

Mobile Network Operators are app developers' new best friends....

The mobile app economy continues to deliver astonishing growth. In 2018, estimates put the value of annual consumer spending through app stores above \$100 billion for the first time.

In the context of this high growth, Mobile Network Operators (MNOs) are transforming their relationship with the app ecosystem. Last year, several MNOs began trialing a new marketing-led business model, which takes advantage of the information MNOs have about customer spending. This information is highly valuable because it helps app developers focus their marketing on customers that are more likely to pay. These 'pay proven' audiences give app developers a higher ROI from their campaigns and capture high Life Time Value (LTV) customers.

For the first time, Bango is enabling MNOs to link with leading app developers. Bango Marketplace gives MNOs a 'shop window' to offer app developers the opportunity to reach paying users. App developers select these 'audiences' to better align a marketing offer with customers interested in paid content.

The introduction of the pay proven attribute to the developer marketing mix is creating a new revenue-

generating opportunity for MNOs. With an estimated \$50 billion spent by app developers on marketing activities each year, there is a significant source of revenue for MNOs working with Bango to boost app developer marketing with payment insights.

Audiences

MNOs can offer both customer insights and marketing channels. For many developers enriching a customer audience with payment insights, which can be applied to an existing marketing channel (Facebook, Google, Line etc.), is the quickest way to boost the success of their app marketing campaigns.

Friends with benefits

The second benefit of this MNO - app developer relationship is that targeted marketing campaigns produce additional payments activity. For MNOs there is a double-win through Bango Marketplace: first, new revenue from app developers buying marketing offers, secondly a boost to end user spend through more Direct Carrier Billing (DCB) spending.

Register now to participate in the world's biggest app developer marketplace at bango.com

Bango Marketplace - New revenue opportunity driven by app developer marketing

Unlock app developer marketing spend through Bango Marketplace:

- Publish your offers to app developers in Bango Marketplace
- App developers request your offers
- You accept app developer requests
- Bango analyzes your payment data to produce the offer audience
- App developer pays for the audience
- App developer applies audience to their marketing campaign
- App developer delivers campaign

Bango Marketplace combines the marketing power of the world's top app developers with the payment reach of MNOs. Using data from the Bango Platform app developers and MNOs come together to acquire more users and increase revenues.

The Bango Platform identifies users who are more likely to make in-app purchases (IAP) – the high LTV users. Bango does this by analyzing payment data to reveal which users can pay, what users bought, how much they spent and how often they buy.

MNOs use this to publish offers visible to app developers registered on the Bango Marketplace. These offers give access to high LTV user audiences they can target through standard advertising platforms such as Facebook and Google.

Unlock app developer marketing spend through Bango Marketplace:

- ✓ Access a new marketing revenue stream
- ✓ Increase the number of paying users
- ✓ Increase revenue through Google Play
- ✓ Boost your DCB profit

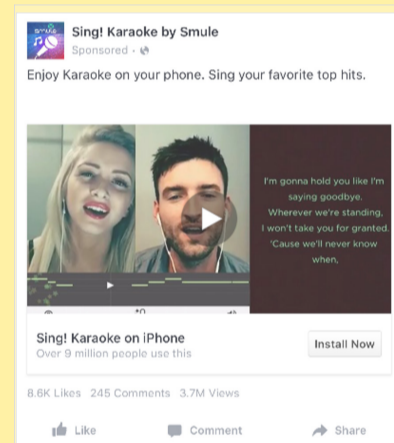
Best way to sell audiences

All the world's top mobile app developers spend a significant amount of their annual advertising budget with Facebook, some investing hundreds of millions of dollars each year. Some even have their own internal teams dedicated to the channel.

To use Facebook, the app developer selects a range of demographic profiles that best match customers of their game or app. For example, men in their early twenties or teenage girls. Facebook users, opted-in to advertising, will see the app developers' ads as part of their Facebook news feed.

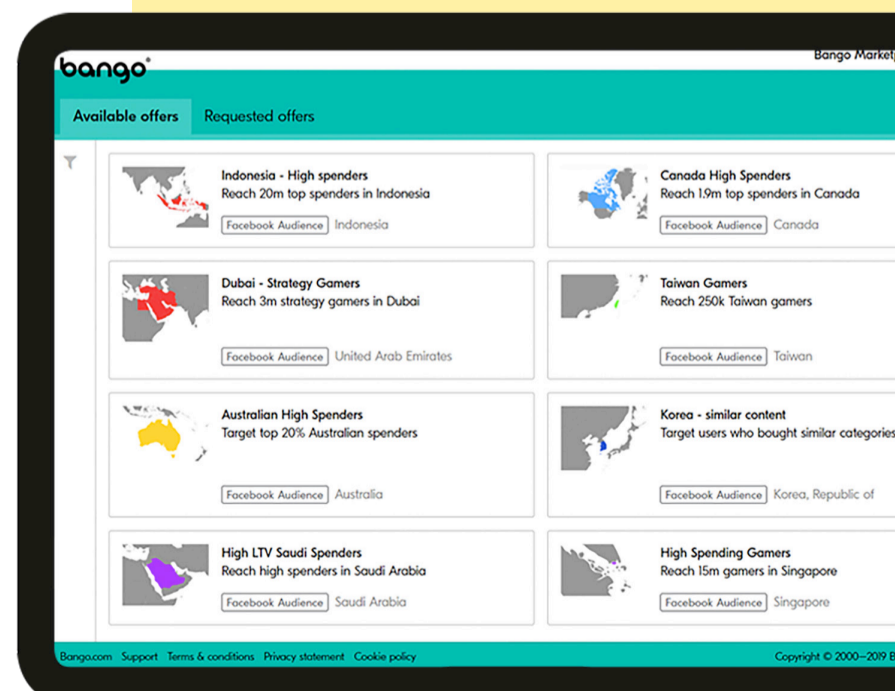
This method of advertising can reach a huge audience but delivers low results. App developers often see less than 2% click rates, sometimes with less than 0.5% going on to purchase or subscribe. This is due to a lack of relevant targeting information that would help ensure advertisements are shown to customers most likely to be interested and able to buy.

A Mobile Network Operator powering payments with Direct Carrier Billing has crucial knowledge about their customers payments, knowledge that makes app developers adverts relevant. By providing audiences based on payment trends, app preferences and more, app developers can acquire a significantly higher number of paying customers – something they will pay a premium for.



Bango Marketplace enables an MNO to become part of the app developers Facebook advertising strategy and get a share of the app developers significant marketing budget.

Bango Marketplace enables MNO data, including Google Play payments, to be segmented and mapped onto Facebook users – all without any data physically being shared. App developers can then target customers that are able to pay or have specific app preferences. Chosen customer audiences are applied using standard Facebook methods that app developers are familiar with, allowing them to combine standard Facebook audiences, with powerful new Bango Marketplace audiences.



App developers are investing with MNOs to access high value users

MNOs are often unaware of the valuable assets they possess and how to drive meaningful revenue from these assets. To understand the value you have to offer, look at the graphic on the right.

App developers derive income from two sources:

1. In-app purchases (IAP) – minority of users but majority of revenue
2. In-app advertising (IAA) – majority of users but minority of overall revenue

One IAP user acquired is worth five IAA users and you can help find them

Currently, app developers acquire users by running advertising campaigns targeting users based on their demographic profile – gender, age, location, employment status, interests etc. However, these demographics cannot help app developers acquire customers who are likely to make in-app or app store payments. But, by using Bango Marketplace, MNOs can help grow app developers end user spending and generate a new revenue stream for themselves.

Acquiring in-app purchase users is the equivalent of finding gold, as an MNO you hold the key to this treasure

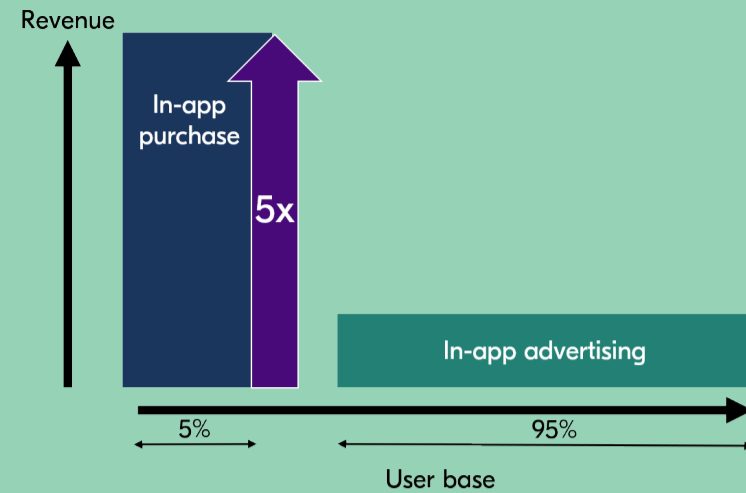


Image data sources:
<https://www.appsflyer.com/resources/state-app-spending-global-benchmarks-data-study/>
<https://www.braze.com/blog/in-app-purchase-stats/>
<https://www.statista.com/statistics/220186/total-global-in-app-revenue-forecast/>

It's as easy as 1, 2, 3...



Partner with app developers

Bango Marketplace allows you to connect with app developers ready to invest in campaigns for user acquisition. By entering Bango Marketplace you immediately become visible to top app developers



Reach target audiences

The Bango Platform analyzes buying behavior to define the ideal audiences for app developers to target



Measure success

Track payments and their frequency to measure customer lifetime value. Use the Bango Platform to monitor conversion to paying customers

Bango Marketplace Nexus - San Francisco

Creating profitable app developer and Mobile Network Operator partnerships

Bango is hosting an exclusive event for Mobile Network Operators and leading app developers in San Francisco on 19 March 2019, to coincide with the Game Developers Conference (GDC).

Part of Bango's long running Nexus series, the event gathers leaders in mobile commerce to make introductions, share ideas, and ultimately help partners thrive through creating profitable app developer and MNO partnerships.

Ray Anderson, Bango CEO commented: "Bango Nexus events have a history of bringing together industry leaders to discuss and advance the industry. By bringing businesses together and powering e-commerce with unique data-driven insights, Bango delivers new business opportunities and new dimensions of growth for customers around the world.

We are pleased to welcome so many leading mobile commerce players to the Bango Marketplace Nexus event, and enable our partners to thrive."

From payments to profits: How DCB generates MNO revenue in unexpected ways

Through their customer billing relationships, Mobile Network Operators (MNOs) are finding ways to partner with leading brands to add new revenues to the business, even when the basic charge to bill business is not intrinsically profitable.

Payment services provided by MNOs – through airtime carrier billing (DCB), mobile wallets, mobile cash – have become the way MNOs build partnerships that drive profitable revenues from related services. In other words, the DCB business itself is not the primary source of profit, but a 'means to a different end'. By providing billing for third party content and services, MNOs can engage with content providers and capture profits from these services, rather than from payment processing itself.

Billing is a powerful collaboration tool. Many MNOs use the Bango Platform to bundle third party 'OTT' services as part of a subscribers package, to attract new customers and upgrade existing customer relationships. For many customers, a deal on a game, music, movie or other desirable content, is more attractive than simply 'more minutes' or 'more data'.

MNOs in heavily pre-paid markets are finding ways to boost the value of subscriber 'top-ups' (adding more funds to the pre-paid account) by providing additional value if the customer increases the amount of the top-up. Using Bango Marketplace, MNOs are making deals with third party app developers to reward subscribers who top-up more. Consequently, pre-paid ARPU can be increased.

Through these relationships with content providers, the sales and billing relationships MNOs have with their customers provide the mechanism to boost market share and raise ARPU across the base. MNO relationships with third parties using Bango create a circle of like-minded businesses that mutually benefit from being 'inside the circle'.

MNOs are in demand, not simply for the customer billing relationship, but on a much larger scale because of the insights they have about their customers that help these third parties grow their own businesses. Inside the Bango circle, there are now more ways for MNOs to monetize these third party relationships than ever before.

About Bango

Merchants, app stores and payment providers cross the threshold into the Bango ecosystem to converge, grow and thrive.

By bringing businesses together and powering e-commerce with unique data-driven insights, Bango delivers new business opportunities and new dimensions of growth for customers around the world. Being inside the Bango circle means global merchants including Amazon, Google and Microsoft can work together with payment partners from Africa to the Americas, accelerating the performance of everyone on the inside.

Bango. Think inside the circle.

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