Product Innovation Framework

This Product Innovation Framework is part methodology and part manifesto. It aims to impart what we've learned from doing many right things but often the wrong thing, and explains the Lighthouse ethos that's been defined along the way.

Our journeys into design and development started in the late 90s. Since Lighthouse formed in 2008, we've helped many people take ideas through validation and experimentation on to MVP build and beyond.

Simplicity, experimentation and foresight underpin our process; coding skills and visuals are all good, but real product success lies in refining every detail. Here you will find digital product construction distilled into four components: Ideas, Validation, Development and Steering.

What we know for sure is that simplicity is good product design. We've learned a lot along the way, so thought it best to share.

Tom & Dan

Here are the four key sections of the framework.
Each is useful in its own right and all fit into different parts of
a product's lifecycle.

01 **Ideas**

Generate, filter and
pitch ideas

02 **Validation**

Research prototype
and test solutions

03 **Development**

Design, develop and
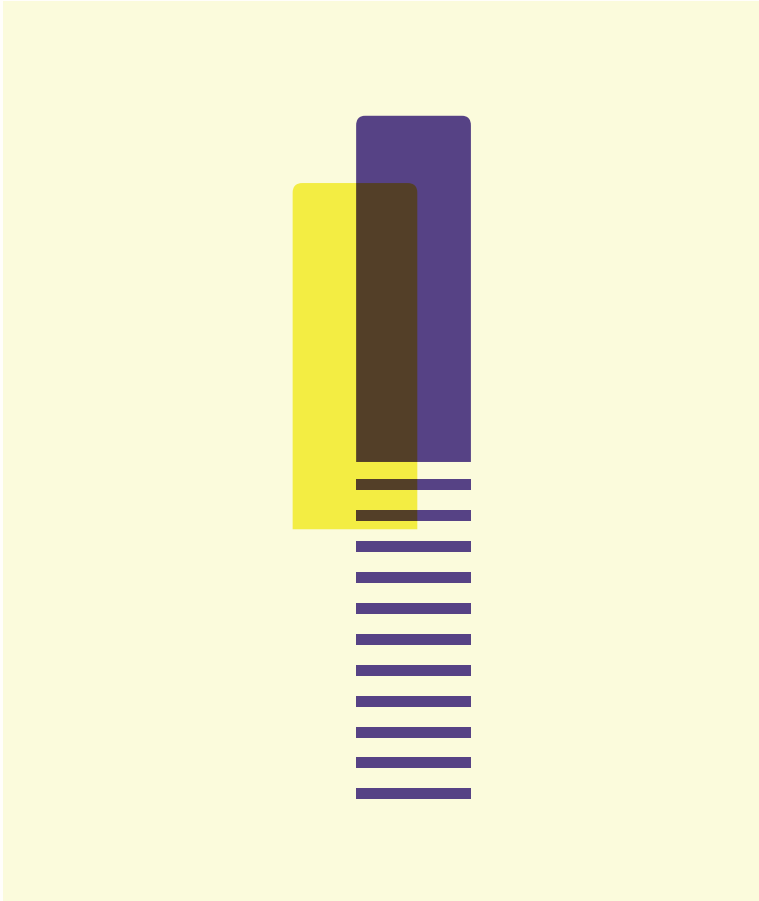launch a product

04 **Steering**

Manage, iterate and
grow value

Ideas

Generate, filter and pitch ideas

"Think your idea is valuable? Then go ahead and try to sell it, and see what you get for it. Not much is probably the answer. "

– Jason Fried, 37 signals

Ideas on their own are not valuable. They need focus and productivity to bring them to fruition.

It's easy to look at a successful product, heaping praise on the original idea and the genius who thought it up. This ignores two things:

- That person also had a load of terrible ideas that you never heard about
- Other people had a similar idea and failed. You didn't hear about them either.

By focusing only on what worked it's no wonder we see ideas as these precious lightbulb moments experienced by the super gifted. Thinking like this makes single ideas seem difficult when actually they are not.

In the real world it's a numbers game. Many normal people are having many normal ideas, trying them, and finding what works. The point is, producing a single idea that becomes successful on its own merit is impractical. It must be generated as part of wider brainstorm, filtered and recorded. All this before moving on to the validation stage.

Looking at it this way, you realise that you don't need inspira-

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tion; you need to focus on your customer and practice your ability to test the potential of many options.

Make this part of your culture and the good ideas will appear naturally.

BLOG

Lightbulb Moments, Magic Beans and Other Innovation Myths – How To (Actually) Generate Ideas

BLOG

Three Simple Steps to Building A Culture of Innovation

GENERATING

Exposing viable product options depends on your ability to generate ideas in volume, keeping a critical eye on what your customer needs.

To boost the number of ideas you have you should increase two things:

- the number of people having ideas
- the problems their ideas can focus on

Utilise everyone – not just management – and focus on the wider problem space rather than a narrow solution.

Ask "what frustrates our customers?" rather than "what app should we build?".

The people who can answer that are more likely to be frontline customer support than c-level bigwigs, so go and find those people.

It's important that everyone in your business feels they can contribute, and even more important that you make the most of the people around you. Make sure it's clear that all suggestions are just starting points. Help people overcome their inner critics whilst increasing your company's chances of discovery.

BLOG

Is Your Boss (Accidentally) Killing Your Best Product Ideas?

GET GOING

Our principle is to diverge and then converge, focusing on specific customer needs. This will enable your team to generate a large variety of ideas before narrowing them down to the interesting ones.

Run exercises that get people thinking about a particular customer and then undertake some rapid idea generation. We often use focus groups to identify the obstacles standing in the way of our customers' desired outcomes.

Remaining outcome-focused allows for productive idea generation whilst ensuring they remain focused on the needs of your customer.

🔗 Lighthouse Innovation Day

Get creative with our rapid idea generation and filtering workshop for teams

FILTERING

Now you have several options, you're going to need a way of filtering them. How you do this depends on your circumstances.

On your own?

You need to work out which of these you want to invest time in, and which are most likely to lead to a successful, competitive product. The factors can be personal:

- Which are you passionate about?
- Which topics do you have a lot of existing on?
- Are there any that suit your industry expertise?
- Do any give you an obvious advantage over competitors?

Create a list of factors to rank your ideas against. One or two strong contenders, should soon appear.

🎙 **PODCAST**

Managing Ideas: How to Generate, Filter and Judge Innovative Thinking

In a group?

Group scenarios require a different approach. If you're going to utilize the talent around you, you need to employ some diplomacy and avoid personal bias. Make sure you give yourself and others time to digest ideas and allow them to stand on their own merit. Measure each against a set of pre-defined How well does this idea fit with our overall mission?

- How well does this idea fit with our overall mission?
- How big a problem is this?
- How much value will this provide?
- How easy is it to test?

These will help you make decisions as a group but will also play a key role in convincing external stakeholders, investors or the powers-that-be that an idea is worthy of taking to the next stage.

Try to create a simple pitch document for the idea. It's a good sign if a pitch comes together easily. Being able to coherently explain the value that a product might bring is key if you want to convince others to help or invest in you.

RECORDING

All of these interesting ideas need somewhere to live. Some ideas are great but the world isn't ready yet. Some you can't move forward with unless you meet someone with the right skills or network. Some require technology that is currently prohibitively expensive but next year could be free.

Create a **portfolio** with a section for each idea, its pitch and next steps. Schedule a review of this every few months

VALIDATION CANDIDATES

The next step for any idea will be how to validate it with customers. Some ideas will have obvious paths to validation and others will be trickier. We call the ones you are going to act on Validation Candidates. The next component of the framework is about what to do with them.

Validation

Research prototype and test solutions

Validation is a crucial stage in the framework. It qualifies which ideas you carry through to experimentation.

For the majority of ideas there is only one person who can validate them: a potential customer. Therefore, the validation component is 90% about ways to get in front of people and extract valuable information from those interactions.

Our approach is a lean one. Big market research campaigns are a good way to generate ideas, but to validate you need to be more focused. We favour methods that can be done with minimum equipment and a small set of people.

Validation is something anyone can do, it can also be great fun and a really interesting part of the process. If you want to launch a product and you have to learn one skill then forget coding, you should learn how to validate. (Bonus, it's much easier than learning to code)

Here are the three methods we've employed the most often:

RESEARCH

Good research is about asking the right questions, avoiding bias and listening more than you talk. Your input at this stage should be minimal. You want to establish your customer's problems, getting them to tell you what they've tried so far and why it hasn't worked.

The right questions depend on context but as a rule don't lead people or ask them to speculate. Don't ask what they want to do, ask what they have done.

If people truly have the problem you're researching then they will have tried to solve it, so ask for examples. What are they currently using and what are the frustrations with that?

Even if you have an idea, don't introduce it at this stage. You want an accurate picture of a person's world. Don't start introducing new things or the picture will change.

Research sessions can take many forms but for products you can keep them lightweight, just a handful of fifteen-minute conversations will teach you plenty. As a product owner, you should always be in research mode, able to extract an insight from every interaction with a customer.

BLOG

How we used research to Kill Our Crappy Music Platform Idea (And Loved It)

PODCAST

How to Conduct Expert User Research aka How You Might Be Doing It Wrong

PROTOTYPING

Sometimes just talking about an idea isn't enough. To get meaningful feedback you'll need a way to demonstrate a product with something tangible that people can see and interact with.

It's still too soon to build the entire solution, so it's time to get prototyping. Prototypes take many forms but are essentially efficient tools that allow you to gain useful user feedback with as little investment as possible. This should require minimal design and it's rare for us to do any coding at this stage.

A prototype is usually a collection of screens from your solution mocked up and made into a clickable tool. You can pull this out on your phone, tablet or laptop when out and about to give your potential customer a quick guided tour of the product. They'll be none the wiser that this isn't the real deal, so you can get a true picture of how people want it to function.

Prototypes are as useful when starting out as they are further down the line when your product has launched. Test new features, user flows, design elements and more without committing a line of code.

⊘ Check out our Product Sprint
Get a prototype in you customers' hands in just 24 hours

PRODUCT EXPERIMENTS

Sometimes a prototype isn't enough and you need to engage an actual customer. Again, this doesn't mean building the entire product. There are many creative experiments you can run to val-

idate products in the real world without venturing too far into the development phase.

We're big advocates of running simple tests that reap lots of useful data. One crucial thing here is foresight; think ahead to how you can migrate this data between platforms if and when the final product is up and running.

Here are a few examples. You've most likely come across some of these before, maybe without knowing it:

Proposition testing

A one page/simple website detailing the offering that asks users to sign up for early access. Send some paid ad traffic to the site and see what happens. You're looking to gauge how well the offer sits with the people visiting the site, so the more sign ups the better.

You can use this technique to quickly refine content once you've seen how well the page is performing. If you're unsure about certain elements you can also conduct some simple A/B tests as this stage.

Wizard of Oz MVP

For the customer this will look like a well-designed, fully functioning product. However, behind the scenes there's little going on. Any interactions are likely to just email the founder who will then carry out all the tasks manually, feeding back to the user themselves.

If the platform grows in popularity this will rapidly become too difficult to manage. Make sure you have a plan in place as to how you'll deal with this before you launch.

> **BLOG**
>
> *The Wizard of Oz MVP: All Style, No Substance*

Third party MVP

Eventually you'll want to build the all-singing, all-dancing bespoke platform but while you're looking to prove a concept you may be able to run a test using a third-party solution. Research whether there are existing platforms that provide the functionality you require and build something on top of one of these.

You'll want to replace this eventually so keep in mind what's required to achieve this, including how you'd go about migrating data and how this would affect your users. The longer you stick with the third-party solution the trickier the migration could be.

> **BLOG**
>
> *Product Story: Bandwagon: Facebook MVP*

RECORDING

Add all of this to the idea's portfolio entry. Strengthen the pitch deck with prototype screenshots and enhance the vision with what you've learned.

DEVELOPMENT CANDIDATES

All of the work you've done so far will have told you lots about all of your ideas. It should be clear which of the ideas can now become Development Candidates, ready for investment in design and build.

Development
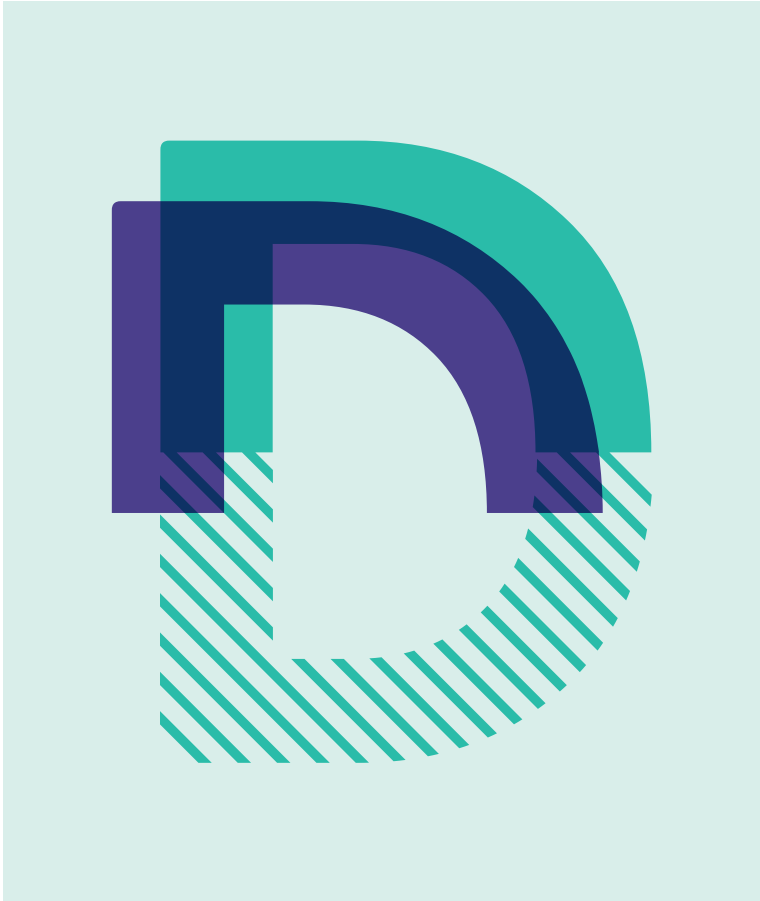
Design, develop and launch a product

Now you've validated an idea and brought it onto the development stage, you'll need to establish some basic fundamental factors. Your customer will want to know how you intend to bring the product to fruition, how long it will take, and what it will cost them.

It's important to remember that one stage doesn't necessarily end because a new one begins, and that you should continue tending to your research and user experiments in order to determine the quality of the end product. By employing ongoing functionality tests, user stories and wireframing, you'll be able to remain strictly user-focused and continue to refine details of the product as the development stage progresses.

Keeping an open dialogue with your customer means that they will be aware of the tweaks you make along the way and won't be getting any big surprises that potentially shake their vision of how the product will work.

During the development stage, we depend on our ethos of simplicity, experimentation and foresight to help bring about workable solutions that ensure goal-focused outcomes.

SCOPING

Now you are confident you know what users want, what do you build? The thing they said they wanted, right? Well, not necessarily.

You've validated a need and hopefully an approach, but development is the real world and brings with it a very important factor in your product: cost.

Cost isn't just about cash, it can be measured in a number of ways:

- Monetary cost
- Cost of reducing flexibility
- Cost of complexity

How are you going to deliver the value you've identified a need for? You need to do it in the simplest way possible, incurring the minimum cost. For this you should carry out a scoping phase.

We try to say "no" more than "yes" and reduce an implementation down to its essentials. This doesn't just cost less, simplicity is also just good product design. Who doesn't love a simple solution?

BLOG

The Hidden Costs of Complexity: Three Things That Will Kill Your Product

There are many ways to scope but our favourites are wireframing and user stories. These are both really easy to understand and also provide wider value. A good wireframe can help with the product's pitch and user stories are simple to prioritise.

The very first thing we need to do is understand who our users. To do this, we build user personas.

PERSONAS

You want your product to be accessible to your chosen markets. This is something you should already have put a lot of thought into during the Ideas and Validation stages. Hopefully you've used your powers of foresight to build a picture of those customers along the way. By remaining focused on user-goal outcomes throughout, you should already have a good basis for building these personas.

This is an exercise that can have different levels of detail and output. How much is up to you. In its simplest form, it's a list of the different types of users who'll be interacting with the product and their core goals.

Each type of user will have different needs relating directly to functionality. By recording these, we can tie any future decisions back to our personas. This makes it easy to prioritise and to resolve any conflicting opinions that arise from internal discussions. If a decision is tied to a user goal, it becomes easier to design an objective solution rather than guess what should be done.

Each product has two obvious users - the main customer and you, the admin user. There may be many more and each should be considered. It's often useful to go into detail about their age, gender and job as well as any other interesting facts about them. This often provides interesting information that will shape the product definition during the following phases. You can even give them a name if you want.

With this documented you'll want to record what their core goals are for the product. Some examples might be:

- Find and purchase products quickly and easily using their payment method of choice

- Manage their team's user accounts on an office computer
- Check updates and talk to people in their network on their mobile phone

You also might want to note which solutions they're currently using to carry out these tasks, just so we have a record of this information.

USER STORIES

It's normal to look at an application as a list of features, and this is an approach that can work. A better way to map out functionality is not to focus on the technical solution but tie this back to a user goal. We do this by creating user stories.

By building up a collection of these stories we can easily document what every type of user of a system is able to do based on the users defined in our persona document. This will then form an accurate scope of work and feature sets can be created with this as a base.

For example, a member system might be broken down into the following user stories

- As a user I can create an account
- As a user I can log in
- As a user I can log out
- As a user I can delete my account

Instantly you're able to see exactly what each user can do. Each story will have a feature or set of features that can then be estimated individually.

Any required functionality that's missing ("As a user I can change my password") can be added in the form of further user stories. When wireframing, user stories can be used to make sure that all required functionality is present in the screens created.

WIREFRAMES

Wireframes take many forms but they are essentially a way of documenting user journeys, layouts and basic interactions before moving on to visual design. Before getting distracted with colours, typefaces and imagery you'll need to map out the skeleton of the application for internal review and rapid iteration.

The level of detail is completely up to you, some are super complex, others contain just enough to show a basic idea. The end result will give you or your tech team enough information to be able to provide an accurate build estimate.

Wireframes are also great for user testing. You can always put these in front of customers to further test your offering before committing to the full build. They can be very handy for final checking or answering questions around ongoing concerns or unknowns.

There are a million different ways to create wireframes and it's not down to us to dictate how you do this. A few ideas are:

Offline / lo-fi
Pencil and paper. The back of a napkin wireframe is a valuable tool and great for rapidly getting something out of your head for sharing with a customer or team. Printed UI kits can also be used to quickly build up page layouts while brainstorming or scoping.

Software tools

Photoshop, Sketch, Illustrator, InDesign, XD, the list is extensive. These are all great ways to create simple (or complex) wireframes and you or your team may already have experience using them. You can even make wireframes in PowerPoint!

Online tools

These range in complexity and cost. Some offer quick and dirty solutions and others will give you a huge array of features that give the ability to create complex, interactive wireframes. We've used UXPin for years.

Creative Bloq have a nice round up of some of the more popular tools available

ESTIMATION

Working out how long something will take to build is tough. People are inherently bad at estimating and guessing the time needed to complete a product is no different.

However, it's important to have trustworthy estimates to work from. With these in place you can set accurate budgets and know how much resource you're going to need from your team.

With your scope in place you can break large tasks down into smaller ones. The smaller the task, the easier it is to estimate and the more chance you stand of getting the estimate right. Build up a document of all the tasks you need to carry out with times done by the hour and add all the numbers up. That figure will be far more reliable than any finger in the air numbers you had before.

Good estimates take into account areas in which there is risk.

Much of what you're building may be familiar territory but there could be parts you're less confident about. It's important to note where there is uncertainty over the accuracy of your estimates and factor this into the plan.

Remember to include time for meetings, communication and other project management. Projects don't run themselves!

TECHNICAL SPIKE

Some ideas will present a level of technical complexity that out-weighs others and adds risk or a big unknown to a project build. It might be that it calls for the use of a technology that you're un-familiar with, an extra large amount of data that needs storing or communication between multiple databases or platforms.

In these cases you'll often find it hard to estimate the time needed for these pieces of work so a technical spike is needed. This is a short project that dives straight into the unknown areas building something as quickly as possible that throws more light on the situation. It's the development equivalent of a prototype - something throwaway that proves a concept.

The outcome of the spike will be enough knowledge to accu-rately estimate the development time needed for the build.

Any scoping or estimation assets are going to help you decide whether to move forward so store them in the portfolio and use them in the pitch.

AGILE/ITERATIVE

Long, complex product builds open up more risk to things going

wrong. Smaller phases of work are easier to keep on top of and fix, should anything derail.

Time and time again we've seen great benefits from running projects in an agile manner. Running short sprints of work and aiming for tested, releasable code at the end of each cycle is a great goal to aim for.

If run correctly and fully adopted by development teams, agile projects can reduce waste, and therefore cost, significantly.

ROADMAP

It's important to keep track of what's next for your product. You'll have a list of stuff to be working on in the next round of changes but you'll also want to store features that you may look at further down the line or even more vague concepts for review a year or two later.

The product roadmap is the place for all of this and forms the central place that helps all stakeholders map out the product's future. Make sure you're adding in new ideas for features here and review the roadmap regularly.

Organise your roadmap to show what the team need to work on next, what's around the corner and what's coming in later. By reviewing what's on the horizon you can make sure you're aware of features that may need researching and prototyping before going to build, or anything that needs a technical spike.

There are multiple tools you can use for your roadmap, ranging from humble spreadsheets to enterprise-level project management tools.

For those starting out we'd recommend the following:

- Google Sheets
- Trello
- Basecamp

FOCUS AND PLANNING

Having a roadmap is one thing, but how do you work out what to do next? The most important thing to remember is to stay focused on your customer. Based on the tasks they're trying to carry out with your product you can work out what they need the most. We call this goals-focused development.

There are a number of ways to work this out.

Listen to users. Once you have people on board, you need to start talking to them. They'll tell you what's good but also what's bad. Knowing what's frustrating your users is incredibly important and will feed a large number of the changes you end up making to the product.

Don't immediately react to every issue a user brings up; you'll soon run out of time if you try to fix them all. Make sure that a problem one user has is shared by others. The only way to do this is by having multiple conversations.

Users will also suggest new features that you might build. If users are suggesting features that you've already thought of then that's a great sign, you're on the right track and understand them.

If they're suggesting something different then record these but don't just automatically add them to your roadmap. When considering a user-generated feature it's important to make sure you tie the functionality described to the goal they desire. By under-

standing the goal you might think of a better way of implementing this than their solution. You're the product expert, after all.

PODCAST

Juggling Priorities – How Product Teams Can Choose What To Do Next

Steering

Manage, iterate and grow value

Launch is just the start. After you have customers onboard you need to have a measured way to steer your product to long-term success.

To do this, steer the direction of your product as you would a business; tend to it and put ongoing development measures in place. A product board should be established to take responsibility for regular meetings that evaluate the key business areas of Design & Development, Sales & Marketing, HR & Resourcing and Finance.

Foresight is key here: don't think about this stage too late. Put a structured formula in place to stay on top of the ever-changing needs of your post-launch product.

THE PRODUCT BOARD

People have been steering businesses for decades and the boardroom process works.

Gather your key stakeholders and hold monthly meetings to review and plan. Someone's got to run the show, so give them the chair. The board's job is to stay on top of what's been going on, decide what changes should be made and allocate resource for the coming weeks.

Each meeting needs a standard agenda and you'll want people to prepare reports for analysis. Focus on the following areas and assign the right person to head up each section:

- Design and Development
- Sales and Marketing
- HR and Resourcing
- Finance

In smaller teams people may have more than one responsibility.

Circulate your agenda and reports before the meeting so that people come prepared.

DESIGN AND DEVELOPMENT

Actions from the board meeting will show where you need to focus the efforts of your design and development team. Different teams will use different tools and processes but make sure that the plan is fed back in a way that allows people to get going on the next phase of work.

SALES AND MARKETING (GROWTH)

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Depending on your product, sales and marketing may have been kicked off some time ago or may be a new consideration.

At some point you'll need to design a sales process, document it and report on its effectiveness. Draw up a sales report with key numbers from the last month. You should make sure that past numbers are available to see changes and trends.

By looking at the data, you'll be able to discuss what's working and what isn't. Where there are problems, discuss ways in which you might change the process. Document the change and put it into action for discussion at a future board.

There are a million different ways to market a product. In the early stages you'll want to pick a small number of channels and experiment with various options. Once you've found some that work turn up the investment.

Marketing experiments should be carried out regularly. After a while you'll have tried out lots of campaign ideas across multiple channels. Your marketing report will show activity across your core marketing channels with historic data. At the board decide which experiments you're going to run next and note them down ready for reporting on success at a future date.

HR AND RESOURCING

As your product grows so will your team. Staying on top of who you might need and when is critical. Hiring is often one of the hardest jobs you'll face so having a plan for who you'll need next will make this process easier. Whether you're getting people in full-time, hiring contractors or finding outsourced partners you need to be on top of this.

Draw up an org chart of the product and review at every board meeting. Add potential new people to the chart when you think you'll need them and get the process moving as an action.

FINANCE

Keeping on top of the money is, of course, hugely important. You'll have different tools for managing your finances and may even have an entire team devoted to it. For your board, get the key numbers out for review and discussion, as well as trying to set financial targets and meaningful forecasts.

Compare actuals to forecasted numbers and make a record of the variance. You want to get to a place where you can predict

your finances to allow your product to grow. These will get better as your product matures. The finances are key to knowing what you can allocate for all of the previous three sections of the board report.

CONCLUSION

This Product Innovation Framework represents two things: our journeys through the world of development over 2 decades and the conclusions we've drawn to date.

At Lighthouse, we work to a strong ethos that embodies the work we do. We value simplicity as it enables us to refine small details. We embrace experimentation because it exposes strengths, weaknesses and opportunities. We maintain a view of the end product, using foresight to accommodate its ongoing development.

This PIF highlights another key element to our culture: the value of sharing expertise and methodology across the development world. We hope that by explaining our methods, we're allowing others to benefit from our trials, errors and successes.

We know that each team and product is different, so some sections will prove easier to action than others. We've tried to break things down so that you can implement different ideas one by one rather than doing it all in one go.

We'd love to hear about your experiences when trialling any of the Framework, and are always keen to hear about the experiences of other product teams.