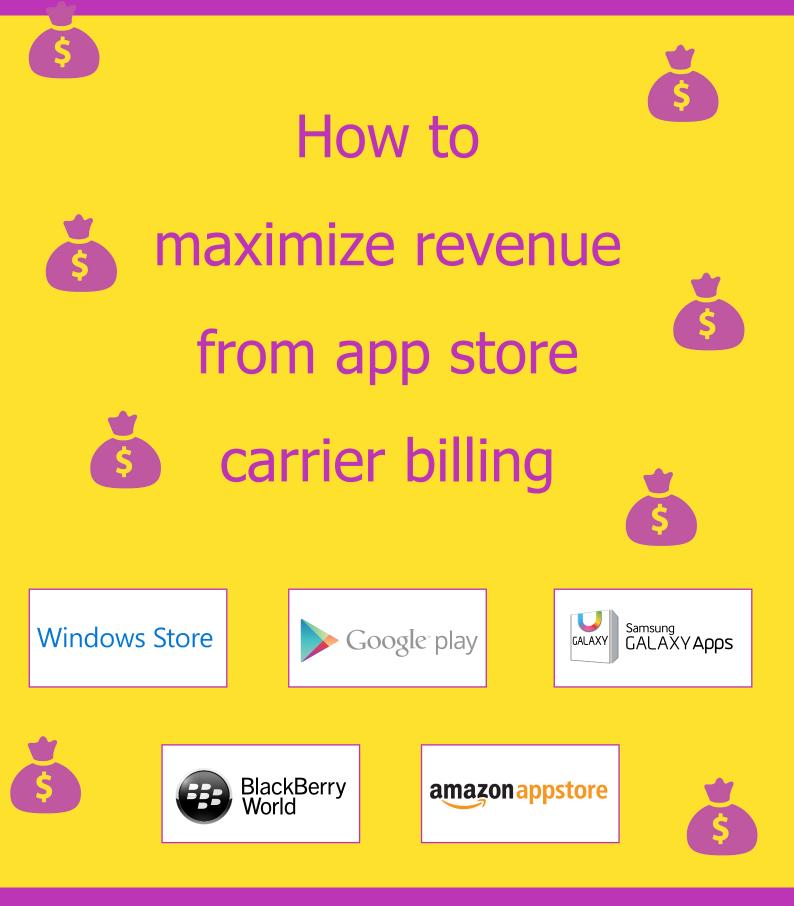
Guide for operators







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How to maximize carrier billing revenue from app stores

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Executive summary

This guide explains how operators can unlock the full carrier billing revenue opportunity from app stores

Customer spend on mobile is increasingly focused on the major app stores, triggered by the introduction of carrier billing as a payment method. Adding carrier billing drives operator revenues and provides insights into subscribers' app store purchase habits, helping increase engagement, loyalty and presenting new marketing opportunities for operators.

However, simply activating Direct Carrier Billing (DCB) in an app store will not deliver the full revenue potential. In fact the majority of operators fall some way short of this and accept the initial results as the best they can get. For maximum potential to be realized, there are multiple activities operators should undertake.

This guide will help operators capture the full revenue opportunity that DCB offers by recommending ways to:

- 1. Boost the number of subscribers making payments
- 2. Increase your subscribers' motivation to purchase
- 3. Maximize spend limits for post-paid customers
- 4. Compare revenue performance against market benchmarks
- 5. Get the most from pre-paid subscribers
- 6. Minimize payment failures
- 7. Increase payment success with a faster purchase experience

Finally we summarize the three "must do" actions that every operator needs to take to support carrier billing for app stores.



1. Boost the number of subscribers making payments

There are three classes of mobile subscribers' for app store DCB:

- 1. Customers that have never paid with DCB (the majority)
- 2. Casual, infrequent customers
- 3. Frequent, high spending customers

Because DCB is so simple to use, any subscriber not using it is either unaware that it is available, doesn't know what it is or cannot set their app store account to use it. Customers already experienced with paying on their credit card need to make a conscious decision to switch to DCB, or be given an incentive.

Operator marketing campaigns aimed at these subscribers are proven to increase the total number of DCB app store customers, significantly growing your DCB market size. This is one of the most important aspects to launching app store DCB and also one of the most commonly overlooked.

- To increase your DCB customer base you need to:
- Make sure all new handsets are pre-configured for DCB by default
- Inform and help customers to set up app store DCB when they visit your retail stores
- Provide clear DCB setup guidance online as part of the sales and support website

How Bango helps

Bango works with operators to establish best practices at launch, and to devise and launch effective ongoing marketing programs that drive subscribers not currently paying with DCB to start using their phone bill to pay in app stores and in-app.

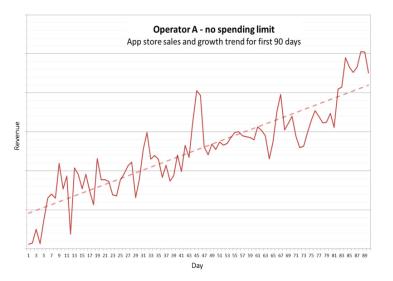
- Send an SMS message to every user advertising that DCB is available in the particular app stores
- Discount or refund the first DCB purchase to get them signed up and spending
- Reward customers for referring their friends to use DCB
- Run regular app store DCB advertising campaigns to acquire new customers and remind existing customers
- Remind your post-paid customers about DCB availability via their monthly bills



Bango Dashboard shows which apps and in-app content is most popular, making it easy to target advertising that motivates customers to make that all important first purchase. Bango Boost provides deep analysis to measure effects before and after campaigns.

2. Maximize spend limits for post-paid customers

For the first month set a spend limit as high as possible. This allows detailed monitoring of the most popular price points and customer spending patterns. Using Bango Dashboard it is easy to see how app stores increase the customer propensity to spend. A spend limit can quickly be added and the results compared. Adjustments can be made over the following days to balance maximum earnings against refunds, social impact, customer satisfaction and customer care cost.



Crucially, operators should avoid spend limits that impact the 20% of customers that drive 80% of spend. See <u>`Carrier billing spend limits</u>' white paper.

A monthly spend limit is the best approach to managing monthly contract customer. Where additional protection is required, a daily spend limit is recommended. One-time spend limits are not recommended if daily spend limits are used. Where a spend limit is required, try the following ranges for established mobile markets:

- 1. Monthly spend limits between \$200 USD and \$500 USD
- 2. Daily spend limits between \$100 USD and \$250
- 3. One-time spend limits between \$70 and \$150 USD

Operators should also consider credit profile based spend limits, based on the ability of each customer to pay, rather than a one size fits all model. Ideally base on app store identity to avoid individual users exceeding spend limits by swapping multiple SIMs.

How Bango helps

It is important to understand what customers are buying, along with the most popular price points and their spend frequency to set and maintain the optimal spend limits. Bango Dashboard enables you to review payment activity, price trends and spend frequency and analyze high spending and potentially high risk customer activity. In addition, Bango Boost delivers regular, deep-dive analysis of customer segments, especially the small number of most loyal, high-spending customers to ensure they receive the best possible purchase experience and are able to safely spend as they wish.

Bango Boost delivers clear actions for optimizing your spend limits to maximize revenue. Where required, Bango provides advanced spend management controls that enable separate limits to be set for different customers, customer segments or for pre and post-paid accounts.

3. Increase your subscribers' motivation to purchase

Once you've increased the total number of paying subscribers, you can become more sophisticated. Over 80% of your DCB revenues will come from less than 20% of your customers. So it is crucial to understand what your top customers are buying; most popular apps, price points delivering the highest revenue; up and coming new apps; current trends; peak times and days.



How Bango helps

Use this knowledge to:

- Reward your highest spending customers to keep their spend momentum growing
- Convert more of your casual spenders into regular spenders or high spenders
- Understand similarities between customers based on their spend profiles and cross sell, i.e. if they bought A, they may like B
- Detect and communicate the latest app trends to your DCB customers

Marketing campaigns timed for peak usage or purchase times grow customer engagement, while campaigns during quieter periods can find new opportunities to re-engage. Use popular apps and media as an incentive for customers to buy more, leverage app popularity in marketing campaigns to draw attention to your brand and app store DCB capabilities to drive new customer acquisition.

Running a simple campaign, which identifies the high revenue generating products (available from Bango Dashboard) and informs customers that these products are available, will drive additional purchases.

Bango Dashboard shows you the bestselling apps and inapp content, along with the prices being paid. It identifies where to put your promotional effort and the resulting effects. Promoting the latest app trends and hot content allows you to cross sell to a willing audience and quickly grow sales. Bango Boost delivers a clear understanding of customer revenue contribution by segment, propensity to spend on content and price point popularity, enabling you to target different customer segments and better understand how to attract more customers.

4. Compare revenue performance against industry benchmarks

How do you define success from app store billing? You may think you are performing well but compared to the rest of the market you may be below average. Few operators realize how much they are underperforming.

Selecting different payment integrations for each app store introduces dangerous discrepancies into the valuable subscriber spend data, reduces the value of the data available, complicates customer interaction and introduces risk. With no unified baseline from which to work, comparisons become impossible. By contrast, using a payment platform for all of your integrations such as the Bango Platform, delivers consistency and simplicity, enabling direct comparisons to be easily made between payments from multiple subscribers, from different apps and app stores, across multiple operator networks within the group. It will deliver a solid foundation on which to build relationships and revenues.

Is your 82% sales success good, or should it be better? Bango knows



How Bango helps

The Bango Platform helps you maximize your revenue within the context of the whole industry. Because we uniquely power the major app stores for hundreds of operators worldwide we have a comparative view across the industry. We know what the industry averages are, what the industry best performers are achieving and how they are doing it. We work closely with operators and app stores to ensure the whole industry continues to grow revenues. Our industry benchmark knowledge is used by Bango 24/7 active monitoring to alert you should revenues drop below average, and by Bango Boost to deliver deep comparative analysis for specific subscriber segments and cohorts. For example, comparing spend limits across peers helps customers safely spend more, without impacting risk.

5. Get the most from pre-paid subscribers

Where payments fail due to insufficient funds on a prepaid account, advise the customer to top-up and try again. Remind a customer of the apps and content they tried, but failed, to buy. Ideally state the name of the product and provide a simple link to re-purchase.

Alert customers when their balance falls below the average purchase price in an app store, ahead of them running out of funds. Bango can provide information on average values for app stores in a range of markets.

Do not set spend limits for pre-paid customers, their balance effectively forms their spend limit. Setting a spend limit on a pre-paid account causes frustration for customers wishing to spend, who know the money is present on their balance, often resulting in customer care calls and customer dissatisfaction. Where spend limits cannot be set differently between pre and postpaid customers, Bango recommends setting a general spend limit well above typical pre-paid top up values, aligned to average spending in app stores, rather than spending on voice or text services, which is often much less.



How Bango helps

Pre and post-paid customers are separately identified by the Bango Platform, allowing different behavior, risk profiles and spend limits to be set. Bango works closely with mobile operators to separate and optimize specific pre-paid and post-paid capabilities. Bango Boost delivers detailed analysis of customer spend behavior, price points and the reasons for payment rejection, such as insufficient funds on a pre-paid account and spend limits for post-paid contract customers. Additional detailed analysis is available on request.

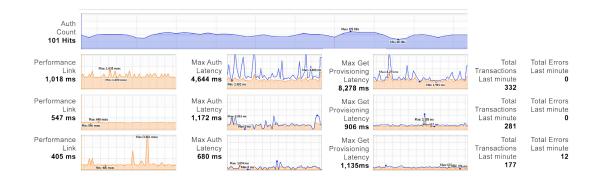
Contact <u>sales@bango.com</u> to find out more about Bango Boost.

6. Minimize payment failures

All app stores have contractual or expected service level requirements (SLAs). Failing to meet those requirements can result in service suspension, or even cancellation. Most of the issues encountered are due to integration failings – features that were not fully tested at the required volumes or a sub-optimal connection. Using an experienced team avoids these risks, as does a robust testing plan prior to launch.

The second area of focus is to ensure payment failures are communicated correctly to your customers. Rather than just reporting an error ensure the customer receives a clear, informative response that helps them, resolve the issue and successfully retry their app store purchase using carrier billing. For example:

- Tell them they have exceeded their monthly spend limit rather than just saying there was an error
 - Show them how they can request an increase in their limit
 - Tell them when their limit will be reset, so they know when to retry
 - Send them a reminder when their limit resets containing a link to purchase again
- Where payments regularly fail due to insufficient funds on pre-paid accounts, encourage them to top-up and retry



How Bango helps

By choosing Bango you are plugging into a shared live system already proven at scale, not a bespoke solution containing new code untested at high volumes in the real world. Even the small amounts of Bango code used to integrate a new operator are modular templates which are reused and proven from many previous operator integrations. This results in much shorter testing without compromising quality, getting you to revenue faster without risk of future failure as volumes grow.

When issues do occur Bango 24/7 active monitoring,

combined with our experienced technical teams ensure the fastest detection and resolution. This leverages the combined attention of all the app stores and operators using the Bango Platform, allowing many issues to be resolved before they even affect you. Bango works closely with the app stores to ensure your systems are not suspended pending long re-testing, avoiding the loss of millions in revenue. Any enhancements made within the Bango Platform to detect or correct issues immediately benefit the whole industry, constantly raising the quality for all.

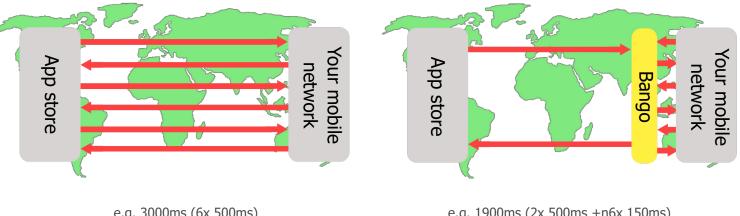
7. Increase payment success with a faster purchase experience

The speed it takes to process each payment impacts on success, customer experience and ultimately revenues. A customer only expects to wait a few seconds to complete a payment. Anything longer causes concern and can result in failed payments, higher customer care costs, lost customers, and even risks an app store Service Level Agreement (SLA) infringement.

For operators the focus of your time and effort should be dedicated to managing and optimizing your core billing system. Optimize connections to reduce redundancy between platforms. Performance can also be improved by reducing the number of API calls required to authenticate and pay. While it is possible to simplify payments to one API request, separate up front authentication, followed by 2-step, reserve and capture, payment processing at the time of purchase is recommended.

Home grown connection into app store

Integration through the Bango Platform



e.g. 3000ms (6x 500ms)



How Bango helps

The Bango Platform is designed to improve performance. Our technology intelligently caches information to streamline "chatty" API calls and reduce round trip times. Bango systems have been heavily optimized during seven years processing high volume DCB payments for app stores, and our servers are strategically placed on fast networks at optimal points between the operator and app store datacenters.

There is no need to manage the integration with each app store, this has already been taken care of to the highest app store SLA standards by the Bango Platform – Don't reinvent the wheel!

Primary actions

This carrier billing guide covers a wide range of actions operators can – and should – take, to fulfil the revenue potential of app stores.

Some actions influence the way you implement carrier billing for app stores. Sections 6 and 7 explain how performance can be assured by implementing "right first time".

There are three primary actions that every operator should take as soon as carrier billing is activated in the store.

First: Communicate to your customers that they can make payments to their mobile phone account. See Section 1 "Increase the number of subscribers making payments".

Second: Ensure that you are not accidentally causing payment failures. Spending limits, built on your subscribers' historic spending, is the number one cause of lost revenue through payment failures. See Section 2 "Maximize customer spend limits".

Third: Motivate customers to start and continue buying. Little and often is a good approach – keep reminding your customers what is available in the store and how payment is made easy through carrier billing. See Section 3 "Increase your subscribers' motivation to purchase".

Finally, to know the effects of your actions don't forget to measure and compare. See Section 4 "Compare revenue performance" for how to interpret the impact of your actions.

Enough talk - time to make money!





About Bango

Bango is the standard platform chosen by leading global stores to deliver mobile payments to everyone. As the next billion consumers adopt their first smartphone and look for universal payment methods, Bango will be there to unlock the world of apps, video, music, games and other content that brings those smartphones to life. Global stores plugging into the Bango Platform include Amazon, Google, Samsung and Microsoft. Bango also partners with leading payment providers around the world to drive new users and revenues through its industryleading mobile payment solutions. Visit: bango.com

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