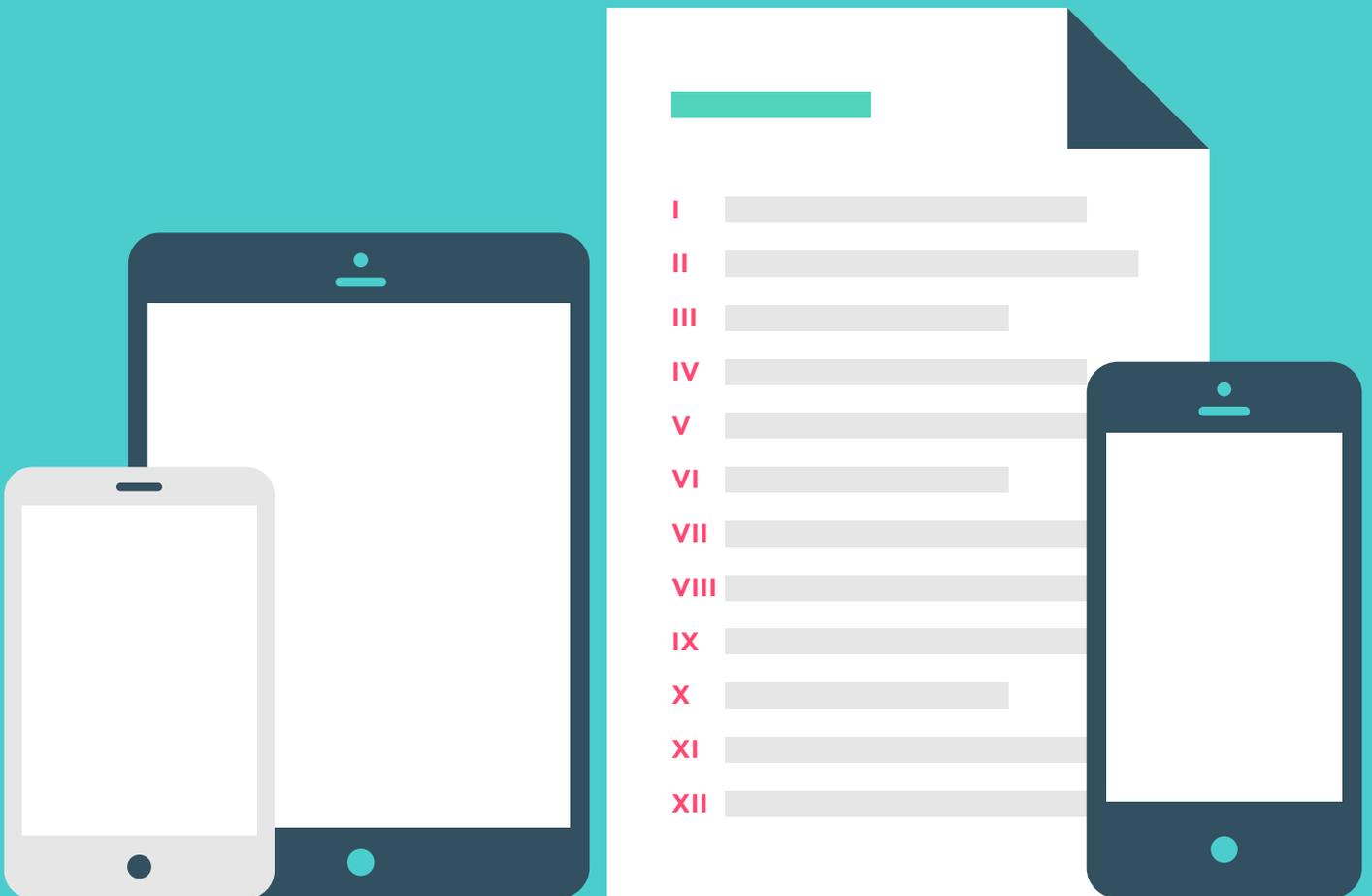


Integrated Change

Healthcare Apps

12 Items for a Successful Healthcare App Brief



Introduction

Within 15 minutes of an adult waking up, 75% of them pick up their smartphone and will then go on to check their device 150 times a day. So far, 102 billion apps have been downloaded and it's estimated that \$92bn will be generated from mobile apps by 2018. According to Nielsen, consumers prefer apps to mobile web, in fact 87% of them do. These are big numbers indeed, so how does the Healthcare industry fare in all this?

The number of mHealth apps launched on iTunes and Google Play reached over 100,000 in 2014 and in 2015, we will only see this number grow, possibly exponentially more. The appetite for digital healthcare is showing no signs of slowing down; in the first three quarters of 2014, digital health funding had nearly doubled what was invested for the entire year of 2013.

Mobile Healthcare and the apps that go with it is still in it's early days but even so there is a vast resource of clinical tools available at our finger tips. These apps cover electronic prescribing, diagnosis and treatment, practice management, coding and billing, as well as ones that assist with answering clinical practice and other questions at the point of care, such as drug reference guides, medical calculators, clinical guidelines and other decision support aids, textbooks and literature search portals. There are even mobile apps that simulate surgical procedures or that can conduct simple medical exams, such as hearing or vision tests, not to mention connected healthcare such as wireless scales, personal ECG monitors and implants that monitor our food intake. The world of digital and mobile healthcare is rapidly evolving and it would appear there is a positive and welcoming market for those organisations that wish to develop mobile healthcare apps.

Of course, it's not all plain sailing as there are many challenges that exist in developing a mobile healthcare app, from security to user experience, funding to marketing, there are many pitfalls that can lie ahead. With hard work and sheer determination, these challenges can be overcome and the pitfalls avoided, as long as you know about them.

One of the stages where we see many healthcare organisations fall over is actually the very first – creating the brief. A mobile app brief defines the project aims, objectives and outputs. It is incredibly important that the brief is as watertight as possible and includes all of the items needed to successfully discuss, cost, fund and then begin the journey of developing your mobile healthcare app.

If you are thinking about developing a mobile app, then this whitepaper is for you

In this whitepaper, we have provided the 12 key items you need to include in your mobile healthcare app brief. We've also included a handy check-list at the end, just to make sure you don't miss anything. As well as the key items to include within your brief, we've also shared some of our 18 years experiences with you so that you don't make the mistakes that others do.

Before you start reading any further, remember that your mobile healthcare app brief is a living document. It will no doubt change as your discussions with your designers and developers commence, so be sure to include some kind of versioning control into the document.

Item 1

Users and Marketing

If you don't know who your users are, you've already failed. What we are talking about here is the 'digital patient'. Many healthcare organisations will have rich data on their patients from a medical perspective but many do not from a digital perspective – the two are completely different.

a) Identify your target audience – do you know who they are?

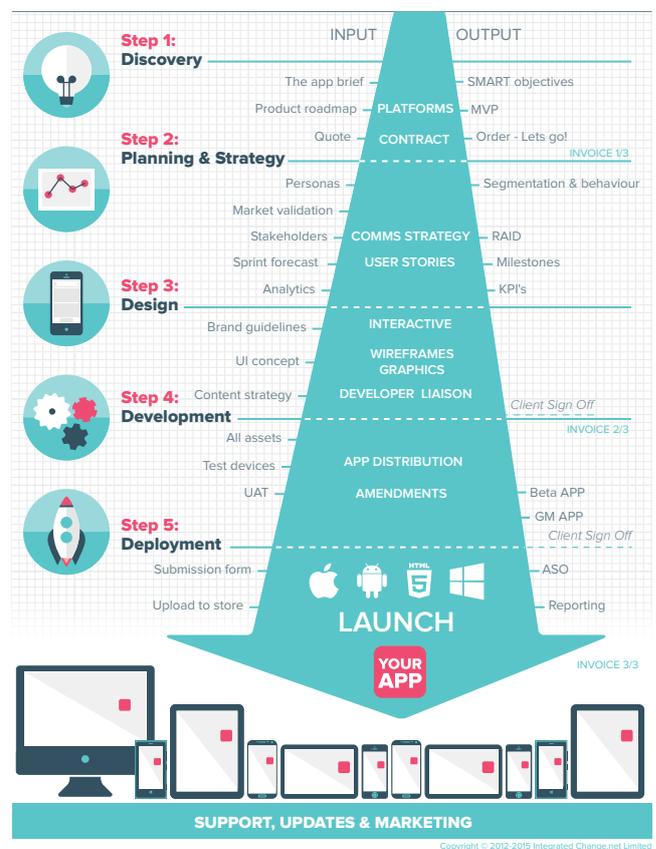
An important aspect when creating your mobile app brief is to forget about the features of the app and concentrate instead on the user. Put away all of those 2015 technology predictions and trends to watch out for. 2015 and in fact every other year before it is all about your end user. Make sure you spend time with your end users such as organising focus groups, interviews or group workshops. The amount of information you can glean from these types of interactive sessions is staggering. Start by creating an ideal customer profile; who they are? what they do? their age, likes, dislikes, problems and so on. This will help you to build up several personas of your end-users. We've included a sample persona sheet at the end of this whitepaper for you. By doing this, you may find that features of the app will become defined by the end user and not you.

b) Understand the app development process – what are realistic timelines for the development of your app?

If you have a specific launch date in mind, is this realistic? When specifying a launch date, consider the drivers behind this choice. Have you got a compelling reason why you want the app live on a certain date? For example, are you planning to launch at a key event or exhibition? Talk to the developers when you have an initial idea – this can give

you an indication of the actual design and development timescale involved and remember to add in contingency to these.

If you are unsure of what a mobile app development process looks like, then take a few minutes to review our mobile healthcare app development process.



Once you understand the process, you can then consider the detail you'll need to include in your brief to ensure that the information flows accurately and correctly for all stakeholders.

Item 1 cont.

Users and Marketing

c) Have a marketing strategy in place.

This is a consideration that is always missed. App marketing, or indeed any marketing of any form, runs along these basic principles:

Acquisition:

How are you going to reach your target app user? Will you use social media, such as Facebook App Install ads, Twitter's Mobile App Promotion platform or will you use print advertising? Will you be creating a web site to act as a FAQ for the app and then promote the app via Google paid advertising or organic Search engine Optimisation (SEO)? By using our persona template, you should have a good idea of how to reach your target app user and what value messaging you should use when you do.

Retention:

Once a user has installed the app, you need to make sure that they stay engaged. Will you use push notifications to keep engagement levels up or email marketing to keep them updated?

Loyalty:

What strategies will you put in place to keep your user base loyal? Apps are deleted as quickly as they are installed, so in line with retention, make sure you keep the app fresh, listen to your users and constantly iterate the app to keep installed users loyal.

Consider also how you plan to measure acquisition, retention and loyalty. Marketing doesn't come for free. You will need to measure its impact and effectiveness. Measuring engagement and behaviour within the app should also be considered.

Think about Google Analytics ([see our blog post here for more information](#)) and how this can be implemented into your app. It's an extremely powerful tool.



To maximise marketing effectiveness, bear in mind that your approach will require a mix of short, medium and long term strategies. Remember to start early with your marketing efforts and create a buzz well before it's launched. If your app passes the kitemarking process (scheduled to begin June 2015), you will then be able to use the NHS logo and the app will be included upon the NHS Choices app store so be sure to make the most of this from a marketing perspective.

When we run through this process with our healthcare clients, many of them find that creating a mobile app brief can be quite an enlightening process. It opens up the thought process, challenges your initial ideas and can provide solutions to those tricky 'what-if' situations. Lets move onto item 2.

Item 2

Make sure you know WHY you want to create a healthcare app

This item caused a debate in the Integrated Change office. Some queried that this should be item 1 whilst the majority argued that you could only answer this when you understand your end user.

So, here we are - why are you creating a mobile app and can you validate your decision to do so based on information from real users? Are you reacting to competition or is there a real gap in the market.



Apps dominate mobile. Time spent on a mobile device is on average 2hrs 42 minutes per day with apps commanding 2hrs and 19 minutes of this

At this stage it is often useful to look at your competitors and market via a SWOT and PEST analysis, build a competitor matrix and position your need to actually develop a mobile app as valid. Include your findings in the brief, separated into an executive summary and introduction (or whatever titles you feel relevant). If you are clear on what problem it solves at this stage, item 3 should come easy.

An important point is to remember to keep really focused on WHY you are developing the app. This is going to become extremely useful when you start to think about your marketing messages and value proposition. The very best companies, like Apple, are masters on focusing why their products will help you. Forget about what your product does but concentrate on why it will help the user.

We recommend that you [watch this inspirational TED Talk](#) by Simon Sinek on titled 'Start With Why'

(source: Flurry from Yahoo, 2014)

Item 3

What are the objectives of the app?

Objectives are crucial so deserve a separate mention. Your mobile app brief must specify what you want users of the app to achieve?



One in five apps is used only once

What exactly is the purpose of the app and how will you allow users to meet their goals from the moment they open the app to the moment they close it. Include what problem it solves from item 2. Both the objectives and definitions of the problems the app should solve/assist with must be included in your app brief.

Make sure your objectives are SMART (Specific, Measurable, Attainable, Realistic and Timely) . You can then validate these with your developers or list of developers to use.

(source: Localytics, 2014)

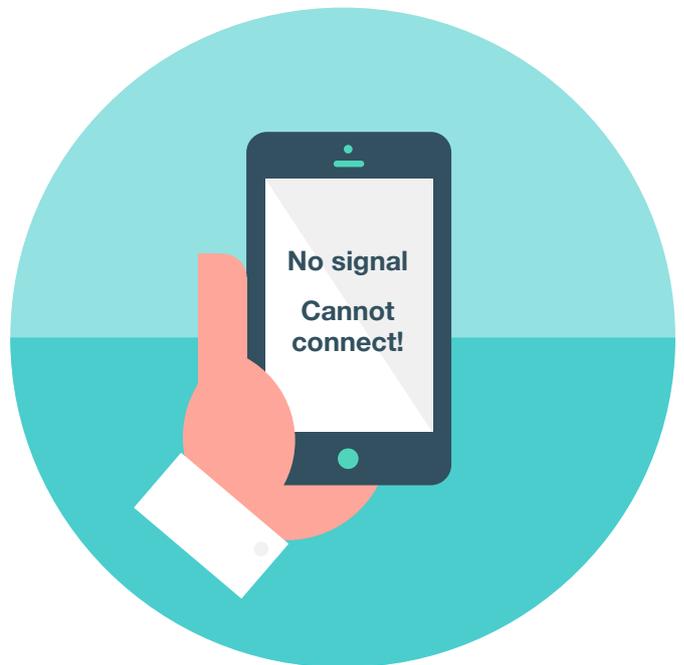
Item 4

Where will the app be used?

Will it be on the train, in a fixed location, roaming, in a business environment, in a clinician to patient scenario, in a hospital or clinical setting and so on? Outputs from item 1 will help you here.

From a list of 8,851 health & fitness and medical apps, they received an ‘excellent’ app quality score. Developing a robust and easy to use app is a must.

Defining where the app is going to be used provides a wealth of information to the design and development team and will come into play early in the development process, feeding into the key phases of architectural blueprint and wireframe (a set of images which displays the functional elements of your app). They will also become invaluable when creating a testing plan.



(source: Applause App Quality Index, 2015)

Item 5

Regulation and Kitemarks

Does your app need to be regulated?

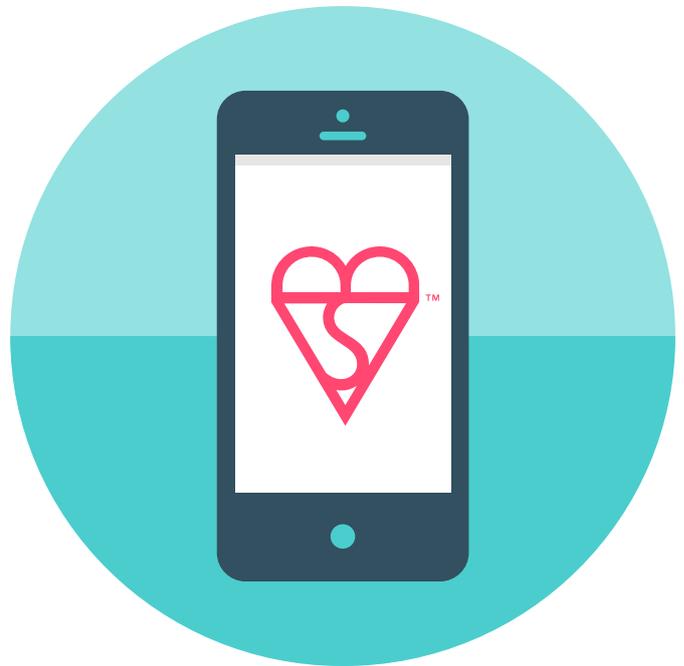
If your proposed app meets the definition of a medical device, it will be regulated by the MHRA (Medicines and Healthcare Products Regulatory Agency) and will have to undergo a conformity assessment. The MHRA is the UK's governing body for the regulation of medicines and healthcare products and their website offer lots of advice on apps, so definitely [go to their website](#) to get an idea of where your app sits with regards to regulatory requirements.

This can be a very grey area but in summary, if your app takes data from users and then does something with it in order to make a recommendation or to give a medical professional the ability to make a diagnosis, then it is highly likely it will need to be regulated. In a nutshell, if your app amplifies, analyses, interprets, calculates, controls, converts, detects, diagnoses, measures, monitors or raises some kind of alarm, the likelihood is that for regulation purposes it will be termed as a medical device.

All medical devices that are placed on the market in the UK have to comply with two sets of device-specific legislation:

- European Union laws – the Medical Devices Directives and Regulations
- UK laws – the Medical Devices Regulations

The legislation places obligations on manufacturers* to ensure that their apps are safe and fit for their intended purpose before they are CE marked and placed on the market in the UK or any other EU member state. These regulations need to be considered as they cover certain types of healthcare app, depending on its content, data collection and intended usage.



The introduction of Kitemarking

As part of its long-awaited IT strategy, 'Personalised Health and Care 2020', in mid November 2014 the NIB (National Information Board) announced that it will set up a group to establish kitemarking, or regulation and accreditation, of healthcare apps, as well as digital services and associated mobile devices.

Apps that pass the kitemarking process will be able to use the NHS brand and be accessible through the NHS Choices website, ensuring this becomes an accessible distribution channel for useful and reliable digital products and so making it easier for patients and the public to find appropriate, regulated apps.

The NIB strategy says further proposals for the kitemarking process will be published by June this year, with kitemarking of apps set to begin by the end of 2015. Watch this space!

* If you are commissioning a developer to develop an app for you and it is going to launch in your company name, then your organisation is deemed as the manufacturer for the purposes of the legislation, not the developer themselves.

Item 6

The MoSCoW method

This isn't the city in Russia but it is an extremely and simple to use method that helps to categorise all of your features. We recommend using post-it notes and sticking them to a wall for this exercise. All five items up to this stage will feed into this (so long as you are following each item in this whitepaper accordingly of course).

Must:

What features need to be included in your healthcare app at launch? These are features that **MUST** help to solve the problem and meet the end users objective.

Should:

A feature that is high priority and that should be included in the app at launch.

Could:

A desirable but not necessary feature. Best left as a later update to the app.

Want:

A nice-to-have feature to be included in a future release or something that, at this stage cannot be budgeted or developed in time.

Once you have categorised the features, make sure that they are adhered to. When development starts, feature creep is a project killer for all concerned and is a seriously demoralising experience. Categorising in this way is immensely helpful. It will also help you to build a roadmap of feature additions to the app spread out across the 12 months following launch. Remember, as we said in item 1, you want to encourage user engagement and buy-in so that your app is not just downloaded and never accessed again but regularly used!



Successful apps don't just have bug fixes as updates. App users want to know that new features are planned and on the way so make sure you specify these in your app store description. Of course, once the app is launched, your users will be generating requests for improvements and updates, some of which you may have never considered. Make sure therefore that you make it easy for users to send you their feedback or even problems they are experiencing with app. If they do this from within the app, you will avoid any negative comments being placed on the app store, especially if the problem can be easily resolved.

Ultimately, simplicity is the key to a successful app and especially so within the regulated world of healthcare. It doesn't mean that your app should provide next to no features but whatever features you include on day 1, make sure they are the ones, which solve the users problem and meet their objective.

Item 7

Choosing the right mobile platform

Believe it or not, a startling amount of app development briefs don't mention the platform of choice. This is crucial information and must be included in the brief as the choice will have an effect on both cost and lead-times.

The previous six items will help to inform you of this. If you are creating an app from an existing website, then take a look at the analytics to determine what mobile devices people are using to access the site. Whether your choice is for Apple or Android (did somebody mention Blackberry?), you should definitely avoid launching on both platforms from day one. We cannot emphasise enough that it is a much better strategic decision to 'stage' the launch of your app on these mobile platforms and there are a whole host of viable reasons why:

- Any problems that arise from developing the first platform will be avoided for the second – you will definitely save time and cost.
- Feedback from just one platform can be transferred to the second platform before development has begun. You can then launch the app on a new platform along with a host of new updates to the existing app.
- You minimise any investment risk if the app is struggling, as changes and investigations only need to focus on one platform. Again a cost saving.

So which platform should you focus on first?

iOS or Android really depends on the target audience so it's a good starting point to survey your existing customer base or, if it's a new audience, do some market research (as outlined in item 1) – either way you should be asking them what smartphone they have. There are a whole range of very cost effective online survey tools which are simple to use and make analysis of collected data a very easy

and quick process too. The idea with surveys is to keep them simple, relevant and not too long – but make sure you structure the questions to maximise the information you want to obtain. You can send out these surveys via email, add it to your social network sites, put it on an iPad in your reception area, or even just print it out. (This is often the most successful option as patients tend to have some spare time when in a clinical waiting room.)

And what about choosing an operating system?

Once you've chosen which platform, it is time to consider which version of the operating system to use. Should you target 4.0 or just Android 5.0? Will it support earlier versions of iOS and not just iOS8? However, if this is all techno babble then we recommend that you leave this open for an advisory conversation with your chosen developer, who will definitely shed some light on the best option for your proposed app. You may also want to consider at this stage the timelines of your project – will they cross over with a new release of iOS, typically in September/October or fight for attention with a new device in June or July. Google and Apple tend to launch new devices and operating systems at certain times of the year – take note of these.

Just remember that devices are not created equal and they will all differ in what they can support. For example, will your iOS app track actual movement or the number of steps a user makes? If so, this can only be supported on the iPhone 5s/iPad Air and iPad Mini 2nd generation and above which utilises Apple's new M7 motion co-processor.

Phew! Are you still with us?

We know there is a lot of information to take in so why not take a well-earned coffee break and come back refreshed. Remember, we are here to help so if you need any assistance then contact us...

020 3302 0600

hello@integratedchange.net

or pop down to our office located at

25 Sackville Street

London

W1S 3AX

OK, lets continue onto Item 8

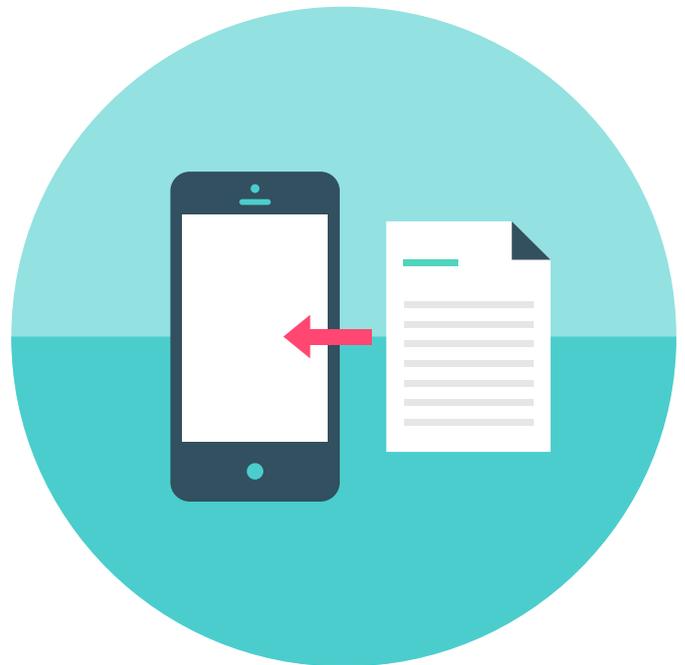
Item 8

What content needs to be developed?

Designing and developing the app is just one aspect, what actually goes into the app is another. Will you be providing the editorial content yourself, as part of your brief, or do you want your app developer to produce the content too? Alternatively you may already work with a third party for production of your content? If that is the case, ensure they can meet the project timelines.

79% of app users will retry an app only once if it failed the first time.

The amount of content you want to include in the app will have an enormous impact upon the design stage of the app and could, if the content is too lengthy, create a poor user experience when it's fully developed. You certainly don't want your users endlessly scrolling to read the content in your app and nor do you want them to discover poor grammar or spelling! It happens, believe us!



Content is a vastly important item of the app and is so often only given limited consideration. Content development is not just a one off piece of work either - consider how it is going to be updated and how often too? Recently Google announced that it will start to index the content of apps within the search engine results pages, which is a most welcome move, for both iOS and Android users. However, this doesn't happen automatically and you will need to involve your developers from the off if want to take advantage of this. [Check out our blog here](#) which details some of the changes.

You should also consider if your app will pull in and display content from an existing website? If it will, then make sure the website page that will be displayed in the app is mobile friendly.

(source: : Compuware, 2014)

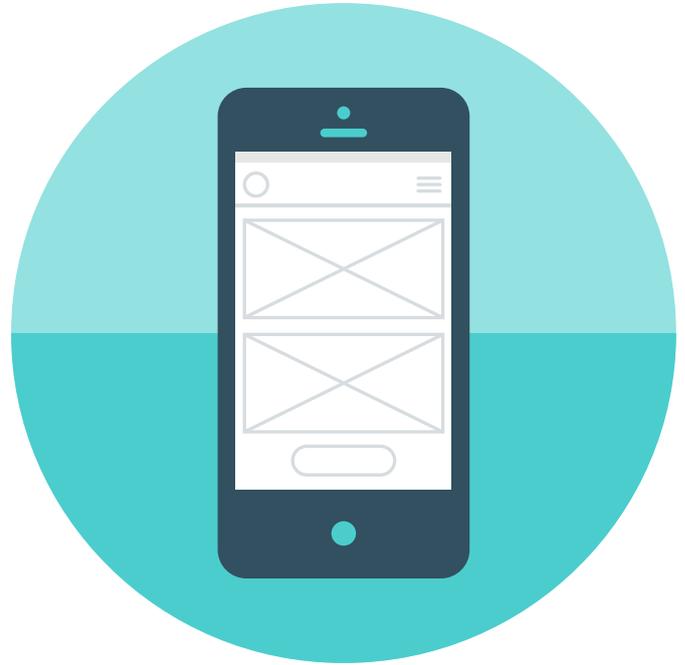
Item 9

Do you have ideas for the design of the screen layout?

It may seem old fashioned but an extremely simple and effective method of visualising the screen/page layout of your app in both modes is just to sketch them out using pen and paper! It really doesn't have to be a fully blown mock-up and we are not suggesting that you take over the role of a graphic interface designer but these can be a really useful visual aid when briefing a developer.

Apps are perceived as more convenient (55%), faster (48%) and easier to browse (40%) more than web

Other visual references are incredibly useful to include in a brief, so if there are any apps that you like, include a screenshot or reference and explain what elements you particularly like about them.



At the end of this whitepaper, we have provided a basic template to allow you to put down your ideas onto paper. Just print off as many screens as you need. You can thank us later!

Also, remember that landscape and portrait modes of an app don't just scale automatically. We sometimes lock down the orientation if this isn't specified in the brief. Do not assume that everything automatically fits into place when turning a device onto its side to view as it doesn't. This screen layout variation needs 'designing and developing in' so be clear on this in your brief.

(source: : Compuware, 2014)

Item 10

Does your app need to integrate with a database?

If you require a database to integrate into your app, then you must include samples of the database structure or output files in your brief for the developers to review (or give them access to it). Depending on the database structure and format there could be extra costs to integrate or even amend the database structure.

From our experience, 97% of the apps we have developed connect to some form of database.

You will also need to be clear and communicate who owns the database – is it your organisation or a third party? Is there a data storage policy in place and do you have to meet any Data Protection guidelines or Caldicott Standards? If it is an NHS app that will transmit data over the N3 network, please bear in mind this is not secure.

If the data is patient information or is sensitive in any way, make this ultra clear in your brief. The developers will need to make sure that the appropriate encryption and security protocols are developed right from the word go. If you need to meet any internal security governance, then make sure that you obtain the exact encryption protocols the app will use.



There is real ambiguity when it comes to data and mobile healthcare apps - if your app is using data collected from the smartphone itself, who will own this? Will it be integrating into Apple's HealthKit or Google Fit? Data and mobile healthcare is a minefield so make sure you spend time investigating this.

(source: Scott Hague, Owner and Development Director, Integrated Change)

Item 11

Will your app require hosting?

If your mobile app will push, pull and store data from any kind of database, or it will need to integrate with an external data source or environment, then some form of hosting is going to be required. If you plan to provide the hosting and your app has to connect to this, make sure this information is clear in your brief. If it's NHS based in the UK, is it N3 compliant or HIPAA compliant for the U.S?

If the data is patient information or is sensitive in any way, make this ultra clear in your brief.



Include information on what the framework is and if there are any security compliance requirements. If the hosting is to be provided by the healthcare organisation, what security protocols do they impose? Will they allow an app to connect to the database and the hosting account? Are users required to register for an account to start using the app or login with their existing credentials?

Hosting should be investigated thoroughly as it could have a dramatic impact on the overall timelines and cost of your app project.

Item 12

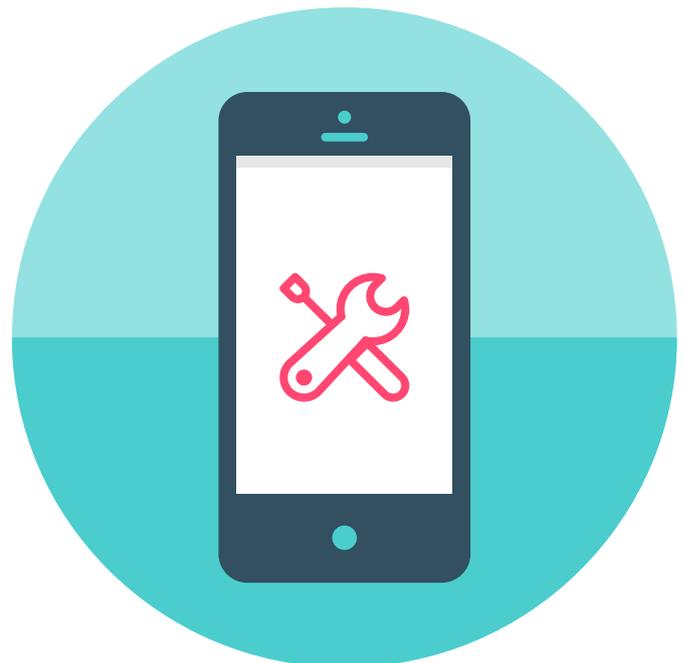
Support, monitoring and analytics

If your proposed app will provide a product or service to your target audience than you need to have a support mechanism in place to either a) accept feedback via a number of channels and b) listen to and respond to feedback. Not having a support framework in place, especially if the app is going to be heavily relied upon is a dangerous tactic.

Your healthcare mobile app is also going to need ongoing support from both a graphic design and technical perspective. No software, no matter who produces it, is 100% bug free. Bugs aside, you will also need to account for the changes in new operating systems and mobile devices. Whilst Apple stated that all apps will 'just work' on an iPhone 6, if the graphics weren't optimised, they tended to look a little fuzzy. Similarly, when Google launched Android 5 Lollipop, most apps worked but some behaved slightly differently in strange ways. As a side note, we would recommend that you purchase or have access to a set of mobile devices to run your app on. Here at Integrated Change we have over 30 devices and we advise that you shouldn't be without (amongst other models) the following:

- An iPhone 4s – yes, a vast number of people still use an iPhone 4s. It supports iOS8 and is still as robust as it ever was.
- An Android phone that runs stock Android and receives operating system updates before any other. A good example is the Google Nexus 5 smartphone.

Technical support can cover bug fixing, hosting and compatibility checking with new versions of software, amongst others and is normally charged by developers on a monthly basis. Alternatively, you can take the risk and then just pay an hourly rate to fix the app when it breaks although, we wouldn't advise you to do this!



Often not associated to a cost as such but if you have included analytic and behaviour tracking in your app, somebody is going to have to report and disseminate this information. Of course, this could be you and if it is, make sure you are totally familiar with the analytics program you have chosen. Also make sure that your developers are, when the time arises, able to update the analytics programming language within the app – this should be covered by the support agreement but check anyway.

Summary

So there we have it, the 12 items you should include in your mobile healthcare app brief. Don't assume that once you have created the brief for your app that's it. It will need dedicated time from you and you will need lots of perseverance and patience.

A good brief is often a catalyst that kick-starts discussions between you and your chosen developer and, as we mentioned at the very start, it will be a living document so expect to go through a few versions of the brief before all parties are happy and the project can get underway. Remember; try not to include everything from day 1 but work on creating a long-term road map of updates and features to include in the app at a later date.

It's a busy market out there so you need a good solid platform to start from. Including all of the items within your brief that we've covered in this whitepaper will certainly make for a very productive and positive developer-client relationship. A well thought out and comprehensive brief will not only assist in planning, design, meeting development milestones and your intended launch date but should also spark ideas for future releases and additional app features. On the flip side, it may even send you back to the drawing board to re-think your mobile app concept entirely!

Developing an app needs a large dose of perseverance, patience and time. Make sure you are prepared to give this before you start.

Creating a mobile can be a stressful experience but hopefully by following our guide, you'll avoid the mistakes that so often waste time and money. Either way, a detailed brief will create the foundation for the development of a really great mobile healthcare app.

Good luck!

(source: Scott Hague, Owner and Development Director, Integrated Change)

About Integrated Change

We are a Digital Healthcare Agency based in London who specialise in developing mobile apps, medical websites and online marketing strategies like SEO exclusively for the healthcare industry.

We work with both public and private healthcare providers, charities and individual healthcare professionals UK wide.

Get in touch

If you are looking for a trusted partner to help you fulfil your mobile app brief, develop your medical website or manage your online digital marketing campaigns then contact us today to find out how we can help your healthcare organisation.

Email

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Visit

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Check-list

Mobile App Brief Checklist

Use our handy checklist below to make sure that you don't miss to include any of the critical items when creating your healthcare mobile app brief. Once you have included the item, simply tick it off and add in the date.

Item	Date complete/revised
<input type="checkbox"/> Users and marketing
<input type="checkbox"/> Identify your target audience
<input type="checkbox"/> Understand the development process
<input type="checkbox"/> Marketing strategy in place
<input type="checkbox"/> Why are you developing an app?
<input type="checkbox"/> What are the objectives of the app?
<input type="checkbox"/> Where will the app be used?
<input type="checkbox"/> Have you considered regulatory compliance?
<input type="checkbox"/> Use the MoSCoW technique
<input type="checkbox"/> Choosing the right mobile platform and operating system
<input type="checkbox"/> Discussed and arranged the editorial content of the app?
<input type="checkbox"/> Sketched any ideas or provided examples of apps?
<input type="checkbox"/> Considered database integration?
<input type="checkbox"/> Considered hosting?
<input type="checkbox"/> On-going support, monitoring and analytics

Remember to keep repeating and validating the items above and include a versioning number somewhere within your app brief document.

Persona

Discovery & knowledge

What is the personas technical comfort level?

Do we know what mobile devices they own or are likely to own?
.....

Demographics:

Age

Gender

Location

Location

Job Title



Objectives & Challenges

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Situation & Context

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Marketing message

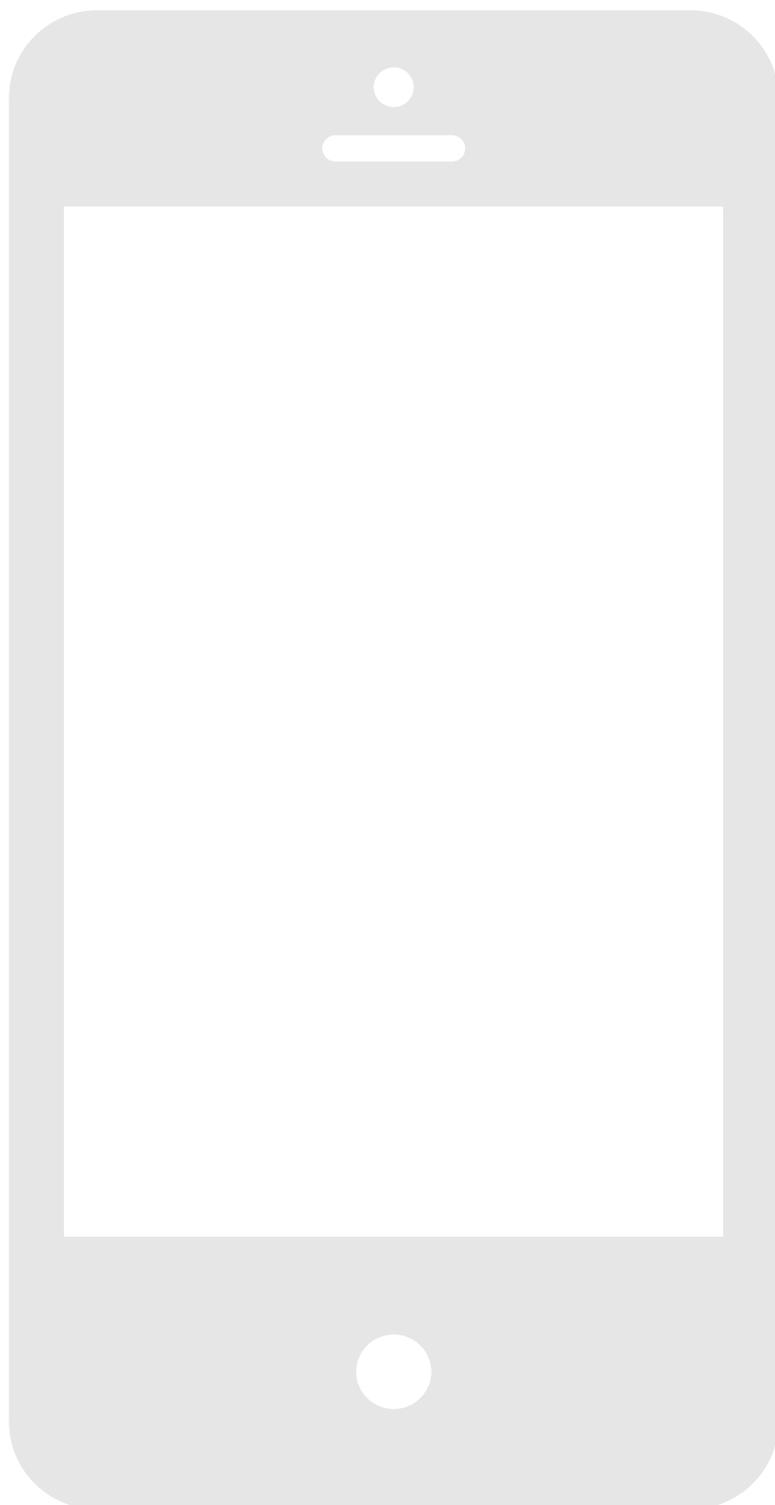
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Elevator pitch

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Sketch Sheet

iOS iPhone



Concept version

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Screen Title

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Screen number

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User Orientated Objectives

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Comments and notes

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