5. INFORMATION ON THE TRICUBES GROUP

5.1 HISTORY

Tricubes was incorporated on 30 July 2003 as the investment holding company of the Tricubes Group. The Tricubes Group traced its foundation to the year 1997 when EPNCR was formed as a joint venture between NCR Malaysia, a wholly-owned subsidiary company of NCR, and a local businessman. Khairun, the current CEO of the Tricubes Group, who was then the Managing Director of NCR Malaysia, was one of the chief architects of the joint venture.

EPNCR was initially engaged in the marketing of NCR Malaysia's products and services to the public sector and designated financial institutions. However, in 1999, EPNCR became a 20% equity partner in GMPC, a consortium that subsequently secured the contract to implement the Government multipurpose card or MyKad project, of which EPNCR was awarded a RM47 million contract to provide hardware and consultancy services. In the aftermath of the Asian financial crisis in 1998, Khairun opted for a Voluntary Separation Scheme offered by NCR and initiated a buyout of the local businessman's entire shareholdings in EPNCR.

TCSB, which was previously a dormant company, was used as the vehicle by Khairun to facilitate the buyout. TCSB thus became the majority shareholder, owning 70% of EPNCR, while NCR Malaysia held the other 30%. In September 2001, CTV, a venture capital firm, invested in TCSB to provide working capital to the Tricubes Group in line with its expansion plans. In March 2003, TCSB managed to attract an additional investor, MVCC. In April 2004, Tricubes entered into a shareholders agreement with Suria Capital to form a joint-venture (namely TriSuria) to further expand its market reach to the Borneo region (including Sabah and Sarawak).

As at 15 October 2004, the Tricubes Group has successfully designed and delivered 3,900 units of the first made-in-Malaysia smart card reader to the Government under the MyKad project. Leveraging on its experience from the MyKad project, the Group has expanded to offer other innovative enterprise mobile workforce solutions, e-payment systems and secure access technologies to various industries and global markets. In the short span of its history, the Group has grown from an 8-man operation to the current staff strength of 74 personnel, the majority being professional engineers and technicians.

The Tricubes Group's principal activities are the provision of IT solutions in the areas of MWS, SAA and EPSys. The management of Tricubes is of the view that one of the Group's strengths is its proprictary capabilities in certain product development. To support these activities, the Group has 5 subsidiary companies and 2 associated companies, each focused on a specific function. Brief details of the subsidiary and associated companies are as follows:

Subsidiary companies	Effective interest (%)	Principal activities
TCSB	100	Design and development of IT solutions and provision of after-sales service to clients.
EPNCR	70	Marketing of the Group's products and services to the Government and the private sector.
TRCO	100	Provision of IT consultancy services.
TGSB	100	Marketing of the Group's products and services worldwide.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

	Effective interest (%)	Principal activities
TC (Sabah)	75	Investment holding company to undertake investments in the Borneo region (including East Malaysia).
Associated companies		
GMPC	14	Provision of national identity smart card or MyKad solutions to the Government.
TriSuria	30	Provision of IT services in the Borneo region (including East Malaysia) through joint venture with Suria Capital.

Both EPNCR and TCSB were awarded the MSC status on 28 June 1999 and 3 July 2002 respectively and both enjoy a tax holiday for a period of five years which is renewable for a further five years and exclusion from the National Development Policy requirements.

The name "Tricubes" reflects the Group's principal areas of expertise namely the three C's – Computer, Communication and Commerce.

On 24 October 2003, TCSB was awarded the Top 50 Enterprise Award by Small and Medium Industries Development Corporation ("SMIDEC"). The award is a testament of the Group's achievements as a fast growing, young and dynamic enterprise. Chosen out of a field of numerous participants, TCSB made its debut at number 33 out of the 50 award winners.

Previous to this, EPNCR was awarded the PIKOM Computing Product of the Year Award in 2001 for the Tricubes 1010 and was a finalist for the Asia Pacific IT award in year 2000.

Share capital

The present authorised share capital of Tricubes is RM25,000,000 comprising 250,000,000 Tricubes Shares, whilst its present issued and paid-up share capital is RM9,729,160 comprising 97,291,600 Tricubes Shares.

Details of the changes in the issued and paid-up share capital of Tricubes from the date of incorporation are as follows:

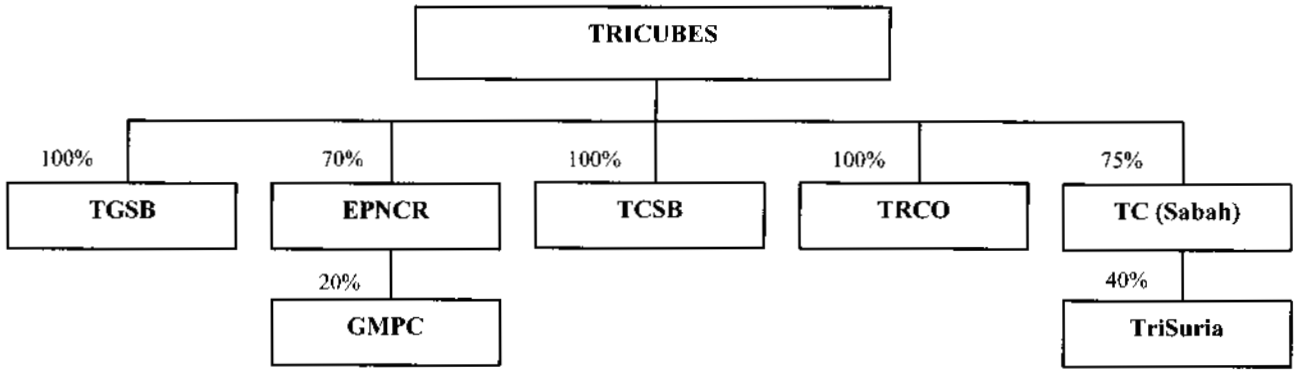
Date of allotment	No. of Tricubes Shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
30.7.2003	20	0.10	Subscribers' shares	2
24.8.2004	97,291,580	0.10	Acquisition of TCSB	9,729,160

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.2 BUSINESS OVERVIEW

5.2.1 Group structure

The current group structure of the Tricubes Group is as below:



5.2.2 Principal activities and technology use

The Group is primarily involved in the provision of secure IT solutions centred on the use of the latest technologies of smartcard and biometrics. Additionally, the Group also provides other value-added services such as IT and business consulting, software application development and product design and engineering. The Group's mission is to become a leading solution provider in the secure applications space catering to both local and foreign markets.

Today, the Group has established a presence in the local banking industry, public sector and foreign markets such as France and HKSAR. In line with the Company's vision to become a leading solutions provider, the Group has formulated 3 key solutions to be offered to the market as follows:

(i) MWS

MWS is a system that includes the handheld devices (rugged handheld devices and enterprise PDA), software component, system integration and other related services to empower the mobile workforce.

The MWS market can be divided into the rugged handheld devices and the enterprise PDAs segment. Each product caters to different needs within different vertical markets. Rugged handheld devices cater more towards rugged usage, for example, by blue-collar workers using the device in industries such as utilities and warehousing. On the other hand, enterprise PDAs are beginning to gain acceptance by enterprise clients such as executives using feature-rich handheld computers in the banking or insurance industry.

In Malaysia, the MWS market is a dynamic and growing market that is garnering increasing interest from a wide spectrum of competitors and end-users alike. Enterprise PDAs have made in-roads into the vertical markets that traditional players used to dominate, notably the Fast Moving Consumer Good ("FMCG") market. The Sales Force Automation ("SFA") solution used in a FMCG environment is the main battleground where enterprise PDAs pose as a great threat in view of their competitive pricing compared to rugged handheld devices. Enterprise PDAs integrated with CRM and ERP applications are also making in-roads into the banking, insurance and stock broking markets, though at an infancy stage.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

The rugged handheld devices market is a long established market in Malaysia that continues to chart growth. Driven primarily by MNCs, these companies in the logistics, retail and distribution, manufacturing and utility deem handheld devices as pertinent to day-to-day operations.

Although MWS is not new to the Malaysian market, the take-up rate of the solution is still relatively low. Main reasons are the high pricing of devices and readiness of infrastructure within organisations. Major end-user segments are the enterprise clients in the corporate field, retail, distribution and manufacturing, the Government law enforcement agencies, utility and the FMCG market. Emerging markets such as banking, insurance and healthcare are expected to take off once proper infrastructure is in place.

(ii) SAA

SAA pertains broadly to an integrated system that utilises smart card and biometrics technologies in enabling various applications such as physical access control (exit and entry) or logical access such as network or online security application. Key users of this solution are the Government and financial institutions.

Governments worldwide are finding ways and means to curb ID fraud and reduce illegal immigration through sophisticated anti-counterfeiting technologies. Many are adopting smart cards integrated with biometrics to do just the above and also to enhance their services to citizens while streamlining operations and eliminating time consuming paperwork.

In Malaysia, the Government is ahead of many countries in the world in adopting chip based and biometrics integrated national ID card. Other countries in the region, which are expected to follow suit are still at its planning or conceptual stage.

In Malaysia, the access control application market (entry and exit to a building) is widely adopted particularly in the urban areas and by large companies, high-end condominiums and apartments and at the parking lots. However systems that runs on smart cards and biometrics system are relatively low as compared to cheaper alternatives such as magnetic stripe and proximity systems. However, with the expected nationwide availability of MyKad, the Group believes that the opportunity for MyKad-based access systems will rise as illustrated recently by the announcement by a local port operator to leverage on MyKad as an access card for entry to the port.

(iii) EPSys

EPSys broadly relates to the provision of EMV-compliant terminals, software component, system integration and other related services used by the banks and merchants. EMV is a standard for chip based or smart card payment cards (debit and credit cards). This standard describes a set of requirements to ensure interoperability between chip payment cards and chip enabled terminals on a global basis.

The payment industry has evolved significantly over the years and offers consumer a number of payment options. Cash is still the most common option in this country, followed by a rapid adoption of cards. Cards will include both credit and debit cards. A successful payment method thrives on elements of convenience, security and low transaction cost.

Hence, smart cards or chip based technology cards, terminals and systems are expected to solve the significant fraud levels associated with the easily tampered magnetic stripe cards in banking applications. The large memory and processing capability of smart card opens opportunities to generate additional revenue and provide value added services to cardholders.

Frost & Sullivan's research indicates that in 2003, there were approximately 45,000 electronic payment terminals (chip (EMV) and non-chip based terminals) in Malaysia. Up to year 2003 an estimated 42.2% or 19,000 terminals are already chip-based EMV compliant terminals, which leaves another 57.8% of the terminals in the market to be replaced. In 2003, revenues are generated mostly from the replacement market. It is expected to continue coming from replacement demand in the next couple of years (2005).

5.2.3 Products and/or services

(a) Current Line of Products

The principal products of the Group are smartcard readers or sometimes called CADs. Tricubes' products, whether developed in-house or out-sourced, both share a common goal of innovative technology at a lower cost to end-users.

The principal products that have been released are as follows:

- **Tricubes 10xx series** – This wireless handheld computer is a device that is targeted at enterprise users that require access information to and from their legacy systems *via* wireless connectivity. Additionally, the device is optionally equipped with a chip-based biometrics scanner and a smartcard reader that make the device suitable for enforcement activities such as verification and authentication of identities. As such, the target customers are mainly enforcement agencies such as police, immigrations and security agencies.

- **Tripaq Sleeve** – The primary market for this device is enterprise- PDA user that requires wireless connectivity. TCSB developed the sleeve with various functionalities such as GSM or GPRS connectivity and smartcard reader module. These options would allow current users of PDA to instantly realise full mobility and run complex enterprise applications such as CRM or ERP.

- **Sekure** – A low-cost biometrics reader that was developed due to demands by users for a simple reader that reads MyKad. The biometrics scanner feature provides user with the possibility of checking a person's identity using the biometrics template available in MyKad.

- **Intellect Multipayment Terminal** –TCSB is also a distributor for Malaysia, Singapore, Thailand and Brunei of smart card readers manufactured by Intellect. Intellect is a Belgian based company that is recognised as one of the most innovative device manufacturers in the smart card field. The Intellect range of products is geared towards the payment solution market.

- **Secure Xcess Console** – A console that is developed to provide the link to using MyKad as an access card for entry to buildings and premises. Typically the console is integrated with applications such as time attendance or visitor's registration for control purposes.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

(b) Future Products

The following are the products that the Group plans to introduce into the local and international market up to the first half of the FYE 31 December 2005:

Hardware

Product Description	Product Features and Usages	General Customer Availability
Tricubes 1020 Cradle /Accessories	• Docking station to enable Tricubes 1020 to be connected to PC • Also functions as a charging unit	By end of the FYE 31 December 2004
Tricubes Key Ring Reader	• Small personal smartcard reader • Powered by standard battery	By end of the FYE 31 December 2004
Sekure II	• Upgraded version of Sekure • Able to read contact and contactless smartcard • SAM slots for enhanced security	By end of the FYE 31 December 2004
Tricubes 2020	• New generation of secure rugged mobile handheld • New CPU platform with enhanced display • Enhanced durability • Able to cater to military requirements	First half of the FYE 31 December 2005

Software

Product Description	Product Features and Usages	General Customer Availability
Tricubes Device Management System	Management of mobile devices with features such as software distribution, software and hardware version monitoring, inventory tracking and remote device configuration. Devices to be supported include: Tricubes 1010, 1020 and Tripaq, Secure X-cess, and Intellect range of EDC terminals.	By end of the FYE 31 December 2004
Tricubes Identity Management System	Tricubes Identity Management System provides enterprises with an infrastructure for developing and deploying authentication services for secure enterprise applications.	By end of the FYE 31 December 2004
Tricubes Online Payment Gateway	Secure, hosted payment gateway service integrateable with online web-based applications.	First half of the FYE 31 December 2005

Although the Group believes that the above product launch plan is reasonable at this time, there can be no assurance that such product launch plan will be implemented as scheduled. The inclusion of the above product launch plan in this Prospectus should not be regarded as a representation or warranty by the Company, RHB Sakura (the Adviser) or any other advisers that the plan will be achieved and implemented as scheduled.

5.2.4 Location of Operations

The Tricubes Group currently rents the following premises for its operations:

Location	Status	Approximate Built-Up Area (square feet)
Suite 18.01 18th Floor, Menara Tan & Tan 207, Jalan Tun Razak 50400 Kuala Lumpur	Rented	8,000
Suite 16-01A 16th Floor, Menara Tan & Tan 207, Jalan Tun Razak 50400 Kuala Lumpur	Rented	1,035
Office/Storage 29-1A, Jalan UP 1/6 Ukay Perdana, Ulu Klang 68000 Ampang Selangor	Rented	700
Office Lot 3-2, Incubator 3 Technology Park Malaysia Lebuhraya Puchong-Sungai Besi Bukit Jalil 57000 Kuala Lumpur	Rented	2,806

5.2.5 Product quality

For product development, the Company relies on best practices in the industry for its processes and methodologies. The Company defines the development phases in line with its validation model through the following:

- Phase 1: Specification and architecture;
- Phase 2: Block level design and test;
- Phase 3: Validation; and
- Phase 4: Production.

Throughout Phases 2 and 3, the Company strives for excellence in its product design, for example design for manufacture, design for test, design for reliability. For contract manufacturing, the Company insists on ISO9000 and QS9000 compliance in the manufacturing of Tricubes' devices by its contract manufacturers.

After each milestone, there will be a quality review on all the documentation and product review.

Apart from that, the product will be submitted to independent bodies such as SIRIM for the certification process as required during the initial specification.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.2.6 Contractor Account Registration/ Licenses

The following table set out the details of the licenses held by Tricubes as at 15 October 2004:

Licensee	Licence(s)	Licensor	Relationship with Licensor
TCSB	Registered contractor to provide: • communication equipments • handheld computer with biometrics scanner	Kementerian Kewangan Malaysia	Registered contractor
	Registered contractor to provide: • workstations and related peripheral and services • other computer related services • networking products and services • communication equipments • handheld computer with biometrics scanner • personal computer and related peripheral and services • small to large multi-user systems and services • software products and services	Tenaga Nasional Berhad	Registered contractor
	Registered contractor to provide: • communication equipments • handheld computer with biometrics scanner • workstations and related peripheral and services • other computer related services • networking products and services	Telekom Research and Development Sdn Bhd	Registered contractor
EPNCR	Registered contractor to provide: • personal computer and related peripheral and services • small to large multi-user systems and services • software products and services • security and access system solutions • workstations and related peripheral and services • other computer related services • networking products and services	Kementerian Kewangan Malaysia	Registered contractor
	Registered Bumiputera Status Contractor	Kementerian Kewangan Malaysia	Registered contractor
	Registered contractor to provide personal computer and related peripheral and services	Pos Malaysia Berhad	Registered contractor
	Registered contractor to provide: • printing and stationery • IT hardware/software • repair and maintenance of IT hardware/ software	Affin Bank Berhad	Registered contractor

Licensee	Licence(s)	Licensor	Relationship with Licensor
EPNCR	Registered contractor to provide: • personal computer and related peripheral • security and access system solutions • small to large multi-user and services • software parts and services	Telekom Research & Development Sdn Bhd	Registered contractor
	Registered contractor to provide: • IT / computer products	Indah Water Konsortium Sdn Bhd	Registered contractor
	Registered contractor to provide: • personal computer and related peripheral and services • small to large multi-user systems and services • software products and services • security and access system solutions	Tenaga Nasional Berhad	Registered contractor
	Registered contractor to provide: • IT	Bank Simpanan Nasional	Registered contractor

5.2.7 Intellectual Property

The following table set out the details of the intellectual properties held by Tricubes as at 15 October 2004:

Authority	Division	Registration/ Serial No.	Description	Date
Industrial Designs owned/applied by Tricubes Group				
MDTCA (Design)	Intellectual property division	MY 02-00507	Handheld computer Tricubes 1020 is the state of the art design which has been designed for modularity and ease of use. The integration of multiple smartcard readers and fingerprint biometrics scanner with various add-ons peripherals such as barcode and global positioning system. Tricubes 1020 is the world first fully integrated handheld device. It is also designed to be shockproof, splash and dust resistant for use in adverse environments.	Registered: 23 August 2002 Certified: 30 July 2003

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

Authority	Division	Registration/ Serial No.	Description	Date
Industrial Designs owned/applied by Tricubes Group (Cont'd)				
MDTCA (Design)	Intellectual property division	MY 03-00116	Fingerprint scanner Sekure II is a fully secured product that integrate the solid-state fingerprint scanner with a smart-card reader in a new revolutionised industrial design which also has another SAM slot for added security. It could interface with the PC either through the USB port or normal RS232 port.	Registered: 25 February 2003 Certified: 3 March 2004
MDTCA (Design)	Intellectual property division	MY 03-00117	Computer accessory The Tripaq 3800 is an expansion module that is designed exclusively for HP IPAQ PDA that consist of ISO7816 Smart Card slot with read and write capabilities, and GSM/GPRS wireless communication module with extended Lithium Ion Polymer Battery.	Registered: 25 February 2003 Certified: 11 November 2003
Patents owned/applied by Tricubes Group				
MDTCA (Patent)	Intellectual property division	UI 20002379	Utility Innovation (SMA Handheld Computer) The SMA Handheld Computer is related to a powerful high capacity versatile hand-held mobile computer with 131Mhz invented to withstand stringent security measures and roughness and harshness with the motherboard having high level flexibility and comprehensiveness for connectivity with other components either being embedded internally or by external peripherals depending on the needs and/or cost requirements with provision for upgrading and steered by Li-IOM based batteries with provision for extended batteries.	Application date: 27 May 2000

5.2.8 Marketing and distribution network

(a) Market Opportunities

A key aspect of the Group's marketing strategy is to select a limited number of attractive target markets and concentrate the efforts on these markets. The Group has identified the following markets as areas of focus:

(i) In terms of SAA market segment, growth is attributed to several factors including increasing uptake for smart cards in the country and MyKad migration push, particularly with nationwide uptake of these cards in 2005. Frost & Sullivan estimated that up to year 2003, an estimated 2,886 units of integrated biometrics smart card reader were sold in Malaysia and the number is expected to reach more then 15,000 units in 2009 representing a CAGR of 32.8% for the Malaysian market.

Frost & Sullivan's research indicates that the Group was the market leader in Malaysia's integrated biometrics smart card reader market in 2003 amongst the leading industry participants with a market share of 56.7% based on revenues for 2003. The management of Tricubes will continue to leverage on the Group's leadership position to take advantage of the potential growth in this market.

(ii) In terms of the EPSys market segment, the management of Tricubes anticipates that growth rate for this segment of the market is expected to peak in the next one to two years (2004-2005) due to replacement of the magnetic stripe based electronic payment terminals with smart card/EMV compliant terminals in accordance with BNM's requirement that all current terminals have to be EMV compliant by 2005. Accordingly, Tricubes' strategy is also to focus on the software, system integration and other related services such as providing consultancy, support and maintenance to the banks and merchants. New hardware and software will have to be integrated with existing systems so that all the processes converge together. The management of Tricubes anticipates that banks would find it complicated and may lack the necessary skills. The complexity of EMV technology compared to traditional magnetic stripe would require more end to end testing to ensure that the system is implemented smoothly.

(iii) Although rugged handheld devices have been in use in the Malaysia for many years, Frost & Sullivan's indicates that the MWS market is presently still in its development stages. With the proliferation of MyKad amongst the masses in the near future, Frost & Sullivan anticipates that the government sector (enforcement agencies i.e. Police, Immigration, Road Transport), banks and various service centers will increasingly utilise these mobile handheld devices to run MyKad applications for authentication, tracking and tracing, data collection and payment transactions. Frost & Sullivan estimates the number of rugged handheld devices to grow by a CAGR of 15.8% for the Malaysian market between 2003 and 2009. The management of Tricubes believes that the Group is well positioned in the MWS market segment to ride on the growth of this market segment. Tricubes intends to leverage on its experience and history with government related corporations to penetrate key projects. The management of Tricubes is of the view that the Group's mobile handheld computer, Tricubes 1020, is competitively priced and equipped with an integrated smartcard and finger print biometrics reader to address the needs of the growing market for user authentication and e-cash payment through MyKad.

(iv) European market where smartcard-based payment system is matured and infrastructure is available for deployment of mobile solutions.

(v) HKSAR with its ID project that is almost similar to MyKad. The Company intends to use HKSAR as the springboard to enter the China market.

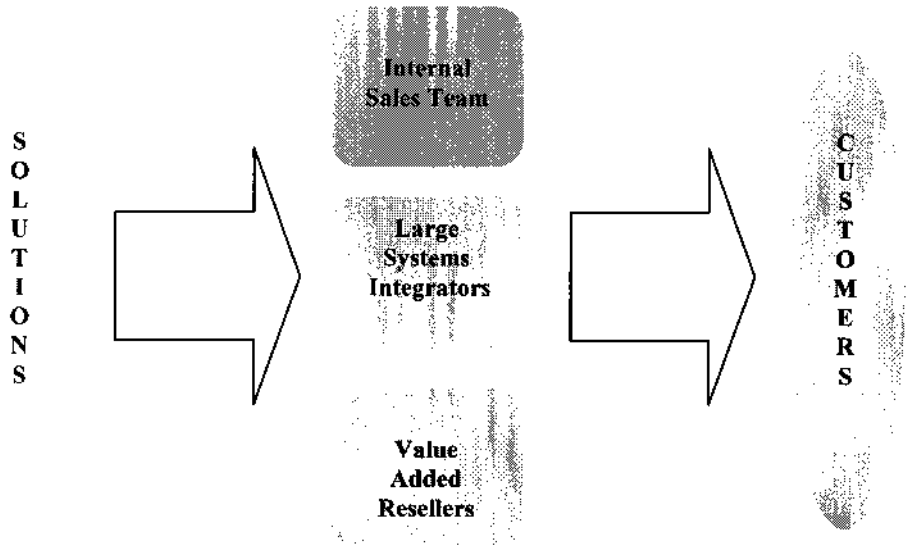
5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

(vi) Middle East due to interests shown by the governments in the region to implement national ID similar to MyKad.

For the 8 months financial period ended 31 August 2004, approximately 95% of the Group's revenue is derived from the domestic market, with the remaining 5% contributed by overseas markets.

(b) Sales Distribution Channel

The diagram below depicts the approach the Group is adopting.



The Group has initiated various activities to build a solid foundation for the selling of the Group's products and solutions. These activities are undertaken by the Marketing Unit and comprise the following efforts:

- Identifying distributors/systems integrators in Europe and East Asia (including Middle East) region. The Group has identified these regions as the area of focus due to their maturing smart-card use. As a start in Europe, the Group had on 7 October 2004 entered into a technical support agreement with Cameon of France where Cameon will secure and maintain TCSB's portfolio in France. Cameon develops biometrics based security and authentication solutions utilising hardware platforms from Tricubes. The Group sees Cameon as a suitable partner to team up with, based on their knowledge in security based applications and specialisation in authentication management solutions. Cameon will also provide pre-sales and post sales support for all European operations. France will be the hub for Tricubes sales expansion into Western Europe. The same strategy will be adopted for the South East Asia and Middle East markets *via* value-added resellers distinct to those regions.

- Joining MDC-led effort to promote the MyKad solution worldwide. The Government recognises the success and uniqueness of this home-grown project and has identified the potential of having this project replicated in many countries. So far, MDC has led delegations to countries such as Bahrain, Philippines and South Africa to promote the technology.

- Partnering with enterprise solution providers who through their own channel would market a complete solution to their enterprise customers. This approach would typically be applied to the Group's Tricubes 10xx series where customers are more likely to demand for complete end-to-end solution from their vendors.

- Putting in place a "Channel Support Program" to assist the distributors and solution partners in selling the Group's products. The Group is providing in the program, support elements such as training, demo sets and exhibition sets to its partners.

- Membership in industry's association such as Asia-Pacific Smart Card Association (APSCA) or the relevant groups such as biometrics and mobile computing. Tricubes believes that by being a member of industry associations, it will benefit from its interaction with its peers in the industry. The Group will constantly be updated on the development of the industry and would be aware of changes in both technology and business environment of its target markets.

- Participating in various trade shows and exhibitions. Part of the Group's advertising and promotion campaign would be to participate in major IT shows such as CeBIT (World Center for Office, Information and Communications Technology Exhibition) and Cartes (French Smart Card Exhibition), one of the world's largest smart card expos. It also plans to be involved in local exhibitions in priority countries such as France and HKSAR where it would include seminars on subjects relating to its products or solutions. Typically these seminars will be conducted jointly with the solution partners.

- Advertising in trade journals where the audience is more refined. Tricubes believes this form of marketing is more effective as its target market comprises largely of organisations with specific needs.

5.2.9 R&D

(a) R&D Policy

The Group's R&D policy has always been market driven. The management of Tricubes has always been emulating best practices in the industry for its processes and methodologies and the one the Group has adopted is the Time-To-Market ("TTM") methodology. TTM emphasises on milestones and upstream activity before product realisation.

(i) Pre-Study ("MS1")

This is a crucial stage whereby the products requirements, pricing strategy and expected production cost are defined. These will then be aligned to the Company's overall strategy. The ouput of this pre-study will be a project directive that will require signoff from an internal review committee.

(ii) Feasibility Study ("MS2")

With the deliverables of MS1, the assigned will do in-depth research and analysis to plan for a proof of concept. The mechanical team will draft a product brief on how the form of the unit will look like with regards to the requirements from the sales and marketing team. Electronic designers will define architecture and choice of components that would suit to the product, while the System designers will draft their architecture and plan the development. Long lead time and high risks parts and processes are identified and designed at this stage. The output from the feasibility study will be an Industrial Design (Product Industrial Design) of what the product will look like equipped with functional proof-of-concept.

(iii) Prototyping

This phase is where the execution of development starts from the proof-of-concept where the first objective is to develop a working prototype. On the mechanical aspect, there will be rapid prototyping carried out before the mechanical tooling starts. Electronics designers will have their first complete schematics, afterwhich the design of the Printed Circuit Board (PCB) will commence. Components will be sourced for the first prototype.

The development of the testing equipment/jigs for manufacturing of products will also be carried out by the technical support team. There will be a few iterations of the design cycle if required.

(iv) Pre-Manufacturing

At this stage, the design is almost 90% stable and the tooling is finalised. This stage is typically outsourced to Original Equipment Manufacturers ("OEM") who manufacture with the proper instructions, test equipments and jigs. Manufacturing of the product will run and feedback related to the product during the manufacturing process will be generated. Units at this stage will be submitted to reliability test and subject to test required for certification such as CE and UL.

(v) Mass Manufacturing

Development completed and product is ready for mass production by the appointed OEM.

(b) R&D Facilities/Personnel and Expenditure

As at 15 October 2004, the Group employed a total of 22 full-time and contract professionals to conduct R&D. The R&D facilities of the Group are housed in the Company's office at Technology Park Malaysia where all the engineers are stationed. The Company has partnered with local R&D companies such as SIRIM to do the safety test and other tests that require certification of their products. The mechanical prototyping and the tooling is outsourced to local suppliers within Klang Valley.

For the past two FYE 31 December 2003 and the 8 months financial period ended 31 August 2004, the Group has spent an aggregate of RM9.0 million on R&D and the ratio of the R&D expenses to the total revenue of the Group is summarised as below:

FYE/Financial period ended	Total R&D Expenses RM'000	Total Revenue RM'000	%
31 December 2002	5,091	11,669	44
31 December 2003	2,754	17,066	16
31 August 2004	1,128	15,494	7
Total	**8,973**	**44,229**	**20**

In addition, the Company intends to utilise RM7 million of the proceeds to be raised from the IPO for R&D expenditure to further enhance its R&D capabilities in the next two financial years.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

(c) Present Status of R&D

Hardware

i. Cradle for Tricubes 1020 & Multiple Battery Charger for 1020 : Electronics prototype to be completed by end of FYE 31 December 2004.

ii. Multiple Battery Charger for 1020 : Prototyping to be completed by end of FYE 31 December 2004.

iii. Tricubes 2020 : Evaluating new processing plateform (CPU) and industrial design.

iv. Sekure II : Prototyping to be completed by end of FYE 31 December 2004.

v. Tricubes Key Ring Reader : Redesigning of casing and will be made available to market by end of FYE 31 December 2004.

Software

i. Sekure : Availibility of MyKad verification application, development of MyKad ActiveX Control and Java Applet in Windows and Linux environment, integration with Netegrity Identity Management System and MyKad PKI.

ii. Tricubes 1020 : Integration with Netegrity Identity Management System and availability of Tricubes Mobile Enforcement Solution.

iii. Tripaq : Integration with Netegrity Identity Management System and MyKad PKI.

iv. MEPS : Preparing specifications for MEPS Cash Payment Server.

The R&D is targeted to ensure that Tricubes products are applicable to a wider spectrum of usage.

(d) Achievements in R&D of new products/processes

Details of the Group's achievements in relation to R&D of new products and processes up to the date of this Prospectus are as described below:

(i) Tricubes 1010

- Delivered the first handheld computer Tricubes 1010 in July 2001.
- Successfully customised Windows CE 3.0 to the Company's product, and fully integrated biometrics, four smartcard readers and GSM module into the unit.
- This device won PIKOM ICT Computing Product of the Year award in 2001.
- Delivered the biometrics/smartcard desktop reader (Sekure) in December 2001.

(ii) Tricubes 1020

- Tricubes 1020 pre-production release in December 2002.
- This product has colour screen, encrypted keypad, and has generic expansion slot that can integrate and be embedded in different modules such as barcode, contactless smartcard readers, GPS, Wireless LAN, bluetooth, and magnetic stripe reader.

(iii) Tripaq 3800

- Tripaq 3800 pre-production release in Oct 2002.
- Succesfully developed integrated smartcard and GSM/GPRS module for HP iPAQ PDA.

(iv) Secure X-cess

- Secure X-cess product launched in March 2004.
- Specially built-in with "all-in-one" features, equipped with fingerprint biometrics system, contact and contactless smartcard modules and flexible keypad functionality.

5.2.10 Employees

As at 15 October 2004, the Group employed a total workforce of 74 employees comprising 51 full time employees and 23 contract employees. The Group's employees can be segregated into six categories as follows:

	Full-time employee			Contract Employee			
Category	No	%	Length of Service (years)	No	%	Length of Contract (years)	Total Employees
Management	10	14	5	1	1	2.5	11
Sales	8	11	5	-	-	-	8
R & D (DE)	8	11	7	7	9	2.0	15
R & D (PS)	3	4	5	4	5	2.0	7
Finance & Admin and Operations	21	28	8	11	15	1.0	32
Human Resource	1	1	4	-	-	-	1
						Total	**74**

The relationship and co-operation between management and employees have been good and are expected to continue. There have been no work interruptions or labour disputes affecting the Group's business nor has the Group experienced any significant turnover of employees. The employees of the Group do not belong to any organised union.

The Group recognises the importance of its employees and the upgrading of their skills and knowledge in order to keep abreast with the latest developments in technology. The Group provides series of continuous staff training and development programmes for its staff which includes on-the-job training and in-house training programmes and workshops. In addition, the Group also engages external training centres and associations to conduct seminars and workshops to enhance management quality and increase the competency level of its employees.

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5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.2.11 Key milestones

The significant milestones for the Group are as described below:

Year	Achievements
2001	
Feb 2001	Tricubes signed with its first distributor in France (Interscan)
June 2001	Completion of phase 1 of the GMPC project Customer Support and Service unit was established for the Company
July 2001	Delivery of 770 units of non-biometrics Tricubes 1010 to the Government
Aug 2001	Tricubes signed for RM2.5 million venture capital funds with CTV
Sep 2001	Tricubes 1010 awarded PIKOM ICT Computing Product of the Year
Oct 2001	Delivery of first 100 units of Tricubes 1010 (Radio Frequency) to the Government
Dec 2001	Delivery of 2,200 units of Tricubes 1010 (Radio Frequency) to the Government for the GMPC project
2002	
Sept 2002	Product Launch of Tricubes 1020
2003	
March 2003	Tricubes signed for RM4.8 million venture capital funds with MVCC
May 2003	Delivery of 248 units of Tricubes 1010 to Telehealth, Ministry of Health
June 2003	Delivery of 200 units of MyKid multi-pay terminals to the Government
October 2003	Awarded Top 50 Enterprise SMIDEC
Dec 2003	Delivery of 200 units of Tripaq 3800 to Clipcard, France
Nov 2003	Delivery of Software for Mobile Enforcement and Desktop Application for GMPC Pilot Phase
Feb 2003	Delivery of MyKad and Bankard Centre Services Application to Maybank
2004	
March 2004	Product launch of Secure X-cess
March 2004	Delivery of Software for Mobile Banking Application to Bank Pertanian Malaysia
April 2004	TC (Sabah) established joint-venture with Suria Capital
June 2004	Delivery of 20 units of Tricubes 1020 to ADP-Airport, France
June 2004	Availability of Tricubes Device Management System with Tricubes 1010, Tricubes 1020 and Intellect Support
June 2004	Availability of MEPS Cash Server Solution
June 2004	Delivery of Mobile Enforcement Software for Hong Kong Immigration
July 2004	Availability of DOS Login Solution for Sekure

Year	Achievements
July 2004	Delivery of 25 units of Secure X-cess to LSG Sky Chefs Brahim Sdn Bhd
August 2004	Delivery of 600 units of Tricubes 1020 to Maybank
August 2004	Delivery of 400 units of Tripaq 3800 and 500 units of Tricubes 1020 to KDN under the NRO for the MyKad project
October 2004	Signed a technical support agreement with Cameon of France where Cameon will secure and maintain TCSB's portfolio in France

5.2.12 Interruptions to operations

There have been no interruptions to operations in the Group's business or operations in the past 12 months.

5.3 SUBSIDIARY AND ASSOCIATED COMPANIES

As at 15 October 2004, the details of the subsidiary and associated companies of Tricubes, all of which were incorporated in Malaysia, are as follows:

	Date / Place of incorporation	Years of operation	Issued and paid-up share capital (RM)	Effective interest (%)	Principal activities
Subsidiary companies					
TCSB	10 October 1995 / Malaysia	8	2,101,512	100	Design and development of IT solutions and provision of after-sales service to clients.
TRCO	19 August 2003 / Malaysia	-	2	100	Provision of IT consultancy services.
TGSB	19 August 2003 / Malaysia	-	2	100	Marketing of the Group's products and services worldwide.
EPNCR	3 October 1996 / Malaysia	7	1,000,000	70	Marketing of the Group's products and services to the Government and the private sector.
TC (Sabah)	20 January 2004 / Malaysia	#	40,000	75	Investment holding company to undertake investments in the Borneo region (including East Malaysia).
Associated companies					
GMPC	18 February 1995/ Malaysia	6	5,000,000	14	Provision of the national identity smart card or MyKad solutions to the Government.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

	Date / Place of incorporation	Years of operation	Issued and paid-up share capital (RM)	Effective interest (%)	Principal activities
TriSuria	12 November 2003 / Malaysia	#	100,000	30	Provision of IT services in the Borneo region (including East Malaysia) through joint venture with Suria Capital.

Note:

 # Commenced full operations on 1 September 2004.

Further information on the subsidiary and associated companies of Tricubes is set out hereafter.

5.3.1 Information on TCSB

(a) History

TCSB is an MSC status company incorporated in Malaysia on 10 October 1995 as Third Entity Sdn Bhd. TCSB commenced business on 1 July 1997. It changed its name to ESC Sdn Bhd on 8 February 1999. Subsequently, TCSB changed its name from ESC Sdn Bhd to Tricubes Sdn Bhd on 8 December 2000 and assumed its present name on 28 March 2001. TCSB was essentially dormant until early 1999 when it was activated by Khairun and his team to facilitate a management buy-out of EPNCR. EPNCR was a joint venture entity created by NCR through its wholly-owned NCR Malaysia and a local Bumiputera businessman to enable NCR to gain presence and win market share for its products in the public sector. The shareholding structure of EPNCR at that time was the local investor (51%), NCR Malaysia (30%) and the management team (19%) respectively. The 19% block was first held in trust by a NCR nominee for the entire management team, which was intended to be allocated to the senior management team in accordance with certain prescribed conditions.

However, in the aftermath of the Asian financial crisis in 1998, the local investor decided to divest his entire shareholding. Khairun, who was then the Managing Director of NCR Malaysia and who was one of the principal architects of the formation of the joint venture, decided to undertake a buy-out of the shareholdings of the local investor. TCSB was used as the vehicle by Khairun to facilitate the buy-out. Khairun concurrently opted for a Voluntary Separation Scheme offered by NCR Malaysia during that period. With the agreement of NCR Malaysia, the buy-out was completed in April 1999.

In December 2000, TCSB became the holding company of its then 70% associated company, EPNCR.

TCSB has also been successful in attracting the interest of venture capital companies. In 2001, TCSB successfully secured funds amounting to RM2.5 million from CTV. Subsequently in 2003, TCSB managed to attract RM4.8 million venture capital funding from MVCC.

The name "Tricubes" reflects the company's principal areas of expertise in the three C's – Computer, Communication and Commerce.

TCSB's main objective, upon completion of the national identity smartcard or MyKad project is to develop and commercialise new and spin-off products serving the mobile-commerce market at home and abroad.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

TCSB has two major operating units:

(i) Customer Service Division; and
(ii) Design Engineering Division.

(b) Share capital

The present authorised share capital of TCSB as at 15 October 2004 is RM5,000,000 comprising 20,000,000 TCSB Shares and 2,500,000 preference shares Series A of RM0.25 each ("Preference Shares"), whilst its present issued and paid-up share capital is RM2,101,512.50 comprising 8,406,048 TCSB Shares.

The changes in the issued and paid-up share capital of TCSB since its incorporation are as follows:

Date of Allotment	No. of shares allotted	Par value (RM)	Consideration (RM)	Cumulative issued and paid-up share capital (RM)
Ordinary Shares				
10.10.1995	2	1.00	Subscribers' Shares	2.00
16.03.1999	99,998	1.00	Cash	100,000.00
06.09.1999	400,000	1.00	Cash	500,000.00
17.02.2000	2,000,000	0.25	Share split by subdivision of shares	500,000.00
25.04.2000	2,048,000	0.25	Acquisition of 51.2% of EPNCR	1,012,000.00
16.12.2002	565,745	0.25	Share Swap with HTP for shares in EPNCR	1,153,436.25
30.04.2003	886,255	0.25	Bonus Issue of 1 share for 5 shares	1,375,000.00
30.05.2003	36,665	0.25	Bonus Issue of 1 share for 5 shares	1,384,166.25
30.06.2003	193,732	0.25	Cash – Investment by MVCC	1,432,599.25
15.12.2003	769,230	0.25	Cash – Investment by MVCC	1,624,906.75
30.07.2004	225,214	0.25	Cash – Investment by MVCC	1,681,210.25
02.08.2004	1,681,209	0.25	CTV converts 2,500,000 Preference Shares	2,101,512.50

Date of Allotment	No. of shares allotted	Par value (RM)	Consideration (RM)	Cumulative issued and paid-up share capital (RM)
Preference Shares				
07.09.2001	2,500,000	0.25	Cash – Investment by CTV	625,000.00
02.08.2004	(2,500,000)	0.25	Conversion into ordinary shares	-

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in TCSB.

(c) Subsidiary and associated companies

As at 15 October 2004, EPNCR is a 70% subsidiary company of Tricubes whilst GMPC is a 20% associated company of Tricubes held through EPNCR.

5.3.2 Information on EPNCR

(a) History

EPNCR was incorporated on 3 October 1996 as Destar Pelangi (M) Sdn Bhd. In 1997, it became the joint-venture company between US-multinational NCR *vide* its Malaysian subsidiary company, NCR Malaysia (49%) (for which 19% is earmarked for senior management) and Bumiputera entrepreneurs (51%) and assumed its present name. It was initially established as the trading arm of NCR, concentrating on government accounts and designated financial institutions.

In 1999, EPNCR became a 20% equity partner in GMPC, a consortium that was subsequently awarded the contract to implement the Government's MyKad project for the NRO. In 1999, a group of Bumiputera IT professionals led by Khairun undertook a management buyout of EPNCR.

As a member of the GMPC consortium, it has successfully designed and delivered 3,000 units of the first made-in-Malaysia smart card reader with wireless payment capability under a two-year contract valued at RM47.0 million. EPNCR successfully delivered the project to the Government in December 2001.

EPNCR is an MSC status company having been awarded the same by MDC on 28 June 1999, and enjoys financial and non-financial incentives such as tax holiday for five years which is renewable for further five years and exemption from National Development Policy requirements.

EPNCR is principally the sales arm for the Tricubes Group for the Malaysian market. The sales group is divided into two sectors, namely, the public sector that is responsible for sales effort in Government accounts, and commercial sector that is responsible for covering among others, the banking industry.

(b) Share capital

The present authorised share capital of EPNCR as at 15 October 2004 is RM3,000,000 comprising 3,000,000 ordinary shares of RM1.00 each, whilst its present issued and paid-up share capital is RM1,000,000 comprising 1,000,000 ordinary shares of RM1.00 each.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

The changes in the issued and paid-up share capital of EPNCR since its incorporation are as follows:

Date of allotment	No. of shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
03.10.1996	2	1.00	Subscriber Shares	2
21.04.1998	499,998	1.00	Cash	500,000
04.05.2000	500,000	1.00	Cash	1,000,000

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in EPNCR.

(c) Substantial shareholders

As at 15 October 2004, EPNCR is 70% owned by Tricubes and the balance 30% is held by NCR (Malaysia).

(d) Subsidiary and associated companies

As at 15 October 2004, EPNCR does not have any subsidiary company. The only associated company of EPNCR is as follows:

Name	Date / Place of incorporation	Issued and paid-up share capital (RM)	Direct interest (%)	Principal activities
GMPC	18.02.1995 / Malaysia	5,000,000	20	Provision of the national identity smart card or MyKad solutions to the Government.

5.3.3 Information on TRCO

(a) History

TRCO was incorporated in Malaysia on 19 August 2003 as a new entity for the Tricubes Group solely involved in the provision of services. TRCO is created in line with the Group's plan to expand its revenue base and to provide more value-added services to the market.

TRCO offers various services such as technology-focused consulting, IT project management and system integration and software development.

(b) Share capital

The present authorised share capital of TRCO as at 15 October 2004 is RM100,000 comprising 1,000,000 ordinary shares of RM0.10 each, whilst its present issued and paid-up share capital is RM2.00 comprising 20 ordinary shares of RM0.10 each.

The changes in the issued and paid-up share capital of TRCO since its incorporation are as follows:

Date of allotment	No. of shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
19.08.03	20	0.10	Subscriber Shares	2

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in TRCO.

(c) Subsidiary and associated companies

As at 15 October 2004, TRCO does not have any subsidiary or associated companies.

5.3.4 Information on TGSB

(a) History

TGSB is a company incorporated to undertake the sales effort overseas given the greater acceptance of Tricubes products worldwide. At the moment, the Group does not have any permanent representative offices in the major market as the Group's sales is primarily done through local partners in these markets.

(b) Share Capital

The present authorised share capital of TGSB as at 15 October 2004 is RM100,000 comprising 1,000,000 ordinary shares of RM0.10 each, whilst its present issued and paid-up share capital is RM2.00 comprising 20 ordinary shares of RM0.10 each.

The changes in the issued and paid-up share capital of TGSB since its incorporation are as follows:

Date of Allotment	No. of shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
19.08.03	20	0.10	Subscriber Shares	2

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in TGSB.

(c) Subsidiary and associated companies

TGSB does not have any subsidiary or associated companies as at 15 October 2004.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.3.5 Information on TC (Sabah)

(a) History

TC (Sabah) was incorporated on 20 January 2004 as Colour Gate Express Sdn Bhd. The company changed its name to its present name on 19 February 2004. TC (Sabah) is an investment holding company which was formed to undertake the Group's expansion in the Borneo region (including East Malaysia). The company commenced full operations on 1 September 2004.

(b) Share Capital

The present authorised share capital of TC (Sabah) as at 15 October 2004 is RM100,000 comprising 100,000 ordinary shares of RM1.00 each, whilst its present issued and paid-up share capital is RM40,000 comprising 40,000 ordinary shares of RM1.00 each.

The changes in the issued and paid-up share capital of TC (Sabah) since its incorporation are as follows:

Date of Allotment	No. of shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
20.01.04	2	1.00	Subscriber Shares	2
05.02.04	98	1.00	Cash	100
12.05.04	39,900	1.00	Cash	40,000

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in TC (Sabah).

(c) Substantial shareholders

As at 15 October 2004, TC (Sabah) is 75% owned by Tricubes and the balance 25% is owned by Syed Najib Albar.

(d) Subsidiary and associated companies

The only subsidiary company of TC (Sabah) is as follows:

Name	Date / Place of incorporation	Issued and paid-up share capital (RM)	Direct interest (%)	Principal activities
TriSuria	12 November 2003 / Malaysia	100,000	40	Provision of IT services in the Borneo region (including East Malaysia) through joint venture with Suria Capital.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.3.6 Information on GMPC

(a) History

GMPC was incorporated in Malaysia on 18 February 1995 as Abad Merdeka Sdn Bhd. The company changed its name to its present name on 12 September 1998. GMPC was set up by a consortium of five companies, each with a 20% shareholding, comprising EPNCR, Iris Technologies (M) Sdn Bhd, Dibena Enterprise Sdn Bhd, CSA MSC Sdn Bhd and Unisys MSC Sdn Bhd (collectively referred to as "Consortium"). GMPC was awarded the contract for the SmartCard or MyKad project by the Malaysian Ministry of Home Affairs on 3 May 1999 and the Group's role in the project was to design, supply, install and commission CADs.

(b) Share Capital

The present authorised share capital of GMPC as at 15 October 2004 is RM5,000,000 comprising 5,000,000 ordinary shares of RM1.00 each, whilst its present issued and paid-up share capital is RM5,000,000 comprising 5,000,000 ordinary shares of RM1.00 each.

The changes in the issued and paid-up share capital of GMPC since its incorporation are as follows:

Date of allotment	No. of shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
18.02.95	2	1.00	Subscriber Shares	2
24.08.98	3	1.00	Cash	5
28.05.99	250,000	1.00	Cash	250,005
22.07.99	4,749,995	1.00	Cash	5,000,000

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in GMPC.

(c) Substantial shareholders

As at 15 October 2004, GMPC is equally owned by each of the 5 companies within the Consortium.

(d) Subsidiary and associated companies

As at 15 October 2004, GMPC does not have any subsidiary or associated companies.

5.3.7 Information on TriSuria

(a) History

TriSuria was incorporated in Malaysia on 12 November 2003 under the name of Prima EraGlobal Sdn Bhd. The company changed its name to its present name on 21 July 2004. TriSuria is a joint venture established between TC (Sabah) and another public-listed company, Suria Capital. TriSuria commenced full operations on 1 September 2004.

The principal activities of TriSuria are to provide IT support to Suria Capital and its subsidiary companies as well as to provide IT services to other companies within the Borneo region, specifically the BIMP-EAGA region (being the Brunei, Indonesia, Malaysia, Philippines - East Asia Growth Area).

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

Tricubes, through its 75% owned subsidiary company, namely TC (Sabah), holds an effective 30% interest in TriSuria.

(b) Share Capital

The present authorised share capital of TriSuria as at 15 October 2004 is RM100,000 comprising 100,000 ordinary shares of RM1.00 each, whilst its present issued and paid-up share capitaql is RM100,000 comprising 100,000 ordinary shares of RM1.00 each.

The changes in the issued and paid-up share capital of TriSuria since its incorporation up to 15 October 2004 are as follows:

Date of allotment	No. of shares allotted	Par value (RM)	Consideration	Cumulative issued and paid-up share capital (RM)
12.11.03	2	1.00	Subscriber Shares	2
11.10.04	99,998	1.00	Cash	100,000

As at 15 October 2004, there are no outstanding preference shares, warrants, options, convertible securities or uncalled capital in TriSuria.

(c) Substantial shareholders

As at 15 October 2004, TriSuria is 40% owned by TC (Sabah) and 60% owned by Suria Capital.

(d) Subsidiary and associated companies

As at 15 October 2004, TriSuria does not have any subsidiary or associated companies.

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5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.4 INDUSTRY OVERVIEW

5.4.1 Overview and Outlook of the World Economy

In 2003, the world GDP growth remained unchanged at 3.0%. This represent an improvement from the average of 2.1% estimated over 2001-2002. Global growth below 2.5% is generally considered to be a recession in the world economy. For 2004, world GDP growth is forecasted to increase by 3.9 %, marking the first year of recovery from a 2-year global recession.

In the developing nations, GDP growth is expected to achieve 5.3%in 2004. This represents an increase of 1.2% over 2003-2004. As domestic demand continues to lag in the developing world, growth in this segment of the world is expected to be export-led. China continues to lead the pack with its GDP growth expected to re-accelerate to 7.9% in 2004 after average gains of 7.5% in 2002-2003. Elsewhere in Asia, the acceleration is expected to be more subdued. Excluding China, growth in Asia ex Japan is expected to hit only 4.6% in 2004, only a slight increase from 4.1% in 2002-2003. This is backed by robust export performance and higher contribution from domestic demand.

The industrial CPI is expected to inch up fractionally to just 1.8% in 2004, following average gains of just 1.5% in 2002-2003. The outlook for the global economy has improved significantly with growth becoming broader based. External demand is therefore expected to be sustained in an external environment of stronger growth in the major industrial economies and higher growth in the Asian region.

(Source: Frost & Sullivan)

5.4.2 Overview and Outlook of the Malaysian Economy

Malaysia's growth momentum continues into 2004 after recording a strong growth in 2003. Unlike 2003, when the global economy was affected by the war in Iraq and Severe Acute Respiratory Syndrome (SARS), the external environment in 2004 has improved markedly with upswing in the global electronics demand as well as favourable commodity prices. This enabled the Malaysian economy to expand steadily from 7.6% in the first quarter of 2004 to 8% in the second quarter, the highest since the third quarter of 2000.

Within the services sector, ICT and tourism-related industries continue to generate significant growth, both in terms of output and foreign exchange earnings. In the ICT industry, the Multimedia Development Corporation (MDC) gained further ground in its endeavour to make the MSC a global ICT hub. R&D expenditure of MSC companies is anticipated to increase significantly by 21.2% to RM657 million in 2004 (2003: RM542 million). The research activities focussed on areas such as communications, software solutions, micro-systems and integrated circuit designs.

Development of the local ICT industry, shared services and business process outsourcing has been identified as new sources of high growth. Specific measures have been implemented to facilitate the development of this sector, including attracting ICT talents through the brain-gain programme and enhancing ICT infrastructure, especially in wider broadband connectivity.

Entrenched domestic economic activities, coupled with a fairly favourable external environment, are expected to drive growth into 2005. Strong output growth is expected to emanate from all sectors, led by manufacturing and services with an increasingly higher contribution from private sector expenditure. Consequently, Malaysia is set to achieve another year of healthy growth of 6% in 2005. Meanwhile, high value-added manufacturing and ICT related industries will continue to attract stronger investment activities, particularly those that are able to provide inter and intra-linkages between multi-national companies and small and medium enterprises.

(Source: Economic Report 2004/2005)

5.4.3 Outlook of the ICT Industry

Malaysia is well placed to benefit from the new wave of growth based within the ICT sector. The relatively developed infrastructure and the conductive environment put in place during the Seventh Plan period for the development of ICT, particularly within the MSC, have formed the foundation for Malaysia to leverage on the growth opportunities provided by the ICT sector.

During the Eighth Malaysia Plan period, focus will be given towards further strengthening the human resources capabilities, hard and soft infrastructure as well as the building of a critical mass of small medium enterprises and Internet users to enable Malaysia to move rapidly towards becoming a developed nation with a knowledge-based society. The period under the Seventh Malaysia Plan (1996-2000) saw a rapid growth in ICT utilisation. Investments in ICT expanded at a rate of 9.2% per annum from RM3.8 billion in 1995 to RM5.9 billion in 2000. This was largely due to increasing awareness of the importance of the production, diffusion and utilisation of knowledge and information for improving competitiveness and overall economic performance. Special incentives, such as the abolition of sales tax on computers and components, and the granting of accelerated capital allowance for expenses on computers equipment also assisted in increasing the usage of ICT.

The thrust of the Government from 2001 onwards to 2005 will be to shift the growth strategy from one that is input-driven to one that is knowledge-driven in order to enhance potential output growth and accelerate structural transformation within the manufacturing and services sectors. ICT itself will be used as a key enabler to facilitate local companies to compete globally, especially in sectors such as banking and finance, logistics, manufacturing and key services. Investments will also be made to upgrade communications networks in line with technological advancements. For the same period, a total of RM5.2 billion will be allocated for ICT-related programmes and projects.

(Sources: The Eighth Malaysian Plan 2001-2005)

5.4.4 Principal Markets and Market Shares

The Tricubes Group is primarily involved in the provision of advanced IT solutions in the areas of SAA, EPSys and MWS. Whilst SAA and EPSys are important markets that are expected to continue to generate revenue streams for the Group, the management of Tricubes plans for the Group to be a major player in the MWS market. The management of Tricubes is of the view that the Group is in a good positioned to capitalise on the take-off of mobility applications in the local and foreign market. Having a track record in MyKad project as well as Tricubes 1020, the Group's rugged handheld computer, having been selected by HKSAR for their pilot HKSAR smartcard ID project, are believed to be positive factors which place the Group a step ahead of its competitors in penetrating the mobile workforce space.

Whilst revenue from overseas business is presently not a significant contributor, the management of Tricubes plans for the Group to increase its revenue from overseas business. Presently, the Group is involved in key projects in Paris and HKSAR.

(Source: Frost & Sullivan)

(a) SAA Market Share in Malaysia for 2003

Integrated Biometrics Smart card reader Market: Market Share based on Revenues (Malaysia), 2003

Company	2003 Market Share (%)
TCSB	56.7
IRIS	34.7
Yasmin Teknologi Sdn Bhd	5.2
Others	3.4
TOTAL	100.0

Note: All figures are rounded; the base year is 2003. Source: Frost & Sullivan

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

(b) EPSys Market Share in Malaysia for 2003

Electronic Payment Terminal Market: Market Share based on Revenues (Malaysia), 2003

Company	2003 Market Share (%)
GHL Systems Berhad	41.2
Ingenico Malaysia	25.7
Nera Infocomm Sdn Bhd	20.6
Paysys (M) Sdn Bhd	10.3
TCSB	1.8
Others	0.4
TOTAL	100.0

Note: All figures are rounded; the base year is 2003. Source: Frost & Sullivan

(c) MWS Market Share in Malaysia for 2003

Mobile Workforce Handheld Devices Market: Market Share based on Revenues (Malaysia), 2003

Company	2003 Market Share (%)
Symbol Technologies, Inc.	25.7
Psion PLC	16.9
Fujitsu (Malaysia) Sdn Bhd	12.7
HHP, Inc	12.5
Intermec Technologies Corp.	11.3
Radix International Ltd.	7.0
TCSB	6.2
Denso (Malaysia) Sdn Bhd	4.9
Others	2.8
TOTAL	100.0

Note: The above vendors each have very unique products that cater to different vertical markets. Each product comprise different configuration of technology and application. As such, direct comparison of revenue market share as shown above may not be a fair representation of the true picture of each vendor's performance.

Note: All figures are rounded; the base year is 2003. Source: Frost & Sullivan

5.4.5 Competition

The Group competes in an arena where many of its competitors are local companies and multi-national corporations which potentially may have greater sales, financial, productions, distribution and marketing resources.

Frost & Sullivan's research has identified the following to be the major competitors in the three market segments in which the Group operates:

(a) SAA

Competitors	Brief Information
Yasmin Teknologi Sdn Bhd ("Yasmin")	Yasmin is a provider of biometrics security Algorithm and encryption technology and enterprise-wide solutions for clients
IRIS	IRIS is involved with the manufacturing of all types of smart cards including contactless book insert.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

(b) EPSys

Competitors	Brief Information
GHL Systems Berhad ("GHL")	GHL is primarily focused on online transactions, with emphasis on payment solutions, transaction processing and customer loyalty programs.
Ingenico Malaysia ("Ingenico")	Ingenico is the supplier of electronic payment terminals by providing the advanced and secure electronic payment terminals and software.
Nera Infocom (Malaysia) Sdn Bhd ("Nera")	Nera is primarily focused on online transactions, with emphasis on payment solutions, transaction processing and customer loyalty programs.

(c) MWS

Competitors	Brief Information
Symbol Technologies, Inc. ("Symbol")	Symbol is a provider of mobile data management systems and services with specialisation in laser bar code scanners, hand-held computers and wireless communications networks for voice and data.
Psion PLC ("Psion")	Psion is a provider of mobile computing and wireless networking.
Fujitsu (Malaysia) Sdn Bhd ("Fujitsu")	Fujitsu is a provider of all major aspects of systems, solutions and services, offering integrated business solutions to customers.
HHP, Inc. ("HHP")	HHP is a provider of image-based data collection solutions for mobile, wireless and transaction processing applications to end users.
Intermec Technologies Corp. ("Intermec")	Intermec develops, manufactures and integrates wired and wireless automated data collection, Intellitag® RFID (radio frequency identification) and mobile computing systems for companies worldwide.
Radix International Ltd. ("Radix")	Radix is a provider of rugged mobile computing solutions specialising in servicing the utility meter reading markets and field data collection applications.
Denso (M) Sdn Bhd ("Denso")	Denso is one of the largest automotive components manufacturers in Malaysia and a major automotive components supplier to national car projects i.e. the Proton and Perodua as well as other established automobile assemblers.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

5.4.6 Major Customers of Tricubes

The Group provides products and services to customers both within and outside Malaysia. The Group's major customers based on the Group's results for the 8 months financial period up to 31 August 2004 are as follows:

Name	% of the Group's Total Revenue	Length of Relationship (years)
Government (for the MyKad project)	55	6
Maybank	11	2
Takaful Nasional Sdn Bhd	7	3
Bumiputra-Commerce Bank	5	5
Islamic Development Bank of Brunei	3	3
Telekom Research & Development Sdn Bhd	2	2
RHB Bank Berhad	2	5
United Overseas Bank	2	3
Affin Bank Berhad (Intellect Outsourcing)	1	2
Affin Bank Berhad (Systemedia)	1	5

MyKad Project

The MyKad project is one of the flagship applications under the MSC initiative. As the purpose of the project is primarily to effect replacement of the old paper-based identity cards, the lead agency appointed was the NRD, the department that is responsible to undertake issuance of documents pertaining to citizenship in Malaysia. NRD is a department under the purview of the KDN. Apart from the ID application that forms the anchor application in the smart card, other applications such as driving licence, personal health data and immigration details are added. Thus, the overall user base is expanded to include other agencies such as the PDRM, Immigration Department, Road Transport Department and the Malaysian Health Ministry. The purchase of equipments is undertaken by NRD who then reallocates these items to the respective agencies.

The status of negotiations and the award of the contracts for the NRO of the MyKad project attributable to the Group is as follows:

(i) On 20 February 2004, the Tricubes Group had received an initial award from KDN amounting to approximately RM5.8 million for the supply and delivery of MCADs under the NRO for the MyKad project. As at 31 August 2004, the Group has completed the delivery of the requested products and invoiced KDN the entire contract sum.

(ii) On 6 July 2004, the Tricubes Group submitted a RM5.4 million proposal involving the development of EMV-compliant platform for MyKad counters at all Jabatan Pengangkutan Jalan (JPJ) branches. The management of Tricubes believes that the outcome will be positive and that KDN will award the contract to GMPC, which in turn will subsequently subcontract the work to EPNCR by end of 2004.

(iii) On 19 August 2004, the Tricubes Group had received a letter from KDN which permits the Group to commence direct negotiations with KDN to supply 1,200 units of Tricubes 1020, 800 units of Tripaq 3800 and 800 units of printer for MCAD, mobile management system and training. Based on, *inter alia*, the historical selling price of the aforesaid products to KDN, the Directors of Tricubes estimate that the total contract value to amount to RM35.4 million. The Directors of Tricubes are confident of a positive conclusion to the negotiations.

For the FYE 31 December 2004, the Directors of Tricubes estimate that revenue to be generated from the MyKad project would amount to approximately 30% of the of the Group's total revenue for the FYE 31 December 2004.

5.4.7 Major Suppliers of Tricubes

The Group purchases products and services from its suppliers in order to design and build its products. The Group's major suppliers of products and services based on the Group's proforma results for the 8 months financial period up to 31 August 2004 are as follows:

Suppliers	Material Sourced	% of the Group's Total Purchase	Years of Relationship
TriM Technologies (M) Sdn Bhd	Contract Manufacturing	39	2
Hewlett-Packard Sales (M) Sdn Bhd	I-Paq Supplier	14	1
Actan (Malaysia) Sdn Bhd	ATM Consumables	10	5
Evincia Consulting Sdn Bhd	IT Consultancy	9	1
NCR Malaysia	ATM Machines and Consumables	5	7
STMicroelectronics Asia Pacific Pte Ltd	Product Components	3	5
SCM Microsystems (Asia) Pte Ltd	Product Components	2	5
CAE Technologies Sdn Bhd	Maintenance Supplier	2	2
Eishin Mold (M) Sdn Bhd	Product Components	2	2
M.D. Marketing	ATM Consumables	1	4

5.4.8 Major Suppliers' Profile

(i) Tri-M Technologies (M) Sdn Bhd

Tri-M Technologies (M) Sdn Bhd ("Tri-M") is a diversified electronics manufacturing services provider with facilities in Singapore, Malaysia, Philippines and China. They provide services in product design and development, prototyping, full turnkey manufacturing and total supply chain management. Their products cover computer peripherals, telecommunications, medical, automotive, industrial, consumer and the multimedia industries.

Tri-M was incorporated in 1987 with its corporate headquarters and manufacturing facility in Singapore. In 1993, it became the first local subcontract manufacturer to be listed on the main board of the Singapore Stock Exchange. The Singapore office houses the Tri-M group's corporate management and finance offices, supply chain management, research & development and a small production facility.

Tri-M is presently serving other prestigious customers such as Hitachi, Ltd. (Japan), Pemstar Inc. (USA), Philips Singapore Pte. Ltd., Federal Technologies Ltd. (India) and Harbour Networks (USA)

(ii) Hewlett- Packard Sales (Malaysia) Sdn Bhd

Hewlett Packard Sales (Malaysia) Sdn Bhd ("HP") started operations in Malaysia on 20 October 1978 and is currently located at HP Towers, 12 Jalan Gellenggang, Bukit Damansara (formerly known as Wisma Semantan) Kuala Lumpur. Its rapid technological development, coupled with its strong and consistent investment in people, manufacturing and customer support over years quickly transformed it into one of the biggest IT multinational companies in Malaysia.

Since its inception in Malaysia, HP has always maintained a strong presence and commitment to the country. In addition to its corporate headquarters in KL, HP has three main sales offices located in Kuala Lumpur, Penang and Kuching, with seven distribution centres and 12 service centres located throughout Malaysia.

HP serves Malaysian customers through its four business units that cater to the various IT needs of different market segments such as the Enterprise Systems Group, the Personal Systems Group, the Imaging and Printing Group and HP Services.

HP's portfolio of products ranges from palm top to desktop and all the way to nonstop computing systems. Everything from digital entertainment systems to printers and imaging products to multi-million dollar commercial publishing systems is in the mix.

(iii) Actan (Malaysia) Sdn Bhd

Actan (Malaysia) Sdn. Bhd. ("AMSB") was incorporated on 24 November 1980.

As a family run business, AMSB started off as a ready-made garment trader. AMSB made its entry into paper converting business with the acquisition of 1 unit used paper-slitting machine in 1983. After 20 years in the business, it had since grown from a mere 1 machine, 1 operator undertaking, to be the market leader in the local roll paper industry. It currently has a workforce of 60 staff with full range of converting machines for roll paper manufacturing, paper core/paper container manufacturing, roll-to-roll printing and roll to A4 size photocopier paper sheeting.

AMSB has the facilities to convert jumbo roll paper of all grades from wood free paper, kraft paper, thermal paper, self contain paper to any paper size fitting all kinds of machinery and equipment. Complimented with roll to roll printing, its finished products are suitable for wide range of usage including, amongst others, ATM machine roll, facsimile roll, cash register roll, water bill, electricity bill, parking coupon and highway toll ticket. Its photocopier paper division has the capacity to produce 1,200 metric tons of A4 size paper per month.

5.4.9 Future Plans and Growth Strategy

The Group plans to become a leading solution provider in the 3 selected market segments (namely SAA, EPSsys and MWS) by marketing its products/solutions both in the local and foreign markets. In order to achieve this objective, the Group's strategy is to pre-select a number of markets in the Association of South East Asian Nation (ASEAN) region, European countries and the Middle East region, which the Group considers as attractive. Thereafter, the Group will make concerted efforts to penetrate these markets *via* value added resellers/partners who have expertise in the selected market segments.

5. INFORMATION ON THE TRICUBES GROUP *(Cont'd)*

In terms of SAA market segment, the management of Tricubes anticipates that demand for integrated biometrics smart card readers may be derived from both the "new" and "replacement" customers. Replacement customers relates to replacement of card based physical access control system such as magnetic stripe and proximity card. Nevertheless, the management of Tricubes anticipates that a large percentage of the demand would be from "new" customers, mainly in the area of logical access control, web services or network security access application.

Growth in this segment would be attributed to two key factors, including the increasing requirements for identity authentication and more stringent security measures in places such as seaports, airports, Government buildings and multi-national companies. Secondly, the Government's encouragement for the adoption of MyKad nationwide by 2005, is expected to fuel the demand for the Group's MyKad authentication devices. Frost & Sullivan's research indicates that the Group was the market leader in the Malaysian's integrated biometrics smart card reader market in 2003, amongst the leading industry participants, with a market share of 56.7% based on revenues for 2003.

The management of Tricubes will continue to leverage on the Group's lead position to take advantage of the potential growth in this market. To stay ahead of its competitors, the Group will continue to invest in market research and development to further develop specialised products and where appropriate, forge strategic alliances and partnerships with local and international partners, with the aim of providing customers with more comprehensive solutions at competitive prices.

In terms of the EPSys market segment, the management of Tricubes believes that with the improving security for e-commerce and proliferation of mobile channels for electronic payments, such as utilising cellular telephone for payments *via* short messages system (SMS) or customised SIM cards, the EPSys market segment presents growth potential. The management of Tricubes aims to foster business relationships with telecommunication companies and financial institutions as such business partnering would yield opportunities for the Group's electronic payments products/solutions for e-commerce activities.

The management of Tricubes also expects banks and merchants in Malaysia to chip enable their terminals to avoid liability shift and further losses from fraud, hence the growth rate for this segment of the market is expected to peak in the next one to two years (2004-2005). Accordingly, Tricubes' strategy is to focus on the software, system integration and other related services such as providing consultancy, support and maintenance to the banks and merchants. New hardware and software will need to be integrated with existing systems such that all processes are converged together. In view of the complexity of EMV technology, as compared to traditional magnetic stripe, the management of Tricubes anticipates that certain banks may lack the necessary skills to implement the EMV-technology and requires external consultant.

Whilst the MWS market segment is currently in the development stages, the management of Tricubes is of the view this market segment is gaining momentum. Frost & Sullivan's research estimates the number of rugged handheld devices to grow by a CAGR of 15.8% for the Malaysian market between 2003 and 2009.

The Group's premier product, namely Tricubes 1020 (a wireless enabled handheld computer with integrated smartcard and biometrics reader), is equipped with a range of applications for B2B and B2E vertical applications. The telecommunications migration towards higher transmission rates of GPRS and 3G networks, is envisaged to enable usage of traditional desktop bound enterprise applications by the mobile workforce *via* mobile handheld computers. The management of Tricubes is of the view that the Group's wireless enabled hardware and software products are designed for such applications.

Tricubes is also involved in the SMARTICs ID project in the HKSAR, a similar project to MyKad. It is the Group's intention to use HKSAR as its springboard to enter the China market. The Tricubes 1020 has been gazetted by the HKSAR authority as the reader for its SMARTICs project. To date, Tricubes has supplied 63 units of Tricubes 1020 to SMARTICs.