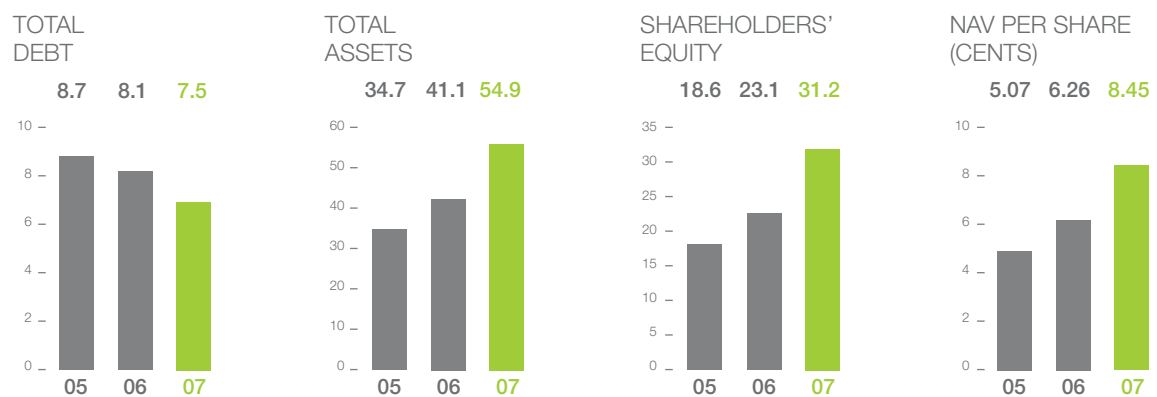
Market Place Performance

FY 05/06

FY 06/07
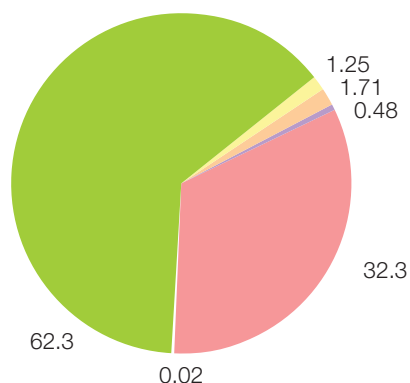
- Singapore
- Taiwan
- Malaysia
- China
- USA
- Others

Summary

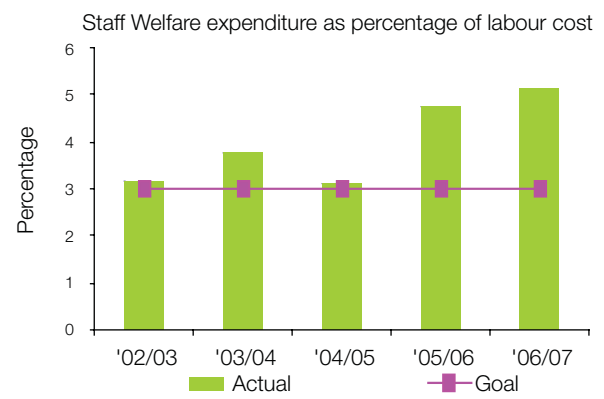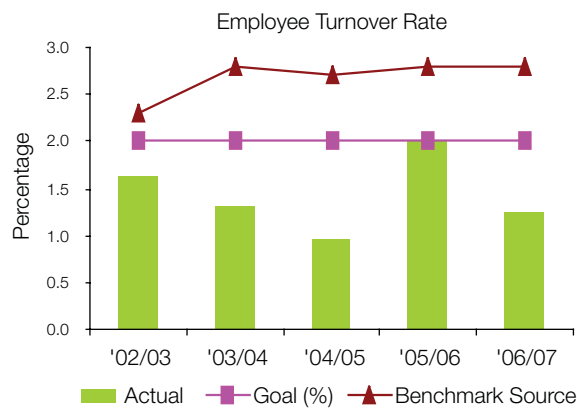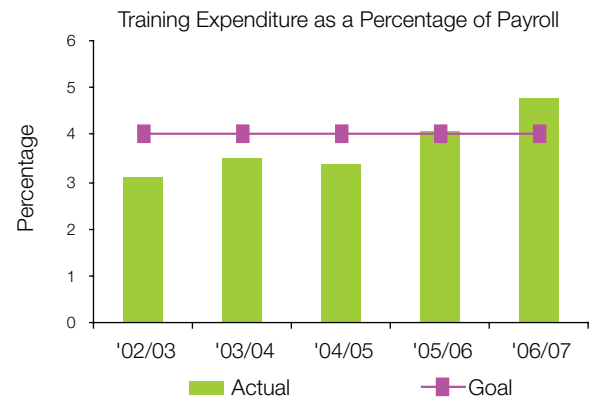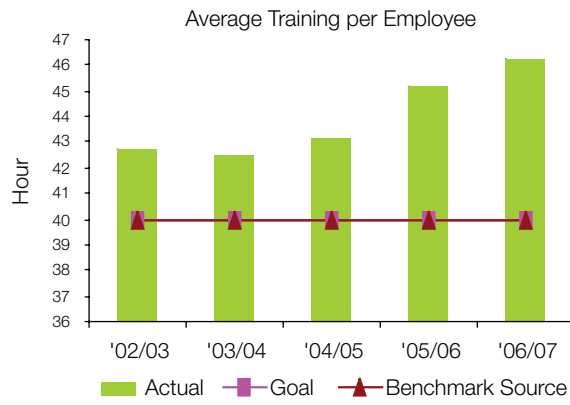Our market share for overseas market increased from 12.3% (FY 05/06) to 37.7% (FY 06/07). This showed that we have less reliance on the Singapore market as our objective is to diversify into other markets.

7.3   People Result

Avi-Tech understands the challenges brought about by the pace of change, technological advance, short product life cycles and changing customer expectation. To strive for success and to be the best, we focus on people to make the difference.

Key measure for people result:-
- Team participation
- Suggestion
- Training Expenditure as a Percentage of Payroll
- Average Training Hours per Employee
- Employee Turnover Rate
- Staff Welfare Expenditure as a Percentage of labour cost
- Absenteeism
- Employee Workplace Satisfaction
- Foreign Worker Retention Rate
- Employee with retention rate with service > 5 years [ERR (> 5 years)]

Average Training per Employee

Legend: Actual, Goal, Benchmark Source

Training Expenditure as a Percentage of Payroll

Legend: Actual, Goal

Employee Turnover Rate

Legend: Actual, Goal (%), Benchmark Source

Staff Welfare expenditure as percentage of labour cost

Legend: Actual, Goal

Absenteeism

Legend: Actual, Goal

Employee Workplace Satisfaction

Legend: Actual, Goal (%)

Foreign Worker Retention Rate (FWRR)

Legend: Actual, Goal

Employee Retention Rate
(ERR ≥ 5 years)

Legend: Actual, Goal

7.4   Operational Result

Key measures for operational performance are:-
- Cycle time / Turn performance
- Machine Downtime
- Supplier Delivery Performance
- Supplier Quality Performance
- Environmental Complaint
- Electrical Energy consumed per unit output
- Community Involvement

Turns Performance

Job Cycle Time

Machine Downtime

Electrical Energy
(Consumed per unit output)
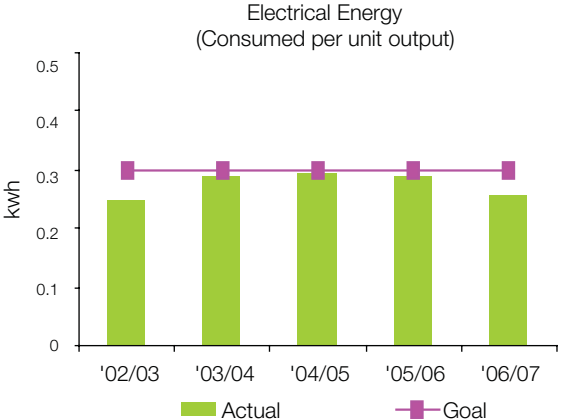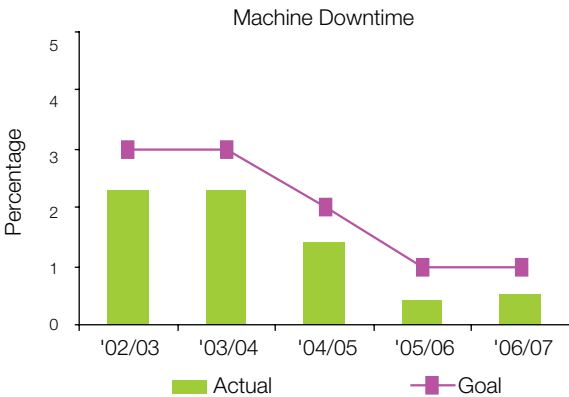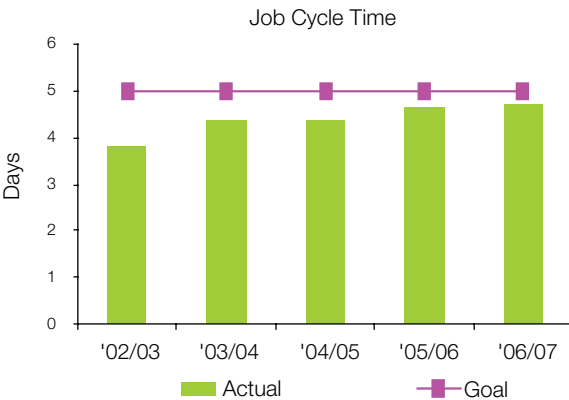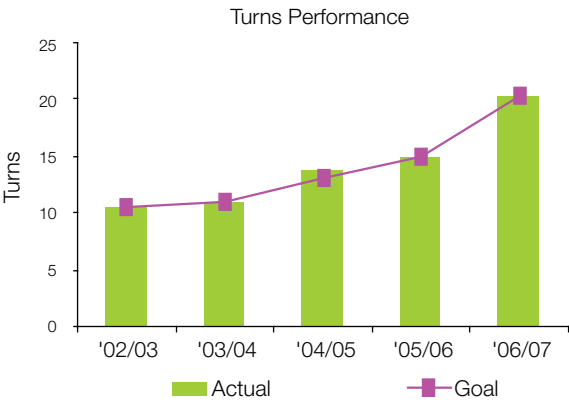
List of Acronyms

8D	8- Discipline Problem Solving Technique
APQP	Advanced Product Quality Planning
BIB	Burn-In Board
CEO	Chief Executive Officer
CFO	Chief Financial Officer
Cpk	Process Capability
Dept.	Department
DFMEA	Design Failure Mode Effect Analysis
EDB	Economic Development Board
EMS	Environment Management System
ERR (> 5 years)	Employee with retention rate with service > 5 years
FMEA	Failure Mode Effect Analysis
HOD	Head of Department
HQ	Headquarter
HR	Human Resource
IO	Industrial Orientation
ISO 9001	Quality Management System Standard
ISO 14001	Environmental Management System Standard
ITR	Inspection Trouble Report
MOM	Ministry Of Manpower
MSA	Measurement System Analysis
PCB	Printed Circuit Board
PCBA	Printed Circuit Board Assembly
PDCA	Plan Do Check Action
PPAP	Production Part Approval Process
PSB	Productivity & Standard Board
QA	Quality Assurance
QMS	Quality Management System
SME	Small and Medium Enterprise
SPC	Statistical Process Control
SQA	Singapore Quality Award
SQC	Singapore Quality Class
SSQA	Standard Supplier Quality Assessment
SMT	Surface Mount Technology
WSH	Workplace, Safety and Health

AVI-TECH ELECTRONICS LIMITED
Company Registration No. 198105976H

19A Serangoon North Avenue 5
Singapore 554859