

# **National Innovation Policy**

## **Support System for Garage Innovators**

Prepared by

**Robest Yong**

## **NIP: Support for Garage Innovators**

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## Reports on the Integrative Session / Dialogue with the Garage Innovators

Date: 8<sup>th</sup> April 2011

Venue: Security Commission, Mont Kiara

Chairman: Dr Danaraj

Consultant: Robest Yong

### Attendance List

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**UNIK Representatives**

1. Dr. Karamjit Singh
2. Dr Danaraj
3. Dr. Taufiq Thiagi
4. Mr. Sudip Thiagi
5. Mr. Tan Shu Hiong
6. Mr. Ragu
7. Mr. Bas Melssen

**Game Changing Proposals:**

1. Grants / Govt. support should be managed by appropriate personnel
2. Solutions / idea Bank
3. One stop inventor's garage / innovation development centre
4. Inventor management centre / frequent discussion with Govt. / industry / pool innovations / physical space for innovators / design centre
5. IP / licensing / bank valuation
6. Garage innovators marketing / global markets / network facilitators
7. Procurement
8. Incentives / business angels / create rapport with entrepreneur community
9. Community innovation chest / bank
10. Education / garage innovators role / involvement in higher education
11. Recognition by society

**Miscellaneous Notes**

- university involvement
- cut across all grants
- for all grants , garage innovators should be considered an important component
- innovators were not given feedback on rejected applications (an avenue for appealing ?)
- part of the grant system should allow the inventor centre to manage / evaluate and dish out the grants
- appropriate valuing and monitoring of grants / governance / transparency
- product evaluation ,
- invitation to the industry to propose solutions / problems for innovators to solve
- www.yet2.com
- centre for prototypes to be done. to formalize
- panel of service providers
- innospace by MOSTI . in Kuching and KK.....should be expanded to peninsular Malaysia
- incubation centre targeted towards garage innovators
- MOSTI should engage professional marketeers etc. to help commercialise ?
- peculiar characteristics of the garage inventors need to be taken into account
- hacker's space
- creation of a steering committee by MACRI, YIM and Andrew's group
- who can they go to if they have an idea ?

- transferring the burden of the inventors community
- trying to get innovators to solve community problems
- sharing and realisation of ideas
- successful innovators to nurture new innovators
- chest should be tax advantages
- levy providers should open up the money to everybody else to solve .
- access existing fund sources
- segment / recognise / identify areas that the Govt. would like the innovators to look into .....demand driven.
- garage industry .....should identify the areas ?
- subsidy of patent costs by Govt. ? possible moral hazard ?
- utility patents
- a lowering of costs for submission and granting of patents
- licensing of IP be promoted for IP generated by garage inventors
- TAF should promote the acquisition of local IP's?
- KHIM could promote garage innovators
- Education about inventors
- continuous improvement
- awareness of the usefulness of the product
- want Govt. institutions to support garage innovators and have special schemes for them
- build a relationship ....global markets ...to open doors
- centres should provide the correct approach
- tax write offs for business angels who sponsor / invest
- encourage tax incentives for venture capital trust
- dragon's den (UK TV show)
- rampant copying of ideas
- bottom-up like companies
- re-alignment of funds
- promote more soft loans for innovators / start ups
- Security - NDA agreement templates / standard format ....for inventors to print & bring along to meet investors.

## Suggestions from the Innovators

### Suggestion #1

Regarding the dialogue and the policy or program of UNIK to assist inventors, I think the most important is to improve on implementation of whatever good program we currently have. I have suggestions for government.

Following are top 3 in the list:

1. Have a fund to protect the IP granted by Malaysian Patent Office.
2. Audit the approved or disapproved innovation by the authorities who are being assigned to deliver the government plan to help innovators. To ensure proper implementation of the plan made.
3. Public university should take the responsibility to conduct study on the innovation or invention by Malaysian inventor. They should stand on behalf of their professional field to past their official stand on the invention, regardless of positive or negative. Because the negative will also benefit Malaysian by preventing further investment for innovation which is proven to be no future.

### Suggestion #2

This NIP has to be taken inline with NKEA which involve many stages from primary, secondary and higher education. May be this topic we reserve to education ministry, what i would like to suggest to the government in the context of commercialization of innovation product. This is the most interesting topic because everybody claim that they have difficulties in raising the fund to commercialize their product. Looking at the current situation, the government has limited budget to provide grant.

#### MTDC Business Start Up Fund

What has MTDC announce recently is very good programe. Business start up fund, in fact government should provide more fund like mtdc, it is start up fund (you have to pay back the money with reasonable time and rate) which mean that the person or company has to have a market research first or invent market driven product to ensure the commercialisation is successful. or the fund can be part grant and part loan.

another thought is that the government itself that decide which product or area to be focus and tender it/invite proposal from any body/company. This entity will propose best technic and budget.

again thank you and have a nice day, hope this event will benefit all of us!!

**Suggestion #3**

To do justice to all key points suggested and to the innovators who suggested these points, we need this last key point:

12. A separate, independent government entity for monitoring funding efficiency and progress.
- to take feedback from the industry and maintain their anonymity
  - to take feedback from the public and publish opinion polls
- (knowing problems and progress only can we remedy the situation quicker)

I urge all who suggested the key points mentioned to support this last key point so that hardworking taxpayer's money are spent more effectively and efficiently.

Let not all past generation's hard work, your parents and our forefathers who toiled for a better Malaysia today leave a legacy for us to simply create key points without proper ways of making things happen.

Let's create a fertile, effective innovation ground in Malaysia today so our next generation can all define "INNOVASI" without anyone telling them how it should be. Let younger generation's true innovation shine and reflects globally.

Your affirmative help in ensuring your contribution to the key points suggested can only come to fruition with key point 12.

**Suggestion #4**

The one thing I did not quite agreed that morning was Dato Singh's commend about inventor is bound to fail unless one has to be also an entrepreneur. This is ideal but this is not possible even with the best training unless one already have the gift. Alternatively, what one has to be first, an inventor or and entrepreneur? Similarly, we cannot expect our successful entrepreneurs to be inventors. Both are separate fields, highly skilled in their areas and not as simple as learning each other trade overnight.

In my personal opinion, an idea is only an idea, it is only a discovery but does not mean that they are ready for the market. We need technical experts to design and test the ideas and to make them possible for them, not entrepreneurs. The entrepreneurs will come in when they see the potential for profits.

A typical example was the cars Airbags. Airbag was invented for war plane during the 2nd World War but was not until 1985 it start to incorporate into our cars. Why 30 years later, the reason was simple they could not find the right type of gas suitable to inflate quickly enough then. My point here is that we need technical experts more.

**Suggestion #5**

**May I suggest for us to consider the following under the category of "education" :**

**1. Provide grants / loans / scholarships for not only excellent students from schools for academic performance but also for those with technical / the arts / other types of skills and innovation. For eg there may be children who are late bloomers, they may not excel academically during their SPM / STP exams but as they move into the colleges / other skills based institutions ,they may show the talent to innovate and invent eg in the automotive industry. There should be scholarships / loans to help these people improve for eg to study automotive hybrid technology in other countries. They may very well end up being an innovative mechanic / lecturers / business person etc in the future and shouldn't be written off so early.**

**We would also want to include the "not so academically inclined but more skills based" students to achieve excellence in their chosen field. Remember the theory of "multiple intelligences" by Gartner ? What I am saying is that our education system needs a serious revamping, theories have been put forth and debated for umpteenth years, yet we still see a very exam based and rote learning culture in Malaysia. About time, we see a serious shake up of the education system.**

**2. Introduce specific subjects for the study of innovation and creativity - it cannot just be inculcated indirectly into the existing subjects.**

**3. And as I have emphasized before, maybe the Universities / schools should consider partnering with credible innovators and inventors to allow them to teach some lessons / subjects on creativity and innovation in the IHLs / schools without too much criteria check on the academic backgrounds of these people. I am sure there are intelligent innovators and inventors who may not have a doctorate, a masters or even a degree / diploma to their names, however they are creative and would be able to contribute to the students' cognitive enhancement.**

**Suggestion #6**

**I fully agreed with you that there was not enough commitment to promote locally invent products. For your particular case, the nation should be proud of you and should have nailed it right away and popularize it at least within the country first. To start with, for example, the science of the invention should have been included into the secondary schools books or syllabus to educate young children how things are made and its usefulness etc. The country has to show at least that they are proud of it. Should not see who make it, it is for the benefit of the country as a whole as well as to prepare the younger generations for the challenges ahead of them.**

**Why we have to restart the system, we already have one, we just wanted a fair body to ensure the process do work and promote it when the invention is worthy. If the govern cannot afford all it is easier for them to pull in the investors than the inventors themselves and provide tax incentive and**



all like what Steven mentioned, which the economist should know what to do in this area.

I sympathize with the inventors here, just because our market is yet to mature and therefore the government has to play a bigger role for the sake of building a more developed nation.

#### Suggestion #7

One more comment from me ( under recognition by society ) - as i had mentioned on Friday :

1 . For society to recognize inventors / innovators and for our nation to acculturate innovation and creativity there must first of all be awareness of what is innovation and creativity, its elements, what are its benefits and why all have to inculcate the innovation culture. In this regards, government mechanisms should amplify awareness of the importance of innovation by educating the public.

MOSTI started this last year with the Malaysia Inovatif campaign, unfortunately, the programme which spanned one year was only that..one year. For something like this to be drummed into the layperson, it needs a stretch of time ( not just one year of campaigning in certain areas of Malaysia sporadically.. There should be focus and consistency, not make it a one off thingy and the branding should be consistent so that there is top of mind recall.

There should be ample allocation of funds for this promotional purpose and not confined to just competitions etc, while we cut back on PR / marcomms etc. The education of innovation and the showcasing - see, touch and feel and the publicity for these are important factors just as its important to have a high profile " Malaysian Innovators of the Year " event. It may seem wasteful but we need to invest to ensure there is effective branding of these campaigns. Take MAHA for eg, the event is held every year and just look at the reception of the public, of course, having said that, they have consumer goods to sell ( cash and carry ), however from my visits to this event, it is also imbued with educational elements for the public.

Malaysia is famous for embarking on one off events / programmes that may not have a lasting impact on the Rakyat, about time we really use event platforms to create and stir the right consciousness and to educate our Rakyat fruitfully. It may take sometime, however, if the relevant parties are determined, the efforts will pay off handsomely in future.

The Malaysian public will understand more about innovation and creativity, its importance and our objectives of being an innovation led nation can be finally realized. There will naturally be recognition by society if we really show the benefits of innovation ,who knows one day there maybe a Nobel Laureate potential nominee ( even a winner ) from Malaysia. Lets look at it from the very bottom of the pyramid, the layperson and the public.

**Suggestion #8**

**At the end of the day, it all depends on the phrase: "It must be commercially viable!"**

**For a 'via' invention or innovation to become commercially viable (and not wasted away), perhaps we need the assistance of a body run by dedicated people of diverse background, well funded somehow but trusted by all! Do we have such a body? Can we groom and nurture one in the future, soon?**

**After 15 years of a US-patent grant (Malaysian patent as well), my go it alone method, no doubt has managed to sell over 1,000,000 pieces of CAL-LAB Lightning Isolators (CLLI) but I am still struggling to create AWARENESS!**

**I bet half of you have not heard of CLLI, let alone used one!**

**If there were such a trusted body as I mentioned above, I could have sold 10,000,000 by now!**

**My point is, the real economies of scale, maximum impact and full exploitation will only bear fruit when all resources available are employed, and the best body has to be one that has the whole country's support - every machinery and human resource is enrolled to create awareness and promote usefulness/advantages!**

**Note: "Commercially NOT-viable inventions/innovations should try again at different times or create new platforms!"**

## PART A : OVERVIEW

### 1.0 Acknowledgement

On behalf of my fellow independent inventors, I would like to express my deepest appreciation to UNIK for allowing our views and ideas to be heard. We are very grateful for the opportunity to put forward the challenges we face and make some recommendations to tap our ideas and innovations. I strongly believe that we too can contribute towards wealth creation and play an effective role in the innovation led economy. I am thankful to Dr. Danaraj for hearing my views on the relevance of independent innovators in the context of the National innovation Policy (NIP) and accepting the idea of 'Garage Innovators'.

I would like to thank my fellow inventors and friends for attending the NIP Dialogue session on Garage Innovators on 8 April 2011. Their experiences and thoughts are very valuable in preparing this document. I am very encouraged by their enthusiasm and support towards nurturing more ideas and innovations that will be transformed into intellectual assets of the nation.

I also wish to acknowledge Dato' Dr. Kamaljit Singh who participated the Dialogue session with the independent innovators and shared some insightful views on the predicaments of innovators. His presence and interaction has reinforced our commitment to UNIK confidence in the initiatives to be undertaken through the NIP.

We are very optimistic that UNIK in its efforts to create a more conducive ecosystem for innovations to flourish in our nation, will take into account the views and recommendations of Garage Innovators. We pledge our utmost cooperation to UNIK and will readily mobilize ourselves to undertake any task that will help UNIK achieve its goals.

Robest Yong  
Consultant, Garage Innovators Session for NIP

## **2.0 Garage Innovators**

### **2.1 Who are Garage Innovators**

These are creative individuals, driven by passion and determination to develop new and innovative ideas. These are innovators who mostly work independently with their own inspiration and resources.

Garage Innovators may be defined as one who creates innovations on his own accord using his own time, expertise, funds, and other resource. He may be self-employed or if he is an employee, he would have created the innovation independently.

Typically most Garage Innovators are self employed or freelancers. There is also a vast pool of untapped Garage Innovators within the Gen Y stratum. These are innovative youths who participate actively in innovation programs, won innovation awards and also those who have sound entrepreneurial flair.

### **2.2 Potential of Garage Innovators**

Individual Innovators like Dyson of UK who invented the 'bagless vacuum machine' and our very own Phua Keng Seng of Malaysia who invented the single chip flash-memory for USB Pendrive, have generated billions of ringgit from their inventions. Their business today which contributes significantly to the economy is evident of the potential of Garage Innovators.

Few Malaysian Garage Innovators have persevered and succeeded in small ways. But in reality most of them have not made it and are still struggling to make their ideas a reality. They continue to persevere because Garage Innovators are usually blessed with the ability to come with a multitude of innovations. They seldom stop with a single innovation. Case in point is Thomas Edison who went on to invent over a thousand innovations.

Therefore in our transformation of the current Efficiency-Driven to an 'Innovation-Driven' economy, the potential of creative, innovative and entrepreneurial individuals should be fully tapped.

## 2.3 Problems encountered by Garage Innovators

By nature Innovators are most likely to be 'right brainers'. This would mean that they are highly imaginative, intuitive and creative. They often see the big picture quickly. They are also likely to be those who do not like to follow rules which don't make sense to them. Given the fact that most Garage Innovators are soloists and may not be well exposed or have excess to the right type of resources. The typical problems faced by them are as follows:

- A. Lack of understanding on how best to protect their ideas through the IP system.
- B. Lack of understanding on importance of market research, feasibility study, etc.
- C. No exposure to the options for commercialization.
- D. Weakness in applying for funding.
- E. Poor communication and presentation skills.
- F. Lack of knowledge or access to the expertise in preparing business plan, etc.
- G. Lack of financial resources to engage the relevant expertise.
- H. No linkages to the right parties, i.e. manufactures, investors, venture capitalists.

The current innovation ecosystem may also be contributing to the problems faced by Garage Innovators. Among the problems encountered due to lack of a conducive innovation ecosystem are:

- A. No proper support for development of innovations.
- B. Lack of support to access financial assistance.
- C. Red tapes and over load of paper work for requesting support.
- D. Lack of recognition and support from government agencies.

## 2.4 Garage Innovators' Accomplishments

Statistically we may not have the figures on the number of Garage Innovators in the country. But within our circle of friends and associations such as Malaysian Association of Creativity and Innovations (MACRI) we have over a thousand individuals in our database. These are individuals who have great passion in innovations and some have innovated products that have gone up to the patenting and commercialization stage.

In terms of commercial output and contribution to the economy, dozens of innovations of Garage Innovators have been successfully placed in the market. Recently the Malaysian Productivity Corporation (MPC) published a book featuring 13 cases of accomplished Malaysian innovators. Collectively these innovators have generated millions of ringgit. There are many more that are not featured in books but have made it to the market.



Azli Paat

The Communications Whiz



Robest Yong

A SERIAL INNOPENREUR



Paul Chang

A Passion for Safety







**Jimmy Yeoh**  
The Enterprising Innovator



**DR. GURCHURAN SINGH**  
The Tara KLamp Success Story



**Teoh Siang Teik**

Harnessing The Power of the Sun through Technology



**Zaiwin Kassim**  
Promising Innovator of Green Solution



**Ting Sie Bing**  
The Mastermind of Local Board Games



## Jimmy Lai

Oral SPA – The New Oral Health & Beauty



## Hj. Nayan Salleh

The Grease - Trap Genius



## Dr. S. Radhakrishnan

Revered Accomplishment in Dentistry



## Dato' Hew Ah Kow

The Humble Path To A Great Destiny



## Hj. Inas Saidin

The Conscious Environmentalist





### **3.0 Supports from Associations and Government Agencies**

#### **3.1 Associations supporting Garage Innovators**

The Malaysian Association of Creativity & Innovations (MACRI) and MINDS are two organizations that offer some form of support to Garage Innovators. However these are non-profit NGOs with very limited resources. At the most they could offer some advisory service on IP, Commercialization, available grants, etc. Most often Garage Innovators are directed to seek financial assistance from MOSTI, Cradle, MTDC, etc.

Primarily the NIP should look into key issues affecting the progress of Garage Innovators and put in place the mechanisms to increase the flow innovations as well as the success rate of Garage Innovators. Organizations like MACRI which represents many innovators should play a role in facilitating the initiatives outline in the NIP.

#### **3.2 Government Agencies Assistance to Innovators**

The Government is convinced that for Malaysia to become a high-income economy, it has to be innovation led. It is established that wealth creation through innovation and technology is the key towards global competitiveness. The Government had created a few schemes to offer grants for the development and commercialization of innovative technologies and business.

Among such grants are those managed by agencies such as MOSTI, MTDC, Cradle, MDeC and a few others. As recently as 31<sup>st</sup> March 2011, Prime Minister Datuk Seri Najib Tun Razak launched a RM100 million Business Start-Up Fund to promote technopreneurship development under the MTDC. This fund offers flexible re-payment period of eight years with no requirement of collateral. It is aimed at spurring the growth of the technopreneur sector and to help them venture into new business areas.

While most of the grants are not catered for Garage Innovators, the few that are available to them may seem too intimidating to them. They are often overwhelmed by the procedures and prerequisites that may seem unnecessary to them.

Some of the shortcomings of current grants are as follows:

- a.) Too much paperwork. Innovators with low academic background but with highly commercially potential ideas may not know how to handle this process.
- b.) Too many irrelevant information required
- c.) Process take too long
- d.) Applicants not notified of the reasons for rejection.
- e.) Technical committees do not understand the technicality of the projects.
- f.) Payments to claims were slow to come.

- g.) Other from funds, the innovators still need other assistants to achieve success.
- h.) While some grants were being abuse by 'grant-nopreneurs' who write beautiful proposals with mediocre ideas, many genuine innovators with great ideas were rejected because they do not know how to produce sexy papers.
- i.) 'Grant-nopreneurs' are professional grant applicants whose projects usually close up as soon as they finished their commitment in their proposed milestone.
- j.) The KPI of the agencies were mostly based on the success of the recipients completing these milestones and not on the commercial success of the ventures.
- k.) The criteria for grants applications from the Government agencies are often thematically based. Innovative ideas are free-flow and borderless.

## **4.0 Mindset of Garage Innovators**

### **4.1 Perception on Intellectual Property**

Statistics from MyIPO indicates that IP registration by Malaysians ranks very low compared to Taiwan, Korea, Japan and even Singapore.

Many Malaysian Innovators do not file for patent simply because they do not see the benefit owing the IP and also because the industries in general do not appreciate the IP Rights of Innovators. Therefore when they are unaware of patent rights, licensing, they are likely to undermine the importance and value in owning IPs.

**APPLICATION AND GRANTED PATENTS AND UTILITY INNOVATIONS  
FROM 1986 - 2011**

YEAR	APPLICATION			GRANTED		
	Malaysia	Foreign	Total	Malaysia	Foreign	Total
1986	29	233	262	-	-	-
1987	71	3,195	3,266	-	-	-
1988	73	1,547	1,620	0	6	6
1989	84	1,803	1,887	11	121	132
1990	92	2,213	2,305	20	498	518
1991	106	2,321	2,427	29	1,021	1,050
1992	151	2,260	2,411	10	1,124	1,134
1993	198	2,684	2,882	14	1,270	1,284
1994	223	3,364	3,587	21	1,608	1,629
1995	185	3,992	4,177	29	1,724	1,753
1996	221	5,354	5,575	79	1,722	1,801
1997	179	6,278	6,457	52	741	793
1998	193	5,770	5,963	21	545	566
1999	218	5,624	5,842	39	683	722
2000	206	6,021	6,227	24	381	405
2001	271	5,663	5,934	18	1,452	1,470
2002	322	4,615	4,937	32	1,460	1,492
2003	376	4,686	5,062	31	1,547	1,578
2004	522	4,920	5,442	24	2,323	2,347
2005	522	5,764	6,286	37	2,471	2,508
2006	531	4,269	4,800	187	6,562	6,749
2007	670	1,702	2,372	338	6,645	6,983
2008	864	4,539	5,403	198	2,044	2,242
2009	1,234	4,503	5,737	270	3,198	3,468
2010	1,275	5,189	6,464	204	1,973	2,177
MAC 2011	288	1,186	1,474	107	309	416
<b>Total</b>	<b>9,104</b>	<b>99,695</b>	<b>108,799</b>	<b>1,795</b>	<b>41,428</b>	<b>43,223</b>

The general perception of IP among innovators may be as follows:

- They have little confidence in the IP System and its enforcement.
- They tend to believe that IP rights can be easily copied or infringed.
- Therefore they do not believe that corporate organizations will respect their IP Rights and will pay for the rights to exploit the innovations. .
- They feel that the cost of filing a patent in Malaysia is relatively high. The cost is even higher for filing in other countries and this cost will be beyond the means of most Garage Innovators.
- The time frame for patent to be granted in Malaysia is between 4 to 5 years. This is too long and for patents in the ICT industry it would have been obsolete by the time it is granted.

IP awareness and appreciation among innovators and investors is very important if we want the innovation culture to flourish. There is a pressing need to educate the private sector, the corporate leaders and industrialists on the values and benefits that IP

registrations can bring to the individual, corporations, industries, and the country as a whole.

#### **4.2 Entrepreneurial Qualities**

It must be noted that Garage Innovators may not necessarily be good entrepreneurs. Many had attempted to venture into manufacturing and marketing their own innovations but only few have succeeded. Garage Innovators must be guided and given the options to commercialize their innovations. Contract manufacturing, licensing, franchising, etc are some of the options that must be presented to Garage Innovators who are not too entrepreneurial. This service must be done in a very professional and structured manner.

## **PART B : GAME CHANGING INITIATIVES**

### **Issue No I: Sowing Seeds of Innovation through Education**

Creativity and innovation are crucial tools for growth and sustainable development. Education and training are seen to contribute to the promotion of these capacities. Hence, further action is needed in both primary and secondary level to incorporate creativity and innovation into an early stage of learning.

It should be noted that the experiences of accomplished innovators would be useful in inspiring and contributing to the students' cognitive enhancement.

#### **Recommendations**

- a) Ministry of Education should promote Innovation Clubs in all schools**
- b) Ministry of Education should have programs to train the teachers on how to teach creativity and innovations more effectively in schools.**
- c) Encourage more workshops and seminars on creativity and innovations for the school students and youth.**
- d) Libraries and Resource centers should stock more books about creativity and innovations.**
- e) Provide grants / loans / scholarships for not only excellent students from schools for academic performance but also for those with technical / the arts / other types of skills and innovation.**
- f) There should be scholarships / loans to help youth and students improve innovation skills.**
- g) Include the "not so academically inclined but more skills based" students to achieve excellence in their chosen field.**
- h) Universities / schools should consider partnering with credible innovators and Innovators to allow them to teach some lessons / subjects on creativity and innovation in the IHLs.**

## **Issue No II: Propagating the Innovation Gene pool**

It is estimated that less than 3% of patents ever get into the market. Therefore the chances of an innovation missing the commercial target are 97%. In order to have more innovations in the market the best chance is to have a bigger pool of innovations. The analogy of “wine” produced with thousands of grapes, processed into a bottle of wine. A good bottle of wine would be worth many times more than the thousands of raw grapes.

Our game plan should be to create a dynamic innovation ecosystem that will give rise to hundreds and thousands of innovation. With the right incentives, platforms and players this initiative can be executed in a structured and sustained manner. This shall be the challenge to Garage Innovators as well as the public at large. The task of increasing the pool of Garage innovations should be offered to organizations advocating innovations such as MACRI.

### **Recommendations**

- a) Assign a NGO like MACRI to represent Garage Innovators and to collate their innovations that are viable and ready to be taken to the next level of development and commercialization.**
- b) Innovators seeking for Government assistance should be registered with a recognized innovators association. The association shall help to verify the authenticity of the awards and achievements of innovators.**
- c) Support and bolster the activities of innovation based associations in order to accelerate the culture of innovation. The associations shall be empowered to organize more publicity and promotions of innovations TV, radio and the print media. Good incentives and prizes shall be offered to attract quality entries prizes.**
- d) Set up special seed fund to assist potential Garage Innovators to transform their ideas into commercial viable products**

### **Issue No III: Incentives, Recognitions and Rewards**

For our nation to inculcate innovation and creativity there must first of all be awareness of the value of creativity and innovation, its elements and what its benefits to the economy are. In this regards, government mechanisms should amplify the importance of innovation by offering more incentives, recognition and rewards. Incentives should be created in for IP matters, publicity, promotion and marketing, global networks etc.

#### **A. Intellectual Property Issues:**

IP Index is a barometer for economic progress. Patents statistics – in 2009 Malaysia ranked 34 on Patents granted to residents (*WCY IMD2008-2009*). Patent applications among garage Innovators are very low compared to applications by R & D Institutions and Universities. Besides lack of awareness, high cost for filing for IP is cited as the reasons for the low rate of IP applications. While encouraging more innovations to be patented, financial incentives to file for IP rights must be put in place.

#### **Recommendations**

- a) To nurture and enhance the competitiveness of business through ownership of IP assets, incentives in the form of Corporate Tax rebates is proposed.
- b) Upon an IP application being filed for a Malaysian Patent and acknowledged by MyIPO, the applicant shall be entitled to make the claims for the total cost of application under the incentive for Tax rebate for that fiscal year.
- c) Further rebates, i.e. the same amount as the first claim should be also considered upon the patent being granted by MyIPO. The added incentive will spur more innovations to be developed and filed for IP protection.
- d) Companies that acquire or licenses local innovations are offered some form of tax relief. This tax incentive would appeal to investors and enable Malaysian innovations to find easier access to the local market.
- e) The patent laws should be strengthen and reinforced to protect the rights of IP owners. Proprietors or directors of the infringing company that are deemed to be willful in causing any infringement should be held equally liable and be made to pay punitive damages. Patent infringement should be made a criminal offence like copyright infringers.

- f) Industries in particular and the public at large should constantly remind of the rewards and benefits that IPs can bring them.**

## **B. Publicity**

Marketing is the hardest part of taking a new innovation to the consumer and convincing someone to actually pay for it. Without publicity, no new product can ever penetrate the market and this is a continuous endeavor which most inventors need help.

### **Recommendations**

- a) The media should be encouraged to highlight successful innovators and to recognize them to inspire more budding innovators**
- b) They should also play a more active role in promoting interest in inventions and innovations by featuring more about issues pertaining to creativity, innovation, intellectual property, etc.**
- c) The society must be 'propaganda' to see successful Innovators as National her just like sportsmen and other high achievers. The news media must be encouraged to play their part in making this to happen.**
- d) News media should showcase successful business matching where innovators have benefited and received monetary rewards from their licensing or selling their patent rights to the corporate sector.**
- e) Encourage inventors to exhibit and showcase their inventions in exhibition and competitions.**
- f) Encourage more innovation exhibitions and competitions for schools, universities and corporations.**



### **C. Promotion & Marketing at local retail outlets**

Shopping malls such as Tesco, Carrefour and even local ones like Giants, Econsave, Mydin and others demand high 'Account Set-up' fees to have goods display and sold at their premises. Suppliers are also required to pay for advertisement and promotion fees. These practices hinders most innovators who are not financially strong to sell their products through these channels.

#### **Recommendations**

- a) The Government should provide more incentives to company selling local products, e.g tax exemption,**
- b) Making it mandatory for all shopping malls and complex to allocate a certain area size for local innovators to market their local innovations without 'start-up fees'.**
- c) All exhibition fairs must contain a certain percentage of local innovations or to have a 'Local Innovation Corner' to display locally invented products.**
- d) A 'Champion of Innovation' mark be introduced to award to companies who embark or support local innovators and innovations.**

#### **D. Global Market and Networking**

The 1Malaysia Mall project had been proposed under the Economic Transformation Programme (ETP) as part of the Government's initiative to push Malaysian mall operators and retailers to expand overseas and export Malaysian products and services. Garage innovations should be assisted under this initiative.

#### **Recommendations**

- a) Government agencies such as Matrade should focus on Malaysian innovated product (not just Malaysia made products which are mainly produced by MNCs) to penetrate countries such as Japan, South Korea, the United States, Australia and Britain.**
- b) Matrade which has many branches around the world should have a retail unit set up in each of their offices to showcase Malaysian Innovations.**
- c) Matrade should invite and encourage local innovators to join their overseas trade events.**
- d) An internationally recognized online portal like [www.alibaba.com](http://www.alibaba.com) set up as a e-commerce platform for local innovators to market their innovation globally.**
- e) Government trade agencies in various Asian countries should assist Malaysian innovators who lack the experience in overseas ventures to find local partners (via joint ventures, licensing or franchises)**
- f) Establish a dedicated company with the support of the Government to development and market Garage Innovations. The company shall undertake to provide quality assurance, packaging, branding, marketing, etc**

## **Issue No IV: One Stop Center - Innovators@Garage**

### **A. The Objectives**

The country has identified that a knowledge economy that is based on innovation and creation is necessary to propel the nation to the next level of development - that is an Innovation-driven economy where the population can enjoy high incomes.

Much effort is currently being undertaken by the government to promote, educate and fund R&D, innovation, invention and commercialization.

But there is a lack of programs to:

- a. Cultivate and develop innovative and creative mindsets of the population, especially from the group who are neither in the education nor under the employment of corporations.
- b. Optimize funding and efforts by methodical screening to produce inventions with higher commercialization potential,
- c. Provide easily available, accessible and most importantly affordable assistance and supports for prerequisite elements of innovation and invention like modeling & prototyping, novelty & patent search, market search, technical & manufacturability search, and business planning.

The major programs for promoting innovation and creativity in the country seek to educate the masses that the country needs to pursue a knowledge-economy via innovation and creativity in order to reach the next level of development, and to encourage R&D efforts in institutions of higher learning and research organizations and commercialization through funding programs.

There is a lacking of support and incentives for individual or garage-Innovators that lack the resources to transform creative ideas into marketable products. Individual innovators and Innovators should not be overlooked or neglected as they have proven to have generated businesses that can contribute significantly to a country's economy.

### **B. The Roles**

This proposal serves to support the programs of the government and will help to:

- i.) optimize spending and efforts in transforming innovations and inventions from garage Innovators into commercially viable product,

ii.) provide the missing link of easy and affordable prototyping in the route of idea to commercialization, and

iii.) of highest impact to cultivate innovative and creative mindsets of Malaysian from a very young age.

To promote and encourage creativity and innovations among the common people, One-Stop centers, be so called 'Innovators@Garages' where the common people can pursue their inventive ideas. These high-tech workshops, equipped with relevant machineries and qualified technicians and managers will be able to provide 'hand holding' programs for Innovators with commercial viable ideas.



#### Deliverables:

1. To provide free consultation and advice on invention commercialization for garage Innovators.
2. To provide easy accessibility and affordable state-of-the-art avenues for product prototyping and modeling.
3. To optimize funding and produce inventions with higher commercialization potential.
4. To cultivate innovative and creative mindsets of Malaysians from young (6 years and above).
5. To expose and link young Malaysian to the inventive and creative communities and technologies globally.
6. To help transform Malaysia from an "Efficiency Driven" to an 'Innovation Driven' economy and move up the Global Competitive Indexes (World Economic Forum).

## The Facilities

The Innovators@Garage's One-Stop Center offers affordable state-of-the-art avenues for product prototyping and modeling for Students, Designers and Innovators.



**Laser Cutter**



**Table Top  
Milling Machine**



**Milling Machine**



**Vinyl Cutter**



**Embroidery  
Machine**



**3D Printer**

Proposed range of Machineries proposed for Innovators@Garages

With an array of computer- aided digitally controlled fabrication machines supported by the Innovators-Garage manager, users will be able to make up to almost 85 percent of object based invention prototypes, ranging from engine components to scale model of architecture buildings. Users can self-learn with the support of the Innovators-Garage manager to make their own prototypes. Children from age 6 years onwards will be able to use these machines for creative exploits like making puzzles and building-blocks.

## C. The Values

With an array of computer- aided digitally controlled fabrication machines supported by the Innovators-Garage manager, users will be able to make up to almost 85 percent of object based invention prototypes, ranging from engine components to scale model of architecture buildings. Users can self-learn with the support of the Innovators-Garage manager to make their own prototypes. Children from age 6 years onwards will be able to use these machines for creative exploits like making puzzles and building-blocks.



Framework for ideas to marketable products

Individuals who have ideas which they think can be developed into a marketable product, can approach Innovators-Garage for consultation and prototyping. Innovators-Garage provides innovators and designers a comprehensive support framework to guide their initial ideas to be developed into marketable products. These individuals will be supported by Innovators-Garage's Expertise Sources Network like the 'Intellectual Property Training Center (IPTC)', 'Business Schools of Partner Universities' and 'Innovators with Product Commercialization Successes'.

## E. "Hand-Holding" Programs

### a) Garage-Advisor

A Garage-Advisor is set-up at the internet to provide country-wide twenty-four-seven online assistance to guide and advice up-and-coming innovators and Innovators.

Questionnaires will be posed to users to appraise their readiness and understanding of the basic needs required to be a successful Innovator.

The Garage-Advisor will help to guide and educate the user to understand and learn about all the business aspects pertaining to and required for putting a product to the market.

It will also be used as a threshold to filter out inappropriate ideas.

## Commercialization Consultation & Advisory Network

1. Patent Check for novelty by IP experts.

Expertise Sources: (a) Malaysian Intellectual Property Organization (MyIPO), (b) Intellectual Property Training Center (IPTC). (c) a panel of IP lawyers

2. Market Check for needs, size, competitors etc by business professionals.

Expertise Sources: (a) Business School of Partner University. (b) a panel of entrepreneurs

3. Technical Check for manufacturability, material use and cost by prototyping experts.

Expertise Source: (a) Innovators-Garage (b) a panel of industrial players (c) a panel of service providers

4. Sustainability Check for material supply reliability, technology cycle and ease-of-copying by business professionals.

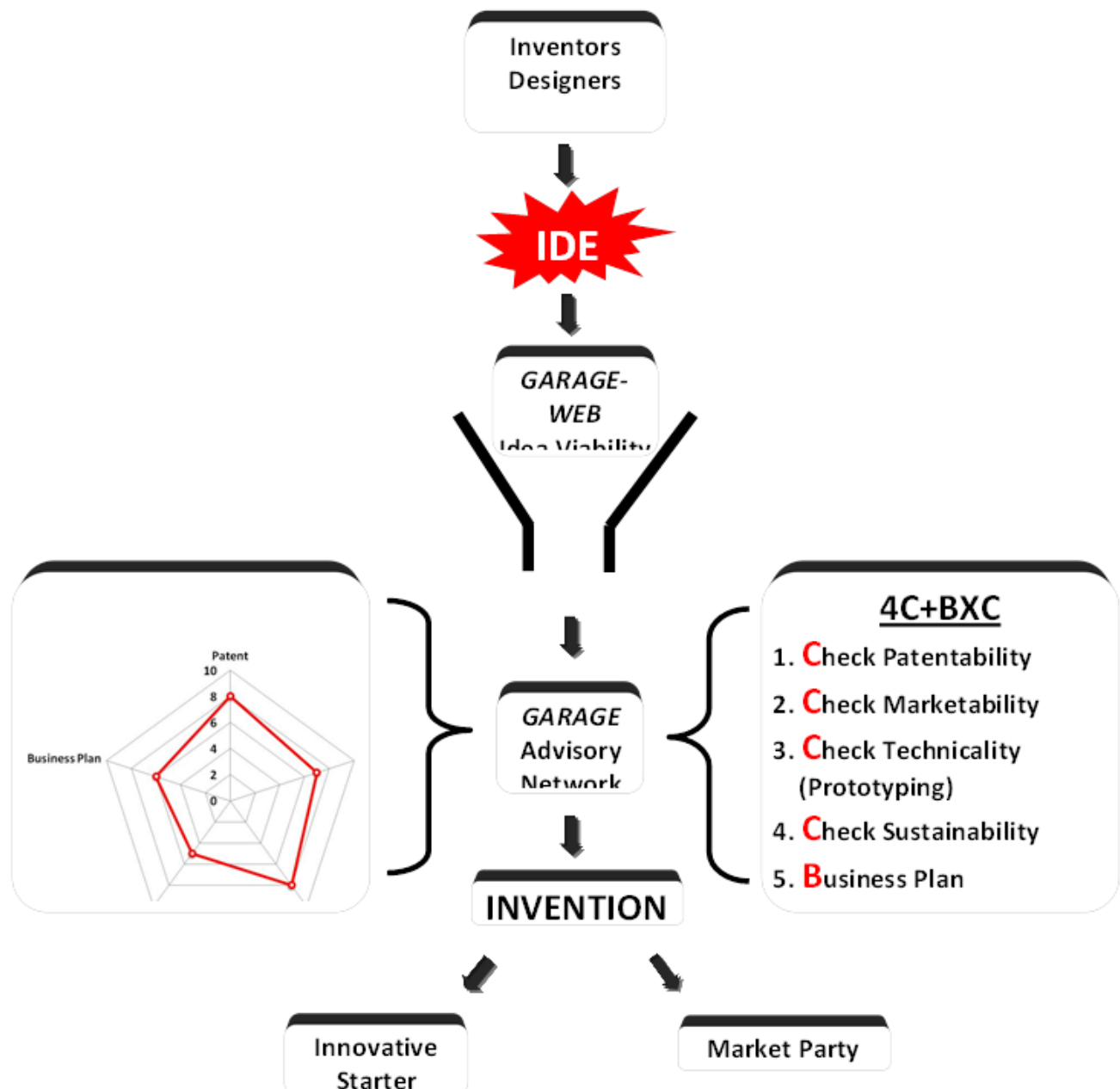
Expertise Source: (a) Business School of Partner University. (b) a panel of industrial experts

5. Business Plan for cost, profitability and return-of-investment (ROI) by business professional.

Expertise Source: (a) Business School of Partner University. (b) a panel of entrepreneurs

6. Commercialization Check for viability and commercialization route by face-to-face consultation with invention-commercialization experts at Chamber of Commerce at fortnightly intervals.

Expertise Sources: (a) a panel of Innovators who have successfully commercialized their products.





## Conclusion

Garage Innovators are constantly developing new ideas and innovations. The success rate of commercialization is however relatively low. This can be attributed to the lack of proper guidance and support system. Therefore there must be a comprehensive support system for garage innovators to excel.

We hope that the recommendations proposed to the NIP will help facilitate the platform for Garage Innovators to flourish. Ideas that would otherwise be left idle should have a better chance of being transformed into intellectual assets for the benefit for all Garage Innovators and the nation.

Through the initiatives of UNIK we hope to assist in creating larger innovation gene pool and adding more value to the innovations of Garage Innovators. The actions taken by the AIM with the support of relevant organizations now will determine the progress and future of garage innovations. Organizations in the forefront of innovations such as MACRI should be involved in tapping the potential of garage innovators.

In summary we wish to emphasize on 3 key initiatives by UNIK or via the NIP Action Plan that would be considered as the preliminary plan of action for the innovation ecosystem. The 3 initiatives implementable with immediate effect are:

1. Create a simple mechanism to identify and select Garage Inventions that has the potential to be taken to the next level of development and commercialization.
2. Make available the resources, expertise and funding for Garage Innovators to get IP protection, assistance for further development and commercialization.
3. Establish a one stop center, the 'Innovators' Garage' which will serve as base for the Garage Innovators to seek profession assistance, further develop their ideas, showcase their innovations and inspire budding innovators.

In return Garage Innovators through national associations like MACRI would be happy to pledge its cooperation in fulfilling the following 3 commitments:

1. Offer to UNIK a databank for Garage Inventions that are viable and ready to be taken to the next level of development or commercialization from our existing pool of Garage Innovators. In addition we would also be committed to sustain the inflow of new innovations to UNIK by introducing new platforms and incentives for budding innovators to pitch in innovative ideas into the Innovation Gene Pool.
2. Evaluate and recommend to UNIK 'low hanging fruits', i.e. innovations that are more readily developed and commercialized.
3. Pool our resources towards the establishment and operation of the 'Innovators Garage' that will serve as a the base for Garage Innovators to develop their innovations and also inspire more budding innovators.

our Goal...our Mission...our Vision



**Malaysia**

an

**INNO-NATION**

By

**2020**