



A MODEL SMART **COMMUNITY**
THE BUILDING BLOCK TOWARDS
A SMART DIGITAL NATION



KEMAMAN TERENGGANU

N 21' 39.4194" E 15' 58.9854"

Kemaman is a district in Terengganu, on the east coast of Malaysia facing the South China Sea. Kemaman district is bordered by Dungun district to the north and the state of Pahang to the south and west. It is the southern gateway to the state of Terengganu.

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TRANSFORMING LIVES WITH ICT

Kemaman is a district blessed with pristine natural beauty, delicious local fare and delightful people. This reputation has been not only a source of great pride to me, but it is also critical to our present and future wellbeing.

It is not without its challenges though. The year-end monsoon usually brings floods that damage homes and disrupt lives. While dreadful, it opens the opportunity for the people of Kemaman to work together and shine in the face of adversity. A collective effort on an unprecedented scale was required, and every person contributed to that. Their efforts were recognised as the Gold Standard by Prime Minister Dato' Sri Najib Tun Razak when he visited us during the flood season of 2014.

Disaster management is one of the flagship applications in the Kemaman Smart Community initiative. Since the inception of this initiative, we have gone through great lengths to ensure the underserved and the unserved areas of Kemaman have access to ICT. The challenge is to provide the rural population of Kemaman with ICT services and applications at an affordable rate in order to boost penetration levels and bridge the digital divide between the rural and urban areas. This is being done incrementally and the people of Kemaman are reaping the benefits.

It is indeed an honour for Kemaman to be chosen as the nation's first full-fledged smart community; one that is replicable and scalable. It

is incumbent upon us to steer the people of Kemaman, to respond and benefit from this effort, as it will be a benchmark for others to emulate and move in tandem with achieving the country's Vision 2020.

"What we learn today determines what our lives will be like tomorrow."

If Kemaman is well-equipped with what it takes to endure this journey to becoming a smart community, it would be an empowering ride for its people. That gives me confidence that our journey towards sustainability will be well supported, and that our small town will both secure its own future and pull its weight in finding solutions to the environmental challenges our Kemaman faces.

With knowledge of ICT, confidence level increases. There is empowerment in the way one sees oneself, and as a community, Kemaman is lifted out of oblivion. On that note, I welcome your interest in exploring this book, as what we learn today determines what our lives will be like tomorrow.

Dato' Sri Ahmad Shabery Cheek
Member of Parliament, Kemaman.

PLANNING FOR A SMART COMMUNITY

A successful smart community project will change how we carry out all of the business of a community. A characteristic common to smart communities is the use of information and communication technology as tools to build the community and solve community problems. As with any complex process, the best way to begin is by making a plan, which you will use:

- to determine the tasks necessary for accomplishing the goals of the project; and
- to establish what resources are needed, and figure out how to obtain them and where and when to apply them.

DETAILING THE INITIAL APPROACH AND ASSESSING THE COMMUNITY'S READINESS ON ICT



Mapping strategies and how best to put them into action with the key players and local champions instrumental in achieving successful implementation.



THE SEED OF INSPIRATION

Communicating as a leader is more than merely giving a speech. It is one thing to tell people what to do and how to do it. It is quite another to inspire them to want to do the things that are necessary for their lives.



If there is one characteristic that most differentiates effective leaders from the rest of the pack, it is the vision of the future that they provide to the members of a community. YBhg Dato' Sri Dr Halim Shafie, Chairman of the Malaysian Communications and Multimedia Commission (MCMC),

envisioned the development of a smart community as the building block of a smart digital nation.

“A bottom-up approach, though, may come across as against the norm in terms of development,” he explains, “but it seems to be the more effective way of building a smart community. Developing local champions through the District Officer and the President of the local town council, for example, would help engage a community. Once the community is engaged, more local champions can be created through teachers, ICT facilitators or volunteers amongst others.”

The seed of an idea was thus planted and thereafter grew in the form of the Kemaman Smart Community. “The quaint district of Kemaman was chosen as the pilot smart community project because of its distance and ease of access, not to forget the many interesting elements in its favour,” explains Dato’ Sri Dr Halim. “It lends its geographical landscape to the oil and gas industry on one end and to a more rural fishing existence on the other.”

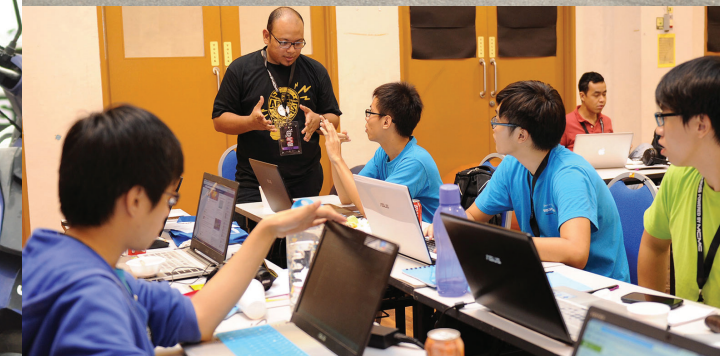
The multiple elements that Kemaman possesses contribute to its replicability factor. “This will enable us to replicate the Kemaman Smart Community model in other communities,” Dato Sri Dr Halim adds.

Vision 2020 is about developing a knowledge-based and empowered society. “What we are doing is trying to meet the objectives of Vision 2020. When we talk about a smart nation,

people cannot visualise it. That concept is too macro. When we talk about a smart community and about a particular district, especially when it works, you can immediately see the impact.”

“Whilst engaging local champions are important, working in tandem with strategic industry partners is essential.”

This initiative undertaken by the MCMC is based on the concept of the delivery of an ICT ecosystem to the smallest geographic units. Our strategy is based on a building block approach with each smart community being developed; these blocks are integrated into the bigger building block, i.e. the district and state they



belong to, hence the buildup of digital states and thereon toward the creation of a digital nation.

Having engaged the cooperation of the District Officer and the President of the local town council, the project is well underway. “From the very start, the two of them were engaged in this concept. They held a town hall session where we identified them as the local champions and presented the concept of how we see the Kemaman Smart Community coming to fruition. These are senior government officers and community leaders. It was now more apparent – and critical – to identify the champions as it is through these champions the project would progress. It is also through them that multiple champions will emerge.”

It was evident that the Kemaman community’s receptiveness of the project was very high. “Leadership is crucial in mobilising the community,”

divulged Dato’ Sri Dr Halim. “In Kemaman, the leadership as well as the community were practical and understood how technology would help them progress.”

“I believe that there are opportunities in terms of talent and it’s just a matter of giving people that opportunity to develop their potential.”

One of the biggest challenges faced was when the District Officer and the President of the city board were reassigned out of Kemaman. “They were both engaged in the whole smart community concept. We were unsure if their successors would buy into the concept. Fortunately, the incoming District Officer and President were both enthusiastic and willing to follow through. On hindsight, we also realised that such changes in the organisation would be inevitable and therefore it

was crucial that not only should top level management be engaged but that of the second level too."

Whilst engaging local champions are important, working in tandem with strategic industry partners is essential. "The financing model is managed through public and private funding," he explains. "We assessed the available infrastructure in Kemaman and looked into the gaps. We then got industry players to fill in these gaps. In places which are of commercial interest to them, they work the infrastructure on their own without funding from us."

"Some of the areas of infrastructure development are already under our Universal Service Provision (USP). We then focus on content development and adoption. We got in the innovation exchange centre IKBN. The operations room for flood management is also funded under USP. The telcos have provided their expertise for some of the applications and systems."

Sustainability for a project like the Kemaman Smart Community is crucial to ensure its success and its replicability factor. The target to become a full-fledged smart community and a model for the smart digital nation building block is not one that can be achieved by end 2015. "There has to be continuous facilitation to ensure its sustainability and, in most parts, the results and success rate can only be gauged over time. Nevertheless, as we move on to other districts, the reference point

will always be Kemaman."

To ensure the proper implementation of a smart community is carried out smoothly, a steering committee monitors this project and meets on a regular basis as well as engages with the community.

"Empowerment of the people through technology is what we are working towards."

"Technology development is a natural process. Even rural developments were exposed to the introduction of technology with the internet, television, radio, the phone, etc. Generally, it can be seen that they have been able to adapt to these well. These new enablement technologies are going to help the community without losing what is uniquely Kemaman."

"They will still be doing the same thing, for example, selling *lemang*, but with new technology coming in, there are possibilities that they could be more innovative with the way they make *lemang* or sell it. The grassroots will only notice it when it impacts them. If nothing impacts them, it will be very difficult for them to see the possibilities as this is all conceptual. If, for example, we introduce a mobile payment system to them, and people can pay via this mode, they will be able to realise the benefits."

There's a lot of participation from the community of Kemaman. "From the many activities held at the library and the Hackathon, we were generally surprised that the people

here were incredibly receptive and easy to work with. We were surprised at the overwhelming response for the Hackathon which saw a healthy turnout of over 80 participants, some of whom came from as far as Pahang, Penang and Kuala Lumpur, giving rise to the tech tourism."

"The overall impact will be realised over time. Take the ICT teachers, for example. The idea was to have the ICT teachers become the champions given their interaction with the children and their parents. The P11M structure also endorses the supervisors as local champions as they engage with the community. We hope the community, in turn, will be engaged in the idea of a smart community."

The smart community project is meant to be for the long term. Therefore, processes are created so that it is sustainable over a long period of time. "The Kemaman Innovation Centre (KIC) is a facility that is tied up with Telekom Malaysia. It is linked to the Telekom Innovation Exchange in Kuala Lumpur and therefore becomes part of the innovation eco-system. Given that Telekom Malaysia will be managing it through their best practices will further enhance the sustainability factor."

MCMC's roadmap is the building of a smart nation in line with Vision 2020. "It is indeed a short span of time. The infrastructure is at the crux of building a smart nation. We are constantly touching base with industry partners to determine the investment they are committing towards the formation of a smart digital nation over the

next few years. On our side, we will compliment this through our policy development, facilitation and some accelerator funds."

"I have always had a dream that rural communities would be on par with the urban ones in terms of access to facilities," Dato' Sri Dr Halim divulges. "That's the reason why we initiated many rural programmes. I believe that there are opportunities in terms of talent and it's just a matter of giving people that opportunity to develop their potential. We have to bring the smart nation concept to the districts."

On hindsight, this is probably one of the most ambitious projects MCMC has undertaken with the hope that many more rural districts may be transformed for the greater good of its people and its future.

"Empowerment of the people through technology is what we are working towards. When we meet people who are using technology for their own betterment, we want to help them feel empowered to take charge of their lives and surroundings."



THE OBJECTIVES OF A SMART COMMUNITY

The smart community concept was built upon objectives to encourage the community's participation. One of the objectives outlined was the need to change and improve the community's lifestyle through the use of ICT applications. The community would endeavor to learn through e-learning capabilities, publish learning material through e-publishing and produce Kemaman's very own collection using the e-studio application and be included or participate in growing global information resources.

In addition, the concept is to bring a rural community like Kemaman on par or higher than the urban communities at the state or international level. Through this, homegrown entrepreneurial opportunities will be made available.

Local businesses and food will be promoted across the boundaries of this quaint town.

The introduction of the smart community concept can be mutually beneficial through the use of high speed broadband services. Through high volume usage, attractions such as turtle rehabilitation centres and the beaches can be promoted widely bringing more tourists, scientists and conservationists to Kemaman.

The smart community concept could also encourage creativity and innovation within the community of Kemaman. This would in turn, also encourage active participation and volunteerism from the people towards building their smart community.



ASSEMBLING & ORGANISING THE CHAMPIONS

Getting the right people involved and using the right strategies to get them involved will gauge the success of the implementation of a smart community.

WORK WITH COMMUNITY LEADERSHIP

Working in tandem with the community leader eases communicative barriers as well as driving the smart community to achieve intended goals within a stipulated time frame. The community leader's buy in to the smart community concept is crucial to its success as his commitment will pave the way to sustainability in the long term.



READY FOR CHANGE



Kemaman is fortunate to be chosen as the first Smart Community, says Kemaman District Officer, Dato' Mohd Rozali Salleh. He elaborates on the locals' reactions and responses.

When trying to get the opinion of the man on the street, sometimes an informal setting is required. It could be as casual as bantering over a cup of *teh tarik* at the stalls; to hear what they have to say when they are at ease. They tend not to hold back, as opposed to feeling intimidated during, say, a formal meeting

In this context, the subject matter is ICT; in what areas can the villagers gain by going digital. More feedback can

be gathered. More will be disclosed.

This is just one of the ways to gauge the needs and wants of a community; ranging from matters to do with infrastructure to conveniences. "Through personal experiences, plus surveys and questions posed to village committees (Jawatankuasa Kampung or JKK)," says Kemaman District Officer, Dato' Mohd Rozali Salleh.

CATERING TO THE PEOPLE

With an open communication channel, the District Office can delve into issues that are the most urgent according to respective village committees.

“We studied the results from the feedback we collected,” says Dato’ Rozali. “Based on that, we found

to actually like using ICT. So far, there are still those who are reluctant to engage in ICT. These reservations could stem from tradition. Some are wary of modern technology. It could also be a question of finances as modern devices, particularly personal computers, cost a substantial amount of money to rural folk.



that the two areas people are most concerned about are education and employment.”

“It would be progressive to have an entire community that is ICT-literate.”

More importantly – education, especially in the remote areas of Kemaman; areas where there is no Internet and where cyber cafes are miles away. This is where the Kemaman Smart Community Programme will help people help themselves.

WELCOMING POSITIVE CHANGES

It would be progressive to have an entire community that is ICT-literate. Not just to know and apply, but also



Other than that, there is also a wariness of today’s smartphones. If you are hardly exposed to modernities, even smartphones can be intimidating. A phone today doesn’t serve as the phone they once knew. But with a

little motivation and gentle guidance, the locals found themselves actually liking what digital education can do for them. Sometimes, all it takes is to point out how a new thing can benefit them.

“I know of a ‘makcik’ (elderly lady) who used ICT to promote her *bahulu* (a



True. You don’t have to drive anywhere, saving on petrol. There is no time wasted taking her wares to customers, door-to-door. Knowing how to use the computer and the Internet has saved her a lot of hassle. If you have children, you can take care of them and at the same time, run your business. It’s thrilling to find out that even shopping can be done using digital means. “In another case, a young man quit his job and became an entrepreneur marketing his product online,” relates Dato’ Rozali. “He now makes a substantial amount compare what he used to make in his previous ICT work!”

ONLINE RESPONSIBILITY

The good part about the arrival of the Internet in remote villages is having access to information. Small entrepreneurs can reach a much wider market to sell their products.

However, where there are positive influences, there may also be negative ones too. “We need to monitor the usage of the Internet, especially among the young ones,” says Dato’ Rozali. “Children cannot decide what is wrong or right. Parents need to guide them.”

He refers to instances such as emails to be wary of; one wrong click might release a vicious computer virus. Porn is also another concern as the access to these websites is too easy.

traditional Malay cake) and her sewing trade,” says Dato’ Rozali. “When asked why she chose to do so, she said simply – because it costs next to nothing. She said she could sell her products without even leaving her home.”

“The good part about the arrival of the Internet in remote villages is having access to information.”

There are also money scams that come with 'sad stories' targeting the vulnerable. For those who don't know any better, they will feel compelled to 'donate'.

"Actually, we can find anything, both information and misinformation, when we search the Internet," says Dato' Rozali. "But whatever that comes to us uninvited, it is up to us to decide whether to accept it or not. One needs to be digitally literate."

ICT in Kemaman is motivating people to move forward, but they must be responsible enough to care for their online safety and security. Because of these Internet threats, a national online safety campaign was launched in schools with the tagline, '*Klik dengan Bijak*' (Click Wisely).

"Children being children, they may turn a deaf ear. Perhaps we need something more creative to make them stop surfing negative content. Perhaps a 'monster' figure that appears on the screen the minute a child opens a damaging website, or something of that nature. We must always think outside the box," suggests Dato' Rozali.

"If you are in an industry that is no longer relevant to the era, a transformation is due to remain relevant."

So far, whenever the Smart Community modules arrive at any place in Kemaman despite their doubts, the locals welcome the



change. Response is good. To date, no one has come forward to discredit this project, or complain that it doesn't do them any good. It's safe to say that all walks of life in Kemaman know the objective of the project and realise that it can only be beneficial.

RIPPLES OF CONCERN

What will happen to printers and paper suppliers if everything can be found online, like e-newspapers and e-books? Let's take a look at an example. In today's modern times, we may have smartphones and laptops, but certain things like movies – are still movies. But there is innovation. Now even movies have gone digital.

"Whatever trade we are in, could still

be relevant with the coming of ICT, but change is needed in order to cater to the ever-changing consumer market," says Dato' Rozali.

"If you are in an industry that is no longer relevant to the era, a transformation is due to remain relevant. When the transformation happens, development is inevitable. You have no option but to move with the times. Evolution is necessary."

AGE IS JUST A NUMBER

The people behind the Kemaman Smart Community Project thought of everything and everyone. No one is left out in a project as significant as this. Even the veterans and the elderly are exposed to ICT.

Campaigns on ICT could be held in mosques where the elderly crowd are. There could be computers and Internet connection for the older generation so they are exposed to ICT. "We only need to know where they are in order to deliver the same message delivered to others," explains Dato' Rozali. Likewise, this practice is also the role of community centres.

A WORTHWHILE INVESTMENT

"It is an honour for Kemaman to be selected for this project. The budget may be substantial but Kemaman needs to invest. This ICT plan, especially one that is tailored for this district, will push Kemaman's agenda to become a Smart Community, further developing its businesses, among other areas," Dato' Rozali elaborates.

There is also a budget allocated by the

MCMC to kick-start this project. Apart from that, there are also resources coming from various industry players in Kemaman. With Kemaman being a centre of ICT, industries will be upgraded and can only stand to gain.

"As for this district office, we contribute in kind. For example, we support this cause by allowing our premise to be used as a venue for ICT-related activities, at no charge," adds Dato' Rozali.

"We want Kemaman to have everything that benefits the locals; for example – a modern infrastructure, because that goes hand-in-hand with ICT implementation," he says further.

The small town of Chukai, which is the centre of administration for Kemaman, is the first to boast 4G LTE coverage; LTE stands for Long-Term Evolution, which is a standard for wireless communication with high-speed data for mobile phones. Other than Kemaman, the only other area that has this privilege is the Klang Valley. Indeed, Kemaman is taken seriously as an ICT-relevant town.

"Kemaman is really lucky to be chosen as the first to participate in a project of such importance," says Dato' Rozali. "On behalf of the community in Kemaman, I would like to thank MCMC for choosing our district to become a model Smart Community."

And with the people's cooperation, success will follow and results will show.



GAIN LOCAL INSIGHT AND SUPPORT



The nucleus of a smart community has to be in place to enable various forms of economic and social development.



SMART SUPPORT

In support of the Kemaman Smart Community project, Director of the Kemaman Local Council (Majlis Perbandaran Kemaman/MPK), Ahmad Sheikh Abdul Rahim, discloses the council's role regarding cellular infrastructure.



Turning the whole of Kemaman into a free Wi-Fi district is not impossible. The most important part of this journey of digital progress is the starting point. And the starting point comes from the Kemaman Smart Community. Step by step, this project brings full-on ICT to a district that was once somewhat isolated from ICT conveniences. Today, the people of Kemaman embrace the change they are beginning to experience. All that is missing is some awareness of how much ICT can change their lives.



TAILORED FOR THE PEOPLE

One of the most requested ICT services that the Kemaman community is clamouring for are mobile lifestyle Apps. An App can be sophisticated and offer a myriad of interactive commands but if it doesn't fulfil the needs of the people, it becomes redundant.

"What Kemaman needs are Apps that can help the people, for example, an App for flood-monitoring. When all other means of communication channels are cut off during a flood, this App can set off flood alerts or record visuals of flood areas to inform others about flood locations. Now, that would be a very useful App; very

relevant to Kemaman," says Director of the Kemaman Local Council, Ahmad Sheikh Abdul Rahim.

Apart from flood alerts, the other priority area for digitalisation is tourism. There is so much that Kemaman can offer. "Our zoo, satar, beaches, waterfalls. Did you know that Kemaman has fireflies?" asks Ahmad Sheikh rhetorically.

Where agriculture is concerned, mushrooms are slowly taking the place of a booming agricultural product. Other than looking to expand the market via online means, a mushroom farm can also be a tourist attraction. Through Apps on Kemaman tourism,



visitors can take a tour of the mushroom farm, get information on mushroom farming and of course, buy fresh mushrooms straight from the source. The possibilities are endless.

“An App can be sophisticated and offer a myriad of interactive commands but if it doesn’t fulfil the needs of the people, it becomes redundant.”

EXPANDING IDEAS

On a heavier industry scale, Kemaman also has oil and gas. Through the World Wide Web, this industry can be further developed and bring foreign investors to Kemaman.

Two months ago, there was a competition to create Apps called a Hackathon. It was to unearth talents for creating Apps and to see how



beneficial their ideas were. This competition was very well received. “There was even a family who worked on their idea with so much commitment and enthusiasm, they didn’t even go home until the next day,” says Ahmad Sheikh, both impressed and amused.

Other App ideas that can be very useful to the people of Kemaman include a parking space App. In Kemaman, more people drive than take public transport. So an App that can point out locations of available parking lots and can sync with mobile phones will be appreciated (even Klang Valley has not developed this yet). Perhaps also a *surau* App to inform of *surau* activities or prayer times for the day. Or perhaps even a JPJ App that can tell you how long a queue is before you reach the service counter. And because Kemaman has many eateries, a restaurant App would make sense. Customers can view menus and order ahead, or even reserve a table or two.

“MPK knows the grouses of the community,” says Ahmad Sheikh. “When you develop an App, you must first know the needs and wants of the local people.”

CONTENT IS EVERYTHING

A town without content is a very lonely town, and that certainly does not translate into a Smart Community component. Content is vital. Without it, what is there to feed the ICT channels? Ahmad Sheikh suggested

“When you develop an App, you must first know the needs and wants of the local people.”

seminars or workshops to teach business owners how to develop content, perhaps through their own blog spots or Facebook.

Ahmad Sheikh gives an example of the teachers who are trained in ICT. He refers to them as ‘agents of transformation’; to learn, impart knowledge and pass it down to society. Although ICT skills can be taught, as business owners, content is theirs to shape.

“Whether you are a homestay operator or a *keropak lekor* maker, take this opportunity to promote what you can offer, on ICT avenues such as Facebook or Google Plus,” stresses Ahmad Sheikh. “People at the grassroots level must see how important ICT is; otherwise they will not be motivated to learn about it. They must know about the good that ICT can do for them. In my opinion, the structure of this project works from the bottom-up.”

SLOWLY BUT SURELY

The vast extent of what communication devices (smartphone, tablet and computer) can do are not maximised nor fully utilised, even if everyone has an average of two or three communication devices each in this district. Features on a communication device aren’t a problem with the younger generation (who seem to be born with intrinsic technological knowledge!). It is the older generation who need more exposure. When they do get exposure, there may be some impatience when lines or broadband access and speed are slow.

To gauge how effective these ICT projects have been, the public’s response is an indication. “Just switch on your hand phone and test its connections. Look at the power bar or try to make a call or get online. This is a true measure of how far we have got to go. So far, blind spots are still a problem as these areas have no Internet access at all. Just like us, they too have to be connected.”

“The time for ICT is inevitable.”

For MPK itself, it has slowly become digital prior to the Smart Community launch. This would pertain more to their internal use, such as MPK’s accounts and finances. Besides that, MPK has also gone digital with Property Assessment Tax (*Cukai Pintu*) as well as rentals.

However, not everything can go online. When it concerns high-risk licenses, it is not advisable to go digital.

Since MPK has its own plans and the Smart Community has another plan – how is there synergy between the two? “Both can run parallel. What we do is widen roads, beautify landscapes, and widen drains but with the Smart Community plan, MPK can lend firm support. We are still the only body that approves the project infrastructure,” discloses Ahmad Sheikh. “The time for ICT is inevitable. We still have to get on board. We will still move with ICT, whether we want to or not. In Kemaman, this is exactly what our people have been waiting for.”



DEVELOP AN OUTREACH PROGRAMME



Developing an outreach programme that garners the interest of the people and keeps them engaged as well as committed towards enhancing the smart community concept.



A VILLAGE EMPOWERED



The residents of Kampung Gong Chengal, once a remote fishing village, now enjoy high speed Internet access that is making a significant difference to their lives.





"I remember a *pakcik* (elderly man) who was a little nervous about using a mouse. He wasn't sure about moving it around, much less how it works as a cursor," relates Nini Faessa Baharuddin, Manager of Pusat Internet 1Malaysia (PI1M) in Kampung Gong Chengal, Kemaman. The Internet centre Nini manages serves as an information, training and learning hub for those who want to learn about ICT.

"The *pakcik* comes to our training sessions regularly. The more he learned, the more excited he became about using the computer," says Nini. These were good signs showing a desire for self-betterment and ICT-competency. "That was about seven months ago."

Now, not only does the *pakcik* know how to use the computer, he is confident in

using the Internet too. "He loves surfing from site to site; mostly websites to do with news and politics. At any one time, he always has multiple windows open," says Nini, sounding awed by the changes she sees in her village elders.

GETTING CONNECTED

Kampung Gong Chengal is a fishing village east of Kemaman. Some 25 per cent of the people in this village own computers. However, Internet access was not something they had before

PI1M Gong Chengal opened in December last year. The MCMC, being the project owner of the Kemaman Smart Community, engaged DIGI Telecommunications to power up the Internet connection in Kampung Gong Chengal. DIGI is the designated service

provider for Kemaman district.

Mohd Fairose Harun of the Strategic Stakeholder Management of DIGI Telecommunications Sdn Bhd (Eastern Region), says, "When the Kemaman Smart Community Project started, we were more than happy to support this government initiative. Bringing the Internet to small communities like Kampung Gong Chengal, can really make a difference to the locals. Now, just like any other tech-savvy community, the residents in Kampung Gong Chengal can put their businesses online, give their products a 'louder voice' and reach out to markets they never thought possible."

SHARING BENEFITS

To city folks, things like setting up online businesses, communicating on Facebook or clicking on Wikipedia for general information, might not be a big deal. But here in Kampung Gong Chengal, Internet access is a privilege. It is appreciated and utilised fully.

Says Nini regarding her village folks, "In Gong Chengal, about 25 per cent of the villagers own computers. But the problem has always been Internet connection. We used to go to the cyber cafes in town, the nearest of which was 10km away. Now that we have PI1M, we are not the only ones that benefit from it; other nearby villages use its services too."

NEVER TOO LATE TO LEARN

Manager and assistant manager of PI1M Gong Chengal respectively, Nini and Athirah, are daughters of the village.

"At the centre, we hold classes that teach people basic ICT skills. We welcome volunteers too, if they have computer/Internet knowledge and can share it with the rest of the villagers," Nini discloses. "It's a good feeling to be contributing

to people we have known all our lives; family and friends too. As a resident of Kampung Gong Chengal, I can say that this ICT exercise is tightening our community ties."

So far, Nini and Athirah see people of different ages frequenting the Internet centre. Primary school students go there to play online games; older kids go there to do their homework or revision; while adults source for hobby-based content such as recipes and home improvement. Because books can be expensive, e-books are quite popular with the Internet users

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here especially the huge e-book resources from the national library (www.pnmdigital.gov.my). They can also borrow books online from seven consortium libraries under the U-Pustaka portal. Social media websites like Facebook are extremely popular.

The centre opens every day from 9am to 6pm, except on public holidays. Apart from computers, Internet connection and a comfortable set-up, the centre is also equipped with a scanner, a printer and an auto-block censorship system "...we don't want any hanky-panky going on here."

To keep the PI1M buzz going, Nini and Athirah organise simple ICT-related events such as online colouring contests and treasure hunts where participants must look for answers online.

SIGN UP FOR THE INTERNET

Signing up for a PI1M lifetime membership costs only RM5. From then on, members are charged only RM1 for an hour's use of the

Internet, while non-members are charged RM2.

Trainings, however, are free of charge. Since the classes started in February this year, the villagers' response have been very encouraging.

“'User-friendly' can be a subjective term.”

“We would get at least 10 people in each class and that we consider good,” says Nini. As for what is being taught, content can range from getting to know the components of a computer to learning how to use Microsoft Office. Other times, there are also classes on entrepreneurship too. Just to gauge how effective the classes have been, Nini and Athirah test their students. “They're not official tests,” says Nini as she smiles. “But it's important to us because we just want to know how much benefit the participants get out of this class; how much



they understand and if they can apply what they have learnt.”

HANDPICKED FOR PROGRESS

Information and Communication Technology (ICT) is no longer an intimidating term to those who are ICT-illiterate. Today, everyone, regardless of age, realise that possessing ICT skills is a plus. It is not just something for offices and learning institutions but is also a vital tool to develop businesses; any business, whether it is *satar* (fish paste wrapped in banana leaves and grilled) or stew.

On a smaller scale but needing the Internet nevertheless, is an App that almost everyone relies on these days: WhatsApp. Still, 'user-friendly' can be a subjective term. An introduction as well as an induction is needed in order to switch one from SMS to WhatsApp.

Nini puts in her last comment, “We are

thankful that we have been chosen as one of the Wi-Fi hotspots. This gives us access to free Wi-Fi.

A member of the village committee (Jawatankuasa Kampung or JKK), Haji Mustafa, came to us one day. He extended his hand and shook ours and thanked us personally for bringing the Internet to Kampung Gong Chengal.

FORWARD HO!

Not many in Kampung Gong Chengal know how to use the computer efficiently, much less the Internet, although this is now considered a work-in-progress. “Our lives are simple,” says Nini. “But we know that we can do more by keeping up with technological advancement. And that's what we plan to do.”

CREATE STRATEGIC PARTNERSHIPS



By creating strategic partnerships with stakeholders, you ensure continued, vested interest in sustaining enhancement strategies that help educate and increase the people's knowledge and ultimately willingness to participate in the smart community concept.



AHEAD IN INNOVATION

"It's amazing," says the Head of Innovation Exchange of Telekom Malaysia (TMIX), Ash Ali. He relates how two or more heads can change the world! Cooperation is everything.



Telekom Malaysia Innovation Exchange (TMIX) is part of TM's innovation agenda. It is an accelerator programme with two main objectives. Firstly, to internally drive innovation, creativity and entrepreneurship within TM. Secondly, to maximise and see other opportunities in the market that can be capitalised. Basically, it is THE

hub that focuses on being innovative. "Innovations are low among Government Linked Companies (GLCs), with very low innovative capacities. To address this, there must be an innovation platform," explains Ash Alwi who heads TMIX.

UPSCALE AND MOTIVATE

"We bring technology to suburban areas in order to enhance lives but we can't do that immediately. We can't tell people to forget about the *satar* they are selling and urge them to become tech-entrepreneurs instead. You can't just go up to someone and say, 'Makcik, let's go global!'" says Ash. "The message that we are trying to relay to people is to not be afraid of technology. Embrace technology."

As far as the Kemaman Smart Community goes, TM aims to position Kemaman as its east coast innovation hub. "What we are looking for are talents to fulfil a higher agenda," adds Ash. "We are also looking to upscale the young people; to inspire them through our programmes and bring in top mentors to motivate them."

"TMIX partners with Institut Kemahiran Belia dan Negara (IKBN) where we leverage on their student network. It's a collaboration to brainstorm business ideas, run entrepreneurship lessons on branding as well as training programs."

In the Kemaman Smart Community project, there are activities being put into place such as the Hackathon where the participants will develop mobile Apps within 24 hours. and Apptersboss. TM provides the internet connecting them.

REAL LIVES AHEAD

Ash relates his experience during the Hackathon, "There was a group of boys whom I had just met. Just chilling in the backyard of the Hackathon

venue. One was a barber, one operates heavy machinery and the other one owns a small shop doing general electrical repairs. Who knew that three random young men can gather and learn about developing an idea in one night."

This fulfils the aim of this App-design competition, which is to unearth ideas from otherwise hidden talents. Once you have an idea, people get together and cooperation begins. Once you get going, it can be addictive; because you want your idea to fully materialise. "In another instance, another team consisted of a mother, a brother and a sister. They worked round the clock on their idea, which was really interesting. Their App was called Virtual Pasar Tani." says Ash.

PROBLEMS AND SOLUTIONS

The ideas that people get sometimes depend on their surroundings, their experiences, what they see, hear, touch, feel and do. In Kemaman, what is important to its community may not be at all similar to what is important to those in the city. "Real people build things that are beneficial to their community. That's the difference I see compared to people in the city," says Ash.

"You must have that burning idea. If you have a solid idea, technology is secondary. The important thing is – what are you trying to solve? Most times, people focus on technology, but that is not the issue here. That is the means to get to where you want to go."




The idea was the most important thing that judges looked out for and there were guides to help execute their ideas. "When it comes to technology, people on the east coast are sometimes looked upon as lacking in skills. In actuality, they are ahead in their level of maturity, coding, tenacity and most of all, they are inspired," Ash comments.

"You must have that burning idea. If you have a solid idea, technology is secondary."

Being inspired is something that is hard to come by when your surrounding provides you with

everything that you need; modern infrastructure and conveniences. When people have everything, they tend to take things for granted. They will appreciate things that they never had. That is why the approach to something as common as the Internet, differs from person to person. It depends on where you live, who your friends are, what you do for a living, your purchasing power and such.

During the Hackathon, TMIX does not intrude in the competition process. There are guides to help the competitors along but only if they ask for help. 

IDENTIFY & EMPOWER THE CHAMPIONS



Managing volunteers who will work at the grassroots level to engage the interest of the people and communicate as well as educate them about the benefits of living in a smart community and all it has to offer is essential for the project's success.



CREATIVITY THROUGH ICT



Going digital is not just about ICT. It is also about creativity and self-expression. We speak to Kemaman's Assistant Education District Officer, Encik Abdul Ghani Samad, who is in charge of ICT engagement among educators and students.

Earlier this year, there was an Internet Safety Forum organised by the Kemaman Education Council. This forum on cyber-safety was held especially for management level employees. "There are Internet users who are not aware of potential dangers online," says Abdul

Ghani Samad, Assistant Education District Officer of the Kemaman Education Council. "For instance, when they receive a file, they will immediately click on it and open it. The risk of a computer virus infecting their device doesn't even come to mind."

THE IMPORTANCE OF TRAINING

Ignorance of Internet safety can be made even worse if there is no virus prevention software installed. "There is always that notion that a mishap of any kind 'will not happen to me', until it's too late," comments Ghani.

He adds that posting comments on social media is another cause for concern. "They must understand that whatever they post on Facebook or Twitter will have repercussions," he says, clearly concerned. "So we must inform them of certain guidelines; the Dos and Don'ts of Internet usage."

"Whatever is posted on Facebook or Twitter will have repercussions."

Safety training is an example of the kind of projects that Ghani undertakes in his current role as Assistant Education District Officer, a position he has held since 2009. In his work capacity, he ensures a working infrastructure in matters to do with ICT education in Kemaman. He is also responsible for disseminating ICT knowledge to students and teachers, the latter being listed in a database of ICT educators. Ghani is also a committee member of the Kemaman Smart Community. He works closely with other Kemaman government departments in executing programmes under the Smart Community umbrella.

HIGH HOPES

"This Kemaman Smart Community Project is something that will shape our future generation. God willing, in



three years, the citizens of Kemaman will be completely ICT-savvy," says Ghani, with optimism in his voice. "Since the floods last year, we have rebuilt much of our infrastructure and logistics, as well as restored our finances. Our raw materials keep us afloat; steel, petrol, and palm oil. As for the people in Kemaman, they are a resilient community. They turn life challenges into catalysts that keep them moving forward."

In Kemaman, the locals welcome constructive changes with open arms. They naturally want to upskill themselves, which also pertains to knowledge in ICT. Turning this district into a Smart Community hub will not be an overnight task but once the community is equipped with the right skills, Kemaman will be a digital hub to be reckoned with.

The first step in educating people is to

train the educators; from teachers to students, leading to more generations of ICT-savvy individuals. It is clear that this Smart Community project is not a one-off exercise; instead, it is one of continuous engagement and facilitation that will benefit the community for years to come.

TRAIN AND COMPETE

To kick-start ICT training for teachers, a competition in digital design is being held between schools. It is a collaborative effort between the National Book Council, the MCMC and the Kemaman Public Library. "Every school has a yearbook. In this competition, participants have been asked to design their yearbook in the form of an e-magazine," explains Ghani.

For the purpose of this competition, the state government purchased a software called e-media; an

investment based on confidence, in order to develop Kemaman into an ICT-savvy community. With this software, participants can produce exciting and interactive layouts for their e-magazine.

All 70 government schools in Kemaman are included in this programme; 47 from the secondary segment and 23 from the primary segment. Two teachers from each school were sent for training on how to use the e-media software. The teachers are those who have a fair background on computers (ICT teachers), although only four schools have ICT as an exam subject. The rest of the schools regard ICT as an extracurricular activity.

"From these schools, we set up a Telegram Group of 140 people. They consist of ICT teachers and 15 officers from our education department," says Ghani. Each teacher is assigned one student to assist them during the competition. "Through this group, all of us are connected. We all share information, exchange notes, give constructive criticism on anything to do with our e-media training programme and the competition."

"The first step in educating people is to train the educators."

The first training session was carried out in May this year. It was to introduce and expose participants to the new software; using e-media to create magazine pages. As for the second training session held

the following month, this was when participants got more time for a Q&A with their instructors. During this time, the committee merely observed the participants and their work-in-progress. Both sessions involved the same participants.

INDEPENDENT MINDS

The teacher-student teams are given till August to complete their e-magazine assignment. The winner will be picked based on the most creative design. "From the second training session in June, we leave them be. They are free to go their own way until we see them again in August with their final product," assures Ghani.

The project requires participants to produce at least 20 pages of content in three months. "There was one school that started out with five pages but by the time their teachers attended the second session, they had completed more than 20 pages."

It is a bit early to know the outcome of these training sessions. But as far as response goes, the teachers were enthusiastic and cooperative. They are ICT teachers after all, most of whom already possess a raw interest in this area. "In fact, I know teachers who are extremely passionate about ICT so much so that they would actually fork out their own money to attend ICT seminars and workshops," Ghani says with an amused tone. "They are the same ones other teachers would seek for advice on ICT!"

MAGAZINE VS E-MAGAZINE

Besides an avenue for more

creativity, there are other benefits of an e-magazine compared to a hard copy version. A yearbook is a bumper publication that could use up countless bales of paper. That alone is already a matter which we all need to be concerned about, as it involves our environment. Meanwhile, a digital magazine requires no paper at all.

Another plus point of an e-magazine is that it is portable. It allows you to read your magazine anywhere; via your tablet, laptop or smartphone.

A hard copy magazine also tends to be a bit unexciting compared to



an e-magazine where you can add sound effects, colour bursts and more. Compared to a hard copy version, the e-magazine can also be more interactive with the inclusion of video and audio files.

On top of all that, a paperless magazine costs a lot less than a hard copy product. That is a saving of about RM15 for each household.

It may seem like a small amount to some of us, but there are households in remote Kemaman that make only RM300 to RM500 a month. Despite their situation, their children still have a right to an education.

"The long term aim of this project is for students to be exposed to digital interactivity, a paperless environment and awareness that the world can indeed be their oyster."

MORE IN STORE

Have you ever heard of a school with only eight teachers and 17 students?

nine of these special schools. If they have less than 150 students they are called SKM (Sekolah Kurang Murid) which literally means 'school with few students'. "There is one SKM in Kemaman with no UPSR candidates this year. But next year, the school has one," relates Ghani. "...so next year, the teachers are hoping for a 100 per cent passing rate."

In cases such as these, the idea of a cyber-classroom becomes something that should be taken seriously. As long as there is Internet connection, there will be education for all. Online learning is not new but it certainly is if you have only just been introduced to the World Wide Web.

In 2009, students were given e-books to use in schools. Before the arrival of the e-books, broadband usage was only up 30 to 40 per cent, but in 2012, broadband usage increased to 72 per cent. The programmes under the Kemaman Smart Community project today can further increase that percentage until everyone gets the benefit of the Internet.

Eventually, the long term aim of this project is for students to be exposed to digital interactivity, a paperless environment and awareness that the world can indeed be their oyster. "When they realise that what they do can be shared with the rest of the world via the Internet, they will strive to be the best," says Ghani. "And that's the kind of spirit that will make the Kemaman Smart Community a success."

ASSESSING COMMUNITY NEEDS

Understanding the community entails understanding it in a number of ways. It's important to understand the specific community you're concerned with. You have to get to know its people – their culture, their concerns, and relationships – and to develop your own relationships with them as well.

From assessing the community background, its needs can be addressed either through a town hall session or survey. From here, community issues that are a burden and in some way may jeopardise the full implementation of a smart community should be addressed.

Once the needs and issues faced by the community are addressed, the technology that is being introduced can help eradicate those issues or assist in the sustainability of the smart community project.

FLOOD MANAGEMENT

Addressing a major issue faced by the community and using technology to eradicate or lessen the burden caused by it.



WATER BOUND

Coming together as one community, the people of Kemaman prove that they are self-sufficient when it comes to managing a community crisis.

Everyone you speak to in Kemaman seems to bring up the flood of 2013. It was a horrific experience for all of Kemaman as they were caught unawares of the height of the waters that was to engulf their entire homes and belongings. Their losses amounted to a lot but they didn't give up.

In 2014, they were prepared. This time, they had deployment plans put

down and had set up flood operations centres and mobilisation centres for their community. The people were well informed and mobilised from the get go without any hesitation. It was because of their sense of community and their willingness to come together as one and help themselves, that they received a gold award of recognition from the Prime Minister, Dato' Seri Najib Tun Razak.



In the wake of the floods and its devastation to their homes and livelihoods, the community of Kemaman, together with MCMC, has created the Flood Management system.

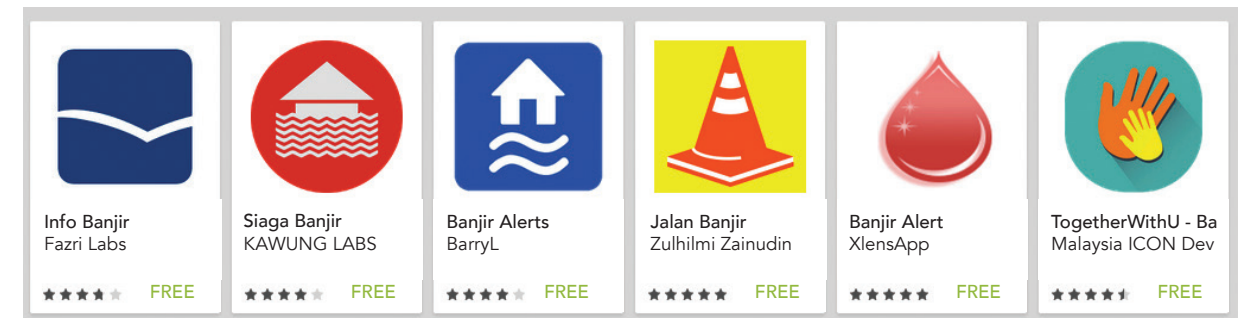
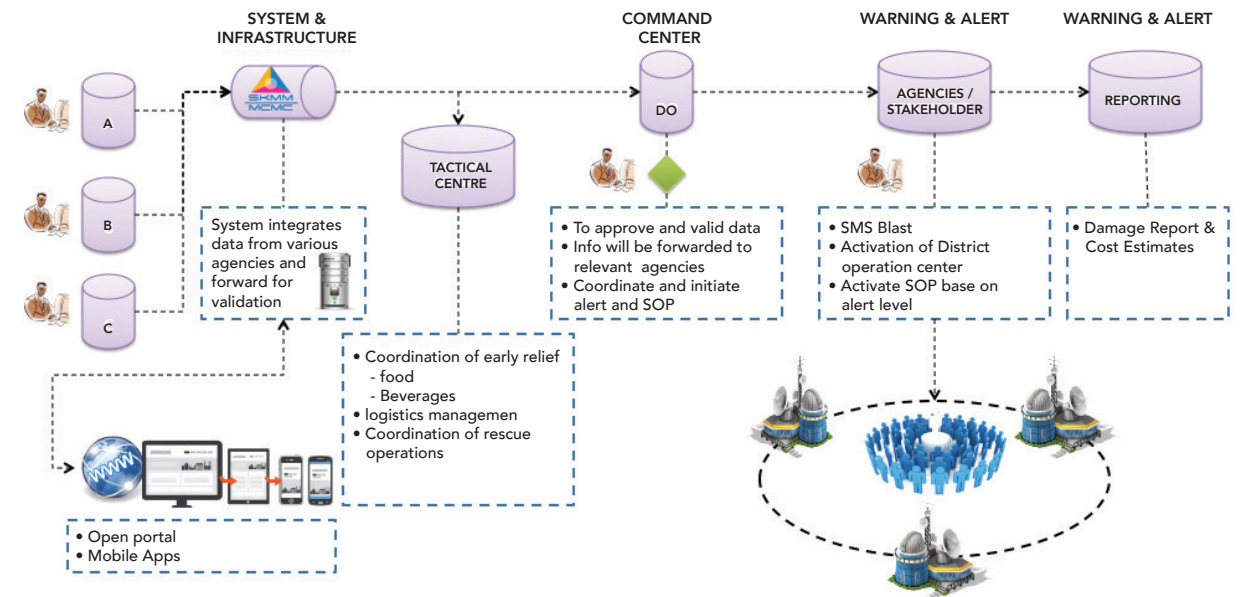
The system is a working outline and tactical flood management system that covers pre-flood, during the flood and post flood management.

The Pre-Flood system has the community register themselves via their mobile phones or the Internet. They are then able to receive real-time information as well as flood safety measures that they should take. There are applications that cater to flood management that is available for free. These applications help the community in their preparedness as

well as being constantly informed of the situation around them. They are also given a card that dictates their flood mobilisation centres, logistics, asset transfers and food and necessities. The people are even informed of higher grounds where they can park their cars on.

During the flood, the Tactical Marquee is erected. Real time updates on the water levels are delivered from the Kemaman District and Land office. The Ops Room to manage disaster relief efforts will also come into effect.

The registration of victims and the distribution of flood aid are managed as well as rescue operations are deployed. At all times, there is distribution of information with regards to safe travel, unaffected



areas suitable for travel as well as distribution of relief aid from outside sources.

The Post Flood system sees that the SOP is activated for each agency or service provider. It is also at this juncture that the initial clean-up of the area starts. Relief aid from the government or private sectors is distributed. Lastly, the estimation of loss of public and private assets is ascertained.

The flood situation is not one to go away any time soon, but having this system in place will lessen the burden on the community as well as keep their losses to a minimum. Today,

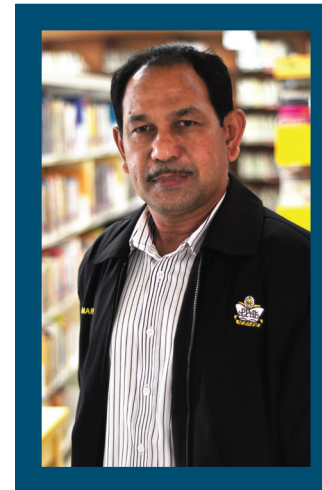
the community is flood-prepared and ready to embrace the year-end challenges that the monsoon season brings. Homes are built on concrete stilts whilst important belongings are kept on ceiling-height shelves where the water can't get to them

It is a challenge, but the community has got it figured out. Helping themselves and becoming self-sufficient has made them all the tougher in the face of disaster. With one voice, the community strives for a better tomorrow – one that may just be flood free.

LIFELONG LEARNING



Ensuring that the community comprising of different age groups and tech capabilities, is ready to embrace technology and use it to its full potential.



KNOWLEDGE IS POWER

The more informed a community, the more they can do with their lives. Kemaman Public Library's Assistant Librarian, Kamarudin Ismail, elaborates on the various ICT-related activities under the Kemaman Smart Community Project.



"Actually, there are so many occasions that call for a library's participation," says Kamarudin Ismail, who speaks on behalf of the Kemaman Public Library. He cites the 'World Book Day', 'Copyright Day', 'Merdeka Reading Month' and many more. "During these occasions, we carry out programmes that sync with our role as a public facility," says Kamarudin who is Assistant Librarian at this district library.

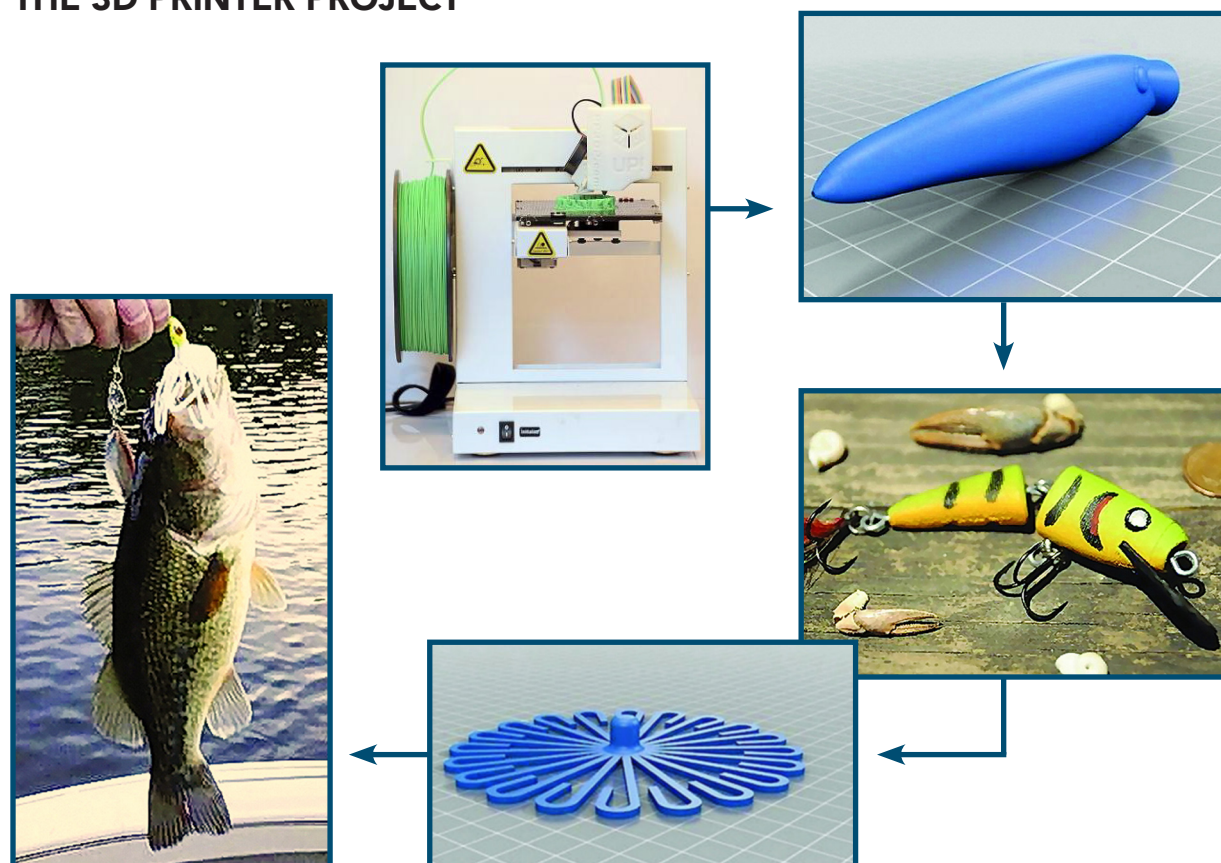
As the current head of this office, his job requires him to administrate, plan budgets and carry out policies that come from the Terengganu Public Library office. He is also responsible for the number of visitors that utilise the library, as well as the activities it organises. These include exhibitions, demonstrations and workshops.

With regards to the Kemaman Smart Community Project, Kamarudin's role is to build ties between the library and the Kemaman community via the use of digital technology. Before

the start of the Smart Community Project, the library would promote the habit of reading and hold education-related activities. With the arrival of the Smart Community Project, one more component is added to that list – using ICT as a means of building a productive network among the people of Kemaman. "Even the mere use of WhatsApp and emails can make a difference in the extent of our communication with one another," says Kamarudin, who was born and bred in Kemaman.

MCMC has given out tools to their agents of change, such as the Kemaman Public Library. Among the tools are; an e-magazine, a 3-D printer, Lego programme, besides the U-Pustaka and access to the National Digital Library.

THE 3D PRINTER PROJECT



BUILDING MINDS

There have been many district projects and competitions that require young participants to take part in colouring, writing, and at the most creative – puppeteering. However, a district programme that involves building blocks is a new thing to the children; they are absolutely awed by it. And the fact that it is Lego? They love it. “Before this project came along, Lego was something they eyed in toy stores. Now, they get to play with Lego bricks for free. And at the same time, they learn about science, technology and mathematics,” says Kamarudin, who organised visits to pre-schools and kindergartens to promote the Lego programme.

An example of how the programme

educates is the construction of a Lego spinning top. The children are instructed to count how many seconds it takes to make the top spin. Next, their task is to try and make the top spin faster. To achieve this aim, the children are given tools. How they use these tools are up to them, depending on their resourcefulness and creativity.

Another exciting example is the Lego go-cart model. The children are divided into groups. “Each group must try and find ways to make the go-cart slide faster down a slope. Should the tyres or the gears be changed? That is for the children to decide. They need to put their heads together and think up solutions,” says Kamarudin. “We regard this as a contest so the kids get more enthusiastic.” The children he



is referring to are between the ages of seven and 12, so one can imagine the organised chaos going on in the library’s activity hall!

“Now, it is about filtering the best talents and gearing them up for state-level competitions.

Soon, there may be more advanced modules in the Lego programme depending on the children’s response and performance. Lego Robotics is already on the way. The children can’t wait.”

BENEFIT FOR THE PEOPLE

Other than the Lego activities, the 3-D printer project is exciting to explore too. It is a new product that interests children, aged 12 and above.

Participants are instructed to invent an object using special 3D-animation software. First, they are given a theme; for example, ‘Resolution’. Then they have to get a concept ready and it must be a practical one. For example, the library proposed a 3-D bait that can help fishermen catch fish in a more efficient manner. One of the designs came in the shape of bait that opens up into a four-angled hook. Their design goes into the 3D printer and produces a prototype. For the participants, it is liberating to witness their design becoming a reality.

“Whatever the effort is on our side, it is the community that creates success.”



Kamarudin and his team have also started a digital compilation of Kemaman's local history. This project is named 'Koleksi Kemaman' (the Kemaman Collection). "We encourage each locality or village to find out as much as possible about their village. It can be how the village was named, what were its trades compared to then and now, who were the important figures who made the village what it is now, and much, much more. There is just so much to tell," says Kamarudin. "The youngsters doing the research will need to speak to their elders. The older generation love to share their experiences. When their stories come rolling in, there is no stopping them."

All this information will be compiled as digital books. There are also portals that act as an online library where you can find records and such.

If anyone would like to find out about a certain village in Kemaman, all they need to do is click their way into the information bank.

COMMUNITY EFFORT

"Whatever the effort is on our side, it is the community that creates success," says Kamarudin. What he says is especially true of Kemaman. This largest district in the state of Terengganu sits between Kuala Terengganu and Pasir Gajah. Now that there is a highway being built between the two points, traffic will bypass Kemaman. Although Kemaman has much potential in community progress and development, it may just become a sleepy hollow if no effort is taken to sustain its future.

For the locals in remote areas of Kemaman, there are special efforts

for them pertaining to the use of ICT. Seven smaller community libraries utilise ICT. In Desa Pasir Gajah, ICT has even reached homestay operators. On top of that, businesses that sound obscure to people outside Kemaman, have also jumped on board the digital bandwagon.

Farmers of the *kelulut* honey are slowly being introduced to ICT to improve their business. To assist these businesses, the entire village comes together – the elders, women's groups, youth groups, etc. They all know that a successful community member makes for a successful community!

A second example is eggs from a special breed of turtles called *tutung*. The abundant creatures thrive in freshwater as opposed to near-extinct leatherback turtles at sea. Currently, there are 80 farmers who have brought their *tutung* egg business online via websites. The website explains this rarely-heard-of delicacy; its benefits, its taste and such. "No one knew about these *tutung* eggs before, but now the whole world will find out!" says Kamarudin, pointing out the amazing reach of the Internet.

For local businesses, regardless of how remote or small, an online presence means a much bigger market. There is no limit to where the Internet can take e-entrepreneurs when it comes to their products and services. "Actually, Kemaman has a lot to offer. Did you know that we have fireflies in Kampung Yakyah? Who doesn't know our local food like *keropok lekor* (fish sausages) and *satar* (grilled fish patty wrapped

in banana leaf)? We also have the best *lemang* (glutinous rice with coconut milk in bamboo, cooked over an open fire) in Kijal," shares Kamarudin who started a Telegram Group with members of this community to give notes of encouragement to each other.

"These activities would not be of use if the people are unwilling to keep up with today's digital technology."

Apart from the efforts undertaken by the Kemaman Public Library to increase the use of ICT among the locals, the library itself utilises ICT to improve their services. The 'U-pustaka' project involves a consortium of libraries. At the moment, there are only seven libraries in this consortium. Through the Kemaman Smart Community project, the Kemaman Public Library is set to join the ranks of these sophisticated libraries. "With U-Pustaka, you can borrow any book, even if we don't carry the title. We get the title from the other libraries in the consortium and deliver it to the reader. You can say that it's a sharing of materials made easy by the use of the Internet."

Another facet of beneficial ICT is the Open University. In Terengganu, this e-learning avenue used to be available only in Kuala Terengganu but is now available in Kemaman too.

SELECTION OF PARTICIPANTS

The library serves as a place to generate a community of interests;



a place to hold wholesome and educational activities for the people. Between this public library and the people of Kemaman, the aim is to bring everyone together and form closer ties with one another. “Even hobby groups and departments can be digitalised in Kemaman,” stressed Kamarudin. “Fishing groups, motor cross groups, institutions and government agencies, and many more.”

The women in Kemaman are more interested in cooking and sewing. Apart from books on these topics, the library holds workshops and demonstrations to generate more interest among the ladies. “We promote these interactive events through our Telegram Group. From there, we can gauge the interest of the people. Let’s say we post a forthcoming cooking demo at the library. Some ladies in the group will immediately start asking questions

and expressing an intention to attend the event. This is how we get our participants in the Smart Community activities – those who show interest in learning and in turn, get their loved ones to participate too.

Apart from demonstrations, posters are put up. More information on these activities is also shown on the library’s website and Facebook page (now, that’s putting digital knowledge to good use!).

Still, regardless of the incentives given, these activities would not be of use if people are unwilling to keep up with today’s digital technology. But in Kemaman, the locals are fully aware of the importance of IT. They are already embracing the efforts that the Smart Community Project is offering.

And they are making a difference.





DETERMINING THE PERSONALITY OF THE COMMUNITY

Kemaman is a quaint district that exudes simplicity and rustic charm. With a flat coastal area, the majority of the people focus on fishing activities. The inland area with hilly features is rich with tin ore, oil palm plantations and timber. The area between the coast and the hills concentrate on farming.

Cottage industries, stemming from fish produce, thrive in abundance and are a common sight around town as well as alongside major highways. The *satar* and *keropok lekori* are unique to the state of Terengganu and have seen a healthy demand from other states. In addition, *lemang*, which is glutinous rice cooked in a bamboo stick over hot coals, is another delicacy that's much sought after by tourists who visit.

A key factor that determines a community's ability to manage

resources is its social cohesion and willingness to set and strive for common goals. This does not mean that the community must be homogeneous (although this often helps).

Conversely there are many heterogeneous communities made up of people of varying backgrounds who are nevertheless able to overcome their differences in order to work toward common objectives. The key issue is whether the community is able to establish common goals, establish strategies for accomplishing those goals, and then work together to follow the strategy that has been proposed.

In the advent of becoming a smart community, cottage industries

have boundless opportunities to be marketed outside the district of Kemaman. Through the use of technology, these cottage industries could thrive through increased demands for their products that can gain a better reach outside their traditional market place.

It is crucial that key characteristics of a community are outlined and their personality and traits defined to ensure maximum potential for growth.

Key issues to be identified are:

- Does the community have characteristics that enable people to engage in cooperative ventures and how can being a smart community enhance these ventures?

- What are the community standards? Is the smart community too extreme that it loses its charm and uniqueness? Or is it so drab that it doesn't generate enough interest to be sustainable?

- Does the community have a distinctive characteristic that can be the focal point and be brought to the fore and be built upon for socio-economic benefits?

"Is the community able to establish common goals, establish strategies for accomplishing those goals, and then work together to follow the strategy that has been proposed?"



FINDING RESOURCES AND FUNDING



Each smart community project is unique and therefore a generic smart community budget may not be sufficient. The budget has to be tailored according to the varying needs of the community in question. One size does not fit all.

Funding from any single source is usually too unpredictable and limited to sustain long-term, capacity-building strategies. As a result, comprehensive partnerships often combine multiple funding sources to meet the priorities of a smart community project.

“For the Smart Community Project in Kemaman, we worked in tandem with synergistic industry partners,” explained Dato’ Mohd Ali Hanafiah, Chief Industry Development Officer, MCMC. “The Smart Community Project is run based on both private and public funding. The available infrastructure is carefully assessed and thereafter gaps in the infrastructure are identified. This is where our synergistic partners come in. They weigh the areas based on their commercial value and build the infrastructure at their own cost without funding from MCMC.”

According to Dato’ Mohd Ali, some of these areas already fall under MCMC’s Universal Service Provision (USP). This initiative by MCMC is to provide collective and individual access to communications in underserved areas

such as Kemaman. It also encourages the use of ICT to build a knowledge based society and bridge the digital divide. The USP is channelled towards projects like the Kemaman Smart Community to develop its socio-economy.

“Through the USP, we have established the Kemaman Innovation Centre (KIC) in Kemaman as well as an Ops room for flood management,” divulges Dato’ Mohd Ali. “The telcos have been instrumental in providing expertise for the setting up of systems and applications.”

The USP and synergistic partners illustrate the variety and complexity of resources that together, create balanced and comprehensive strategies to build a smart community.



“Collective and individual access to communications in underserved areas such as Kemaman encourages the use of ICT to build a knowledge based society and bridge the digital divide.”



PLANNING FOR SUSTAINABILITY

Planning for sustainability is vital to ensure that the district of Kemaman, together with the industry and other stakeholders, and most importantly the community, sustainably plan and manage their smart infrastructure and adopt innovative practices. It is inherent that as the smart community was being developed, MCMC strongly emphasised the need to focus on planning activities that engage the community regardless of age and ICT knowledge. These activities were to enhance the use of the smart community infrastructure, to educate and inculcate the uses and advantages of being a smart-enabled community.

Amongst others, it is inherent that a financial strategy is implemented to ensure these activities are sufficiently funded, operated, maintained and re-innovated over time. It is crucial to enhance the long-term technical, financial and managerial capacity of each strategy.

ADDRESS COMMUNITY GOALS

Consistently assess a range of alternatives that address community goals such as a hackathon that gives them the opportunity to develop Apps that are mutually beneficial to the individual and the community



PITCHING AND PROGRAMMING THE NEXT KILLER APP

The rural folk get their first taste of a high energy, around-the-clock Hackathon to boost their interest in App-building as well as to create an opportunity to enhance their businesses.



Hunched over the computer keyboard in a fluorescent-lit hall, some 100 people pound away at source code for 24 straight hours at the Hackathon Appster Boss in Kemaman. The

contest is to pitch, programme and present a functioning Android mobile application in 24 hours. The participants from all over Malaysia were vying to be one of the idea generators and clinch the cash prize of RM7000 for the Open category and RM3000 for the novice category. These marathon coding competitions have exploded in popularity all over the country, fuelled by the development of easier-to-use software writing tools.

The Open category was won by Mamashroom Smart Tani whilst the Novice category was won by Park-In. The Mamashroom Smart Tani App will connect the entrepreneur



understand the nutritional benefits. This app is able to solve that.”

The Hackathon concept was new but nevertheless provided a lot of experience. “We joined the Hackathon to find out more about apps and challenged ourselves to create one. It was our first time. The biggest challenge was to develop our app using MIT. The members of our group were from diverse backgrounds. My mother is a teacher, my brother from *tahfiz* while I am from the agricultural sector. Regardless, we were driven by passion to develop this App. We didn’t even know how to create a splash screen or how to make our App function well.”

“We are still working to upgrade the App to its fullest potential,” he adds.

The opportunity to create an App and make money has exploded; the time and budget needed to code that software has fallen closer and closer to zero. Programmers can add core features to Apps simply by cutting and pasting a few lines of code. This enables them to focus on creating new functionality.

In other words, it’s an ideal time to go into the App business – Hackathons have emerged as the new forum for networking, learning, and beta-testing new Apps and ventures.

Venture capitalists are looking to Hackathons as a new way to spot fresh faces worth recruiting and good ideas worth funding.



to the buyer. It will enable them to search for agricultural products as well as present tutorials on how best to prepare and cook these products. “It will create awareness amongst Malaysians to use these products and practice a healthy lifestyle,” explained Zue Aziz. “For example, if you wish to eat mushrooms, you can use this App to search for the nearest location to obtain mushrooms as well as get information about mushrooms; its health benefits, tutorials on how to plant and cook the mushrooms, etc.”

The idea ‘mushroomed’ from her experience in the agricultural sector. “From my observation, farmers always faced problems marketing their products whilst the buyer, on the other hand, didn’t know where to buy the products. They didn’t even

BRIDGE THE AGE GAP

Analyse other innovative approaches that attract different age groups as well as draw out talents amongst the young i.e. Game Jam.



GAMING WITH SOCIAL RESPONSIBILITY

It's a vast difference from the norm. Five children show the positive side to gaming steeped with social values.

These days' kids live in two worlds.

In the real world, five 11-year-olds go to school, do their homework and help with their household chores. Then, at least once per day, they hop onto the Internet and transform into human warrior avatars of sorts and battle evil.

It came as no surprise that their crusade to battle evil would be the theme of their entry into the Game Jam, part of an initiative under the Kemaman Smart Community Project.

"The Game Jam was an initiative under the Kemaman Smart Community Project that was open to all the local schools to garner the interest of school children in the smart community concept," explains Dato' Mohd Ali Hanafiah. "It was to jumpstart their interest at an early level and, as they grew older, they would continue to develop games at a higher level. There can be income generated from developing these Internet games. It is interesting how they have managed to tap into their sense of social responsibility to develop a game that adds value to their lives and that of others."

Computer gaming took a different twist when the game in question had some reflection on the lives of Muhd Arif Fahmi bin Mohd Anuar, Syamil Laksana bin Azian Laksana, Tuan Muzfir bin Tuan Mohd Rafizam, Muhammad Aizat bin Ahmad Faidhirhisham and Muhammad Afiq Hanif bin Mohd Saporin. For these students of Sekolah Kebangsaan Sultan Ismail in Cukai, Kemaman, their winning entry spoke volumes about how they viewed gaming as a means to communicating important issues to other gamers.

GAME PLAN

The idea of their winning entry entitled *Banjir* was mooted from the devastation suffered by the community in Kemaman due to the monsoon floods annually. Though their experiences with floods differed, they agreed unanimously that it was a problem that hit their community relentlessly every year end when kids in other parts of the country were enjoying their holidays.

According to Muhd Arif Fahmi and Muhammad Aizat, though they

personally had not been victims of a flood situation, they could relate to the situation, having watched it on the news, and understood the severity of its impact on a community. "I know I would panic if I were to go through a similar situation," Muhd Arif Fahmi explains.

His fellow gamer, Syamil Laksana, has been trapped in his house when the surrounding areas were flooded. "It was scary as I couldn't leave my home to go out," he shares. "I felt like I was on an island!"

Tuan Muzfir, has also experienced flooding, especially the notorious flood of 2013. "The water level reached up to my waist. It was a frightening experience. Our belongings were also destroyed by the flood."

"We figured if we could show people how to help themselves through this game, it would benefit them in a real life situation."

Muhammad Afiq recounts his experience of being a victim of the area's worst flood in 2013. "The water level was up to my head. We lost most of our belongings and couldn't live in our home during that time. We managed to salvage some clothes and important documents before leaving to stay at my grandmother's house, which was on higher ground. We stayed there for two months before we could move back home. I helped my parents clean up the mess caused by the flood."

With experiences such as these, as well as the knowledge of the devastation of the floods in 2013, it was no wonder these five boys' discussions veered off in that direction.

"We figured if we could show people how to help themselves through this game, it would benefit them in a real life situation," explains Muhd Arif Fahmi.

"We could educate people to think fast as the water level rises," adds Syamil. "We could teach them the importance of salvaging important items such as personal documents that are difficult to replace."

So how does flood management tie-in with the game?

"The game starts as you enter your home," explains the rather confident Muhd Arif Fahmi. "The water level starts rising and, as it rises, you are to collate important personal items. You gain points for every important item you manage to salvage. If you reach out for the unimportant stuff, you don't get points and you are just wasting time as the water level keeps rising. Once the water level rises above your head, the game is over!"

"The important things consist of one's money, passport, personal documents and identity card," adds Syamil. "It's a hassle to apply for new ones."

This gaming experience instils valuable flood management knowledge in kids, basic but nonetheless just as important.



Syamil Laksana bin Azian Laksana

Muhd Arif Fahmi bin Mohd Anuar

Tuan Muzfir bin Tuan Mohd Rafizam

Muhammad Aizat bin Ahmad Faidhirhisham

Muhammad Afiq Hanif bin Mohd Saporin

"If I were to play this game constantly, important survival tactics would become second nature when the need arises," divulges Muhammad Afiq. "I would instantly know what to do and be able to think on my feet, grab the necessary and important items and head to a safer area."

The boys were given headphones and a plaque for their winning entry. "We were so surprised – and shocked!" says Syamil. "We really didn't expect to win!"

"We could educate people to think fast as the water level rises. We could teach them the importance of salvaging important items such as personal documents that are difficult to replace."

MOVING FORWARD WITH A SEQUEL

But this brainwave doesn't end here for these amazing, young boys from Chukai, Kemaman. According to Muhd Arif Fahmi, they are now motivated to enter more competitions. They already have a sequel in the planning: "Earthquake!" he exclaims. "We heard about the recent earthquake in Sabah and how school children died, and feel it's another disaster that Malaysians have to learn to handle. Maybe gaming can be a positive method for kids like us to learn how to save ourselves when in a similar situation."

These boys with steady heads and strong motivation are moving along the lines of not just becoming gaming experts but developers and entrepreneurs of the future.



The Game Jam participants from various schools



SUSTAINABLE AND RELEVANT GOALS



Set sustainable goals and objectives that support relevant community goals like organising a story-telling competition to support the making of a documentary centred on the community and their struggles against floods



SPINNING TALES

Understanding and learning one's culture and historical background is best experienced through the art of story-telling.

Story-telling seems to be a thing of the past where grandfathers gathered their grandchildren under a tree, sitting on woven mats, talking at length of how they fought the war or how tough life was as they grew up.

Charming tales steeped in moral values were the order of the day, which normally ended with summoning the ice cream man, who would be very timely, managing his rounds on a bicycle.

The gift of storytelling may be one of life's most powerful – and envied – skills. A story beautifully told can make us laugh, weep or swell with pride. Humans seem to be fundamentally drawn towards stories – they're how we record both the monumental events of life and the small, everyday moments.

As part of the Kemaman Smart Community Project, the MCMC organised a story-telling competition

“The gift of storytelling may be one of life’s most powerful – and envied – skills.”

as a mode of engaging the people of Kemaman. The competition saw people from all walks of life, regardless of age, come forth and share different aspects that, when brought together, spoke volumes of Kemaman and her uniqueness.

Prior to the competition, a one-day workshop on enhancing story-telling skills was held for the community of Kemaman. It saw 10 participants, some of whom were students from Institute Kemahiran Belia Negeri. There they learned to tell stories that define and shape their identity and shared this through actions and words. This was followed by a story telling competition that comprised five themes: Arts and Culture, Food, History, Socio-economy and Recreation, and Tourism. With cash prizes worth RM5000 for the top prize, followed by RM3000 for the second prize, RM2000 for the third prize and seven consolation prizes worth RM500 each, it’s no wonder this inaugural event took off on a positive note and served as a prelude to the making of the documentary called *Malaysia’s Flood Warriors*.



MALAYSIA’S FLOOD WARRIORS

□ *With the successful implementation of the Flood Management Plan 2014, the community of Kemaman stands more united than ever and, through a documentary, show how a community with one voice can forge ahead despite its challenges.*

Within the quaint town of Kemaman, there are hills and plains, rivers and roads that have many a tale to disclose and what better way than to tell it through a documentary aptly called the *Malaysia’s Flood Warriors*. The documentary

was streamlined to present the facts and give an accurate representation of the issues faced by the community of Kemaman.

It is to be used as a medium to educate people and help the audience understand the community of Kemaman and what they stood for. The premise of the documentary is the cohesiveness of a multi-ethnic community forging ahead despite the challenges of the flood brought upon them by the monsoon. Kemaman’s

“The cohesiveness of a multi-ethnic community allowed them to forge ahead despite the challenges of the flood brought upon them by the monsoon.”



history, its challenges and, most recently, its triumph in battling the floods in 2014 and winning the *Gold Standard Award for Flood Operations* from the Prime Minister, was the catalyst behind this documentary.

By analysing this extraordinary community throughout its history, and water topography system where river and sea meet, we see how residents faced their annual predator with unrelenting fervour. With the Flood Management Plan 2014 activated during the floods in December 2014, we learn how the community, through volunteerism and unity, succeeded in deploying this plan. The documentary covers the flood in three stages: Pre-flood, actual flood and post flood situations.

“By managing this calamity, the community was able to spring back to normalcy fast enough because of their level of preparedness,” explained Dato’ Mohd Ali Hanafiah from MCMC. The fishing and local cottage industries managed to get back on their feet faster. The tourism industry was also reactivated quickly, hence causing as little loss of income as possible.”

“This is why the community of Kemaman is special. They take pride in whatever they do, and they do it with unrelenting passion.”

“The triumphs and woes of Malaysia’s flood warriors were written, co-produced and documented by local talent through script writing and story-telling workshops and competitions,” he divulged. “What better way than to have the people who were directly involved with fighting for their lives and livelihood, share their experiences. The locals were instrumental in seeing this documentary come to fruition as they assisted the producers in any which way possible; whether it was to take them to a particular location or direct them to a particular source or place of interest, they stepped up and helped.”

“This is why the community of Kemaman is special,” he adds. “They take pride in whatever they do, and they do it with unrelenting passion.”



BE INCLUSIVE TO MAXIMISE MUTUAL BENEFITS

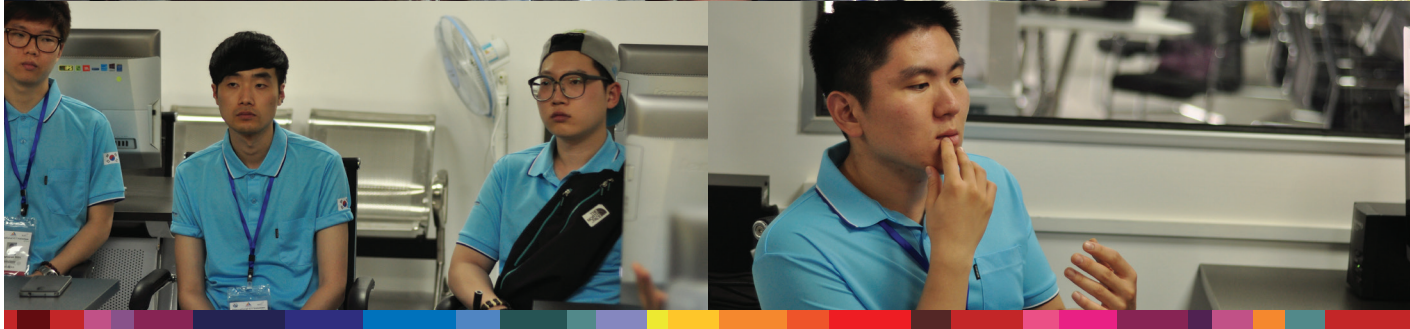
Do this by setting goals and selecting projects that are inclusive of the community.



DIGITAL ————— □ EMPOWERMENT

Being equipped with ICT knowledge is incomplete if there is no regard for Internet safety, security and responsibility.

Digital Empowerment entails reaching out and empowering Malaysians to become effective 'digital citizens' and increasing their participation in the social and economic sphere. This is so they can contribute towards building Malaysia into a smart digital nation.



A DIGITAL CITIZEN

The rural community is relatively new to the cyber world hence it is important to inculcate the culture of positive and responsible use of ICT. This is achievable via programmes, initiatives, platform development and implementation with relevant stakeholders and a massive reach-out to as many Malaysians as possible.

STRATEGY TO WIN HEARTS

Apart from the general public, who are the people who would gain from empowering their lives with ICT knowledge?

Anyone from the unemployed, to homemakers and single mothers,

to young entrepreneurs – we all can benefit from the knowledge of ICT. They can be taught to develop a website, or a Facebook page or a BlogSpot. We are living in a time where you don't have to leave your home in order to earn a living. Business or otherwise, it is always a must to know where you are online, what you are looking for and be aware of details that are not suitable for you to put online.

KOREAN ICT VOLUNTEERS

The International Telecommunication Union (ITU) in collaboration with National Information Agency, Republic of Korea (NIA) recently organised a programme themed Empowering

Youth in ICT Development that saw 100 Korean students from various universities in the Republic of Korea come to Kota Kinabalu, Sabah to attend an ICT boot camp hosted by MCMC. This is Malaysia's first participation in the IIV programme.

During these visits, the students partake in ICT volunteer work which includes organising IT training as well as sharing the positive things that ICT has to offer. In addition, the students enjoy a cultural exchange with the locals.

"This is our first time in Malaysia. We feel we have a responsibility to share our knowledge with Malaysians."

As part of the Kemaman Smart Community project, this programme was brought to empower the people. There is so much to learn from them. Today, you see four Korean university students here at Pusat Internet 1Malaysia/1Malaysia Internet Centre (PI1M) in Gong Chengal. The four young men from Soong Sil University in Korea are also international ICT volunteers.

"This is our first time in Malaysia. We feel we have a responsibility to share our knowledge with Malaysians," says one of the students, Jeyong Ryu, excitedly.

The four students consist of two ICT experts, one cultural exchange student and one language exchange student.



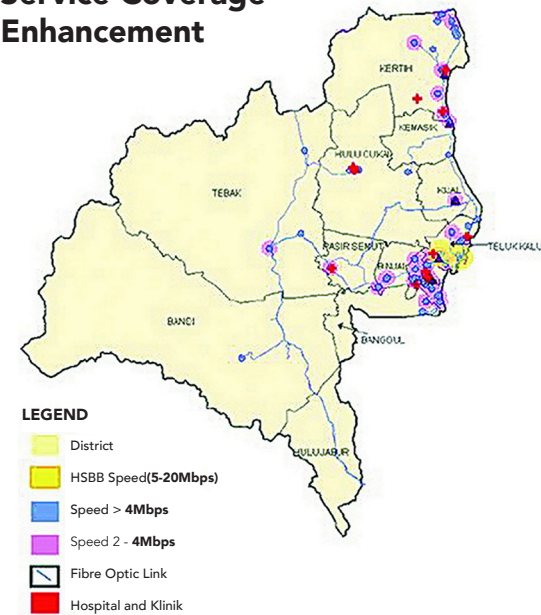
The content of what they teach, from an ICT angle, would benefit the Kemaman Smart Community Project.

Malaysia is leveraging on the NIA/ITU programme or IIV Programme to develop its own version of the Malaysia ICT Volunteer Programme to support the move towards a smart digital nation.

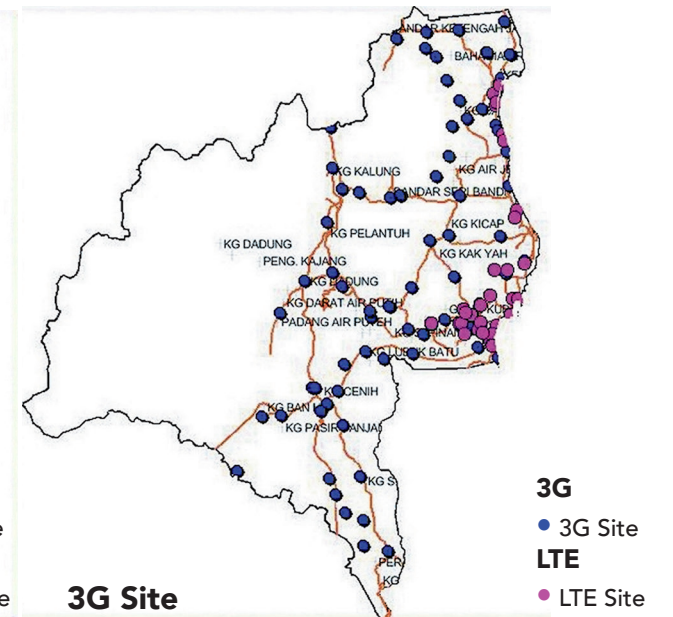
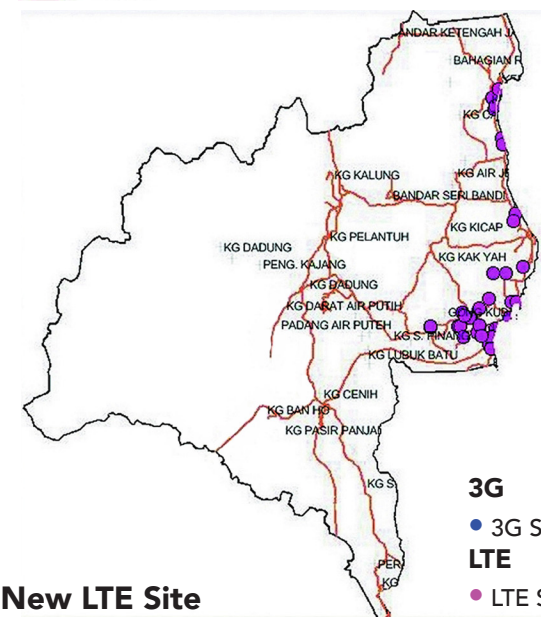
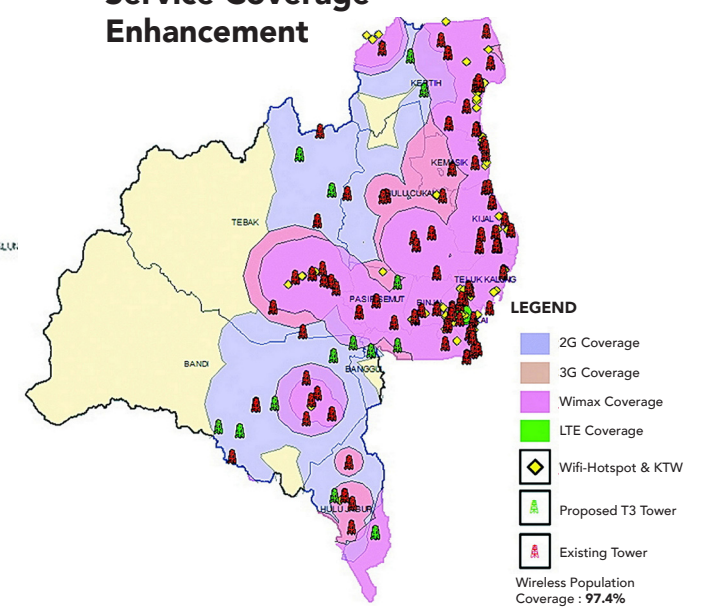
FIGURING OUT THE TECHNOLOGY

Technical infrastructure refers to the composite hardware, software, network resources and services required for the existence, operation and management of an ICT environment. It allows a community to deliver ICT solutions and services to its people.

Service Coverage Enhancement



Service Coverage Enhancement



GETTING COVERED

To enable the growth of new advanced Internet applications, the presence of a telecommunications infrastructure is crucial. Its success in the information economy and the increase in productivity is dependent on its deployment.

In order to kick-start the telecommunications infrastructure development needs for the Kemaman Smart Community, a stock-take exercise was conducted in February 2015 to ascertain the capacity of fixed and wireless broadband coverage within Kemaman. In addition to that, the needs of the community and

the extent of coverage and services required were surveyed. MCMC also gathered information on suitable applications from service providers with PDTK, and shortlisted these to be developed further. From March to June 2015, the infrastructure was set up according to the findings.

Based on the above, the team identified four main factors to address in order to develop and improve the infrastructure and services. "It is crucial that the 3G coverage covers at least 85 per cent of the entire district of Kemaman," explains Dato Ali Hanafiah. "In addition, the 4G LTE coverage should be available in the entire town of Chukai as well as tourism attractions within Kemaman."

"As such, quality coverage in problematic areas is to be enhanced through the reconfiguration of satellites, relocation of temporary satellites as well as new satellite structures in new locations that are in a blind spot or are experiencing lagging of coverage."

"Also included in the infrastructure plans is the upgrading of fibre optic cables to enable high capacity broadband services," he adds. "The cost of the enhancement of the infrastructure and communication services has been covered by industry players."

To date, rural districts such as Bandi, Banggul, Binjai, Cukai, Hulu Cukai, Hulu Jabur, Kemasik, Kerteh, Kijal, Pasir Semut, Tebak and the Teluk Kalong Industrial area are enjoying Streamyx

at 2Mbps to 8Mbps. In addition, higher speed is also available at the Teluk Kalong Industrial area with Unifi at 5Mbps to 20Mbps.

"The Kemaman Smart Community Project holds itself to the highest performance standards so that the community can stay connected at all times."

The Pusat Internet 1 Malaysia (PI1M) is a project aimed providing Wi-Fi access for the rural population. It is part of the government's efforts in narrowing the digital divide between the urban and rural population. The PI1M is available at Kampung Gong Chengal, Kampung Geliga, Kampung Bukit Anak Dara, Padang Kubu, Felda Kerteh, Felda Cerul and Bukit Kuang.

"Upcoming packages include fixed broadband packages at 1Mbps with a data cap at 1GB for RM38," divulges Dato' Mohd Ali. "This service will be implemented starting June 2015. Increased services at 5Mbps to 20Mbps are expected to reach various districts with Chukai obtaining this service speed in August 2015, whilst Kerteh and Kemasik receive it in October and November 2015 respectively."

"The packages for wireless broadband are with a data cap of 1GB at RM25. In addition, the 3G and LTE coverage starts July 2015 with a new PI1M centre opening in Kampung Kemasik Baru. The wireless population will then be deemed to cover 97.4 per cent of the Kemaman Smart Community."

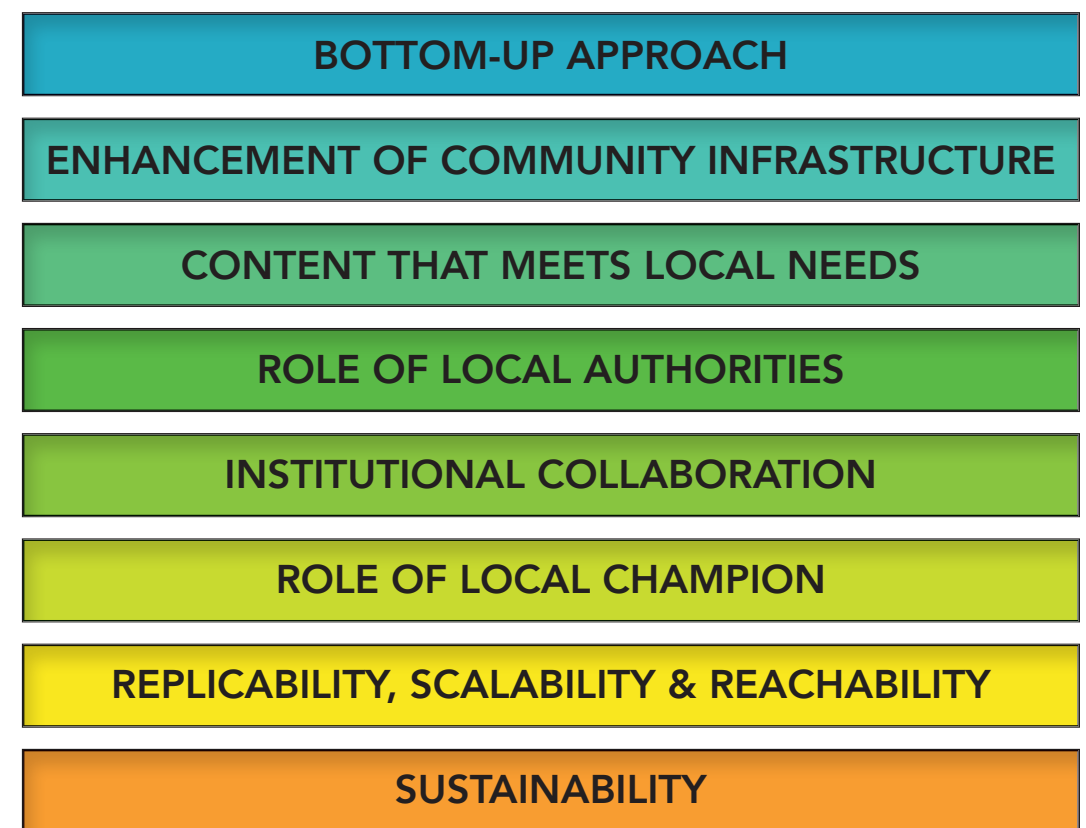


IMPLEMENTING THE SMART COMMUNITY

Some of the keys to completing successful implementation of the smart community are found in a clear, concise and compelling mission and vision statement which identifies the purpose of the smart community. A well-defined value statement which is supported by all participating organisations will help orchestrate a smooth path to project success. Strategic policies which set boundaries within which the smart community will operate are crucial. Goals and objectives which provide specifics about how to execute strategies as well as an evaluation programme to serve as a monitoring and feedback mechanism should be in place to ensure the smooth execution and implementation of the smart community.

GOALS & OBJECTIVES FOR SMOOTH EXECUTION

The smart community's success is driven by principles that serve as a guide for implementation.



ELEMENTS TO BOOST PROGRESS

Outlining details for implementation is crucial for the replication of future smart communities.

The smart community is developed on the seven principles outlined to ensure successful implementation. The concept can be replicated easily from community to community by integrating these principles.

"The first principle is the bottom-up stance to ensure sustainability, and will enable the smart community to forge ahead," explains Dato 'Mohd Ali Hanafiah. "From the district officer to the ICT teachers' unrelenting



passion and commitment to the smart community project, we are assured that through them the community will accept new developments that are beneficial to them.”

The second principle outlined is a complete infrastructure. “This needs to be set in place to ensure the smart community runs on a platform that is Internet ready and efficient.”

“The third principle is where the core needs of the community will also be addressed through the development of the smart community to ensure it is beneficial both in the short term and long term. The fourth principle covers key individuals with decision-making aptitudes who will work in tandem with the Malaysian Communications and Multimedia Commission (MCMC) to ensure the community needs are met and the development moves at a pace that is adaptable to the community of Kemaman.”

According to Dato’ Mohd Ali, the fifth principle, cooperation from local institutes to harness talent and extend

expertise in the ICT field, is also encouraged.

“A local champion is identified to act as the catalyst in driving the concept of the smart community. This is the sixth principle. From the district officer to the ICT teachers, they are all instrumental in driving the smart community to success.”

“The seventh principle is how the smart community must be made replicable, scalable and reachable. This is in line with developing the country into a smart nation. Collectively, smart communities will boost the country’s status as such.”

“Lastly, the eighth principle, sustainability, ensures that innovative approaches continue to be in the forefront of the development and enhancement of the community.

With the positive implications from the Kemaman Smart Community, it is apparent that we are enroute to achieving the smart nation status in good time. □



DEVELOPING POLICIES

Smart communities need to develop organisational policies in order to implement the strategic aims and priorities of the project.

LEGISLATION AND POLICIES

These policies provide guidance and facilitate how the smart community's overall mission and aspirations are to be pursued.



FACILITATE CONTRACTS

Development of telecommunication policies and related legislation; internal policies for operating a smart community should be encoded for use over middle to long term. □

The role of the local city council, Majlis Perbandaran Kemaman (MPK) is to manage infrastructure, internal systems and the public web. "However, in the context of the Smart Community Project, MPK has to approve applications put forth by telecommunication companies,"

explains Ahmad Sheikh. "As long as the telcos fulfil the council's checklist, approvals should be swift. If the infrastructure proves beneficial to the people, the application can be approved in two weeks or less."

MPK is instrumental in fast tracking

approvals. "We understand that when there is a cellular infrastructure, lots more can be done in this smart community," says Ahmad Sheikh.

A term like 'cellular infrastructure' is not easily comprehensible, but 'Internet access' and 'mobile phone access' are self-explanatory to people. So far, only 75 per cent of Kemaman has 3G coverage whilst Chukai enjoys 100 per cent. To achieve 100 per cent coverage in Kemaman, there needs to be more sites identified as suitable locations for telco towers. To put this into place, there have been some 50 applications from telcos for site approval. The target for this is end of August. With towers put in place and lines connected, the aim for full digitalisation might just happen earlier than August.

"When there is a cellular infrastructure, lots more can be done in this smart community"

If the telcos and the landowners have an agreement, getting approval for these sites is not a problem. Sometimes the glitch comes when making a deal with the landowners. In the past, some landowners were not paid for leasing their lands to certain telcos. Once bitten twice shy; even if what happened previously had nothing to do with current telcos, their new applications nor the Smart Community Project. The telcos have to win the hearts of the people once again.

"There are also skeptical residents who are worried that the towers may

emit radiation. We urged the MCMC to test this and the result stated that there is nothing to worry about. The level of radiation is harmless. There was even a dialogue held between the residents, telcos and MCMC so clarification could be made. If the towers tilted or were built on unapproved sites, now that would be of real concern," says Ahmad Sheikh.

"In some instances, telcos toe the line but sub-contractors do not, thus painting a bad picture of the situation. The best option is for telcos to seek 'green areas' which will be the least problematic since these are government lands. As long as the people can benefit, MPK will not have a problem with applications."

From the state government's perspective, three areas of relevance to the smart community project are in need of due consideration. Firstly, it is inherent that communication infrastructure is readily available in new areas in order to attract investors. Secondly, the state government's assistance is required to ease the process of Right-of-Way during the development of telecommunications and transmission infrastructure to projects. Lastly, to establish a Film Unit to expedite the management of film direction that could in turn project the state as a tourist attraction.

It is evident that with these in place, a smart community is well-equipped to progress and gains from an economic standpoint which will in turn benefit the people of the community.



WHEN OLD BECOMES NEW...

The nucleus of a smart community is the people; and its success dependent on the acceptance by which they adapt and adopt the new improvements and enhancements in their everyday life in the wake of technology.

Progress is ripe for the taking and the opportunities are limitless. The nurturing of minds and the growth capacity to be an enabled, knowledge based society allows for freedom to express and innovate. The time is right to get smart and to be smart as a community for a sustainable future.





PRINCIPLES OF A SMART COMMUNITY

BOTTOM-UP APPROACH

ENHANCEMENT OF COMMUNITY INFRASTRUCTURE

CONTENT THAT MEETS LOCAL NEEDS

ROLE OF LOCAL AUTHORITIES

INSTITUTIONAL COLLABORATION

ROLE OF LOCAL CHAMPION

REPLICABILITY, SCALABILITY & REACHABILITY

SUSTAINABILITY



MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION (MCMC)

The Malaysian Communications and Multimedia Commission (MCMC) implements and promotes the Government's national policy objectives for the communications and multimedia sector. The MCMC is also charged with overseeing the regulatory framework for the converging industries of telecommunications, broadcasting and online activities, in accordance with the national policy objectives set out in the Communications and Multimedia Act 1998 (CMA). The MCMC also has the responsibility for postal services and digital certification under the Postal Services Act 1991 and the Digital Signature Act 1997 respectively. The Acts provide that the MCMC undertakes a policy implementation role, while policy decision-making is vested in the minister.

Not just a regulator, the MCMC also undertakes a developmental role in ensuring quality communications services reach all Malaysians alongside the drive towards positive industry growth and consumer confidence. As part of its developmental function, the MCMC has been implementing projects under the National Broadband Initiative. These include the 1Malaysia Netbook, Kampung Tanpa Wayar 1Malaysia (wireless villages) and Pusat Internet 1Malaysia (community broadband centres) initiatives, as well as Community Broadband Libraries (CBL) and a nationwide expansion programme for wireless broadband services.



THE MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION

**MCMC Tower 1
Jalan Impact, Cyber 6
63000 Cyberjaya
Selangor Darul Ehsan**



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