



# THE APP HANDBOOK

25 hard-won truths about making apps  
by BBH Stockholm, creators of 100+ apps

**WHO SHOULD READ  
THIS BOOK?**

This book is written to inspire future and existing app creators. From remote stakeholders to teenage wizkids interested in joining this exciting world.

It's conception has been a collaborative effort involving every mobile expert at BBH Stockholm. As a result, the book isn't very well structured. It isn't backed up by any deep theory. The paragraphs don't follow the same train of thought. Instead, we have tried to get our most hard-won truths about app making down on paper. From planning your app to designing it, to coding it, deploying it and tweaking it.

Before you jump into it, let's share the first truth: This book is obsolete. With no one knowing what phones people will be using in six months, how do you write a book about designing its apps? So you need to **move at the speed of opportunity**. That is the second truth. And the opportunities are many. Never forget that.

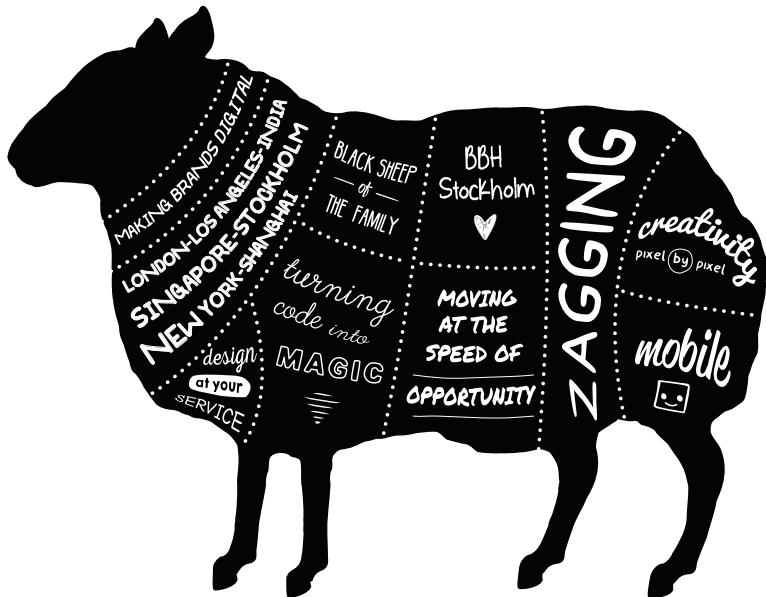
# WE ARE BBH STOCKHOLM

BBH Stockholm was born and created in the mobile age.

Since 2009 we have been shaping, and been shaped by, the development of the mobile market. From RedBull and Justin Bieber to Adidas and charismatic startups – we have gone from campaign based entertainment applications to long term business development and service design.

With BBH Stockholm you have the world's leading mobile expert at your fingertips, situated in the middle of the Silicon Valley of Europe (and the most beautiful city in the world) Stockholm.

We are your strategic and creative partner helping you enhance your customer meeting through innovative mobile solutions.



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# **STARTING OUT**

the people at **Instagram**  
didn't work harder than  
the people at **Path**...

...they just had a better **idea**



**01.**

# GOT AN INSANELY GREAT APP IDEA?

Your answer should be: YES!

If the idea doesn't get your endorphins pumping just thinking about it, it's not great enough.

It's just rubbish.

You need a solid idea to carry you through the storm.

A charismatic concept that will pick up new evangelist in a heartbeat.

Something so strong you will immediately put down this crappy book and get on with it.

Still a YES?

Turn it over to research...

**02.**

## DO YOUR RESEARCH

It is easy to shrug off research as boring. To say it is the stiff and righteous counterpart of pure genius.

Well, genius, just answer YES! to these questions and away you go:

- Is your idea completely unique?
- If so, is this the right time to do it?
- If not so, is your idea much better than the competitor?
- Do you need to steal away users from the competition?
- Really? Then will the app be 9x better?
- Who will use it?
- Will enough people use it? Will it be profitable?
- Can you fend off competition when they copy your idea?



**03.**

## THE THREE PILLARS OF ALL THINGS DIGITAL

This one goes beyond just apps. Every digital thingie, is a mix of three parts: **Emotion, Content and Function**

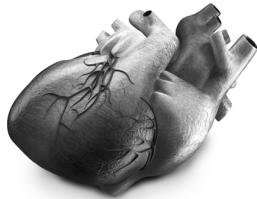
Emotion is the memorial component.  
What do you want the user to remember?

Content is the informational component.  
What does the user want to know?

Function is the actionable component.  
What does the user want to do?

Different platforms rely on these pillars differently. Apps should have very little static content, and focus on delivering a brand experience through useful functionality.

Make sure it does.



**EMOTION**



**CONTENT**



**FUNCTIONS**

**04.**

## MEET THE TEAM!

Building an app requires Designers, Developers and Production Management. Everyone knows that.

To succeed in todays hypercompetitive app landscape, you'll also need a clever strategist, an able analyst and highly imaginative creative.

Now you know.

Then there is the person that is always different.  
The expert you already have at your disposal.  
Namely, **you**.

What value do you bring to your app team?

Are you a visionary or a detail-oriented person?

Are you a techie or a strong designer?

Once you know your skillset, bring in experts with entirely different abilities.

For example if you code and know your way around development, seek out those who specialize in design, planning, and quality assurance.

Don't be a Winklevoss and hire your twin brother, be a Zuckerberg and hire Sean Parker.

$$1 + 1 = \textcircled{11}$$

**05.**

## WHEN TO REALLY BUILD AN APP

Consider this: Snapchat is an emerging giant, yet the company has never spent a dime on marketing. Even so, it still has a very strong brand. How is that possible without the help of marketing gurus?

**Answer:** Their users created the brand.

How?

Through an app! Instead of attracting customers through storydriven advertising, the app created customers through what we call **storydoing**.

Storydoing is when you surrender control to your audience and let them take part in shaping the brand. And when they do, peers join in.

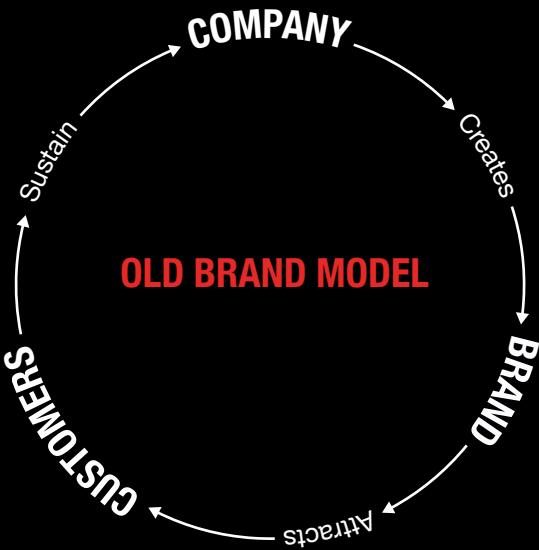
This is what Marty Nuemeier calls the brand flip: The Company creates customers that build a brand to sustain the company. That is totally new.

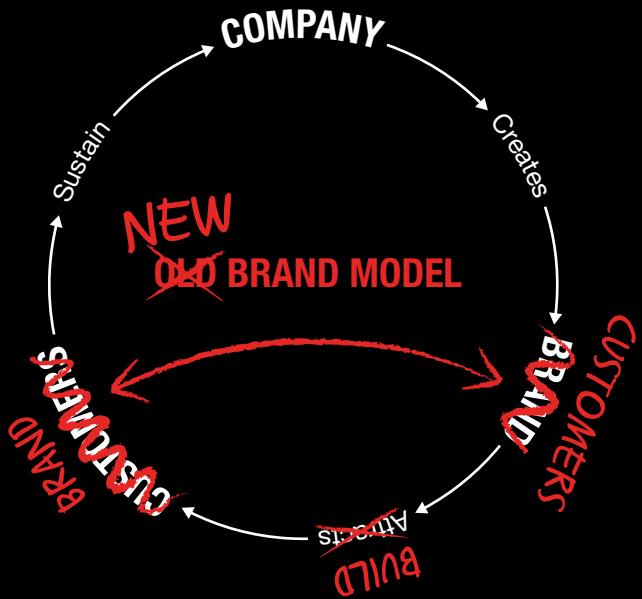
To make it work, you need to wrap your core business around digital distribution, preferably through an app. Airbnb does it, Uber does it.

So can you.

Make the people using your product part of the brand, through an app. Then you can fire us, the agency.

How cool is that?







**DEFINE**

PEOPLE DON'T DOWNLOAD



THEY INSTALL



f **unctions**

**06.**

## SOLVE ONE PROBLEM

The phone is like this fantastic army knife where you can add whatever tool you need. In other words, people don't download apps, they install functions.

Your app doesn't have to be a multitool, the phone already got that one covered. But don't take our word for it, ask Apple.

They will tell you the most frequent reason for downloading an app is to solve a specific problem.

What problem does your app solve? More than one?



Shazam



Clear



Vine



Messenger

**4 FUNCTIONS, 4 APPS**

Here are some solutions to bring more focus to the app:

**Don't compromise.**

Get rid of all the other ideas and focus on the most crucial problem solver. It will shorten development time; reveal its weaknesses immediately and make the user get the app faster.

**Try fusing many problems into one.**

Compare Uber to any taxi app out there. You will be struck by how coherently smooth Uber feels compared to the other “hacks”. That is because Uber has fused many problems into one engaging consumer journey.

**Put the most crucial problem in the driver's seat, let the rest ride shot gun.**

Pinterest is about pinning stuff from the internet. Tinder is about capturing the excitement of shallow dating. Everything else is secondary.

**Save the rest for 2.0.**

Be smart and focus on the most important problem now. Put the rest in your favorite bucket list.

**07.**

## IS IT A PAINKILLER OR A VITAMIN?

Startup people always ask themselves this question.  
So should you.

Painkiller apps provide a remedy to something that sucks in everyday life. These solutions tend to look back, asking: **Why?**

Vitamin apps enhance the consumer journey. They provide a need. These solutions tend to look forward, asking: **What if?**

Which one is right for you?

Painkillers are easier to spot and execute as they solve tangible problems. Go for it when you have the perfect remedy.

Vitamin apps are for black belt app makers only.  
Also hard to market. But the upside is great.

Think about it, who needed Facebook before it existed?  
It provided a need.

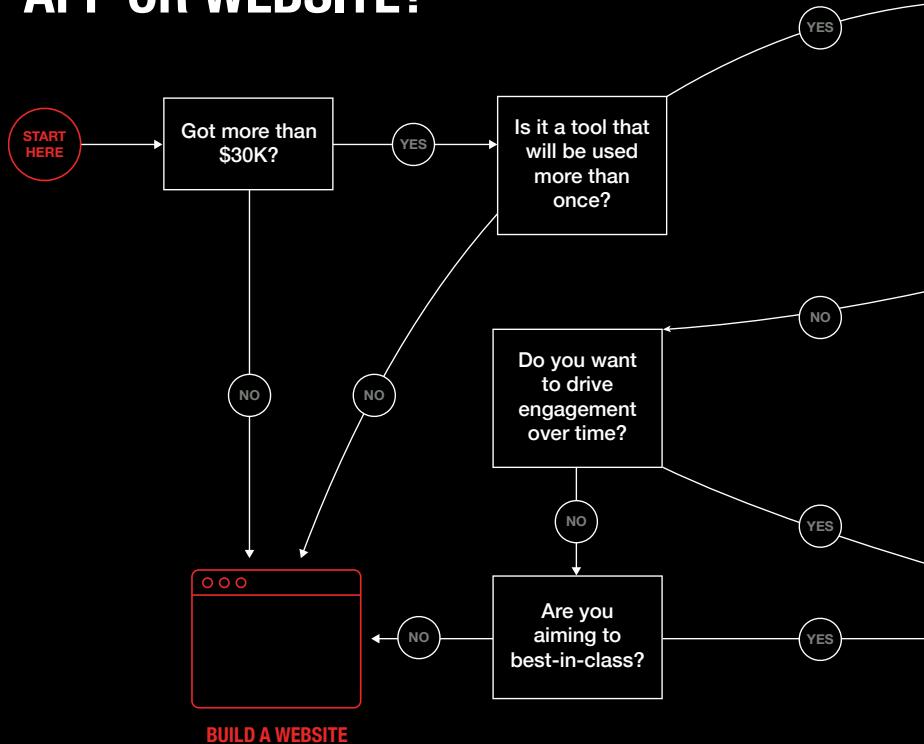
So know your skillset and aim accordingly.



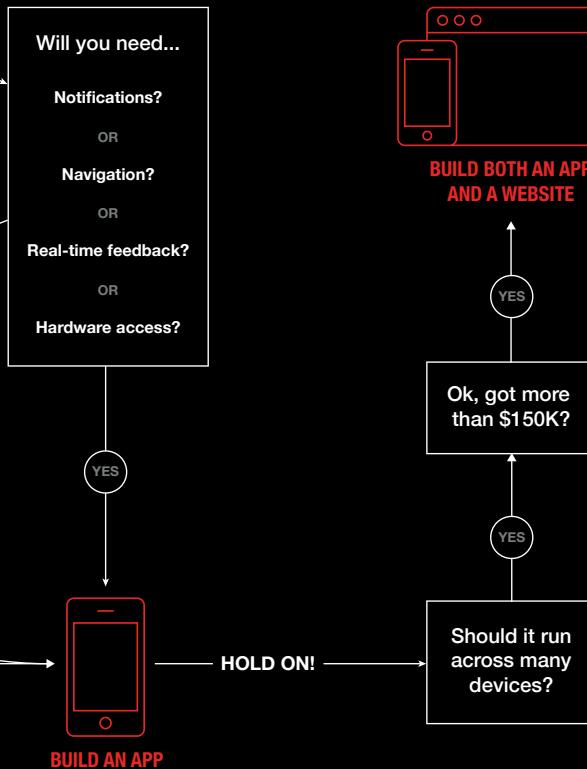
**OR IS IT BOTH?**

08.

## APP OR WEBSITE?



BUILD A WEBSITE



**09.**

## **SLIPPY OR STICKY?**

As far back as any care to remember, apps have always focused on being “sticky”. That is, immersive experiences designed to be engaging and make the user come back for more. That could be your app. Or, you could aim to be different.

The opposite of “sticky” is “slippy”. Instead of forming a bond with users by grabbing their attention you can become an invisible part of their lives.

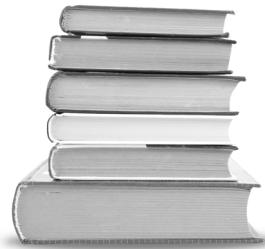
“Slippy” apps are designed for glance-ability, minimal information and for use in high-stress situations.

The goal when designing a slippy app is for just the right information to catch a user’s eye, then seamlessly integrate with that moment. This type of experience lets people get on with their lives while it does useful things for them.

So instead of immersing people in your world, try to play a small but important part in their.



**SLIPPY**



**STICKY**

## 10.

# THE CHICKEN & EGG SYNDROME

Imagine how the first person who bought a fax machine felt.  
That aroma of freshly minted plastic.  
The sound of the fan as the machine warmed up.  
The flash of fluorescent light as the paper was scanned.

And no one to send it to.

That, my friends, is the chicken and egg problem of the digital age.

Still, the fax guy probably felt immensely great about himself. Because the fax held the **promise of greatness**: To be able to send a piece of paper over a telephone line.

When your app requires interaction between people, you have a chicken and egg problem on your hands. It too must hold the promise of greatness to get off the ground.

Instagram found its initial greatness elsewhere. They put all their efforts into creating awesome filters, before funneling its users into a visual driven community.

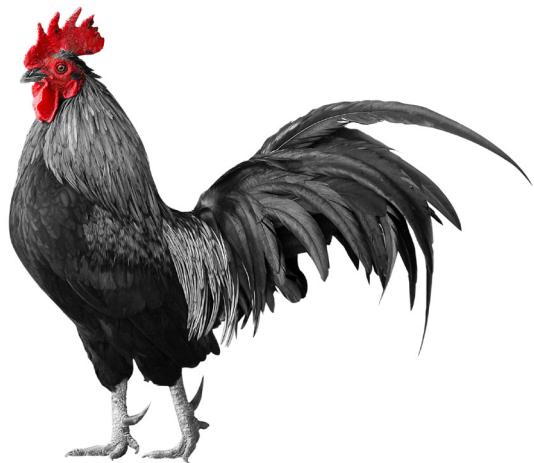
So find **your** promise of greatness. Identify the idea that early adopters fall head over heels in love with.

It certainly helps if you long for that greatness too.  
Then the app will have at least one user.





**PROMISE**



**GREATNESS**



**DESIGN**

**11.**

## **DESIGN HABITS, NOT APPS**

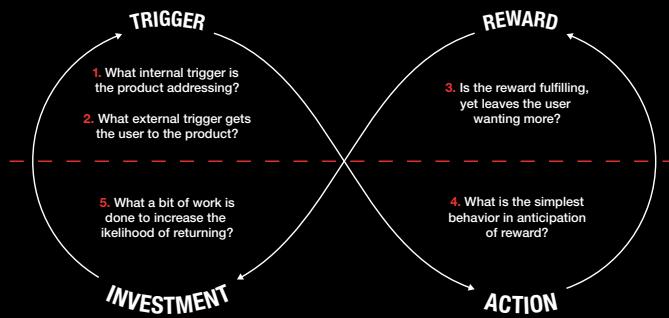
With so much computer power connected to the internet, all within arm's reach, it's no wonder we get hooked on apps. In fact, the most popular apps ARE popular because of the habits they've spawned.

To prosper, you need to design the habit, not the app.

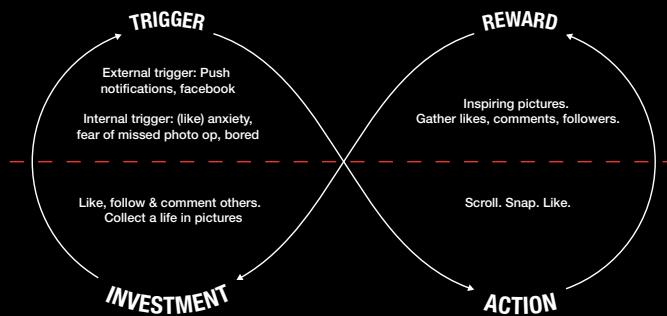
Habits are formed through repetition. For it to happen, the hook has to sink a little deeper every time people use the app. When they don't feel more engaged, more rewarded or better served after each use, the habit will not stick around.

To help you design a habit that successfully connects the user's problem to your solution, use the Habit Hook. Proposed by Nir Eyal, the model takes users through a 4 phase circle: **Trigger, Action, Reward and Investment.**

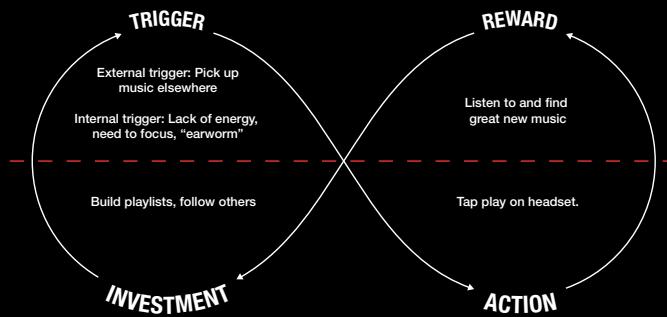
## BEHOLD: THE HABIT HOOK



## THE INSTAGRAM HOOK



## THE SPOTIFY HOOK



You need to ask yourself how your app deals with every phase to succeed.

1. **Trigger:** What triggers the usage of the app? How do you reach out to users through external triggers such as email, banners, push etc? But more important, what are the state of minds that will trigger app usage?
2. **Action:** When does the user have the ability? Who will be motivated? And who won't? Map out these answers to understand what actions could occur.
3. **Reward:** What's the pay-off? Is it a social (getting likes on Instagram), or the result of a hunt (a match on Tinder), or is it the reward of the self (clearing the mail in inbox)?
4. **Investment:** What is the action that customers themselves need to take to stay engaged? This is the apps.

By cycling through successive loops, users begin to connect with the app and a habit is formed.

**12.**

## TURN THE USER INTO A SUPERHERO

Good app designers aim to make the app better.  
Great app designers aim to make the **user** better.

They look beyond the interface, into the benefit of the tool. They aim to turn the user into a superhero; to make you capable of doing stuff you would never imagine; to let you accomplish things you earlier thought of as too hard or too complicated.

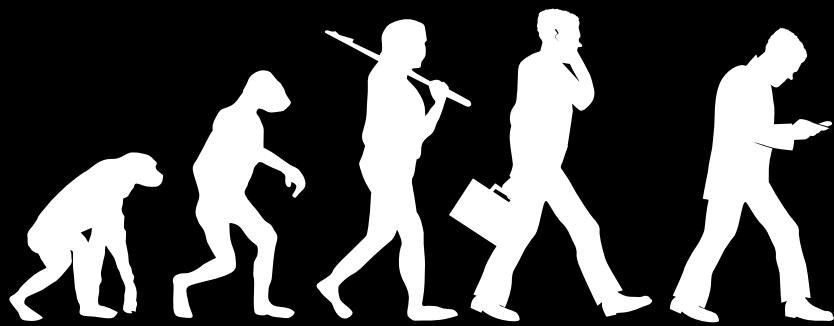
**The first Google Maps app was a good app. But the app's turn-by-turn navigation turned you into a good driver.**

To be a great designer, look beyond the assumed solution.  
Find the benefit of your app.  
Ask how this benefit will change the user tomorrow.

Incorporate the knowledge of the change to the app today.



DUOLINGO IS GREAT BECAUSE IT MAKES YOU GREAT.



USERS ARE SMART, BUT NOT WHILE ON THE PHONE

**13.**

## **THINK STUPID**

Mobile phones grant the user mobility. Which means the user will probably do other stuff while on your app.

They will text while talking to someone else.

They will reach for loyalty cards with a heavy shopping basket in one hand and a screaming child in the other.

They will browse music while driving a car (God help us).

It is in this noisy world that your app needs to survive, not in a quiet den with the user curled up around the phone. So keep it stupid stupid. Make the interface sparse and clear.

**Let the app do the thinking.**

Mark your Call to Action button like the fire exits they truly are.

**14.**

## THE START SCREEN IS THE ONLY SCREEN

Take it from an agency that have built more than 100 apps: People spend less than 10% of their time outside the app's home screen.

All those hours poured into naming and designing the nav bar and its underlying views will be lost on most people.

To be fair, the major reason why most people will never touch the navbar is that they never come back after their first visit.

They never got what your app was all about.

Make them get it.

So pour your heart into the first screens of the app.  
The splash, the onboarding and the home screen.

Then you start worrying about the rest.



**NICE TAB BAR, RARELY USED**

Verizon

66%

5:23

Monday, March 23



Starbucks 3m ago

Happy Monday! Members get a free pastry  
with drink purchase today, 2-5 p.m.

slide to view

**15.**

## PUSH THE GOOD NEWS

Push notifications have a dramatic effect on an app's ability to engage users. But, with knowledge comes power.

**As an app maker, use push messaging wisely.**

Don't make it go the way of email spam.

Here are some tips:

**Bring good news!**

Never stress the user with annoying stuff.

**Personalize.**

Don't send the same message to all users.

**Chill.**

Never, never notify the user more frequently than she uses the app.



**DEVELOP**

**16.**

## **IT'S 80% IDEA, 80% EXECUTION**

You have to invest time, talent and attention to harvest great ideas for your app. An app that fits your business goals, that taps into distinct user needs and that has legs to travel and adapt over time.

**But an idea can only be great if the execution is great.**

It means finding the right partners, matching talent to task.

It means creating space and time for the idea.

It means nurturing the idea, protecting it, watching it grow up.

It means being respectful of craft.

From UX design to Quality Assurance, from typeface design to animation, from wireframe to App Store visuals.

The devil is in the details.



**17.**

## **AN ESTIMATE IS NEVER CORRECT. IT'S AN ESTIMATE**

Time to write some code!

But wait a minute, before we start, how much time will it actually take?

After coding over 100 apps, here are some hard-won truths:

Make a very thorough estimate.

Be super-pessimistic.

Then add 50%.

Does the app involve transaction of money?

Add another 50%.

Does the app screw around with time?

(e.g. a calendar or custom video editor)

Multiply everything by 2.

Then put away a big chunk for specification.

Why?

Good news: Every hour spent specifying saves two hours of coding.

Compile!





TAP MY SHOULDER TO ZAP MY DAY

**18.**

## ENJOY THE SILENCE

Office lore has it that a one minute interruption puts a coder down for 45.

Why?

Ever heard of the “Zone”? The “White room”? The “Flow”?

That’s the nirvana-like state when the task at hand is just hard enough to solve **IF YOU CONCENTRATE!!!**

You and I might not visit this place very often, but programmers live in the “Zone”.

Their whole careers are built upon cocooning in their code.

**Don’t screw with their livelihood.**

Stay quiet, send a message instead of tapping their shoulder. Ask them to come to you. They won’t. But it was worth a try.

**19.**

## **ADDING MORE PEOPLE TO A LATE PROJECT MAKES IT LATER**

Under the hood, apps can be immensely complex. As hard to take apart as the ingredients in a batch of Bearnaise.

Imagine dropping a new person into the pan.  
One of two things will happen, often ruining the result.

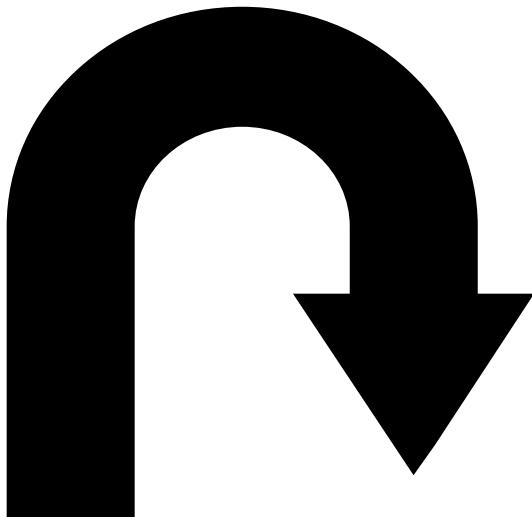
Either an “expendable” person on the team is assigned to bring the new person up to speed. Bugs spread through the app as the new guy stumbles around in something he can’t fully comprehend.

Or...

...one of the rockstars stops coding to bring the newbie up to speed.

Less bugs will follow, but since the rockstar now is their liaison officer and continuously have to help out, the output of the rockstar drops from 1500 lines/day to 150.

When things run late, it's better to cut corners, to boost morale, than to bring on total confusion.





**DEPLOY**

**20.**

## **FIND YOUR APP'S AHA! MOMENT...**



When Twitter looked through their user data they found something interesting: Users who followed more than 30 people stuck around, the rest dropped off.

What happened?

The users had an AHA! moment. At around 30 they suddenly “got” what twitter was all about.

All apps have their AHA! moment. During it's design and conception, you have to guess it. But once you publish the app you can find it by measuring it.

Use your findings to optimize the onboarding. Do everything you can to make the penny drop faster.

In Twitter's case, the solution was to give an intelligent recommendation on whom to follow so users quickly reached 30+.

21.

...THEN WOW! THEM



AHA! is about meeting people's expectations.  
WOW! is when you beat those expectations.

Out of the ballpark.

The crucial thing is to do this in the right order. WOW! should happen after or at the same time as AHA! Never before.

Tinder's WOW! happens when you find a match. That's after the AHA! moment – which is the famous tinder swipe.

Shazam's WOW! and AHA! moment coincide. It's when the algorithm matches the song you hear. Still a work of magic.

Most apps lack strong WOW! moments. Twitter doesn't have one. But they could:

Say you're a Liverpool fan signing up for Twitter. The onboarding of the app then suggests that you follow every player on the squad.

All of a sudden the app lights up in red and you find yourself on the inside of every player on the field. WOW!

**FORGET THE APPSTORE  
TOPLISTS. THEY MEASURE  
DOWNLOADS. YOU NEED TO BE  
TOP 25 AMONG PEOPLE WHO  
ACTUALLY USE YOUR APP.**

**22.**

## AIM FOR TOP 25

According to Nielsen, the average smartphone user wields 27 apps per month.

That is a number that has been pretty stable for some time now.

When creating an app, ask yourself – and challenge the team – how will it become a top 25 among our target users?

Now some of you might think:  
"But getting into App Store's top 25 is impossible!"

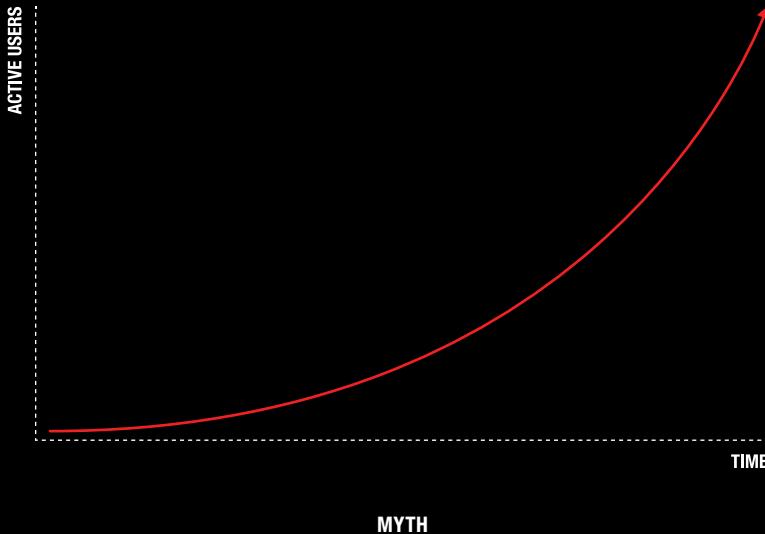
It is.

But the only top list that matters is the one inside your consumers' smartphone.

You'll be surprised how much they differ, and how few of the App Store top 25 apps they really use.

23.

## THE REAL WORK STARTS AFTER LAUNCH



One of the biggest challenges we face as an consultancy is that our clients' budgets seldom stretch further than through the first two weeks after launch.

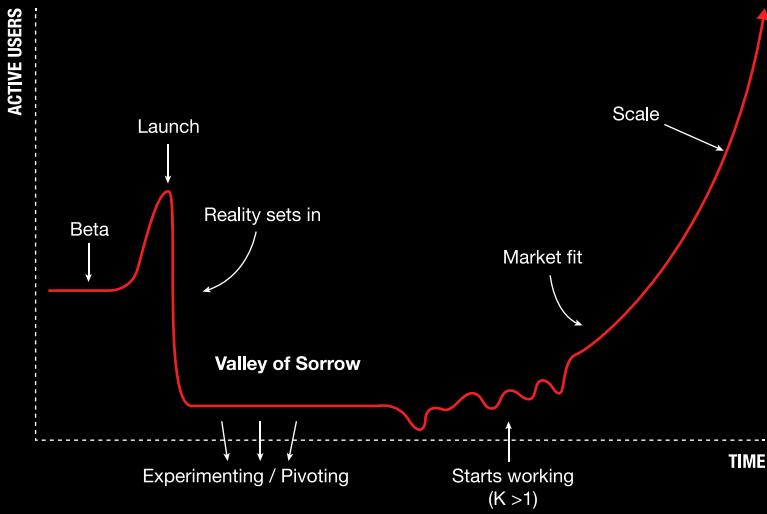
The reasons are as many as they are understandable:

1. App creation is **complicated** business. Looking beyond launch is difficult, even for seasoned professionals like us.
2. It is also a very **focused** effort. Your team is determined to collaboratively meet the end goal. What happens after is lost in the fog of war.
3. Apps are **expensive**. It sure hurts to think you have to sink even more money into it in a very near future.

Whatever the reason, you need to get over it.

You need to plan for success.

Success doesn't look the way Silicon Valley portrays it; where there is launch and then BOOM! exponential growth followed by IPOs and Wall Street openings.



In reality what happens is nothing. After the initial launch with PR fanfares and ad packages sucking users in, the acquisition curve will come crashing down. Actually, if you have more people installing the app than deleting it, you have a very good chance to get investment funding.

It is at this point, in the “valley of sorrow”, that faint-hearted n00bs go home and real app makers are made. They fine-tune their App Store and Search Engine scores. They sift through user data to win insights in order to adjust or even completely rethink the app’s design.

To succeed you need to prepare for this.

How do you plan to meet success? Will you have the resources ready when it happens? What members of the crew do you need to keep moving forward? Hint: Pick the most persistent yet equilibrant people you can find; team players who are ready to change their mind in heartbeat if the users says so; people who are focused without slipping into the tunnel.

**24.**

## DON'T BE AN ASO-HOLE

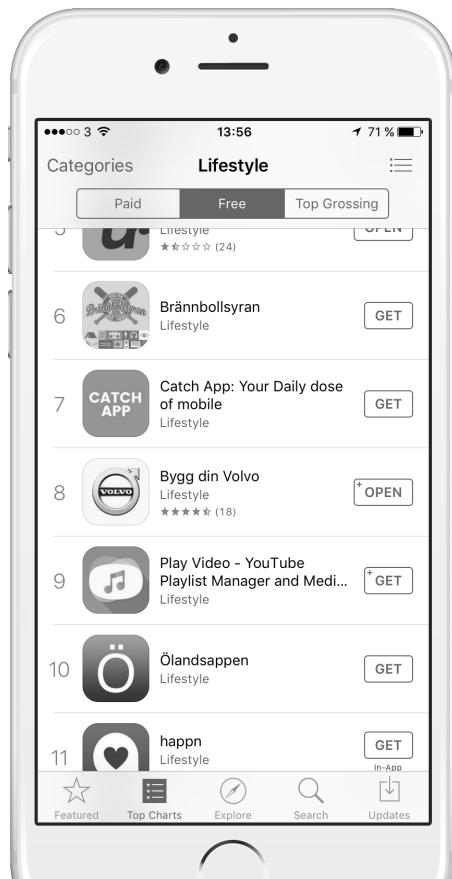
So, you've built an awesome app. People love it.  
Why on earth bother with App Store Optimisation? Bah!  
**BOOOORING!** Build it and they will come baby!

Not so fast. The number one reason for downloading apps are not rave reviews, peer recommendations or Google adwords, it is people aimless browsing App Store. Help them find what they are looking for and you will both prosper.

We learned this the hard way. For Volvo, one of our biggest and oldest partners, we developed this beautiful car configurator. Best-in-class. The most downloaded car configurator on App Store.

But our client asked us to aim higher. So we took a look at our App Store presence. After a rewrite using all the tricks in the ASO book the app soared. From top 100 in Lifestyle to solid top 10. Cost? Dirt cheap.

**BASIC APP STORE OPTIMISATION TOOK THE VOLVO APP  
FROM 158TH TO 8TH PLACE WITHIN A MONTH**





**25.**

# MOVE AT THE SPEED OF OPPORTUNITY

Congratulations, you've reached the end.

Time to put down this book and get to work. Because nothing is more crucial in the world of apps than speed. Two reasons why:

- 1. Competition** – make no mistake, right now someone else is building the same app you are planning to create. You have to get to market faster and your app has to be better.
- 2. Progress** – nobody on the planet knows right now what phones, tablets or wearables people will be using in six months time. Move slowly and the app will look dated day 1.

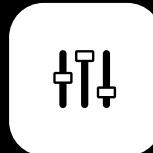
**Solution:** Hire a mobile expert agency (like BBH Stockholm;-)

It's the fastest way to get going. Agencies have the experience, but above all, they have the ability to put together a team with great chemistry and with the complementary skills.

And they love deadlines! See you at launch!



be a  
**KILLER**



**NOT A  
filler**



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