



Case Study: Bindez

GSMA Mobile for Development Impact

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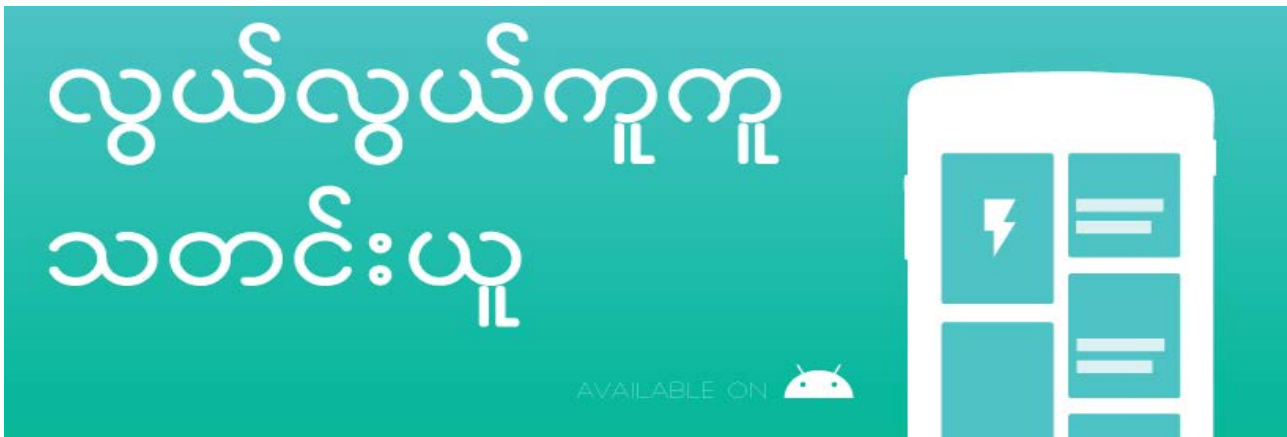
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Connecting the people of Myanmar with information and content in their own language



Product Summary

Bindez is a recently formed start-up in Myanmar that has developed an information search engine and discovery platform that connects users to relevant and understandable information relating to local news (politics, business, sport and entertainment) and real-time information in range of areas. Their objective is to connect Myanmar people worldwide with information and content in their own language.

Year Launched: 2014

Business Model: Tech Transfer, Advertising, Insights

Targeted Device: Smartphone

Primary Delivery Technology: App, Web

Products & Services: Search engine and Content Portal

Markets Deployed In: Myanmar

Estimated Total Number of Users: 20,000 (November 2015)

Background and Opportunity

After decades spent in relative isolation, Myanmar is opening up to the world. The military dictatorship that ran the Southeast Asian nation from 1962 to 2011 tightly controlled many industries. Until 2013, the state owned Myanmar Posts and Telecommunications (MPT) was the sole landlines, mobile and internet service provider. The consequence of this was that while mobile phones were not illegal, the cost of running a mobile was far too high for the vast majority of the population. Five years ago, the country only had 1 million mobile subscribers and only Eritrea and North Korea had lower levels of mobile penetration. However, a series of reforms beginning in 2011 led to a loosening of many of the traditional monopolies that existed in the country. This included the telecoms sector, and in 2013 Telenor and Ooredoo were awarded licenses in the first telecommunications auction held in the country. As a consequence, growth has been dramatic and Myanmar now represents one of the world's most dynamic mobile markets. In a single year, unique subscriber penetration (the

percentage of the population subscribed to a mobile service) in the country jumped from 11.7% to 29.1%.¹ Moreover, over half of these subscribers had access to the mobile internet, typically on faster 3G or 4G networks. As a consequence, thanks to mobile Myanmar has joined the internet age at an unprecedented speed.

The decision of the foreign operators to push 3G networks, 'leapfrogging' the older 2G signal meant that user experienced a far higher quality of service than in many comparable markets. Concurrently, the liberalization of the telecoms market came at point in time when smartphones were becoming a mass market product in the developing world due to their increased affordability. In other emerging markets, a number of services have necessarily been developed for basic phones, using SMS, USSD and IVR platforms.² As a result, Myanmar had the potential to go straight to smartphone apps, skipping less advanced mobile platforms. However, this is contingent on consumers seeing the enhanced value of smartphones and mobile broadband network. For this reason, operators in Myanmar are interested in finding content that is relevant for the subscribers now coming online. In recognition of this, the GSMA have previously supported Ooredoo, in order to develop a pre-natal and post natural care App, May May, specifically tailored to the women of Myanmar. The objective here, aside from disseminating vital information, is that by demonstrating the relevance of Internet to women, they will ultimately become better customers for the operator.³

Globally, for decades, a great deal of energy has been focussed on the lack of connectivity in many emerging markets, particularly with regard to the Internet. In the past ten years, as more people have begun to come online, the focus has begun to shift towards whether the content is there to make the Internet relevant to those who are being connected for the first time. As a result, there is now more attention being placed on the content and gateways to content that people in particular markets understand and find relevant. For this to happen, many technical challenges have to be overcome, information discovery chief among them. This problem was the one Bindez aimed to solve.

Objective

At present, the majority of information in Myanmar has not been digitized. While a range of media and entertainment content has come online, other sectors like healthcare, education, government and agriculture are only starting the shift towards digital. Ultimately, Bindez wants to be the main way in which people in Myanmar find information in these areas, for both content and real-time updates.

At present, the main ways in which the citizens of Myanmar discover content is through either Facebook or Google. Bindez aims to offer people a different way of consuming information in that it offers a more curated experience. This is in the belief that these platforms are often a daunting experience for inexperienced, first time users of the Web. While challenging such internet behemoths may seem daunting, the region has already seen examples of local competitors achieving this. The browser CocCoc was launched in Vietnam in 2013, and is now larger in that market than both Firefox and Internet Explorer, something it has done by designing a product relevant to its Vietnamese audience. Similarly, the Chinese company Baidu, provides a hugely successful example of information and content can be delivered at scale to Web and smartphone users. Baidu currently has over 500 million active users of their complementary range of products.

¹ Source: [GSMA Intelligence](#) (Q2 2014 - Q2 2015)

² The M4D Impact [Products and Services tracker](#) features hundreds of such services operating across emerging markets

³ GSMA Connected Women, [Maymay in Myanmar: How and why Ooredoo are targeting Myanmar women](#)

Approach

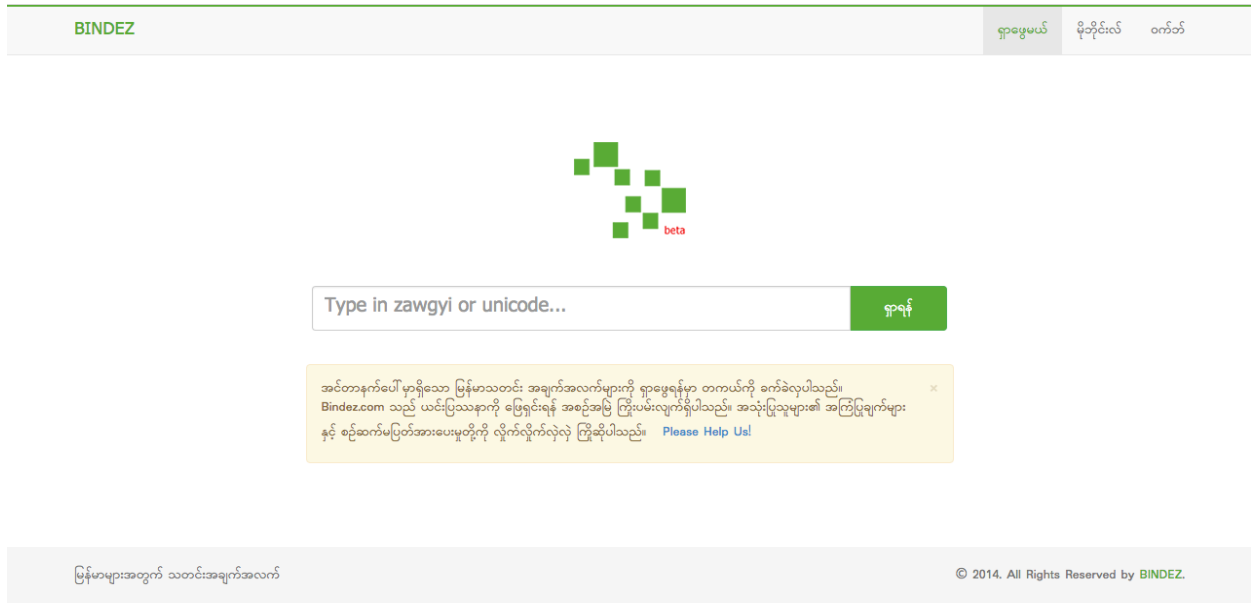
Bindez initially emerged out of a challenge that has faced many countries coming online in the last few decades: how to make their countries languages talk with computers. This area, natural language processing, is one that spans computer science, artificial intelligence, and computational linguistics that studies the interaction between human language and computers. The field remained very underdeveloped in Myanmar until recently. Before the turn of the millennium, there was no standard way in which the Myanmar language could be interpreted in more advanced computer systems such as search engines and recommendation systems. The Government supported Myanmar NLP Research Centre, was established in order to deal with this, and resulted in a limited series of standardized Unicode fonts, Myanmar1, Myanmar2 and Myanmar3.



In 2013, Ko Ye Wint Ko, a 23 year old working in Singapore as a Software Engineer attempted to develop software architecture and code to address this need. His contemporary, 22 year old Ko Htet Will, had just graduated and joined him to build momentum on their project in the community. One of the first start-up incubators in Myanmar, Project Hub Yangon, selected Ko Htet and Bindez for their first fellowship in July 2013 and offered them working space and start-up mentoring. Here project Bindez was connected with their mentor Rahul Batra, an Indian national with internet business and start-up experience (including 5+ years with Google internationally) who was on a break from his career, volunteering with a rural micro-entrepreneurship program in Yangon.

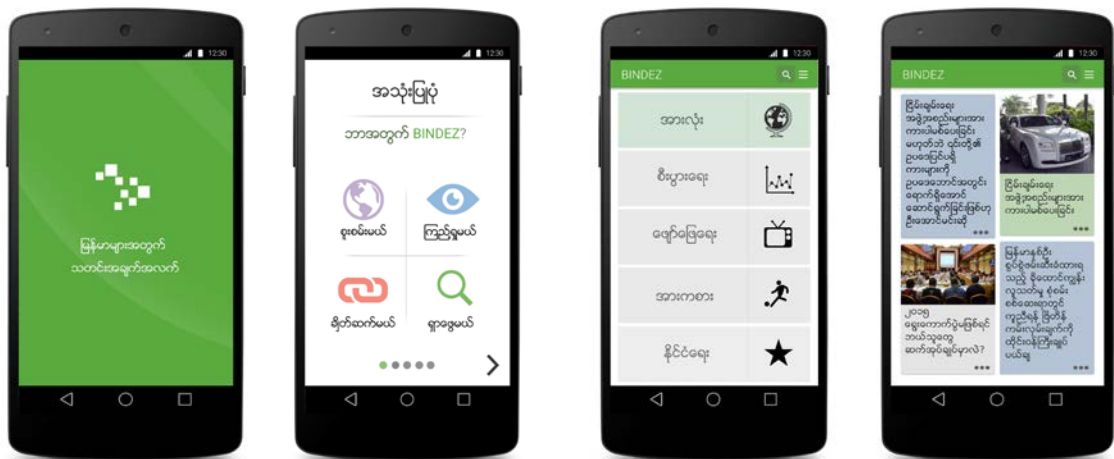
Initially, their goal was to develop a search engine that better understood the nuances of the Myanmar language. While Google had launched a Myanmar version of their search engine in March 2013, there were issues with content indexing. As a result, digital content in Myanmar was highly fragmented, particularly in the Myanmar language. Bindez felt that there was an opportunity to develop a search engine tailored to speakers of the local language.

Figure 1: Bindez search engine



However, the team quickly grasped two key facts that shifted their approach slightly. First, was that the majority of people were connecting to the internet via smartphones. Second, given the limited exposure that many of these users had to the internet, a more curated experience would be necessary in order to make the Internet relevant to a larger percentage of the population. As a result they launched a News Search App prototype in Nov 2014 in order to address the need for a service that can connect users with news in politics, business, sport and entertainment.

Figure 2: Bindez Private Beta Version (August 2014 to January 2015)



Since then, the product has continued to develop in response to events. Within days of the July 2015 floods in Myanmar, the team had launched an ‘Emergency News’ category, that as able to bring all flood related news from across media sources in one central location. Similarly, a category was launched for the November 2015 General Election.

Figure 3: Bindez and the Myanmar Floods and Elections



Challenges

1. Technical: text issues

Encoding

The Myanmar language currently lacks a single encoding standard. To date, the majority of websites in Myanmar have used a standard called Zawgyi for text input. However, Zawgyi is not compliant with Unicode, the globally accepted industry standard. This means that at present, content created using a non-standard font cannot be read on certain devices. As a result, all applications dealing with the Myanmar language face the technical challenge of devising a way converting content inputted on different standards.

Bindez overcame this by allowing users to select the fonts they have on their mobile phone, when they install and use the app for the first time. The app then converts all the information and content to the fonts the users have selected, mapping character code numbers between different font standards.

Tokenization

It is relatively straightforward in English for computer systems to detect and extract important keywords to understand the grammatical structure and the meaning of the text, but non-segmented languages such as Chinese, Myanmar pose additional challenges as words are not clearly delineated by white space. For example, search engines require documents to be indexed by words. When a query is submitted to a search engine, keywords of the query are extracted and compared against the words that are stored in index files to return search results. Tokenization is therefore an essential pre-requirement in information retrieval process.

This was not something that had been tackled in Myanmar before. In order to solve this, Bindez carried out a collection of 100,000 headwords from sources including dictionaries and websites. As

of today, they have built a repository of more than 100,000 words to be used in tokenization programs. Moreover, as part of this process, they created algorithms in order to facilitate machine learning of texts.

2. Ecosystem: the difficulties of starting a business in Myanmar

Being an entrepreneur in Myanmar presents a host of challenges. Despite recent reforms, according to the World Bank's 'Doing Business' ranking, it remains the hardest place in the world to set up a business.⁴ More broadly, the challenges that Bindez have faced are similar to many early stage start-ups in emerging markets.⁵ At present, Myanmar lacks many of the components necessary for a flourishing start-up ecosystem, including a lack of skilled professionals in certain sectors, funding and infrastructure. Culturally, there is often a lack of belief in start-ups in general and a resistance to change, both of which are critical enablers of a successful start-up.

For Bindez, a more specific issue has been the fact that, there are only a few businesses in Myanmar that have an understanding of digital advertising and marketing. As a result, the majority of advertising budgets goes toward offline marketing. Subscription and data services have yet to be proven as viable business and user monetization options, which then represents a large challenge to the short-term commercial potential of digital start-ups and products in Myanmar.

3. Investment: a shortage of seed capital

In common with a majority of start-ups, Bindez has had to work hard to gain investment. This has been particularly challenging given the nascent nature of the start-up ecosystem in Yangon. One of the key issues here is the absence of financing at all levels (seed financing, early stage financing, and growth financing) and for all types of capital (debt financing, equity financing and grants).⁶

While Bindez's product is primarily a commercial proposition, the venture has always had social impact embedded in its vision and approach. However, despite the large amounts of development sector capital that has arrived in Yangon in recent years, this hasn't had a particular impact on early stage start-ups like Bindez. The relatively low speed at which donors move and their lack of experience in funding early stage start-ups like Bindez, means that the arrival of international donors has solved the main issue facing entrepreneurs: a lack of seed capital. As a result, Bindez has had to rely on their network to connect with international investors.

User Centric Attitudes

The ethics of Design Thinking - free-thinking, prototyping, user-testing, evaluation, feedback, iteration – are central to how the team works. Similarly, the design of the user interface (UI) and the user experience (UX) is fully based on user needs. Both are flexible, fluid, and intuitive to what users are seeing and engaging with.

From the outset, Bindez has engaged with experts in both design and engineering to develop the product, as well as attended labs at local community hubs to understand market needs better. A great deal of insight was taken from world leading centres of design thinking such as Stanford University's d.school, HPI Potsdam School of Design Thinking, and local organisations such as Proximity Designs and Point.b. In recognition of the importance of design thinking, Bindez have provide financial support for one the first design centres in Myanmar.

⁴ In the World Bank's Doing Business global ranking, Myanmar was placed 189 (out of 189) in the 'Starting a Business' component in both 2014 and 2015

⁵ This is something we have explored in depth in two reports: [Emerging Market Entrepreneurs and Silicon Valley: Making the Mobile Connection](#) and [Financing Innovation](#)

⁶ Project Hub Yangon and USAID, [Mapping Yangon's Emerging Start-Up Ecosystem](#)

An example of how this approach has informed of the UX of the product is found in the app's menu design. When testing, Bindez found that conventional long-press and hidden menus, common to many modern apps, were not appropriate in Myanmar due to users' lack of familiarity with this kind of design.

Figure 4: The importance of design thinking



How to use the 'Search' functionality



How to 'Save' an article to read later



The importance of design thinking

The Use and Value of Data

As an app and website, Bindez necessarily creates large amounts of data. This is generated and analysed through Google Analytics, Google Play Store Analytics and their back-end data platform, PageGraph.

The data generated has fundamentally shaped the look and design of the product. For example, the placement of various categories within the service is based on engagement with particular articles. Similarly, user flow (i.e. the path the user takes through the app) is tweaked in response to data. For example, the decision to go with a 'swipe' and 'scrolling' interface was made after seeing how users engaged with the product. Moreover, in the initial product, basic content snippets from the various information sources Bindez were indexing were displayed to users along with a link to the original source. However, data revealed that due to the slow internet downloading speeds, taking users to original websites led to a very poor user-experience on mobile. As a result, the team begun testing a 'Read' view, which enabled users to read full articles in a simple format, with faster loading time. Following this improvement, the team found that time spent in the app doubled.



Partnerships

Content Partners

As an information based platform, content is the lifeblood of the Bindez platform. At present, Bindez are working on developing formal partnerships with local news, directory, data, information and service sector partners. These kinds of partnerships are ground-breaking in Myanmar, given the lack of a precedent in the market for the majority of content providers in dealing with digital services and internet-based business models in general.

Marketing and Distribution

At present, Bindez's key marketing and distribution partner is Ooredoo Myanmar. Having originally sat within the mobile operator's Ideabox start-up incubator in 2014, the Bindez team has a good relationship with the firm, with support from the digital services and senior management team at Ooredoo. Bindez originally planned to have an equity relationship with them, but have ultimately signed a commercial agreement with Ooredoo in May 2015. The principal rationale for this partnership for Bindez is to gain access to Ooredoo's millions of subscribers.⁷ The initial SMS outreach campaign reached over 2 Million Ooredoo subscribers and led to just over 10,000 downloads of the App. They have also been able to engage with Ooredoo Myanmar's Facebook audience of more than a million followers via tailored brand, product and feature highlighting campaigns.

For Ooredoo, the rationale for the partnership is borne out of an understanding that having quickly connected millions of people in Myanmar to the internet for the first time, that they need provide these users with relevant content.

⁷ Ooredoo had 5.1 million connections in Myanmar as of Q3 2015

Investors & Advisors

Bindez began as a self-funded project with funding from family and their own savings. It has since received seed and angel investment from a selection of investors across Asia. They are currently looking for further investment as well as projects and proposals to draw funding from for-profit development sector focussed investors and institutions.

In engaging with a variety of investors from around the world (US, Europe, MENA, APAC), the team found that in general, Western investors lack an understanding of the context in Myanmar. They found that Asian and Asian based investors had more of the patience and flexibility required for dealing with an early stage market such as Myanmar.

Lessons learned

1. Be willing to pivot and to innovate.

One of the most widely repeated mantras in the world of digital start-ups is that a willingness to pivot is essential. Founders need to be willing to change course to grasp newly perceived opportunities within a market. Bindez's journey so far is testament to this, particularly in the shift from a general search engine for local language to an Android based news and information platform. In their words: "Plan A will never work. Plan B might barely stick. Be prepared to do your homework, run your checks, cover your bases and stay 2 moves ahead of a potential let-down - every day, week, and month."

2. Building a team with an aligned approach and goals is difficult, but essential.

Given the scope of Bindez's vision, a huge number of challenges remain, chiefly, securing funding and continuing to execute a strategy for marketing, distribution and monetization. Given this, ensuring that the team are on the same page in terms of vision and value is essential. Bindez have spent a large amount of time ensuring this is the case in the early stages.

3. Given the uncertainty of working in rapidly developing markets, risk mitigation is key.

Despite the huge progress made in Myanmar in recent years, operating there remains highly unpredictable due to a lack of infrastructure and the continuing legal, political and social instability. Ensuring that any business opportunity is subject to risk-assessment across technology, product, content, human resources and financial transactions remains a priority when making key decisions and commitments towards finance, product, marketing and partnerships.

4. Be disruptive in your thinking, but focussed in your execution.

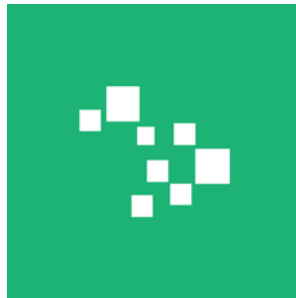
Emerging markets offer a plethora of opportunities for entrepreneurs, who generally have a problem solving mind-set. However, there is a risk that entrepreneurs end up getting pulled in different directions producing a number of half-baked products. Focussing on building depth and value over long patient periods of time, and keeping an eye out for market-serving opportunities is essential for success.

Future Plans

At present, Bindez is focussed on delivering a successful and scalable product, securing investment and driving usage. Targets are focussed around building content and information

discovery, user base and service offerings. They are projecting growth to 1 million users by the late-2016 and 3-5 million users by the end-2017. Here, the recently agreed relationship with Ooredoo is critical, given that by the first quarter of 2017, they are forecast to have 9.6 million connections.⁸

While very much a news and information product at present, the team are keen to explore complementary business models in future. They have also received regional feedback that their product could be relevant other markets where similar solutions are needed. Here, the Bindez team is confident that while Myanmar may be a nation of just over 50 million people, with a particular culture and past, it is representative of the huge wave of people around the world who are coming online through mobile for the first time. If this is the case, then their product could be an essential one in larger global push towards connectivity and information inclusion.



⁸ GSMA Intelligence



About the GSMA

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

For more information, please visit the GSMA corporate website at www.gsma.com. Follow the GSMA on Twitter: @GSMA.

About Mobile for Development Impact

GSMA Mobile for Development Impact supports the digital empowerment of people in emerging markets through its Mobile for Development resource. It is a central platform of data, analysis and insight used to inform investment and design decisions for mobile services.

Our work is freely accessible through support from Omidyar Network and in partnership with The MasterCard Foundation at <http://www.m4dimpact.com/>



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