



YUSARN AUDREY

The Role of Malaysian Patent Attorneys in Innovation and Transfer of Technology

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Table of Content:

XX Cycle of Innovation

XX Role of Patent Agent (Overview)

XX Role of Patent Agent (Upstream Activities)

XX IP Assessment & Education

XX Role of Patent Agent

(Intellectual Property Registration)

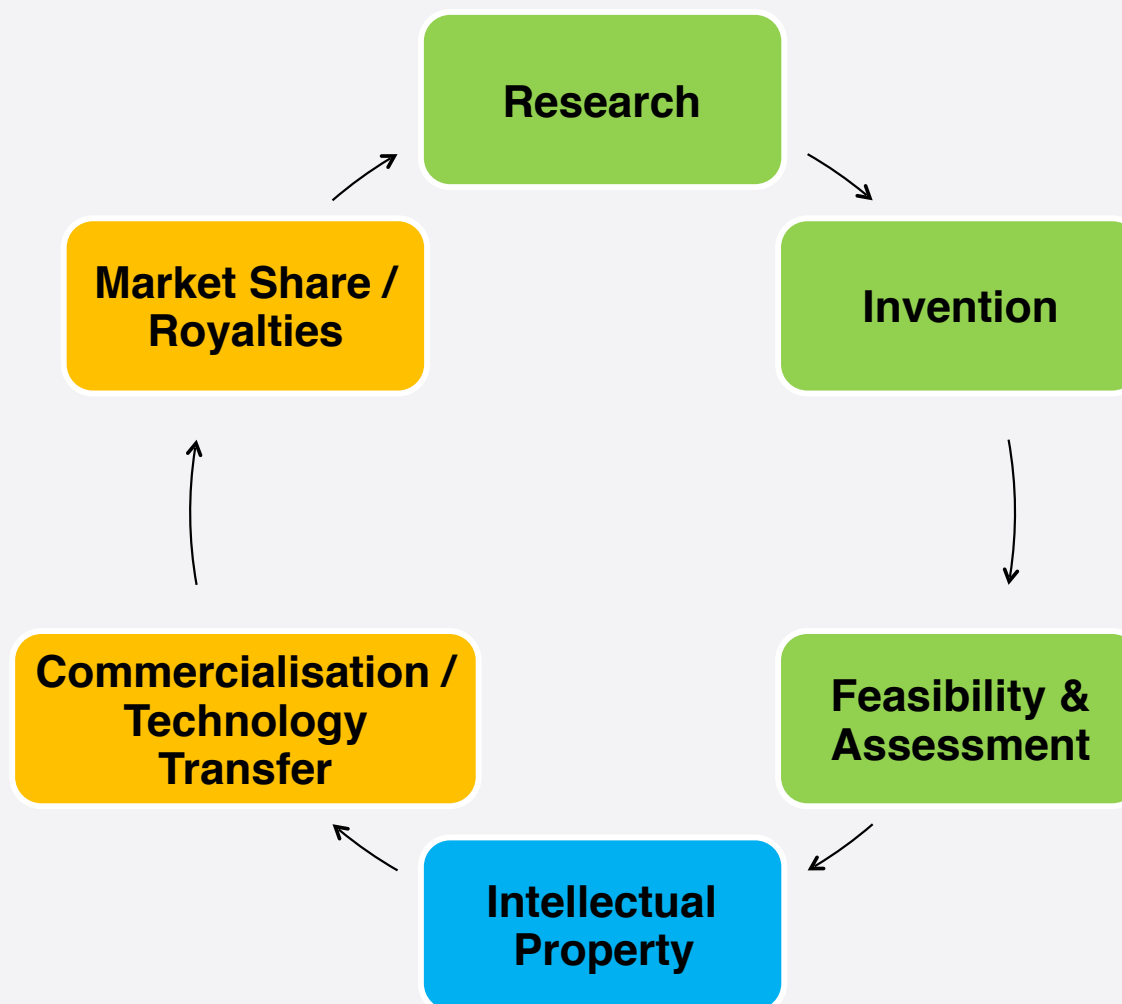
XX Strategic IP Audit, Protection & Management

XX Role of Patent Agent (Downstream Activities)

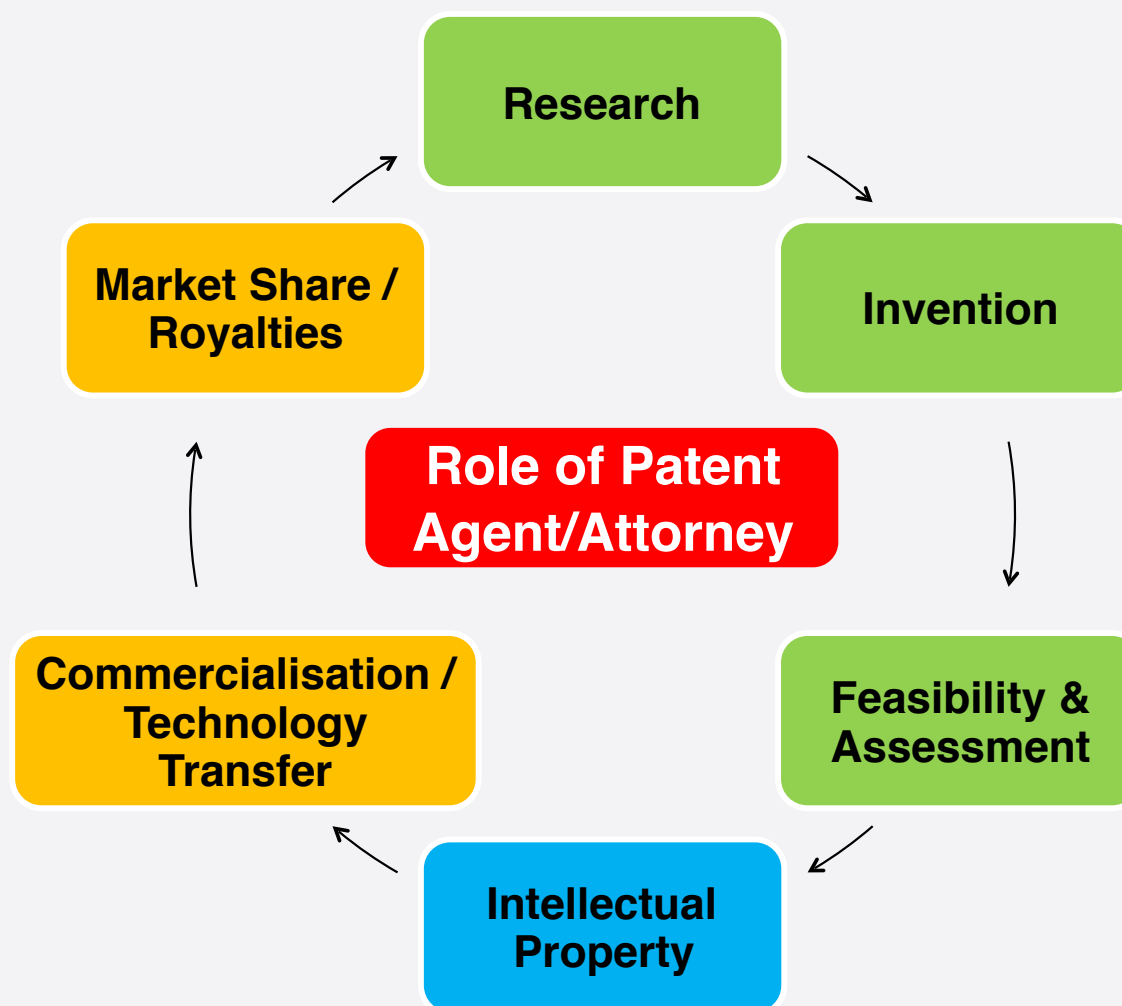
XX IP Competitive Intelligence



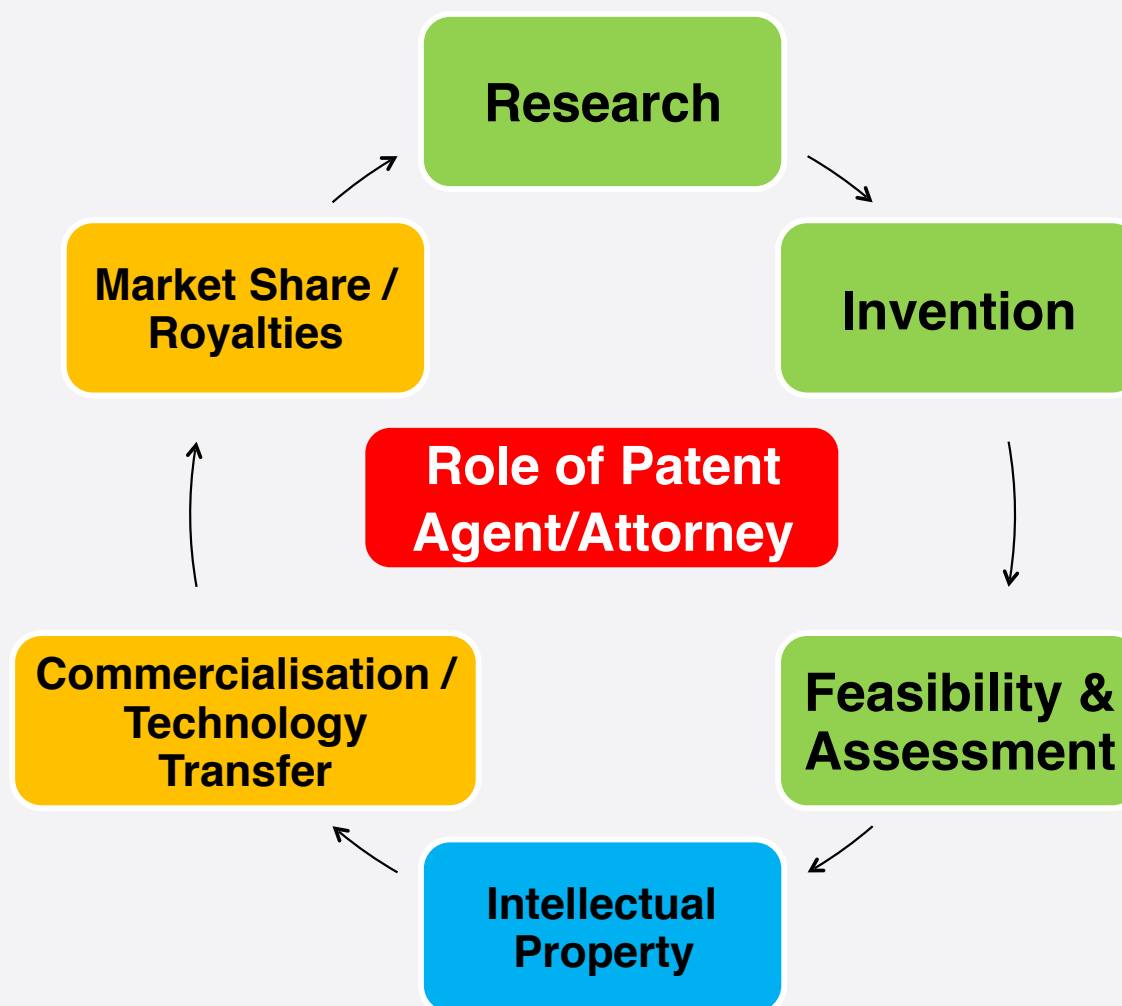
Cycle of Innovation



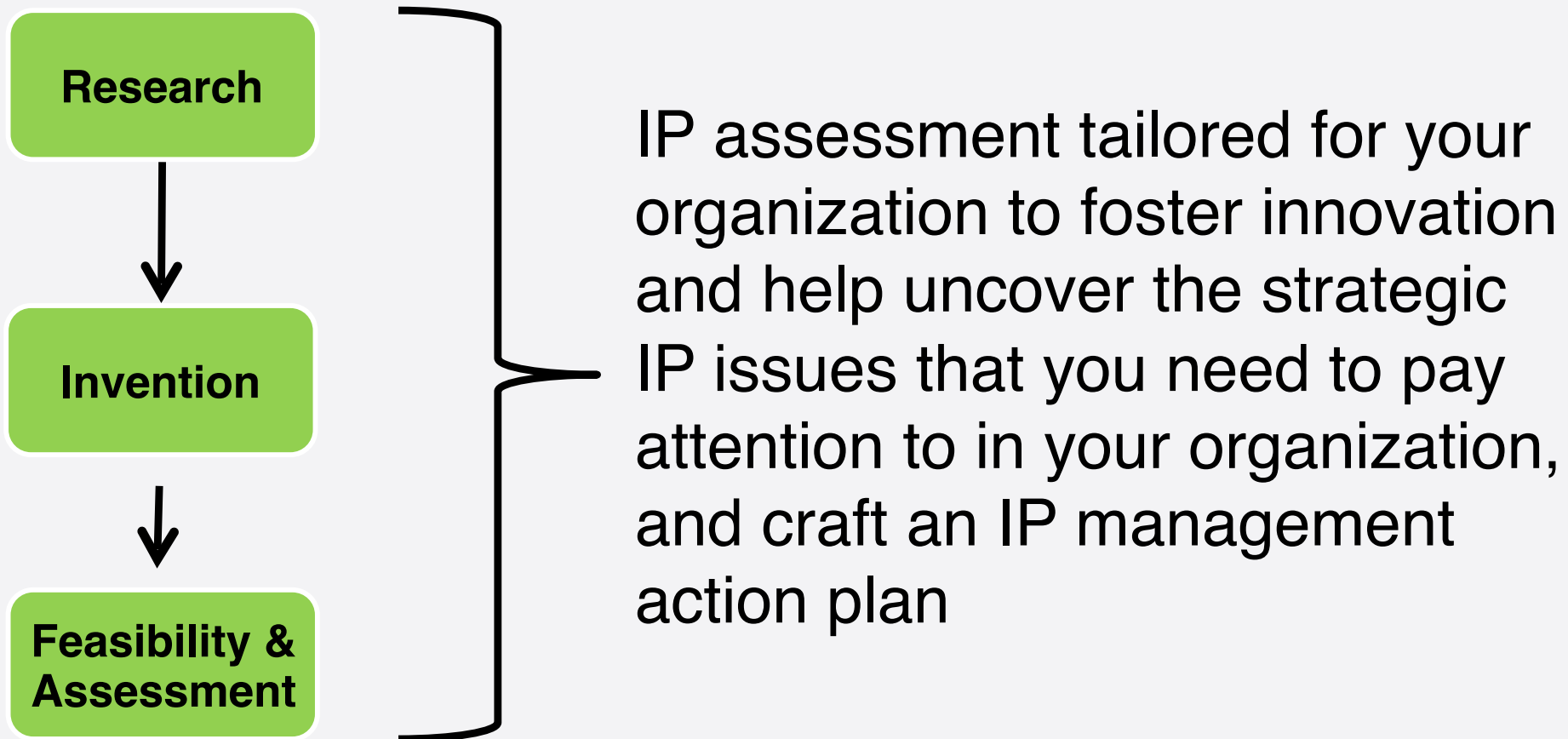
Role of Patent Agent



Role of Patent Agent (Upstream Activities)



Role of Patent Agent (**Upstream Activities**)



IP Assessment & Education

Invention, can it be patented? **Patentability search & assessment**

Generic product? **Patent watch**

New product development? **Freedom-to-operate search & assessment**

Industry trend? **Industry survey**
Subject-matter search



What information & document needed? **Invention Disclosure Form**
Laboratory Notebook

What is the existing problem & market demand? **Problem-solution approach (Inventiveness)**
Commercialisation potential

How to improve my invention/technology? **Continue to Innovate**
Research collaboration
Technology transfer

Teoh Siang Teik

Harnessing The Power of the Sun through Technology



Microsolar



Problem in the conventional solar water heater systems

Teoh, who earned his Masters from University of Edinburgh, Scotland proceeded to spend time researching and dwelling on the flow analysis of the conventional solar heater. The 20 tubes going into one storage tank was like an ill-planned traffic system causing bottleneck constriction on the flow diameter. As Thermosyphon flow slows down, a hot spot develops in the panel and heat is lost through the glass resulting in less water being collected in the tank.

The bottleneck problem seemed further aggravated by hot water stagnation due to

the horizontal angle of the upper manifold. Due to the hotspot which developed in the panel, the stagnant water gets hotter and hotter but heat is re-radiated back through the glass. This heat loss should have been collected safely in the insulated hot water tank. After pondering on all these problems and more, Teoh set to work on his design that would better the situations, but eventually he ended up designing a winner in solar technology. He concluded that the end result of his invention should retain heat for longer periods, provide highest temperature and high volumes of hot water.



The **Microsolar Coaxial Multivalve M80VTHE** 356 litres is the world's highest efficiency thermosyphon solar water heater, operating fully without electricity, capable of reaching a maximum temperature of 100 degrees Celsius within six hours of full sunshine. In some countries, such as in Kenya, **Microsolar** is used for water pasteurization too.

International Recognitions

1997 — Patented worldwide through The World Intellectual Property Organisation

1999 — TIME Magazine featured Teoh as one of the Heroes for the Planet/Design in its March issue that year.

World Market

Microsolar is distributed and sold in many

countries worldwide. Teoh is appreciative of Matrade for undertaking activities to promote the product to overseas markets.

The product is patented worldwide and is in use in Malaysia, the USA, UK, New Zealand, Japan, Indonesia, Philippines, Singapore, India, Nepal, the Middle East, the Caribbeans, Kenya, Tanzania and Maldives.

It achieved world levels of excellence in performance in the mid-winter testing in Pewaukee, Wisconsin USA in January 2004.

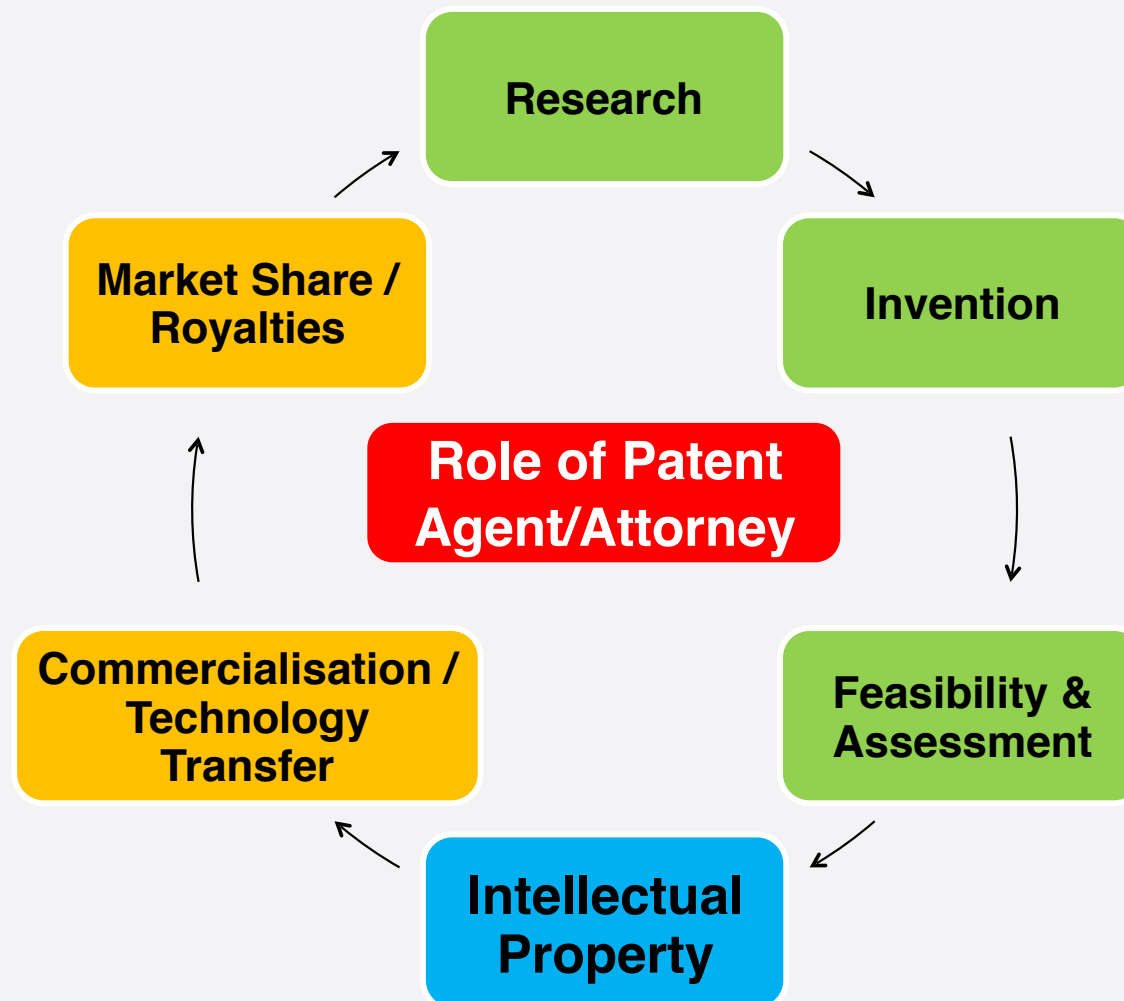
Problem-solution approach
“Problem in the conventional solar water heater system... ended up designing a winner in solar technology”

Strategic IP Protection “The product is patented worldwide...”



Sourced: <http://www.mpc.gov.my/wp-content/uploads/2016/04/Malaysia-Innovators-Journey-of-Creativity-to-Reality.pdf>

Role of Patent Agent (Intellectual Property Registration)





Role of Patent Agent (Intellectual Property Registration)

Drafting of Specification

(Title, Description, Claims, Abstract, Drawings)

Filing of Patent Application(s)

(Conventional filing, International / PCT filing)

Prosecution

(Formalities requirement, Substantive examination,
Responding to Office Actions)

Grant & Renewal

(Certificate of Grant, Annuity renewal)

Strategic IP Audit, Protection & Management

(IP protection is territorial and it requires years of efforts/resources to obtain a registration. Like any other important business asset, IP needs to be audited and managed strategically in accordance to your organization strategy to maintain/achieve competitive advantage)

Strategic IP Audit, Protection & Management

Good knowledge of what IP assets you own can significantly **increase the value of your organization** as investors would value an organization based on its expectations of future profits, vis-à-vis the **commercialisation of IP rights**

Good knowledge of your IP and its value will assist you in deciding which **type of IP rights to acquire and maintain**, and how best to manage your IP assets

A well-structured IP portfolio determines the **credit worthiness** of your organization and may be used as **collateral for fund raising**



An IP audit will assist you in determining the value of your own IP which enable you to obtain **maximum benefit and increase your cash flow by licensing** out IP rights to a third party. *Increase cash flow, increase revenue, increase market value of your organization*

A well-structured IP portfolio would help you **identify obsolete IP assets** which enable you to **cut-down IP asset maintenance costs** and lead to a reduction in costs

Robest Yong

A SERIAL INNOPRENEUR



“Someone once told me that my Polyclone rubber stamp machine invention was either copied or it wouldn't work,” Robest Yong said calmly in an exclusive interview.

“They said if it could be done, the Americans or the Japanese would have done it by then,” he continued. Well, Robest then went on to

wrong!
The early years of Robest Yong in Penang at the Me Robest from 1990s, but I traced back

one of the most prolific local inventors today.

Challenging moments
Lack of money to realize his dream was the biggest challenge back in 1994, when there were no grants for independent inventors. Inventing was more like an expensive, impractical hobby, hence not much attention was paid to it. “Patenting itself carried a cost of over RM8000, so the most exasperating question I had to ask myself time and again was, to patent, or not to patent?” cited Robest. His belief, however, till this very day, is that **if the idea carried a commercial value it is always best to file for a patent.** “Inventors and innovators today are a lucky bunch! The Government has many grants worth billions for them to apply for.”

Stamping his mark worldwide
The Polyclone rubber stamp machine is Robest's proudest achievement and rightly so as it has revolutionized the rubber stamp industry of the world! With this invention, it takes only five minutes to make rubber stamps when previously one had to order, days or weeks in advanced. With this major breakthrough, Robest knew his dreams has taken him to a whole new level and he never looked back

The rubber stamp machine eliminates completely the need for lettering bits, composing messy plaster moulds, the use of high temperatures, photographic equipment. Why, rubber stamps can now be made using any computer printed designs and plain tap water! This one-made operation device allows for unlimited creativity by the user and can be also utilized for printing name cards, envelope headings and as a letter press machine too with superb end results.

Today, Robest's rubber stamp machine is sold and used worldwide - USA, China, Japan, Korea, Russia, South Africa, Papua New Guinea, Indonesia and Thailand. In fact, being one of the most user-friendly inventions ever, it would not be surprising to find this machine in many more countries worldwide!

- Creativity knows no boundaries**
Since the invention of the Polyclone rubber stamp machine, Robest proceeded to embark in a series of other innovations. He turned his creativity and innovating skills to three automobile gadgets, all of which were proudly displayed at the MINDEX/INOTEX 1996. The inventions were:
- Carver-UP car mat cover:** Robest's answer



By LARSEN CHEEMA

The quietest engine and best tool way to make a rubber stamp today for millions and uses tap water, according to Robest Yong.

The 40-year-old businessman from Malacca was talking about his invention called the Polyclone rubber stamp machine.

The invention is among the early entries to the Malaysian Invention and Design Exhibition 2004 (IDEX 04), in Penang from Aug 12-26.

Yong says the machine and the idea of an environment-friendly and eco-friendly are his goal. “The design was a result of my thinking.”

He says, but compared to current methods of making rubber stamps, the polyclone one cheap, maintenance free, compact and portable.

“Conventional methods need ink and tools equipment and a lot of space.” (The machine is about the size of a laptop computer.)

He claimed his invention would save people the “hassle” of making low quality or more cost (including delivery) for a new rubber stamp to be made.

Yong said his machine is not just for rubber stamps, you can also make prints for name cards, envelope headings and letter press machines.

All you need is a computer of the required design.

Stamping out his profits

Even needed, as the negative impact on the environment from excess or computer printed transparencies is a matter of minutes.

“This machine is like an inkless stamp. You just put a computer print, heat up in the machine for one minute before being inserted in water for another two minutes.

Being in the stamping field, Yong fully understands the concept of the kind of technology needed to make rubber stamps.

“It is not surprising that I have had to only look three to four months to develop the machine.”

After a few attempts, he was the fourth machine to be selected and to be the most popular invention. It is a real milestone for him.

“Honestly, I will come out with a new version by March 2005,” he said.

Yong's invention would meet the needs of small businesses and the smaller towns where the demand for rubber stamps is high.



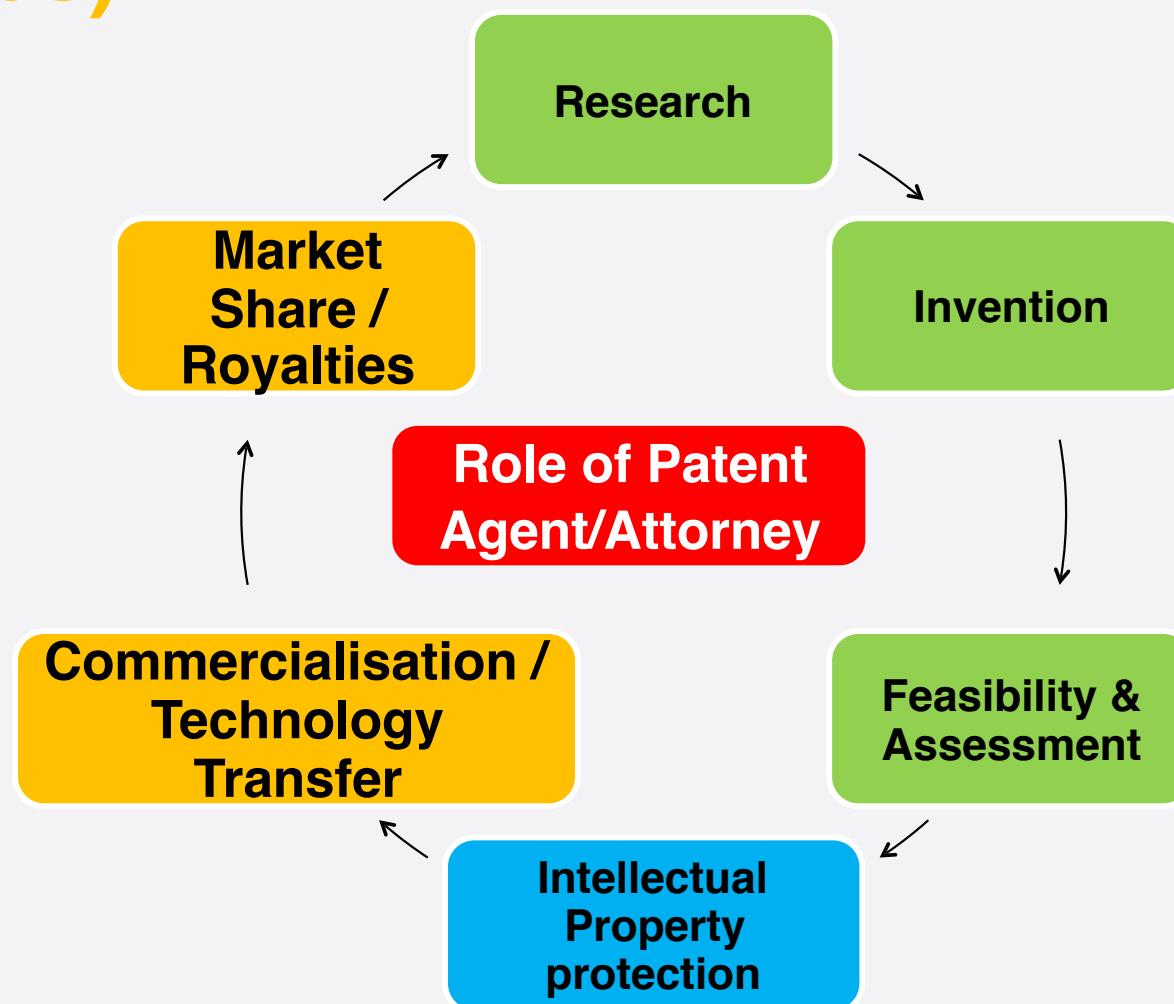
Yong showing how to make a rubber stamp on the Polyclone rubber stamp machine.

- ABL Automatic car-braking system:** This indispensable safety invention allows the vehicle to remain stationary even when the driver's foot has been released from the brakes pedal.
- Electronic road sign reader:** A safety device reduce the dangers of motorists failing to see road signs due to poor visibility. The device

Patent Filing
“if the idea carried a commercial value, it is always best to file for a patent”

Continue to Innovate
“Creativity knows no boundaries”

Role of Patent Agent (**Downstream Activities**)



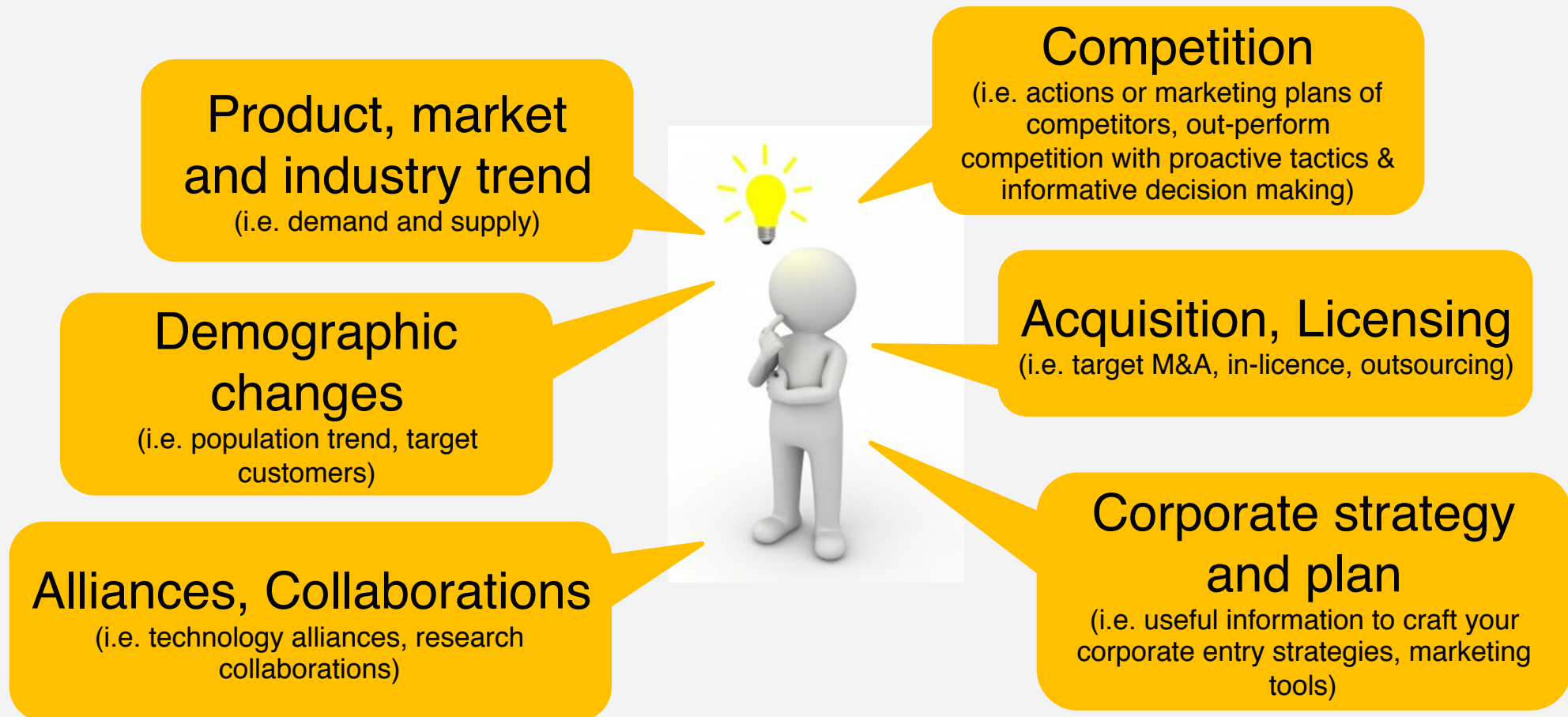
Role of Patent Agent (**Downstream Activities**)

Find out potential collaborators and competitors through IP competitive intelligence



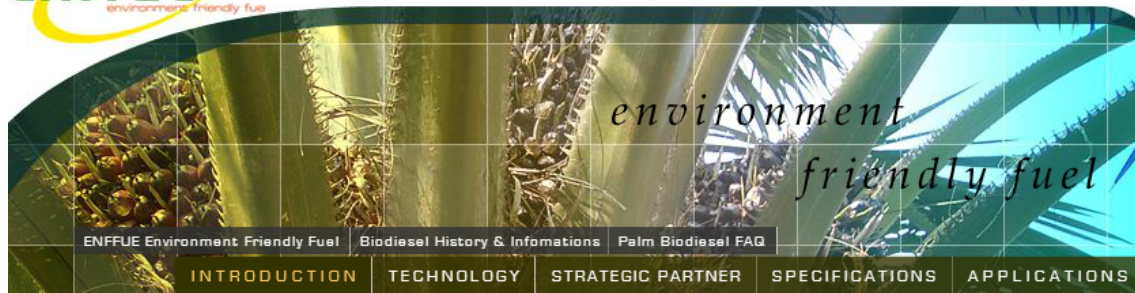
IP Competitive Intelligence

Good knowledge of IP competitive intelligence enables your organization to identify and anticipate:





Strategic Collaboration:



STRATEGIC PARTNER

Our strategic partner is the Malaysian Palm Oil Board (MPOB). MPOB is the world's leading research organization in the field of Oil Palm. For the past 10 years, we have been a partner of MPOB for the commercialization of many R & D projects since 1996. Over the years, we have partnered with MPOB to successfully commercialise the following technology:

- 1) Red Palm Oil
- 2) Production of alkyl esters
- 3) Extraction of nutraceuticals from Palm Oil
- 4) Large scale production of Biodiesel

Patented by



Today, the Carotino-MPOB relationship has become an excellent example of research, organization and industry collaboration. For our joint efforts, both Carotino and MPOB have been honoured with several awards, both at the national and international level. MPOB's pioneering work in the field of [BIOfuel from Palm Oil](#), started in the 80's.

Sourced: http://www.carotino.com/enffue/strategic_partner.html



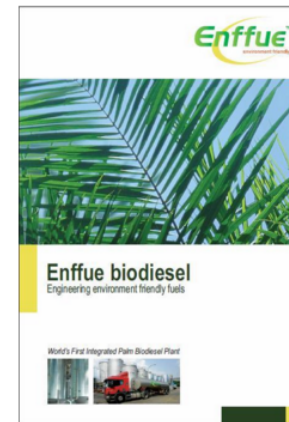
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Home > Our Products > Biodiesel

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- Oleochemicals
- Biodiesel

Enffue (Biodiesel)



Carotino in collaboration with the Malaysia Palm Oil Board (MPOB) commercialised the World's First Integrated Palm Biodiesel Plant in 2006. The crude palm oil is derived from RSPO certified plantations and mill, processed into refined palm oil and trans-esterified to palm methyl ester. These processes are all carried out in Carotino/JC Chang group of companies. Hence quality, sustainability and traceability are controlled throughout the supply chain.

The manufacturing facility is the first of its kind in the world with the capacity to produce biodiesel from palm oil that can be used in temperate countries to meet the seasonal cold filter plugging point (CFPP) requirements (summer grade, 0°C; spring and autumn grades, -10°C; and winter grade, -21°C). The plant produces two grades of palm biodiesel i.e. regular (+15°C CFPP) and winter grades (up to -21°C CFPP).

Both regular and winter grade palm biodiesel meets all the stringent specifications of EN14214 and ASTM D6751 including cold soak and filter blocking tendency. Our biodiesel is produced under strict quality control guided by ISO 9001:2008 quality management system. Our biodiesel is free from soaps, heavy metals and other impurities to ensure smooth running of your vehicles and machineries. We have RSPO Supply Chain certification and ISCC certification for the supply of sustainable palm oil biodiesel.

Click here to read more > www.enffue.com

Sourced: <http://www.carotino.com/biodiesel-49.aspx>



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Global innovators in palm oil research, development and manufacturing



Home > Our Products > Consumer > CAROTINO® Premium

Consumer

CAROTINO® Premium

CAROTINO® Premium is a nutritious cooking salad oil which is rich in phytonutrients such as natural Carotenes, Tocotrienols & Tocopherols (Vitamin E), Co-enzyme Q10 and is also cholesterol free.

Facts About CAROTINO PREMIUM

- The first and only molecular refined palm based cooking oil rich in Natural Carotenes, Tocotrienols & Tocopherols (Vitamin E) and Co-enzyme Q10
- The richest source of Natural Carotenoids
- Just 10 g meets FAO/WHO recommended daily requirement for Vitamin A.
- Just 40 g meets FAO/WHO recommended daily requirement of Vitamin E.
- Cholesterol free and does not contain harmful trans-fatty acids.

Foodservice & Industrial Products

Sourced: <http://www.carotino.com/carotino-premium-12.aspx>



Strategic Collaboration:

University of Nottingham & Gaharu Technologies Sdn Bhd



University of Nottingham Malaysia

UK
China
Malaysia

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Showcase 1 – Gaharu Technologies Sdn Bhd

Project - Identification of Gaharu species planted, producing powdered and nutritional study of Gaharu

Gaharu is a resin formed in Aquilaria and Gyrinops tree species due to the infection of a specific mold. These trees are largely limited to the Southeast Asian region and is highly valued for its aromatic and medicinal properties. Studies have shown that Aquilaria extracts (Gaharu) possess anti-bacterial properties and valuable phytochemicals, thus, the diverse variety of phytochemicals and their applications has various uses and commercial opportunities. Gaharu Technologies Sdn Bhd (GTSB) based at Gopeng, Perak undertakes intensive cultivation of gaharu-producing Aquilaria plants on a commercial scale and manufactures its own products derived from Gaharu, including herbal tea, cookies, fragrance, and other food products. Through a collaboration with the University of Nottingham Malaysia, GTSB intended to identify the species of the Aquilaria plants in its plantation that are believed to be derived from 12 different species, and to explore the possibility of refining its tea products into water-soluble powdered form and thereafter studying the nutritional values of these refined tea products. This work would generate inventive Gaharu commercial products and breakthrough into new market instead of the traditional perfume and essential oil industry. This proof-of-concept research had completed, and we are now taking on this research to commercialization with further funding by PlaTCOM Ventures Sdn Bhd under the Concept-Commercialisation Gap funding. This exemplary university-industry collaboration has clearly demonstrated the benefits of knowledge and technology transfer between the institutions.



GAHARU TECHNOLOGIES SDN BHD (GTSB) was founded in October 2008 to undertake intensive cultivation of gaharu-producing Aquilaria plants on a commercial scale. Gaharu, agarwood, eaglewood, aloeswood are just a few of the names for the resinous, fragrant and highly valuable heartwood produced by Aquilaria spp. Agarwood or Black-Gold has long played significant role in Arab culture and religion, where many consider it as part of their culture. Agarwood is not only the most expensive wood, it has many health benefits as well. Chinese has century old writings mentioning agarwood in herbal medicine remedy.

The involvement of gaharu plantation in Malaysia spear headed by ENVIROTECH MANAGEMENT SDN BHD (EMSB) can be traced back to the late 1980s. However this is the first attempt to cultivate this valuable crop on a commercial scale.

GTSB has become successful with full support from its subsidiary company EMSB. EMSB is well known for its expertise in land preparation for use in large-scale plantation establishment and management skills where else GTSB has a R&D lab to perform tests on Aquilaria plants for the purpose of enhancing the quality of Gaharu produced.

The proprietary inoculation technology developed by GTSB is an assurance to potential investors in this highly valuable gaharu industry. Whereby tested and proven inoculation method for the induction of gaharu formation in these gaharu-producing plants is vital for any form of commercial venture in the gaharu production business. GTSB's know-how in the field of gaharu oil extraction is indeed a value addition to the country's gaharu industry.



Gaharu Plantation



Gaharu Tea

Sourced: <https://www.nottingham.edu.my/Research/Business-Engagement/Success-Stories.aspx>

Sourced: <http://www.gaharu.com.my/about.php>



YUSARN AUDREY
IP Strategists • Lawyers • Patent Attorneys



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