

The State of Product Management 2010

Nic Newman

The State of Product Management 2010

A study of product management best practice in UK digital media

CONTENTS

Methodology and acknowledgments

Executive summary and conclusions

1. The role of product management
2. The emerging product development process
3. Case studies
 - 3.1. The Guardian
 - 3.2. BBC iPlayer
 - 3.3. Channel 4.com
 - 3.4. Huddle.com
 - 3.5. BBC Weather
 - 3.6. Mobile IQ
 - 3.7. BBC Wildlife Finder
4. Masterclass interviews
 - 4.1. Anthony Rose – BBC (iPlayer/YouView)
 - 4.2. Hunter Walk - YouTube
5. Conclusions: The secrets of product success

Glossary

Interviewees

Bibliography

THE AUTHOR:

Nic Newman played a key role in shaping the BBC's internet services over more than a decade. He was a founding member of the BBC News Website, leading international coverage as World Editor (1997-2001). As Head of Product Development for BBC News he helped introduce innovations such as blogs, podcasting and on-demand video. Most recently he led digital teams, developing websites, mobile and interactive TV applications for News, Sport, Weather and Local. Nic is currently a Visiting Fellow at the Reuters Institute for the Study of Journalism where he has published two recent reports on social media and mainstream media. He is a trainer, writer and consultant on digital media at the interface between technology and journalism.

METHODOLOGY AND ACKNOWLEDGMENTS:

This study was completed in June and July 2010 and aims to explore product management best practice in the digital media industry. It aims to raise the profile and understanding of the importance of the role of the product manager in the creation of successful digital products through interviews and case studies. These form the backdrop to a series of courses being launched by the BBC Academy from the autumn of 2010. I am grateful to all of those practitioners and observers across the industry who gave their time and expertise in the assembly of this report and the accompanying films. Along the way I have been inspired by the many passionate and hardworking exponents of the craft of product management - as I witnessed their work and attended product camps and forums. The role of product manager may be little understood, but I am more convinced than ever that the creation of successful digital media products depends on the type of skills and talents showcased in this report. I am also indebted to the companies that have openly shared their expertise - notably the BBC, Guardian, Financial Times, New York Times, Channel 4, Global Radio, You Tube, Mobile IQ and Huddle. I am also indebted to the BBC's Rebecca Salsbury and Chris Russell and to the BBC Academy's Head of Technology Andy Wilson, Jane Palmer and the team for their enormous support and encouragement throughout the project.

EXECUTIVE SUMMARY AND CONCLUSIONS

Product management is a nascent and little understood role within many media companies. This report highlights a number of key trends and conclusions which will be of interest to practitioners and observers alike:

- The role of product management is being taken increasingly seriously by media companies. More and more companies are raising the profile of product leaders to the top table, rather than defining product management as a subset of technology or marketing.¹
- Elsewhere, product management remains in a state of creative tension with other groups. Understanding of the role is patchy at best and battles for control persist variously with editorial, user experience and design or technology. This can be at the expense of successful products and the self-esteem of product managers.
- The introduction of agile development methodologies is helping to clarify the role of product managers in many organisations. Agile has made more visible the need for a product owner, who can represent audiences and stakeholders. It also provides a commonly understood framework for the wider product development lifecycle including proposition development and testing.
- At a detailed level, the role and responsibilities of a product manager vary widely. There is little consistency in job descriptions or use of common terminology or process. In this respect, digital product management in the UK lags behind practice in the US and Silicon Valley in particular.
- Partly as a result of the above, there is a strong desire in many parts of the industry - particularly in traditional media companies - for better training and skill development – as well as forums to drive common standards.²

¹ FT and C4 are two companies where the product role has been raised to top table and recognition of the value of ongoing proposition management has increased. The BBC has begun a major push to raise the profile of product management.

² A series of groups have emerged in the past year. The first UK Product Camp was run in Richmond in May 2010, there is an active AOP Product forum and a separate digital media forum, where best practice has begun to be shared.

The following sections aim to provide a common framework and language for product management in the digital media industry. Through the use of case studies and masterclass interviews it also offers some detailed and practical guidance on how to create successful products that delight and inspire users.

1. The role of product management

Product management has a long and honourable pedigree. Concepts like product planning, audience research and testing, product lifecycles and product marketing have been successfully employed for many years to drive everything from pharmaceuticals and automobiles to chocolate bars and breakfast cereals.

The principles are as old as the hills, but what has changed is the way technology - and software in particular - has created a whole new set of products and platforms to surprise and delight consumers. In the process these technology-led products have upset the balance of power in many businesses – particularly in the media sector - which traditionally viewed IT as little more than a support function.

It is no co-incidence that many of the most successful consumer products of the last few decades have come from technology companies like Microsoft, Apple, Google, Amazon and eBay. All of these companies have adapted and redefined traditional product ideas to fit the culture and needs of a software/technology business.

In contrast, many editorial and creative companies have found it hard to see technology as a legitimate driver of their businesses and have struggled to make the organisational and cultural changes required to deliver successful products. As a result the interface with editorial, user experience and design, marketing and sales remains something of a battlefield – with restructures rife and product management responsibilities split across different areas.

Whatever the result of these battles is - and wherever responsibilities finally sit - the future of many media businesses will depend on finding and empowering product leaders who can help define the right products and features to be built. And this report explains how the skills to manage an 'ongoing digital promise' to consumers are considerably different from those that have built the media companies of the past.

This study looks at the experience of traditional media companies like the BBC, Channel 4, the Guardian, Global Radio and the FT – as well as newer media companies such as Yahoo and You Tube. It focuses primarily on *consumer based*

internet products and services, but also recognises that *business to business or enterprise products* will also be relevant; companies like Huddle provide useful perspective and lessons in best practice in this area.

Despite the different backgrounds of the companies featured here, it is striking how the same principles and ideas are being applied; remarkable too how the same conclusions are being drawn about how to create successful digital media products.

1.1 What does a product manager do?

In his book *Inspired*, author and consultant Marty Cagan describes the job of the product manager as “to *discover* a product that is valuable, usable and feasible”.³ His central point – born out of bitter personal experience – is that brilliant engineers, designers or editors will be wasting their time if the product idea isn’t right; if it doesn’t meet a fundamental audience need.

To some extent this has always been true, but the internet has swept away monopolies and lowered the barriers to entry. Greater competition, says Martin Eriksson VP Product at Huddle, means that now there is no hiding place for the half decent-product:

In the past people would stay with your product even if it wasn’t great to use. Today, any user can jump from one website to another - jump to something else, so you constantly need to focus back on the user and how you can make their lives easier.

It is this process of matching audience needs to business goals and capabilities that is the essence of a product manager’s role. At the Financial Times, Head of Product, Mary-Beth Christie defines a product manager as someone who translates business problems into solutions by shaping products:

The first thing is to make sure that you understand the problem or the opportunity that you are trying to go for. It’s not just building a solution that someone else tells you to build. That is the real distinction between product management and a product developer or junior producer.

At the Financial Times the role of product management has grown in importance over the past few years; no longer mere translators, but shapers and thought leaders in their own right with a seat at the top table. The same has been true elsewhere. Anthony Rose came to the BBC from Australia with a track record of developing successful products⁴. He epitomises the passion, commitment and the technical

³ Marty Cagan - *Inspired: How to create products customers love* SVPG Press 2008

⁴ Anthony Rose was former CTO of Kazaa/Altnet

understanding required to deliver a game-changing, audience pleasing product like BBC iPlayer. He's also a product manager who believes in ownership and personal responsibility:

I think a product manager is someone who unambiguously thinks that they are responsible for the success or failure of the product.

But the precise level of responsibility is rarely clear cut. In most cases, product managers are not responsible for the editorial or commercial targets (Profit and Loss or P&L). Robin Pembroke, who developed product operations at Yahoo before taking up his current role of Online Group Director at Global Radio, says the heart of the responsibility is around product direction and roadmaps: "What is the product there to do, doing the proposition development, overseeing the design of the website and managing the programme of work that continues to evolve those products."

The modern product manager is a multi-disciplined person who operates at the intersection of technology, design, editorial and commercial and is able to bring all these elements together. Mike Bracken, Technology Director at Guardian News & Media, says that the essential qualities of the job are "passion, expertise and knowledge of the products that they are managing". But beyond that, he stresses the diplomatic part of the job, the need for a product manager to look two ways; to maintain two conversations at once: "Firstly, with an end user; with the people who are consuming or paying for the end product and [secondly] to maintain a good working relationship and take a bunch of stakeholders with them through the product development cycle."

But having well developed facilitation and translation skills does not mean that the product manager should play a passive or subservient role. Rebecca Salsbury, who has helped shape the BBC's view of product management, stresses the crucial evangelistic part of the role:

A great product manager is someone who is a champion for their product ... In every decision they make, in the way they communicate to teams or to senior board level, they are representing the needs of the audience at all times.

There are some tricks and tools that help product managers do their job - growing amounts of audience data, new techniques for testing and prioritising the countless ideas and feature requests. Many of these are explained in this report, but there is something else that is hard to teach; instinct and clarity of thought.

At Channel 4 they call it 'good judgement'; the ability to make the right call with enough technical knowledge on the one side and enough editorial understanding on the other. "Vision and gut instinct are essential," says Anthony Rose. "You can't be a product owner without having a vision and you can't be a product owner without living the dream every day."

Marcelo Marer, General Manager, User Experience & Design at the BBC has seen the best product managers at work in the US, Latin America and the UK. He says it is about cutting through the noise and focussing on the things that really matter:

They have to feel simplicity in their gut. The easiest thing is to build a product with too many features. There is a balance to be struck between innovation and simplicity and it's a really hard art.

Ideal product managers are hard to find. They are held responsible for success or failure, but often without formal status or power. They need to understand audience need at all times, be on top of the competition, be brilliant marketers and strategists - and have a thorough grounding in technology, design, commercial and editorial. Their diplomatic and communication skills must be world class. It is a tough ask, but not impossible if you have your entire organisation lined up behind you and a good understanding of your own role.

1.2 Problems of definition: Products, platforms and features

One of the biggest challenges surrounding product management relates to the lack of common definition about the term product itself. In the digital world, there are many different ways of looking at product – there are physical products, virtual products, business to business products (B2B) and consumer products (B2C). There are social products, mobile products, web products, and TV products. There are applications, widgets, modules, features, services and platforms.

So we are often dealing with apples, oranges, pears and bananas – and yet we often lump them together without sufficient thought about both the commonalities and the differences. They may all end up in a fruit salad but the recipe will be different for each product and it is important to understand the ingredients, the flavour combinations as well as the tastes of the target customer. One increasingly common distinction is between *platforms* and *audience facing products*. That's the distinction between, say, a content production system, or a rendering system on the one hand - and a website with real users on the other. A few years ago these elements were hard to separate, but with the move to service based architecture and cloud computing, that is beginning to change. The Guardian's strategy, articulated by technology chief Mike Bracken, is to turn itself from a publisher into a platform, on top of which the products of the future can be built:

Platforms are things like identity, video, our open platform and R2 the publishing platform. These platforms allow products to be created and delivered to end users. Products are recognisably consumed by end users.

And other organisations are making the same distinction – either using an in-house platform or outsourcing the heavy duty platform services – and then building agile multi-disciplinary product teams (consumer or B2B) on top. The BBC has just reorganised its development teams in this way with a small number of product managers, with resources attached - aligned to the key products that end users consume. Here are a few examples⁵:

- News
- Sport
- iPlayer
- Homepage
- Wildlife finder

⁵ A number of BBC case studies using these products are discussed in section 6

At the BBC, there is also now a central *platform engineering team* that looks after common services such as video transcoding, identity, rendering and storage systems. Not all products split easily in this way and there are a number of special cases. At the BBC, *Search*, the *Embedded Media Player*⁶ and the *Single Sign-on/Identity* system are both platform services AND consumer facing products at the same time. Each of these has a consumer facing user interface, but they also provide dynamic services for other products and in this sense they have direct customers and internal customers (other product managers).

Another special case might be a content production system, which also has two customers. There are the audience-facing product managers who will have requirements for an iteration of their consumer focussed products – and there are the users of the system itself, who need to input content. In this sense, a content production system is really a *business to business product*, a bit like the Huddle product in section 3.6 - as well as being a crucial part of the company's *platform*.

Organisationally it may or may not be called a product or sit in a product division, but the system owner will need to have a vision, understand and prioritise all the requirements, produce a roadmap and be an evangelist for the system – just like any audience facing product manager.

Back on the audience facing side, there are many different ways of dividing up large products into manageable chunks. At Channel 4, there is a short list of audience facing propositions: “We have Channel 4.com, E4.com, and three lifestyle verticals; food, homes and beauty,” says Richard Davidson-Houston, who defines products as the creation and management of ongoing propositions:

We differentiate between product management and commissioning for example. Commissioning might happen for something that is only online very briefly or is only relevant very briefly whereas an online product has a promise that continues over time.

The Guardian splits its website into verticals and allocates a product manager to areas of special commercial or editorial interest such as jobs, dating or environment . Other companies like eBay sometimes split their product managers by audience group. At eBay, the sellers and the buyers have different product teams acting on their behalf, developing functionality and features to fit their needs – with further more technically focussed product managers looking at cross cutting functionality like trust and reputation management systems.

⁶ A single audio/video player is used across all BBC products including News, Sport and iPlayer

Types of products in media organisations

The following grid shows an illustrative list of products that may exist in a media company and the relevant customers and domain knowledge for each.

| PRODUCT | CUSTOMERS | DOMAIN KNOWLEDGE |
|--------------------------------------|-------------------------------------|--------------------------------------|
| <i>Audience facing</i> | | |
| Web Homepage | End users | Portals |
| News, Sport site | End users | News/Sport |
| Verticals (eg jobs, motors) | End users | Jobs/Motors etc |
| E-commerce (eg shops) | End users | Transaction |
| Mobile website and applications | End users | Mobile technologies |
| TV on demand products (iPlayer) | End users | Video technology, TV |
| <i>Hybrid service/products</i> | | |
| Search | End users + other PMs | Search technologies |
| Identity | End users + PMs | Technology |
| Mapping | End users + PMs | Mapping, data etc |
| Voting | End users + PMs + content producers | Technology |
| Social | End users + PMs | Social technologies |
| Email services | End users + PMs + content producers | Email issues eg spam |
| Common media player | End users + PMs | Video technologies UI |
| <i>Business to business services</i> | | |
| Content Management systems | PMs + content producers | CMS tech + workflow |
| Enterprise sharing systems | PMs + content producers | Sharing tech + workflows |
| <i>Platform Service only</i> | | |
| Advertising | PMs only | Integration wt 3 rd party |
| Transcoding | PMs only | Codecs, storage etc |
| Rendering | PMs only | Optimisation, caching |

The list above helps to illustrate some of the key skills that product managers need to have, depending of the type of product they are working on. The ones at the top of this list will be very audience focussed with strong domain knowledge and the ability to talk to many different internal stakeholders. As you get to the bottom of the list, the domain knowledge becomes much more deeply technical – and the number of stakeholders is smaller and more focussed. At the BBC, they are defining this kind of role as a Technical Product Manager, normally an engineer with product management skills.

1.3 Importance of domain knowledge

Whilst user experience (UX) staff, engineers, audience specialists and project managers may move between projects, the product manager by definition is the one person who stays put. Key to the success – and to the status - of a product manager is their ability to master their *domain*; an area of specialist knowledge and expertise.

An excellent example of this is the BBC Wildlife finder case study in section 3.7. Tom Scott – who played the product manager role in this case - had to thoroughly understand the complex information architecture of the natural world, the workflows and systems of the Natural History Unit in Bristol, the competitive landscape in which the product sits -- and crucially the way these particular audiences think and behave. As the study explains, the whole product was based on a *domain focussed approach*. This knowledge can take years to acquire, which is why product managers need to demonstrate commitment to their product. “You have to stick with it, live it and breathe it - commitment to the product is essential,” says Piers Jones who runs the product development team at the Guardian.

It is possible to pick up that knowledge over time but it helps to have a passion in the subject already. “It was useful to have previous experience in weather and meteorology” says Peter Deslandes, who runs BBC Weather products, but he says it is perfectly possible to learn the domain. Tom Scott had a degree in biology – so instantly felt comfortable with the natural history domain, but there was still much knowledge to acquire and keep up to date.

When Mike Bracken arrived as Technology Director at the Guardian in 2008, he found a large number of business analysts and project managers, but a dearth of *domain expertise*:

“We had a bunch of generalists trying to run products, but they weren’t technically specific enough about what constituted products as end users consumed them. What that led to was that the people who looked after the end product line weren’t really focussed on the end users.”

Domain knowledge gives the product manager a sense of ownership, but it is also important in another way. In many media companies, there are large editorial teams who have extensive domain knowledge – they have worked in the area all their lives. If the product manager is unable to show the same level of knowledge of commitment it can be almost impossible to exercise authority or leadership.

1.4 Product management in editorial and creative organisations

Overall user experience in a digital product is a mixture of content and software – and for editorial organisations that raises a number of challenges. The intertwined nature of the experience makes it hard to know where the editorial ends and the product begins – and therefore where responsibility and overall ownership lies.

“The container, the product, the package, in which the content resides is much more apparent than it is in a television screen,” says Richard Davidson-Houston of Channel 4. In an internet product, the content rarely fills the screen – navigation, discovery, user interaction all play a far bigger role. BBC iPlayer is clearly a product in that sense, he says, but with a website like Channel4.com it is often hard for less web-literate people to understand the difference between the product and the content: “This is a very live debate at the moment - we are still defining terms,” he says.

This partly relates to the way in which media companies have worked for decades. The heart of the creative process has been about assembling items into a finished package that can be sold on a newsstand or broadcast on television or radio. As Mike Bracken at the Guardian explains, the internet has turned that whole model upside down:

The newspaper like the Guardian is a synthesis of 1600 staff plus all the external contributors and results in a single beautiful artefact the next day. That process of taking all those skills and distilling it in one product is entirely the opposite of what you need digitally -- which is ability to create and iterate and engage in a conversation with the user, and continue to develop the product with the user. Those methods are polar opposites and that's why many organisations struggle.

At the Financial Times, Mary-Beth Christie also sees the need for a clear distinction between the skills required to create content and the skills to deliver an ongoing promise to audiences:

We build the cereal box – editorial make the cereal. We make sure it can get out on the shelves and can be displayed properly and stays fresh ... It's much more complex than the pure newspaper.

Part of the complexity relates to the number of internal stakeholders that need to be kept onside. “It is very different from being a product manager at a software company,” says Piers Jones, Head of Product Development at the Guardian who has had experience of working in a number of non-editorial organisations. “In media publishing you are working across technology, commercial and editorial and working

with that group of people to define what the product needs to be. The key difference is that you have a group of people to bring with you on that journey.”

At BBC iPlayer, relations with the editorial divisions were extremely difficult until Ian Hunter was appointed as a trusted editorial voice to manage the issues and the stakeholders: “The world is extremely complicated,” he says. “We are finding that apparently simple technical changes often have unfortunate consequences on the other [editorial] side.” Hunter believes that a partnership approach based on mutual respect and trust is the only way of operating:

I’ve learnt that all products are essentially a triumvirate. There is the technical means of delivery, there is the stuff being delivered ... and then there is the UX design bit in the middle and each of the those has different constraints and methods of delivery and so on ...you have to be tolerant and make a big effort to understand how the world looks from each of those three angles.

In many organisations, it has become common practice to appoint an *editorial lead*, whose job is to work with the product manager full time on defining the product, making calls on editorial issues and assessing and managing changes to workflow. These roles are sometimes used to co-ordinate and drive editorial projects that utilise existing functionality or require only small changes to it.

Organisations like the Financial Times and the BBC have found these roles essential in delivering successful projects – especially those that involve workflow or significant editorial decisions. A full time *editorial lead* needs to be part of the agile development process, involved in stand-ups (morning product meetings) and sprint planning - working as an integral part of the product development team. In this sense, there is an editorial owner and a product owner. The product manager shapes it in a collaborative way.

At the FT, this *partnership model* has really begun to bed in. Mary-Beth Christie says there is a growing mutual respect based on the simple fact that a good product manager produces better results:

When Robert Shrimley took over as editor of FT.com, he said ‘what do the product people do?’ Now he gets the fact that product managers are vital to making things happen and it’s not an add-on job to someone who is a video editor. We work well with editorial now. It was delivering that made the difference.

In many of the organisations featured in this study, where editorial tends to be paramount but products tend to be technology driven, a well-defined partnership model is proving to be the most effective way forward.

1.5 Whose product anyway?

Whilst there is increasing consensus on the importance of the product role, there is less agreement on who should play this role or where it should sit in an organisation.

In recent years there has been a trend to sit the product managers as part of technology. This is partly because the complexity of many software products required the definition to be carried out by people with a strong affinity to technology, but also because it made it easier to leverage expensive solutions across multiple products. The Guardian, the New York Times and the BBC have largely gone down this route, whilst others place product managers with business units, within the marketing division or within a separate product division. Mary-Beth Christie, who runs the product team at the Financial Times reports directly to the MD of FT.com:

In my experience I have found that it never makes sense for product to sit under technical because then it is not as free to come up with new and different ideas and not so open to using ideas that might sit outside that internal team.

At the Guardian, the team sits within technology but has a clear remit and structure of its own. Mike Bracken, who runs the engineering side, introduced a product culture soon after he arrived three years ago. He says products have helped create an ongoing conversation with audiences around the brand, part of the wider strategy of engagement and mutualisation at the Guardian⁷. But more practically, he says, having product management has made a huge difference in helping manage capacity and match it to product lines:

If you have invested in a product manager, that PM has helped create a business case that users want. That then gives you a clearly derived set of requirements for your capacity in a world where everything is possible and everyone wants everything tomorrow.

At Channel 4, the team has recently moved out of Future Media and Technology to become a separate area with reporting lines directly to the Chief Creative Officer. The driver here was to ensure that online was not seen as an add-on and that there was a closer and more equal relationship with TV commissioning. “What we hope will happen now,” says Richard Davidson-Houston Head of Channel 4 Online is that “the other media - the other platforms - will be thought of at the moment of creation”.

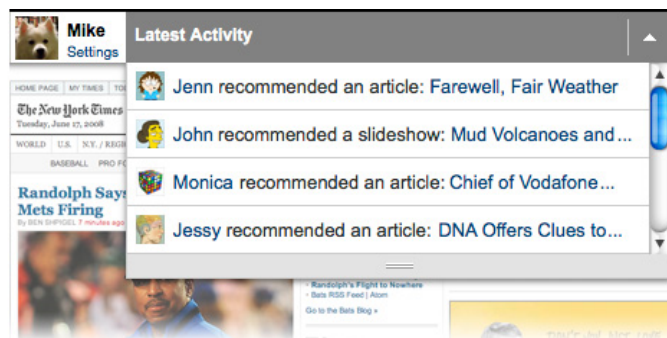
⁷ Alan Rusbridger lecture on mutualisation <http://www.guardian.co.uk/media/2010/jan/25/cudlipp-lecture-alan-rusbridger>

The position in the organisation matters because it can be hard to have influence without control of budgets or line management. The BBC is moving to a model that gives the product managers more control over resource and budgets. It's a similar story at Microsoft where product managers have considerable influence and power as a result. But as Hunter Walk explains in section 4.2, at YouTube, product managers do not normally have line management responsibility, leaving them free to influence across different disciplines.

The New York Times has been on an interesting journey. Product managers “did not exist in the early days of the website,” says Chief Technology Officer Marc Frons. Then they became “all important and powerful” for a time, before playing a more balanced role today:

Product managers are still important, but not as important as they once were in the grand scheme of things as journalists and technologists have taken a larger role in shaping product strategy and in product creation.

Different people can play the product role depending on skills and requirements. A social product like **Times People** (right) is driven and owned by technologists, whereas an election, which requires very little new technical functionality, is essentially defined and owned by editorial. Fiona Spruill runs editorial developments at the New York Times:



While there was a product manager for the election, the reality was that in no way was the election product driven from the product group. It was my boss who had the high level view ... and he obviously sits in the Newsroom.

In other parts of the New York Times website— such as editorial specials or multimedia features - it will be someone from the Newsroom who effectively acts as product manager and defines requirements and user interactions. A similar division of labour comes from Global Radio where straightforward editorial projects are defined by the editorial side. Global’s Robin Pembroke says ad- hoc commercial projects are often handled in the same pragmatic way: “A microsite may be led by the sales guy, who writes the brief and the editor makes sure it links to brand guidelines.”

The problem, says Marcelo Marer at the BBC, is that the product metaphor doesn't work for everything – especially where editorial content is involved. “It is less about organisation, more about people”, he suggests. The key is to find the individual or group of individuals with the right skills to play that product role. And in surveying a number of organisations for this study, I found a significant amount of cross divisional product management going on.

Across the industry, expensive, complex, strategically important products are now mostly managed by someone with a product manager label, but elsewhere pragmatism reigns with product skills and techniques spread across disciplines. There is little appetite – in content organisations at least – to build massive new product structures.

But none of this discussion over structure should detract from the importance of the role - or from the consistent need to work *across* departmental boundaries bringing clarity and understanding along the way.

2. A Product Manager's role in the development lifecycle

This section sets out the product development lifecycle and explains the role of the product manager at various stages of the wider development process. It highlights a number of terms which crop up and are *italicised* in subsequent chapters, notably in the case studies. There is a full glossary of terms at the end of this report.

2.1 Product origination and assessing product opportunity

Products can be initiated top-down or bottom-up. Sometimes strategic initiatives are announced by management and the product teams must scramble to match this to audience need. At other times, ideas bubble up and make it through an innovation or commissioning process and appear on a project or product slate. Some companies have a defined pipeline, which includes submission of ideas into a process, using a scorecard evaluated against strategic objectives. This might involve the filing of an *opportunity assessment document* or short *business proposal*, designed to outline the opportunity and release resource for more initial research. Elsewhere, the process is far more informal and ad-hoc.

Either way, at some point, a formal decision will be taken to invest more in a particular area or launch a new product. At this stage someone – often a product manager – is asked to take the product into *discovery*.

2.2 Product discovery

Whether a product is being created from scratch or being upgraded with a new set of features or functionality, the area of *product discovery* – sometimes called *product vision or proposition development* – is crucial. This part of the process is all about ensuring that the right features are being built and prioritised; about being as sure as possible that the product will meet an audience need.

The key to getting this right is *research* and there are a number of inputs commonly used by a product manager at this stage.

- Market research : Often working with the *audience insight* team or an external company, focus groups can provide insight on the wider market, current perceptions of the product or test new concepts
- Competitive analysis: A more strategic look at the market, audience and usage trends – strengths, weaknesses, opportunities and threats

- User behaviour: Existing behaviour can be studied using web-analytics or by commissioning user testing on how features are used and valued by customers
- Feedback and listening: Categorising existing feedback, feature requests from surveys and email and social media.

This process can take months or just days, and this may depend on the strategic importance of the product and on the money and time available. “The thing that I’ve increasingly realised is the need to test propositions rigorously up front and early,” says Global Radio’s Robin Pembroke who has been working with the BBC and other players on an industry wide radio player. “Even before prototypes, you should get out there with high level concepts to see if it is something that a particular demographic might be interested in.”

It is worth remembering that many types of research can be delivered extremely cheaply, especially when set against the cost of getting product features wrong.

Often the input from the various research workstreams is shared with key stakeholders through workshops – to increase their understanding and to get their buy in. In the Guardian case study in section 3.1, exposing stakeholders directly to audience data really helped get a common view of the most important elements. It is often helpful to agree a shared goal up front with a high level *product vision statement* sometimes also known as an *application definition statement* (Mobile IQ case study).

“A *product vision* is absolutely essential,” says Richard Davidson-Houston at Channel 4. “It keeps everyone honest. If you have a strong enough vision that everyone can buy into and is proven through research then when questions come up, you just need to glance at the vision.” And at the BBC, Rebecca Salsbury agrees it both helps prioritise and provides a target for everyone to aim at. “I think it is probably the primary role of the product manager to articulate that vision, in a way that is compelling.”

Although audience insight, user experience, and business teams play a key part in discovery, all elements of the team should be part of the process. Technical architects need to have a view, for example, to ensure that *prototypes* and *wireframes* are technically feasible. The operations team may need to be involved in helping to define operational viability.

Increasingly the product discovery process is iterative – just like the coding and testing parts of the development process. The Weather case study in Section 3.3,

shows the value of a number of rounds of user research during the *discovery phase*, which helped to identify problems and test potential solutions using wireframes and prototypes. And all this *before* significant amounts of scarce development resource were committed.

2.2.1 Business case and product definition methodologies

By the end of the *discovery phase*, the product team will typically have pulled together the following items at a high level; product vision, product principles, minimum scope, and some kind of cost/benefit analysis - the cost of implementation and the audience or commercial benefits. This output can then be cut in different ways. Typically, some combination of these tools and methods will be used:

- **Presentation:** Useful for board level engagement and product level evangelising within editorial, marketing and commercial teams
- **Business case:** A detailed formal document – often with a fixed template to go into a prioritisation process with a *Product Council* or *Finance Committee*.
- **Product Definition Document (PDD):** Sometimes also known as a *Vision and Scope document*. This is a longer and more detailed summary of the vision, scope, high level functions, success criteria (audience and technical) aimed at the project team and its key stakeholder group, which will approve it and typically keep it under change control.
- **High-fidelity prototype:** Given the difficulty in getting stakeholders and developers to read and understand the same thing from a written document, experts like Marty Cagan⁸ believe prototypes are a far more effective way to communicate how the product will work. Often this is the same prototype that has been tested and iterated with users.

A lighter version of these methods may be used earlier in the *product discovery* phase to update key stakeholders on progress and release money for the ongoing shaping.

These documents (especially the business case) may not be written by the product manager. There is often a senior manager or *business owner* sponsoring the process. Even so, it is crucial that the product manager's voice is consistently at the heart of all three.

⁸ In *Inspired* Cagan says prototypes are the most useful way to describe the product to the rest of the team. Examples can be found at www.svpg.com/examples

2.3 Design and development

In traditional software projects, the development team, working with a project manager would define all the work up-front, making estimates and a project plan. This *waterfall approach* had the advantage of providing an impressive overview of all the key milestones via a Microsoft Project Gantt chart, but rarely delivered on time and often wasted development effort by not doing the most important features first.

As a result, most web and digital media companies interviewed for this study have moved to *agile methodologies* over the last few years. These place a premium on speed, transparency and minimum waste. Using a prototype and/or Product Definition Document (PDD) as the basis, features are fleshed out one by one, grouped together and then developed and tested in short chunks or *iterations* – until a *minimum scope* is reached and the product can be launched.

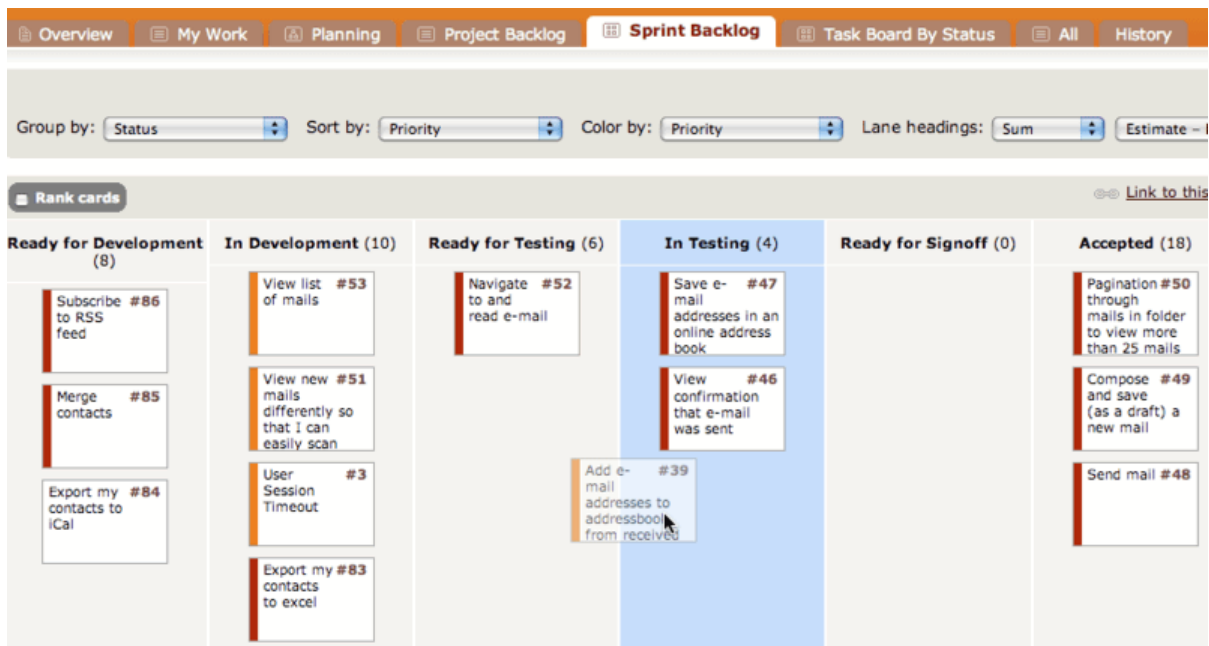
The product manager plays a key role in *agile*⁹ as *product owner*; representing the interests of stakeholders and audiences at all times. The key task for the product manager/product owner in agile is managing the *product backlog*, which is essentially a prioritised list of bite sized tasks or features. Behind each feature is a *user story*, which is a tightly written description of the user benefit with a short amount of additional information. This format is important because it stops the product manager specifying *how* the feature should be implemented. In this way, says Martin Eriksson VP of Product at Huddle, a user story becomes the basis for a creative conversation with developers and designers.

The beauty of a user story is that it is an end goal. It doesn't have all the detail of how you do it ... and that gets you to the development stage much quicker.

A range of tools have been developed to make this process easier and more transparent. *Mingle* is one widely used tool for managing user stories and product backlogs¹⁰ - both writing them in the first place, but also prioritising them and then signing off completed stories as part of the acceptance process.

⁹ Core principles are explained concisely at <http://www.agilemanifesto.org/>. Wikipedia is a good starting point for further reading on XP, Scrum http://en.wikipedia.org/wiki/Agile_software_development

¹⁰ Mingle is a proprietary project management and collaboration platform that is built by ThoughtWorks Studio



Other tools such as *Pivotal Tracker*¹¹ (see Mobile IQ and Wildlife Finder case studies) are also now widely used by product and project managers as a way of enabling real time collaboration around a shared, prioritised backlog – particularly useful for distributed teams.

One drawback with *Agile*, is that it can be hard to get an overall schedule; you rarely know how many iterations will be required. Staff in management roles, in particular, felt comfortable with the (perceived) predictability of a *Waterfall approach* and the visibility of the whole project up-front. But there are some increasingly common techniques that can help provide equal comfort for stakeholders in an agile world:

- High fidelity prototypes mentioned in section 2.2.1 - along with agile *show and tells* - can provide a common language around scope and progress.
- The *stripe* (see Channel 4 case study) is an excellent way of providing an overview of all the features and how they link back to the product vision.
- Focussing on *minimum scope*, with burndown charts can provide some confidence around launch dates

The final area of focus for the product manager during the development phase is re-testing the actual product with audiences before release. No matter how good your discovery work, there is often a significant difference between a high-fidelity prototype and production software using real content. In addition, some aspects of scalability or user interaction require a different type of testing that can only be

¹¹ Pivotal Tracker is a free project management tool <http://www.pivotaltracker.com/>

managed through large audience involvement or live deployment. These are some of the most common techniques during the development and delivery phases:

- Qualitative user testing – testing or retesting labels and functionality in detail
- Quantitative testing – try it out with beta or closed beta (Weather case study)
- Multivariate or A/B testing¹² – try different template configurations for certain functionality to see which one is liked most by users (iPlayer case study) or which improve key metrics (e.g. bounce or click through rates)

2.5 Launch, listen and review

Key to the success of any product is communicating its existence (new product) or the benefits of changes (existing product). Typically the product manager will work closely with a *product marketing* specialist on a schedule of communication with existing and potential new users. As the BBC Weather case study (Section 3.3) shows it can make a huge difference to involve marketing and communications specialists early in the process, helping to advise on how to minimise the negative impact of changes and maximise positive buzz.

No matter how good your preparation, there will be some issues that only emerge once a product has gone live. Ideally, there will be resources on hand for several weeks after launch. The product manager will be heavily involved in monitoring feedback via social media and feedback forms and usage data and prioritising any changes that need implementing quickly.

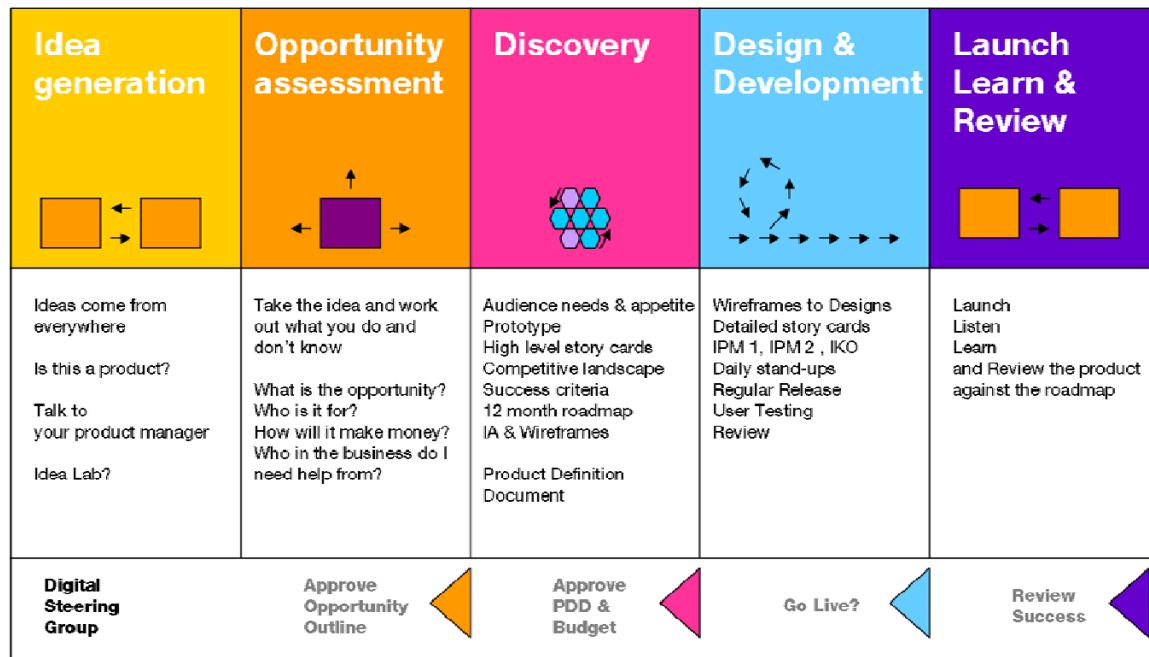
The launch of a new product is in many ways just a start; the beginning of a relationship with users that may go on for years or decades. Once the immediate launch is out of the way, it is important to review performance against the original objectives and to understand whether these have or have not been achieved.

And so the cycle begins again. The case must be made for new investment and the product manager must think again about how their product can contribute to *business goals* to increase revenue, reach or audience appreciation. The product manager must be constantly looking at new technology and at what competitors are doing – and the *roadmap* must be adjusted accordingly. There is no set format for roadmaps, but most organisations aim to keep them updated on a rolling 12 month basis.

¹² http://en.wikipedia.org/wiki/A/B_testing excellent references here to the BBC's use of this and also criticism of Google's overreliance on this method. Also http://en.wikipedia.org/wiki/Multivariate_testing

The steps outlined above and the terms described above are very similar to those used by the Guardian, whose product development process chart is reprinted below with their permission. It is set out in stages with a sign off point at the end of each.

guardianproductdevelopment



V1.1 04/2010

3. Case studies

3.1 The Guardian Environment website

The Guardian has always had a strong reputation for environmental coverage. In looking for new digital opportunities it seemed like an obvious sector to exploit in terms of building 'reach, revenue and influence' – the three core measures of success at the Guardian.

It was hoped that an improved environment section offer could drive new revenues outside the UK and offer important opportunities to influence opinion formers, politicians and corporations that were important to the Guardian Media Group. Finally, it was felt that a successful editorial product could support a wider business-to-business strategy focussed on events and data/information services for environmental professionals.

The screenshot displays the Guardian Environment website. At the top, there is a navigation bar with links for 'Mobile site', 'Sign in', 'Register', 'Text larger · smaller', 'About Us', 'Today's paper', and 'Zeitgeist'. Below this is a large orange banner for 'Global Cleantech 100' with 'the guardian' and 'cleantech' logos. The main navigation bar includes 'guardian.co.uk', a search bar, and a dropdown menu for 'Environment'. A secondary navigation bar lists various topics: 'News', 'World Cup', 'Comment', 'Culture', 'Business', 'Money', 'Life & style', 'Travel', 'Environment', 'TV', 'Video', 'Community', and 'Jobs'. Below this, a 'Webfeed' icon is visible. The main content area features a large image of a person in a boat on a body of water, with the headline "'Garden of Eden' Paradise found: Iraq's marshes reborn". To the right of this image are several article teasers: 'You ask Centre for Alternative Technology', 'Brian May Kill the cull, not Wales's badgers', 'Ask Leo How to leave a legacy in a will for conservation?', and 'Wildlife Plastic toy draws tortoise out of his shell'. Below the main image, there are two sections: 'Green living' with the headline 'Soapdodgers of the world, unite' and 'Latest news' with the headline 'BP begins new operation to seal off Deepwater Horizon well'. On the right side, there is a 'Sustainable business Quarterly' section with a 'Click here to register to attend >>' link, followed by 'Founding partners' logos (GE, KPMG, ORACLE). Below this is an 'On Environment' section with tabs for 'Most viewed', 'Zeitgeist', and 'Latest', and a 'Last 24 hours' list of articles, including '1. BP begins new operation to seal off leaking Deepwater Horizon well' and '2. Plastic toy draws Timmy the tortoise out of his shell'.

But whilst the genesis of a new environment product may have come from the Guardian business strategy, the *shaping* of that idea into a product that would delight consumers required the skills of a product manager.

Mairead O'Connor came to product management from a background in management consultancy and business analysis. She saw her role as helping to bridge the gap between editorial and commercial, providing the audience and usability perspective – as well as crucially focussing and providing a *vision* for the product. A *vision statement* – or *high level objective* - came out of a workshop with key editorial and commercial stakeholders, which happened during the *discovery phase* of the project and was described as follows:

We want to be the place where people go to find out what's happening to the world and what they can do about it.

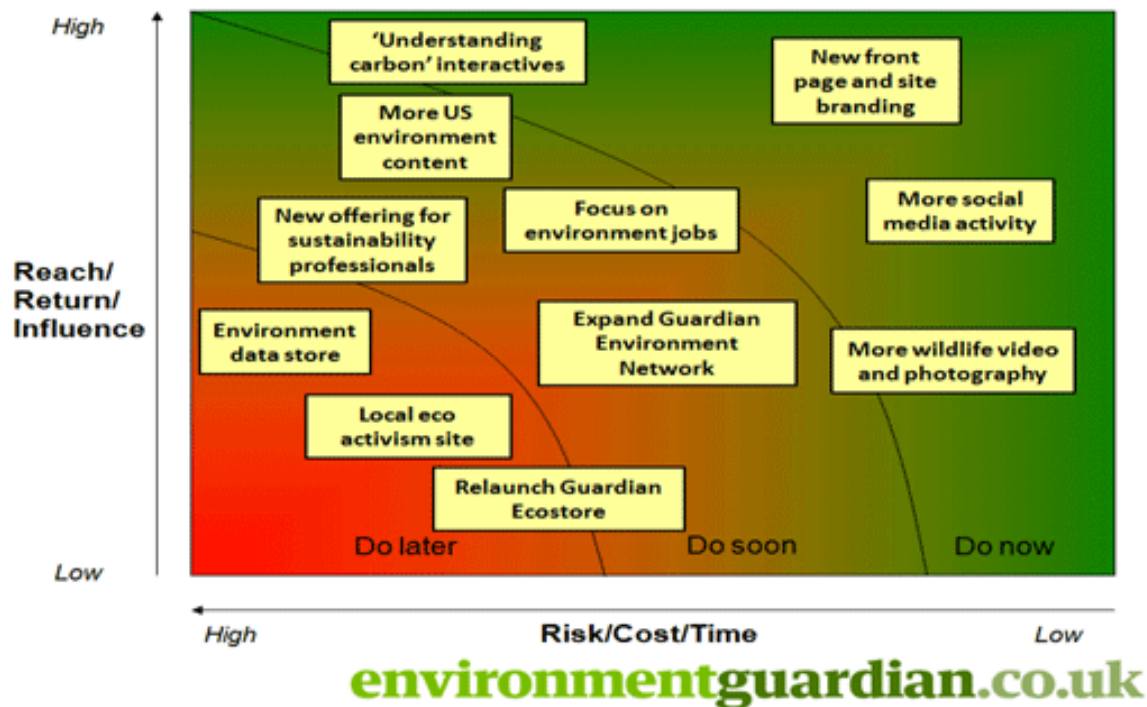
O'Connor says that setting this kind of high level objective is “the most important and useful thing” in developing a successful product. In this case, it provided a common jumping off point for people with different backgrounds to think more openly about the possibilities:

Rather than just thinking about news, which perhaps had been our traditional stance, we were thinking there are other people that maybe don't know that they are interested in environmental issues. We wanted to get these people on board as well.

This shared goal helped focus the *discovery* stage, conducted in a series of separate meetings with editorial, commercial and business to business teams. “There was no shortage of ideas. That’s never a problem here at the Guardian. The difficult thing is deciding which of these things you do first”, says O’Connor.

In order to provide structure for the process, she plotted all the emerging ideas on a matrix (below) to allow the cost and complexity to be evaluated against the 3 core key business objectives - reach revenue and influence.

Candidate ideas for environment



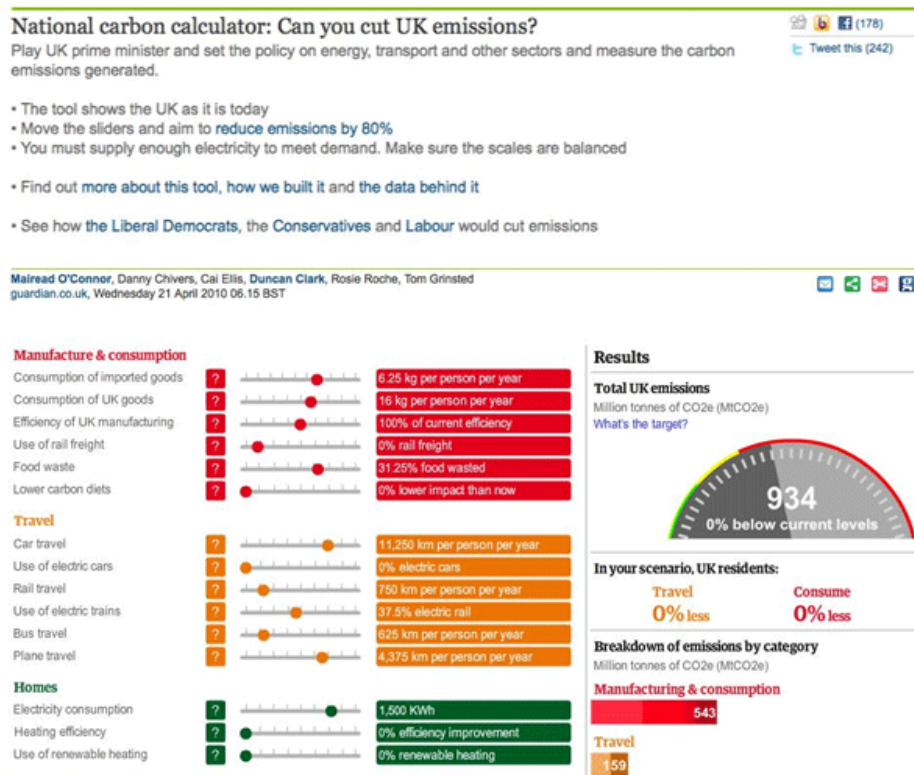
This simple collaborative process helped all the stakeholders to get to common agreement - quickly - on the features that had the biggest impact for the least investment (top right). In complex and fast moving projects, these techniques - which are drawn from management consulting - are often far more effective and inclusive than a detailed document setting out the options.

The core focus for the first iteration was a new site layout, content and branding. But as the project moved into wireframing, it proved difficult to reach consensus. Here, Mairead O'Connor evangelises the benefit of user testing, putting different options in front of users and especially getting stakeholders to attend the sessions.

Watching the audience helped neutralise the raging internal arguments and focus all minds on the audience needs.

A second important part of the project was the creation of a series of complex carbon calculators, an attempt to tell stories through data that users could interact with and share. This was technically complex to build and required close collaboration with a data specialist and with the Flash experts building the application itself. O'Connor used a simple Excel prototype to help flesh out her ideas and provide a common language that could be iterated over and over again until it was right:

There was never a big document. We did it very much based on conversation ... It was something where doing a specification at the start would never have worked ... the specification was in the detail. An agile, iterative approach was the only way.



The creation of the carbon calculators inevitably involved bespoke development, but much of the rest of the project was able to take advantage of earlier heavy investment in the Guardian content management platform. By focussing on platforms, “developing a particular product on top can be a far quicker and simpler affair,” says O’Connor who recommends that all product managers ensure they have a good understanding of the capabilities and limitations:

Understanding what’s possible is crucial. It’s much more efficient if you know what you can and can’t do from the start. But ...the technology knowledge and skills I had were just a very small part of getting this done – it’s definitely not all about technology.

One of the key relationships was with commercial stakeholders where O’Connor found a real coincidence of interest over audiences. A focus on demographics and target groups played well with sales, who were comfortable talking about the same issues with advertisers. In this way an audience focussed product management approach can help bridge the gaps and mistrust that sometimes builds up between different cultures within media companies.

Following the launch itself, there was an intense period of listening to audiences as they began to interact with the product. There was also PR to organise - and social media sites like Twitter and Facebook were regularly monitored alongside web-analytics packages. This all fed back into further iterations of the product, with subsequent releases and interactive features planned throughout the year to coincide with specific real life events. Increasingly the Guardian is thinking in terms of *product life cycles*, *product planning* and *product roadmaps* – an approach that involves new thinking:

The traditional newspaper approach is once you've got the product out that's it. In terms of a product that lives over time, you need to get out of that mindset. It is hard to get people to step out of the day-to-day and think about the product. This is where the product manager can be valuable.

And with the environment site now well established, it is time to think again about the next set of features, about revitalising the roadmap with plans that will attract the attention of users and speak to the key objectives of driving reach, revenue and influence.

3.2 BBC iPlayer

Launched amid much fanfare in December 2007, BBC iPlayer is the UK's best known and most popular video on-demand service. But with the early excitement now over, this is an example of a big, mature product that requires a different kind of product management.



With Anthony Rose (see section 4.1) having moved to become Chief Technical Officer of YouView¹³, the Head of iPlayer, **James Hewines**, faces two separate but equally important tasks: on the one hand, he has to keep the product developing so it is still seen as the benchmark for innovation in the industry. On the other, he needs to focus on the boring operational and legacy issues. “There is no point having new social features if the media delivery isn’t working right,” he says.

Hewines doesn’t use a formal *product vision statement*. He prefers, instead, to see principles as a ‘stick of rock’ that run through everything and he builds these through hundreds of small interactions over time. He says that the values come from the things he consistently emphasises in his leadership role and makes a fuss about. Chief amongst those things is that the needs of the audience must be paramount:

That means making sure that every team member knows that the most important thing is that the basic things that audiences need work really reliably and really well. And then when we design features that elaborate on that, we do it in a way that makes it easy, simple and fun.



As part of the drive to understand and satisfy audience needs, Hewines is an advocate of *evidence based* product management techniques. Together with colleagues in the *audience insight team*, he runs a sophisticated dashboard of metrics about how the product is being used with clear targets for each. Core metrics include unique user growth (reach), minutes consumed (a measure of impact), along with net promoter scores (a measure of quality over time). But beyond that, there is a wealth of other data about how people are using the site and how they get there in the first place. The beta launch in May 2010 of the new homepage with social

¹³ Common interface and standards for providing web delivered content to Freeview TVs

features allowed Hewines to compare the performance of the existing homepage and the new one to see which performed better:

We have managed to increase the number of visits where the sought for content is found on the home page from 50% to 70% - that is a great metric which shows that we're doing a really good job in making it as easy as possible for people to get the content they need.

Closeness to audience insight teams is a crucial part of a product manager's job, says Hewines, providing empirical evidence that the product is getting easier to use, that user journeys are "free flowing and enjoyable".

In addition to web analytics, the team deploys regular surveys, conducts user testing, as well as looking at email feedback, blogs and Twitter – which has proved an effective early warning system for the operations team. None of these are seen as silver bullets, but taken together these tools and techniques make it easier for the modern product manager to stay close to audiences.

In the early days of BBC iPlayer, the role of marketing was crucial in helping define the essence of the product. The idea of being able to consume TV and Radio output within a 7 day 'catch up' period and the tag line 'making the unmissable, unmissable' really helped sell a new concept - watching TV on a computer - to millions of ordinary people. Now, Hewines is looking to the marketing team to help redefine the essence of the product in a collaborative way:

One of the things we need to shift to now is a broader 'entertain me' proposition, rather than 7 day catch up proposition. A shift like that can only be conceived and implemented with marketing and product working hand in hand...because it goes to the essence of the proposition itself.

So as the new marketing campaign is being developed, the product team has been fully involved in workshops to shape and understand the stories to be told.

Editorial interfaces

The future direction of BBC iPlayer has often been a fraught affair. This is not surprising, given that the overall experience is a combination of content and software and because the success of BBC iPlayer was seen as being strategically important for the future of the whole BBC.

Changes to the product have thrown up regular editorial/technical dilemmas - over labelling, rights, and functionality. James Hewines gives an example of the BBC's requirement to show parental guidance (PG) information before programmes are

played. He says the key thing was to deliver that feature in a way that captured the underlying editorial requirement, but in way that didn't impinge on the audience. On a competitor website, he says, the PG implementation is four clicks every time before it is possible to play the programme because they've taken an editorial goal too specifically:

It is important for a product manager to pull back a bit to look at what is the essence of what people are trying to get at and what is sensible way of accommodating that. It is usually possible to find a solution that makes everyone happy.

This often means pushing back on editorial policy or editorial figures who have a very specific idea of *how* the feature should be implemented. Hewines has a background in *business analysis* which he says has been invaluable as pathway into product management - as he puts it - a bridging role between the 'world of intention and the world of implementation'. But product management is much more than that. It is also about high level analytical skills and diplomatic skills:

The multidisciplinary view is crucial. You need to be able to take the marketing view, the audience view, and the editorial view and synthesise those into a coherent whole. And then you need to communicate that in a way that is sympathetic to their concerns and sell back the merits of why you want to go one way rather than another.

Together with editorial lead Ian Hunter, Hewines has worked hard to build a 'relationship of trust' where it is clear that editorial risks will be taken seriously; making it possible to move beyond an adversarial dynamic, which had seen product people pushing to go faster and editorial saying 'no'.

Today, Hewines is looking to the future, looking to refresh the product without alienating loyal users – as well as satisfying a wide range of internal requirements. In driving the *product roadmap*, he starts with agreed *top down goals* such as the reach and impact targets and prioritises features that will achieve those objectives. These are then matched with constraints around capacity and resource, some of which are pre-allocated to essential architecture and infrastructure work. The resulting roadmap or portfolio should be strategic in focus, he says: "The danger is that you end up with a bottom up roadmap that is just an assimilation of requests and that is to be avoided." Hewines believes that a good product manager should focus relentlessly on doing the core things really well – in this case being able to find and play the programmes they want really quickly. He is a believer in keeping things simple and putting the audience at the heart of everything you do. "Don't imagine the audience is exactly like you," he says "understand the spread of motivations and try to do everything on their terms".

3.3 BBC Weather website

Back in 2008, the BBC Weather site was in poor shape. The design was dated and it was built on legacy technologies which were hard to support and maintain. It was much used, but unloved by audiences. There was so much wrong, that a replatforming¹⁴ and redesign project was created, informed by audience research and backed with a business case and a *vision and scope* document.

There was also significant top down engagement from the Journalism leadership group, including Deputy Director General Mark Byford. He saw an improved weather website as a key way of helping his division achieve its targets for reach and quality, as well as providing better weather services for the News, Sport and Local websites.

Despite this good start and clear focus, there were some fundamental weaknesses. There was no dedicated product manager and insufficient editorial engagement, whilst a lack of full time resource and changing personnel (project management and user experience) exacerbated the problems. The combination of replatforming and redesign made the project extremely complex to specify and build. The project took 18 months and when the new site was eventually launched, there was insufficient focus on the quality of the product itself - testing whether it really met the original aims.

Audiences hated it and voted with their feet. The site lost market share, the Net Promoter score dropped significantly¹⁵ and the BBC received thousands of emails of complaint:

“It’s slow and not user friendly at all. The old one was 10 times better!”

“The new layout is extremely poor. It is very difficult to navigate and get to the information I need. The previous layout was muchless cluttered.”

This case study focuses on the response to these problems - which by contrast with the original project - was iterative, audience centred and successful.

¹⁴ Involved changing the technologies behind the site as well as rearchitecting the solution

¹⁵ Net Promoter operates on a scale of 1-10. Promoters are those who give 9 or 10. Detractors are those marking 1-6. The net promoter score is calculated by taking one from the other.

Re-visioning the product

The starting point was an honest discussion of what had gone wrong and what was required to put it right. Three key changes were put in place.

Firstly, a dedicated product manager role was created for Weather and the role of the corresponding *editorial lead* was redefined. A new set of core resources was assembled and co-sited in a dedicated project space. Secondly, a member of the *audience insight team* was assigned to work alongside the product manager right from the start - ensuring that whatever changes were made, they met key audience needs. Thirdly the core aims were revisited as articulated by product manager, **Peter Deslandes**:

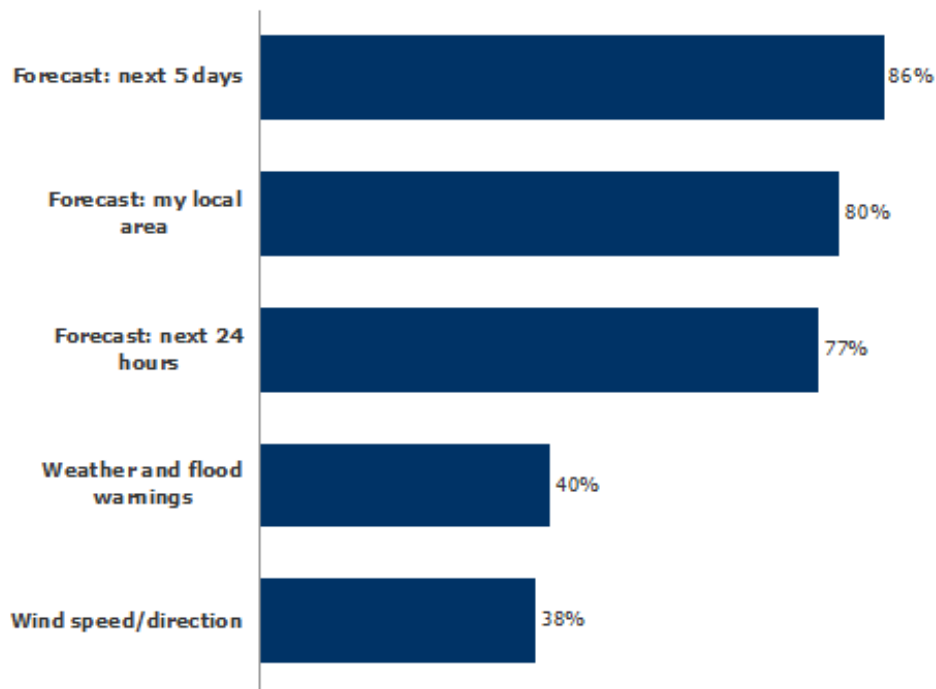
We wanted to give people the forecast they were after, 24 hour forecast and five day detail. It needed to be accurate, and we needed to deliver it quickly and reliably.



Stakeholder and audience demands for immediate change were intense and team members were aware that they couldn't afford any more mistakes – so a twin track strategy was adopted to manage the pressures. Some immediate obvious 'quick fixes' were identified and implemented, while an initial round of audience research was completed to resolve the more fundamental issues. The key task was to limit the scope of the 'quick wins' and to ensure that the underlying fixes were not unduly held up.

Two techniques were used to identify the key issues. Firstly, feedback from a survey on the site was read, classified and analysed and secondly a series of focus groups were assembled, using many of the people who had written provided negative feedback in the survey. The entire team (developers, interaction designer, product manager and management) attended the focus groups and inputted thoughts and questions. Wireframe solutions were developed as the focus groups continued to ensure the shortest time to market.

Audience needs from weather site



16

The focus groups and audience feedback drew out the key problems and key audience needs, which were prioritised and agreed by the stakeholder group. However the team were already working on the issues because they had been part of the process. The issues were identified as follows:

- Improving local forecast layout (going back to a simpler layout)
- Clarifying the purpose of the front page/landing page
- De-cluttering and simplifying throughout.

The design solutions were then wireframed and rebuilt for qualitative usability testing and for a major quantitative exercise with over 1000 users including promoters and detractors and a nationally representative sample of weather website users, who were asked to compare the current site and the new site (available via a test web address).

¹⁶ Online survey of weather website users by Essential Research, Nov 2009 (1,351 respondents).

New landing page and new forecast pages



Overall this gave considerable confidence that the new site would be successful *before* it was launched. It showed that a significant proportion of the detractors would become promoters of the site. The vast majority of users (88%) said they preferred the new 5 day and 24 hour layout. The new front page was also much preferred.

Additionally the testing gave the product team hard evidence to push back on stakeholders who wished to change the labelling on the site, as the quantitative approach gave confidence that proposed labels worked with audiences.

Silver Oliver, the weather *interaction designer* played a key role, working closely with the product manager. He attended the focus groups and quickly came up with solutions for retesting. From a user experience perspective, he says it was a satisfying project to work on for three main reasons

- Emphasis was placed on trying to do a few things well as opposed to pleasing everyone, particularly those users who are the most vocal. “More functionality often places a greater distance (noise) between user and content. This redesign needed to return to the basic principles of providing the content in a clear and useful way.”
- It was a small multi-disciplinary team
- Communication and decision making with senior stakeholders was well managed. “We asked them about design decisions we wanted them to make as opposed to having opinions on every detail.”

The project also benefitted from having a *product marketing representative* as part of the team. The role – separate from audience insight - was to work out a strategy

for communicating the changes and promoting the improvements externally – this included on-air promotion via radio and TV. Nicki Sheard, who was Head of Marketing for BBC News at the time, explained the benefits of this approach:

It meant we were thinking on an ongoing basis about both how to migrate existing users successfully onto the new product to minimise loss of users and also how to attract new users.

Once the site was relaunched in December 2009, the impact was almost instant, helped by a period of poor weather/snow which brought users back. Market share increased by around 6% and the net promoter score recovered to pre-refresh levels.

Today, the same audience led approach is being used to prioritise the next steps on the *product roadmap*. Having dealt with the critical issues on the original list, the next release is focussed on satisfying a series of detailed audience concerns about the way the interactive maps work – creating layers of data that can be manipulated by users. Once again, the proposed solutions will be thoroughly tested with users before launch.

The BBC Weather project is an example of a growing trend towards evidence based product management, says Chris Russell Head of Product Management for BBC News and Knowledge: “We should be basing most of our decisions on evidence and evidence is a very good way of choosing between options as well”. For Louise Vinter of the audience insight team, a key lesson has been the value of working in partnership with the product management team and being closely involved throughout the project. “It was really important that the audiences team sat on the steering group, especially when we were talking about making fundamental changes to a site that millions use.”

The BBC Weather project shows the value of using audience data to drive significant product improvements. But that process still requires judgement and tough decisions along the way and ultimately that comes down to a product manager.

3.4 Channel 4.com

In 2008 Channel 4 embarked on a major project to relaunch and redefine its core website proposition, Channel 4.com.

For many years Channel 4.com “was a place where stuff was published and then left”, says Head of Online Richard Davidson-Houston. “What we did was arrive at a proposition about what Channel 4.com ought to be, what permission we had, and what was likely to be useful and successful.”

By talking to audiences it became clear that much of what had appeared on Channel4.com in the past was of low value and was distracting from the core user need, which was to ‘find and play Channel 4 programming quickly and simply’.

At that point the focus of the project became to strip away everything that didn’t support that purpose and replace what was there with something better.



The updated Channel 4 site (above) now integrates 4oD - once a separate application - and makes it easy to navigate around extra information about Channel 4 programmes. But getting to this slick new product involved a significant amount of business change, technical development and stakeholder involvement.

An important starting point was a *vision statement* agreed with stakeholders. This said that Channel 4.com should be the ‘the authoritative source of information and content related to Channel 4 Television programmes’ - and then beneath that vision,

there were a series of ranked *business objectives/success criteria* split into four areas: commercial; business improvement; functional and public service.

Commercial objectives¹⁷

- 100% of programmes with online presence
- Increase video advertising and sponsorship inventory by 25%

Business improvement objectives¹⁸

- Time taken to produce mid level brand pages reduced by 40%.
- No extra production effort required for pages with clips and catch up

Functional objectives

- 80% of brand pages are in top 3 rankings of UK search engines when exact term is used
- Interactions should be tracked on all brand pages

Channel 4 corporate/reputation

- C4.com supports overall Channel 4 public service remit
- Access control prevents minors from accidentally discovering 16+ rated content

A website redesign is often a long and tortuous process, with significant stakeholder pressures and multiple objectives to manage at the same time. This was no exception. The front end changes (the look and feel of the website) had to be combined with improvements to workflow and back end systems.

With so many variables and a large number of stakeholders to manage, the team decided to commission a prototype, as part of the *discovery phase*, to illustrate emerging ideas. **Alison Crowe**, Lead Product Development Manager at C4 says this proved invaluable in getting a common language around the proposition:



What we found is having something visual is the greatest key to getting useful feedback from stakeholders in particular. You can have wireframes coming out of your ears but until you have something that looks like an online product - that's not necessarily even clickable – is the best way to elicit feedback.

¹⁷ These are just a sample of the commercial objectives

¹⁸ Also a sample of the business improvement objectives

The prototype was also useful in early audience testing and although not all the ideas made it through to final delivery, it helped clarify what worked and what didn't before development had begun.

Another useful tool for communicating with stakeholders and developers was *the stripe* - a way of laying out visually on one page, the features and phasing; all linking back to the core business objectives that were agreed up front (above).



During the development phase, agile methodologies were used. Alison Crowe played the role of *product owner* – a single voice representing audiences and internal stakeholders at all times:

A lot of the time I was acting as proxy for the business owner (Head of Online Richard Davidson-Houston), taking decisions on what should be prioritised for the next iteration – and going back to stakeholders and making sure they were happy with the features that have been fleshed out.

As product manager, Crowe saw her role as being involved throughout all the stages of the product development process, not just in leading the up-front definition, but in ensuring that what was eventually delivered matched the original brief.

A key feature of Channel 4's product philosophy is the focus on audiences. Not only are individual products like Channel 4.com rigorously tested but there are regular

mandatory sessions where product managers watch audiences interact with all their products. Alison Crowe says that listening to audiences needs to happen before during and after launch:

It's not a case of it being done ... 4oD gaining great ground etc. It is now a case of ongoing user testing. We do surveys all year round and there is a field where users can give us free form feedback and we can take some of those anecdotes and feed them into the product roadmap.

Not all the desired features made it into the first release and these must now be prioritised against emerging requirements from audiences as they use the product. Part of the product manager's role at Channel 4 is to manage a rolling 12 month roadmap, where a launch is seen as part of an ongoing process of prioritisation, development and feedback and where 'good judgement' will be needed again and again. "You have to make calls, you have to make choices" says Richard Davidson-Houston, Head of Online. "It happens that at Channel 4 we have a big impact with audiences on the one hand but relatively small resources on the other – so we need people with excellent judgement."

3.5 Mobile IQ/BBCiPad

Most of the case studies in this report have focussed on product development within a single organisation. The BBC's mobile application development followed a different route, where the technical build and some of the interaction design was outsourced to a third party. This case study looks at the challenges and opportunities for product management where this approach is taken.

Mobile IQ is a small company based in Basingstoke, which has worked with some of the biggest names in media to help them seize the opportunities in the mobile space. In developing mobile applications, where the technology is moving quickly, it can be more efficient to work with a third party. "With the BBC, they had a pretty strong view of what they wanted to do," says



Managing Director and Founder Shaun Barriball. "What Mobile IQ brought to that discussion was our knowledge of what the platform could do and what user expectations were."

The deadlines for creating the project were extremely tight. In February 2010, the BBC announced that it was moving in to the mobile application market with a news and sport application and a month later it was decided to add an iPad application¹⁹ too. All of this meant a severely compressed product development lifecycle and heavy pressure on the team, led by Executive Product Manager for mobiles **David Madden**:

Apple had asked us to be a launch partner so we had about 4-6 weeks between them approaching us and us shipping in the app store and that included a two week period of Apple's quality approval and review process ... we had about 4 weeks to turn things around.



¹⁹ Initially the launches were only international for the BBC's commercial arm BBC Worldwide. The BBC Trust wanted to explore the justifications for a UK based app, following complaints from newspapers. The UK applications were later approved.

Whilst the timescales helped focus the proposition, there were many different stakeholders at the BBC end – commercial and public service as well as different technical, editorial and product teams. Many of these teams were represented at workshops between the BBC and Mobile IQ where the product vision was thrashed out.

MD Shaun Barriball says it is often helpful to create a one or two sentence application definition statement, which normally starts “the application will mean these key words to a user”. For the BBC News application, this centred on being fast for news and included words like breaking, latest and skimming. “Every time we discussed features, we did a sanity check against these objectives and it really helped prioritise.”

Although the workshops were helpful in moving towards a defined scope, Mobile IQ project manager Elaine Roberts sometimes detected a lack of agreement amongst the BBC stakeholders – and the scope continued to evolve while the product was in development. In an ideal world, what is Roberts looking for from a product manager at an organisation like the BBC?

The product manager needs to have a clear view in their heads of what the product needs to be. Because we can't build everything in the first release and that person needs to control the scope of the product.

The second job is to be able to sit between us and the stakeholder and filter out the various opinions and comments. They are the one voice that we speak to. They might be collating 15 different views, but they need to make the decision.

With developers in Basingstoke and stakeholders in London – and with timescales short - it was crucial that everyone was on the same wavelength. With new builds every day, bugs and editorial feedback had to be turned round every 24 hours.

In addition to daily conference calls, an important early step was to agree to use a common communications tool, a web application called Pivotal Tracker which supports distributed teams working with agile methods. All of the features were listed and prioritised in the application. This helped provide transparency between the teams over what was being worked on and how fast development was going. “It wouldn't have worked to treat them in a waterfall fashion, when we're working alongside them in an agile iterative way,” says Executive Product Manager David Madden. The BBC selected Mobile IQ partly because it was felt that working methods and culture were compatible.

But iterative working can present challenges when working with third party teams. In particular, it can make it difficult in setting the initial pricing - as the specification and scope often clarifies later in the process. One model, used by Shaun Barriball at Mobile IQ, is to phase deliverables and pricing as the project goes on:

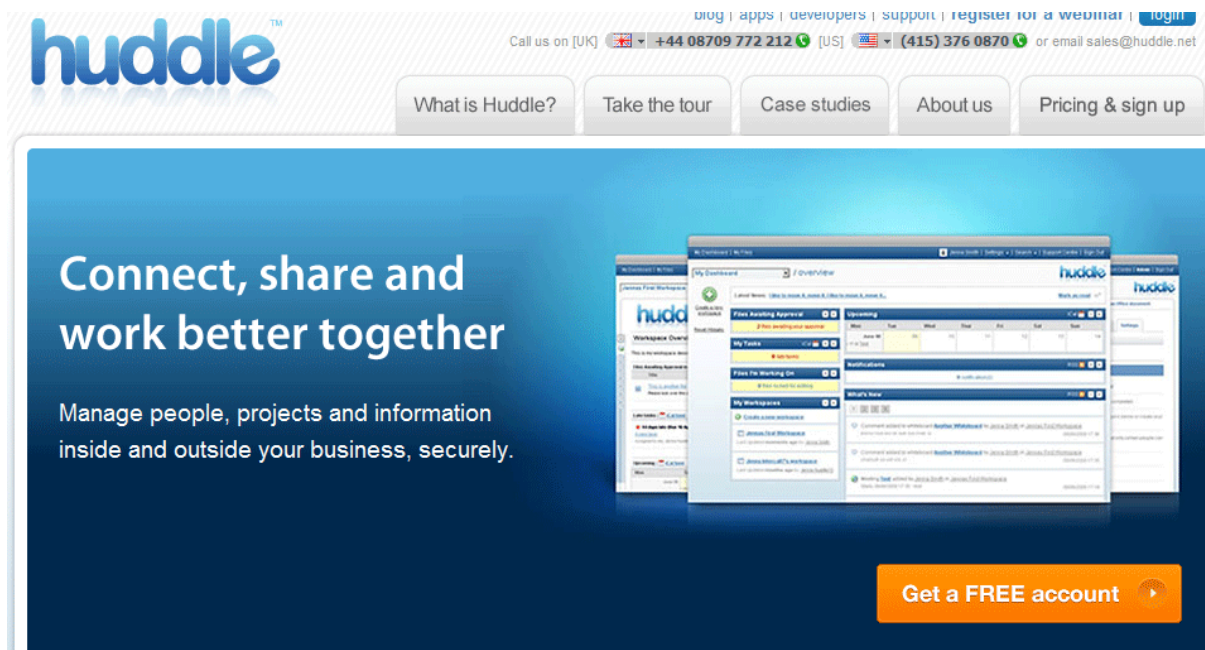
It is not a traditional development project where you provide a spec and then 6 months later we deliver it. With apps, because it is more iterative, it is more of a concept initially. Then we do analysis for 4 weeks and then give a shopping list of options because we understand the practicalities of each.

It is also important to consider the future roadmap – and the involvement of the third party in the initial thinking about price - as the product will need regular iteration and change to reflect audience feedback and new technical possibilities. If anything, this is more important in the fast moving mobile space.

Both the iPad and iPhone global applications met their deadlines and both have been well received by users, but their future success will depend on what happens next – on the product judgements that are made and the way the relationship develops with suppliers and experts like Mobile IQ.

3.6. Huddle

Huddle is a small online start up with offices in London and San Francisco. The Huddle product suite is a set of collaborative tools aimed at making businesses more productive. It includes communications, messaging, spaces for sharing and project management tools. Huddle has grown rapidly since it was founded in 2007 and today is at the vanguard of the software as a service movement²⁰.



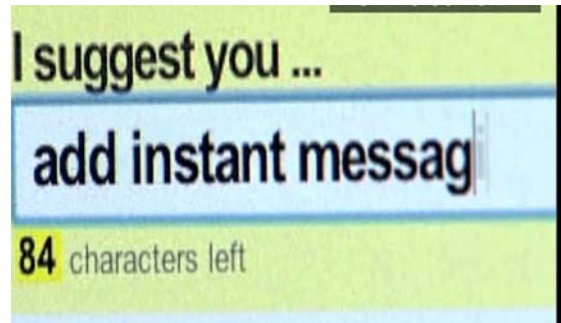
As a business-to-business product it needs to satisfy both the people who use it every day, but also those who buy software for big companies like Disney and Nokia. Martin Eriksson, Vice President of Product says many of the core principles are identical to managing a consumer product and that starts with ensuring there is a clear, well understood *product vision*:

The product vision is key because it helps you make those decisions every day and focus on one thing – and that vision is about helping people work better together.

A key part of Huddle's success and rapid growth has been its customer focussed approach, trying to understand the problems businesses have. Input often comes from visiting customers; sitting behind them as they do their job and watching the pain points as they move from one system to another. Feedback also comes via the sales team or by asking customers directly for their input. Huddle makes extensive

²⁰ Software that runs over the internet makes it easy for clients to set up as all the servers required to run are external (in the cloud)

use of an online feedback tool called *User Voice*²¹, which allows existing users to suggest new features and aggregates the most popular requests:



Every time when we develop something we look at that list of items and especially when it is voted on we can see very quickly which ideas bubble up to the top and which ones most important to our users.

A current project, which is rebuilding the project management suite from ground up, has been based on this kind of customer input. In other cases where you are looking to develop something new, says Eriksson, it may be less appropriate to ask customers exactly what they would like:



The key is to understand what the user needs and what the problem is you are trying to solve. There is the classic story that if Henry Ford had asked his customers what they wanted, they would have said a faster horse. What they really wanted was a better way to get from A to B.

At the heart of Huddle's approach is teamwork; software engineers, sales and product people working together to solve the problems identified by users. Company brainstorms often produce a long list of potential features: "Product people define the problem and then we let the development team and other parts of the company work out how to solve some of those problems, understanding that product management isn't infallible and doesn't have all the answers."

At this stage, developers can help identify where 'quick wins' might be, where you can get 80% of the benefit for 20% of the effort. Then the rest of the list needs some severe prioritisation and tough choices. The first filter is the core company product vision. Does it meet the core aims of the company? Beyond that, Eriksson uses a simple *excel spreadsheet* with two additional filters. These are the current KPIs for the product – one relates to whether it will increase the core satisfaction score

²¹ <https://uservoice.com/>

(based on a monthly survey) and secondly the return on investment (cost versus return). The ideas are then scored and the top items move into development.

| Project Prioritisation Checklist | | | |
|--|--------------------------------------|----------|--|
| Project name: | <project name> | | |
| Product owner: | <product owner> | | |
| Date checklist completed: | <date> | | |
| | | 1 | |
| Benefits | | Very low | |
| 1 Will it increase revenue? | % increase to revenue | | |
| 2 Will it increase number of invites? | Increase in invited users/user | | |
| 3 Will it increase percentage paying? | % increase in paying users | | |
| 4 Will it increase activity? | Increase to avg page views/visit | | |
| 5 How useful will this be to users? | % of total users impacted | | |
| 6 Will it bring in new users? | % increase in total registered users | | |
| 7 Does it diversify revenue streams? | No. of new streams | | |
| 8 Does it save costs? | Value in £ to online P&L | | |
| Complexity | | | |
| 9 How much technical effort is required? | Estimation Points | | |
| Risk | | | |
| 9 What are the risks of not doing it? | See risk table | | |

Agreed features are then broken down into *user stories* as part of an agile development process – Huddle uses a mix of XP²² and Scrum – and these are entered into using an online tool (called Mingle). Each *user story* is written to show the audience benefit and every two weeks the user stories are reprioritised by the product manager. Eriksson says that the key lesson in writing user stories is to keep them as simple as possible:

The key point of a user story for me is getting across the benefit to the developer so they understand why the user wants this and what the benefit is going to be. So it is not just 'I want a button here', it is that 'I need to save my documents when I just uploaded them' - so the developer understands the whole flow - what comes before and what comes after.

In developing new features the day-day involvement of the product manager is critical in representing the users at all times; being available to answer questions to ensure development is not held up. At a small company like Huddle, much of the activity revolves around the product role and with resource limited, the ability to

²² Extreme programming (XP) advocates frequent "releases" in short development cycles

make the right calls in product development will ultimately be critical to the success of the entire company.

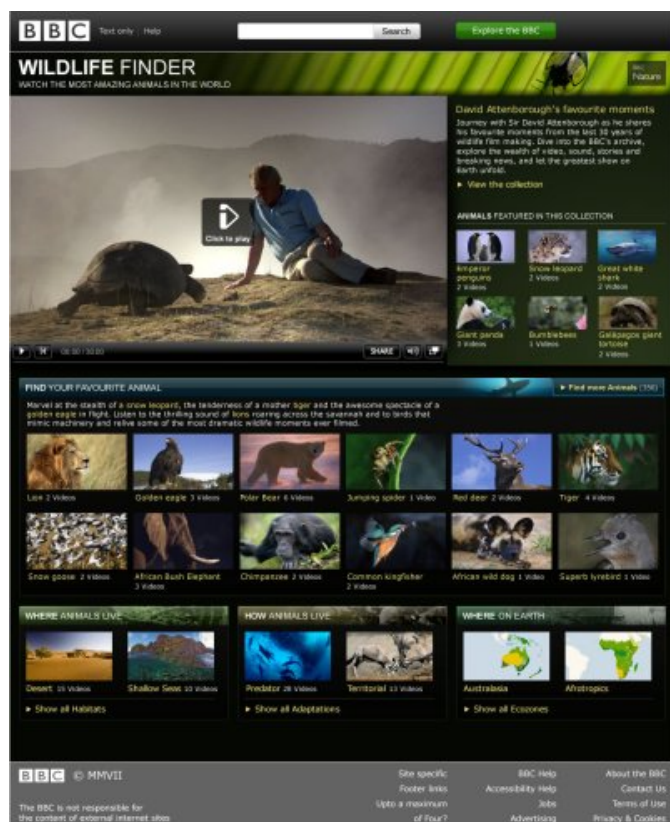
3.7 BBC Wildlife Finder

The BBC has been at the forefront of wildlife film making from early programmes such as Zoo Quest (1956) through to more recent multi million pound productions like Life on Earth (1979) and Blue Planet (2001). However this wealth of content has been designed for linear television viewing and only recently has the BBC turned its mind to how it could open up this unique historical footage online and on demand.

That was the genesis of Wildlife Finder – a top down idea, backed by a wealth of great content. Top down in the sense that it directly came from the *business strategy* of the BBC, to create a small number of new high-profile propositions that fitted the public purposes, to generate reach and repeat visits for the Vision/Knowledge area of the BBC²³. Natural history was felt to be a good fit, where the BBC had distinctive content that would not unduly distort the market and the money and resource was appropriately prioritised.

The product task was to feed off that strategy and shape it into a successful online product that would delight audiences and attract them back again and again. Tom Scott who took the role of product manager for Wildlife Finder says that they'd been putting programme clips online for some time:

We wanted to go further, to help people discover new programmes from the archive and to gain a better understanding of the natural world; and to do this we built Wildlife Finder.



²³ BBC's refocused strategy includes a section on building knowledge.
http://www.bbc.co.uk/pressoffice/pressreleases/stories/2006/04_april/25/creative_detail.shtml

Wildlife Finder uses programme clips, combines them with other sources of information from around the web to let audiences find out more about the world's wildlife, its animals, their behaviours and adaptations, and habitats. It does this by providing a page - a URI ²⁴ - for every species, habitat and adaptation the BBC has content on and aggregating the information around that link.

In addition to opening up the BBC's natural history archive, the wider BBC Earth project also encompassed a dedicated wildlife news service Earth News, closely linked with the main news site and Earth Explorers, a site which provide a more personal insight from crews on location.

Product shaping and product discovery

There had already been a significant amount of work before Tom Scott arrived on the project. There'd been some heavy duty audience analysis, breaking down the audience need into three main areas and a business case had articulated the key opportunities. Scott added an analysis of what people were searching for in Google - 2.5m searches a month for the words like 'Panda' and 'Lion' and millions of searches for terms like predators, rivers and rainforests. This perspective was then compared with the available programming content within the BBC Natural History Unit, which tended to be about animal behaviour or about specific animals or habitats. As product manager, Scott saw his job as putting the pieces of the puzzle together in a way that enabled audiences to find and enjoy this content

The missing bit of analysis was the intersection between what audiences are thinking about and interested in and what the BBC is producing. By thinking in this way, I wanted to be able to hammock people from a news story to a programme or through programme pages or just hook new people because they were searching for new information.

Unlike some *product discovery* processes that are focussed around personas, Tom Scott felt that this kind of product suited a domain driven design approach. The research therefore focussed on what mattered to audiences, on how they thought, and the information and ultimately the experience was built around that. This became the high level *product vision*, which Scott and the team then sold back into the business with the help of designs, prototypes and an updated business case. The high-level vision, which is displayed prominently on the project wiki says:

²⁴ Uniform Resource Indicator is a string of characters used to identify a name or a resource on the Internet.

BBC Earth is intended to make the BBC's Natural History content more available and discoverable on the web.

This vision is supported by a two sentence description of the three elements of the project including Wildlife Finder, Earth News and Earth Explorers and the project was underpinned by a set of further principles about matching the right technology to user need - set out as a manifesto (below):

Our manifesto

- **Persistence** - only mint a new URL if one does not already exist: once minted, never delete it
- **Linked open data** - the website is the API
- **RESTful**
- **One web** - one canonical URI for each resource, dereferenced to the appropriate document for the client (HTML, JSON, RDF, etc)
- **Fix the data don't hack the code**
- **Books have pages, the web has resources and links**
- **Do it right or don't do it at all** - we don't hack in quick fixes or 'tactical solutions' - they are bad for users and bad for the code.
- **Release early, release often** - small, incremental changes are easy to test and proof

These principles were fully discussed at the start by stakeholders - and proved important in a number of ways as the project developed. The principle of persistence helped deliver an appropriate approach to rights acquisition. The commitment to linked open data and the resources of the web meant that editorial resource needed to be assigned to partnerships, with a range of policy and editorial implications.

In the end, editorial partnerships included the International Union for Conservation of Nature (IUCN) who compile the Red Data List for data on the species conservation status, the WWF (World Wildlife Fund), the University of Michigan and the Zoological Society of London to provide information about the threats to the most endangered and unique species. There was also substantial usage of Wikipedia to provide general background information on each animal, habitat or adaptation.

The project also has a number of business and stakeholder challenges, not least the involvement of commercial partners BBC Worldwide and the Discovery channel, although these eventually dropped out and a simpler public service proposition was developed.

How was the team structured and how did the product manager gain authority?

The product manager role was recruited by commissioner Lisa Sargood, the *business owner* who had been given the task of getting the project up and running and was clear about the qualities required:

I was looking for a hybrid, someone who was editorially and technically savvy. The language that he [Scott] spoke enabled him to bridge the gap between editorial and technical and talk to both sides in an understandable way. He was really clear about what was possible and able to communicate with the whole team. He had a really strong overview of the whole product.

An added bonus was that Scott was a biologist so not only did he have editorial and technical knowledge but he also understood the terminology he was using for the subject he was dealing with. According to Sargood this proved critical:

Products in my experience are hard work. You need to have someone who has a very clear vision of what the product is going to do for the audience and to keep that in mind and to push that through the team.

The biggest problem at the start, for Scott, was a fuzziness and confusion about roles within the team, with a tendency for everybody to stick fingers into other people's pies. Tom describes this as "something of a BBC disease". He admires the IBM ideas about T shaped people²⁵ - those that have a clear passion, but an interest in all areas²⁶:

The thing that you are brilliant at you should become brilliant at, but you need to be aware and sensitive about everyone else's role but that doesn't mean you should interfere in their job. If you can encourage that behaviour then you are more likely to get successful products.

In the BBC, says Scott, there is often a distinction in a much more polarised way than elsewhere. "A product has to be a successful synergy of design, technology and content and the role of the product manager is to ensure that those three elements come together in a way that delights the audience." He believes that it is unhealthy to separate these things out. "Depending on people's background, they'll require support in different areas, but ultimately the job is to be responsible for all these areas."

²⁵ The concept of **T-shaped skills**, or **T-shaped persons** is a metaphor used in job recruitment to describe the abilities of persons in the workforce. Wikipedia http://en.wikipedia.org/wiki/T-shaped_skills

²⁶ IDEO exec Tim Brown on T Shaped people
<http://www.chiefexecutive.net/ME2/dirmod.asp?sid=&nm=&type=Publishing&mod=Publications::Article&mid=8F3A7027421841978F18BE895F87F791&tier=4&id=F42A23CB49174C5E9426C43CB0A0BC46>

The importance and role of editorial lead

Like many new products, Wildlife Finder required a consistent stream of relevant editorial content and some significant changes to workflow. There was a large amount of work to be done in costing and negotiating rights clearances and identifying editorial content that would meet the defined audience needs. For staff in the Natural History Unit all three products (Wildlife Finder, Earth News and Earth Explorer) also required training on new content input mechanisms. In this sense the product manager needed to work closely with an *editorial lead*, who took responsibility for the content, the team managing the content, the metadata describing that content and the processes and workflows sitting around that. Penny Hunter who took this editorial role, worked closely with the product manager, advising him on the feasibility of new product development and inputting ideas to the roadmap. Hunter says she particularly valued the iterative nature of the process:

The fact that we are continually reviewing and looking for audience feedback, learning from what we've done; the fact that it is always open to change is incredibly valuable.

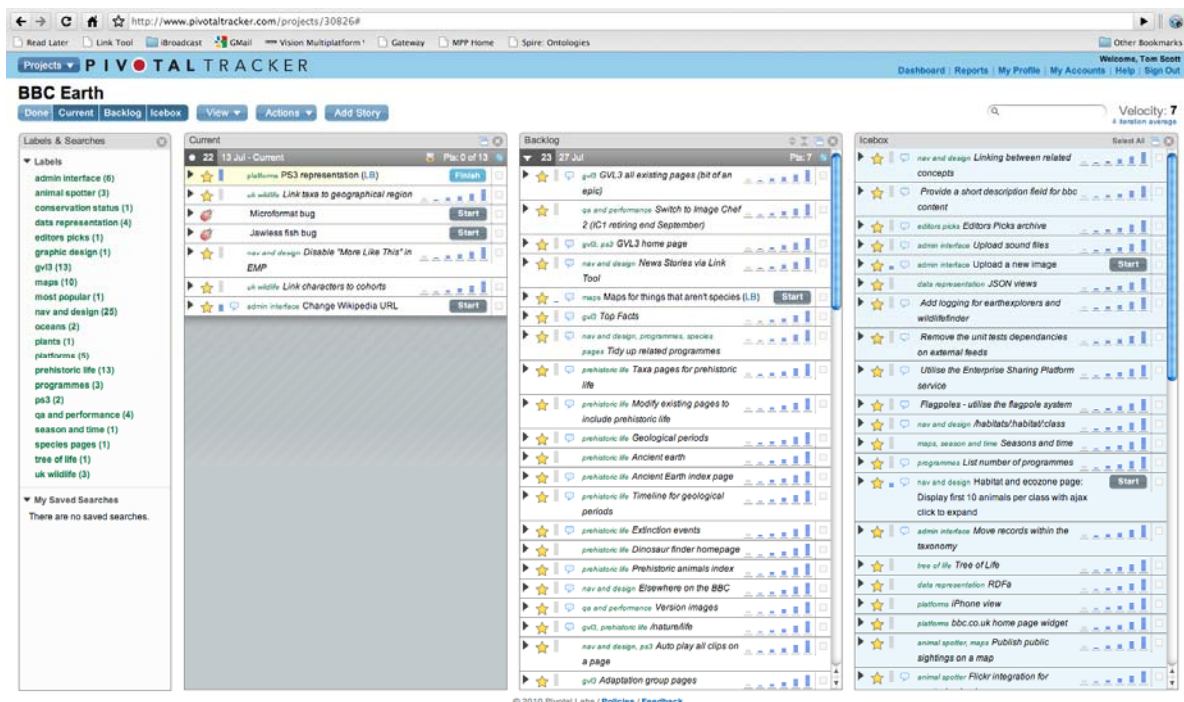
The iterative nature of the process is underpinned by a considerable amount of face-to-face time. Tom Scott spends two days a week in Bristol, the editorial base of the Natural History Unit. Commissioner Lisa Sargood says the relationship between the editorial lead and the product manager is critical because of the overlap between the user journeys and the strength of the editorial content that lies behind those user journeys. The key thing, says Sargood is to ensure that the “right people are in place with the right skills and mutual understanding”.

How did the role of product manager work during the build phase?

Each sprint was two weeks long and at the sprint planning meeting, Scott took the role of product owner in the agile process. He outlined the objectives that they were working towards, talked through the items on the backlog and the priority of the items - and then there was a detailed discussion about how they would be delivered. Once the sprint started, the day to day task management was down to the scrum master.

Scott sees a major part of his role as thinking strategically about the future. The roadmap is divided into iterative improvements and content development - which stripes throughout the year - and major functional development. The challenge is getting the balance right between the two.

He keeps a rolling high level roadmap that describes the major releases through the year and then a detailed product backlog which breaks that down into specific features. Scott prefers the product backlog approach over a document that gets signed off, because he finds it more flexible and easier to incorporate what works with live data and live use.



Wildlife Finder product backlog (above) is kept in Pivotal Tracker, making it easy to reprioritise

Wildlife Finder has taught Scott a number of key lessons about how to develop successful products. He is a huge advocate of working with a multi-disciplinary integrated team, built around a shared product vision. He is also passionate about the need to be externally focussed. "You have to be ruthless and focus on doing those things that make the product better for the audience, rather than creating artefacts for the business that don't help."

4. Masterclass interviews

Two exponents of the art of product management reveal some of the tricks of the trade.

4.1 Anthony Rose

Anthony Rose was CTO of Kazaa & Altnet before arriving at the BBC. He turned BBC iPlayer into one of the UK's most successful digital products. Now he is working to create platforms and products for YouView.

What did you learn from the early days of BBC iPlayer?

When I saw the proposed BBC iPlayer, it was a pretty poor user proposition. I assumed that the developers weren't very good, but when I arrived, I found the real problem was that they were being pulled in different directions.

My analysis was that BBC iPlayer started with satisfying goals of the BBC Trust and BBC editorial and content rights people and the (wider) content owners, and none of it had the word *consumer* in it. It was about ... *taking things away* from consumers ... and because it had taken so long, the technology was also no longer relevant.

So the key to it - as for most products - is having a single clear vision and working out who to listen to and who not. One of the first things I did was to put myself as a star or hub connector – a filter to the rest of the business - so that there was one clear unambiguous voice to the developer team.

Would you say that looking at things from a consumer's point of view was the key to turning things round?

It's absolutely about the consumer, but it is also about the interplay between the consumer and what technology will be able to do. If you ask audiences, through consumer testing, they'll tell you the state of the world as they know it. So for example on Canvas we're doing consumer research and they say it is all about catch up TV not web applications – because no-one has seen a web app on a TV yet. But in due course it may turn out that web applications are huge.

Consumers give you feedback on what they know. Technology can help invent new things and a successful product sits somewhere in between the two.

There are so many possibilities, how do you decide what features to include? How do you keep the product simple?

As far as I can tell there are always two markets to address and you need to address each of them independently. The first market, the real market, is the mainstream consumer market ; the second market is the early adopters, the people who will write about your product well before it is launched. The challenge is to target both and keep both happy. In BBC iPlayer, initially the blogosphere was very anti the BBC because it was perceived as being pro-Microsoft – for that reason I targeted the Wii and the iPhone specifically with versions for those devices.

The challenge is to meet the needs of both audiences in a single product – a particular challenge with BBC iPlayer Version 3, where we wanted to introduce advanced features such as social and chat around content... and then there is your mum who just wants Eastenders and says ‘What’s all this nonsense about following and tweeting – I just want the programme’.

How important is it to have a product vision?

Vision and gut instinct are essential. You can’t be a product owner without having a vision and you can’t be a product owner without living the dream every day.

For me I have iPlayer hooked up to my television in about 8 different ways, and I watch iPlayer downloads on the tube on a Sony Walkman. I have an iPod/iPhone. I find problems more frequently than other people because I’m there as a passionate end user.

But you are not exactly a typical end user?

You’re right. I’m a geek. I like to have lots of tech and that’s very different from somebody who isn’t in that demographic. Now, in the ongoing evolution of the iPlayer, I may not be the best person to drive it going forward because the technology problems have largely been sorted. Initially there were problems about video encoding and distribution but those now tick along and your next set of things is a challenge on how to create the best consumer proposition for a more mainstream audience.

With iPlayer Version 3, more effort went into designing the proposition on paper than building it – building it was the easy bit. Deciding on product features took us longer than building those features! As you move through a technology lifecycle the problems to be solved change quite dramatically.

Who should lead a product like BBC iPlayer where there are user experience, marketing, editorial and engineering challenges?

There are various models, and the one that has been dominant at the BBC is that User Experience (UX) leads. The problem is that UX looks at technology that exists today not at the technology that may exist in future so you can have a conservative design that fails to take advantage of latest developments. On the flip side if technology leads you get a product that is brilliantly clever but no-one can use.

For me, unambiguously, I prefer to see a single product owner with all of those work threads reporting into him or her.

As a product manager, how do you keep in touch with what people think about your product?

Several times a day I'll do twitter searches on the word iPlayer or look at Google News feeds or blogs and if you ever see something negative, you need to robustly follow it up.

Part of the challenge is that you always want to be working on the next version, but you also need to fix and maintain the current one. There is a great phrase 'broken window syndrome'; there is even a Wikipedia page about it (*about how New York tenements quickly fall into decay after more than 3 or 4 broken windows*)^[1]. If you have one or two small bugs in a product, it is not an issue but if a user sees several problems they think it is Swiss cheese ...there are holes everywhere. That is really bad and so every day you must identify the key problems through formal audience feedback and your own feedback.

Whenever I'm at an airport or go and visit a relative, I always go and visit the airport kiosk, or their computer - I think I'm a renowned pain for doing it - to see iPlayer on their computer. Often you find they don't have the right graphics hardware or the right wi-fi connection or it is too slow. Understanding all these weird things can ultimately help you improve the product.

When you can't do all the things you want – how do you prioritise?

I wish I had the answer on prioritisation - I am renowned for feature creep. I look at the critical path to the project and I try to add features to just those things that are not on the critical path. But it turns out that those things *do* affect the critical path anyway and then you have to have a big reprioritisation – and all your dreams move to the next release. I don't have a clear answer.

I think what I do instead is try to create building blocks that help power an unknown future. I focus more on the underlying pieces which I can then assemble flexibly in many ways later. Often the developers won't understand and say 'what is the use case'? I say 'trust me, you'll need this later'.

How do you deal with difficult stakeholders?

There are two extremes: to love them to death, to engage constantly and seek their opinions; or the fortress siege mentality where they become difficult and you simply stop asking them. I usually try the first and end up retreating to the second. The problem I have is there are too many things to do in a day and I try to pick the ones which are most rewarding for me personally, like talking to developers who say 'yes'.

The problem with *not* dealing with stakeholders is that they become unhappy and to the extent that they are funding you - or your success is dependent on them - that is not good. Secondly you are missing a trick. It is important to get the relationship symmetric or with some parity so that it works correctly and both parties are suitably empowered.

What are your top 3 tips for successful products

1. **Listen for the *what* not the *how*.** People will ask you for things, stakeholders or your own team. They are asking for a '*what*', but it usually comes bundled with a '*how*'. Figure out what the ultimate abstracted goal is. Ignore the how - and figure out how to get there yourself and you'll get a much better product.
2. **Always focus on the customer:** Obviously figure out who the customer is first, because you will find yourself being pulled in any number of directions for technical, product accessibility or whatever reason and if you lose sight of the consumer you will have a less good product.
3. **Ship early, ship often.** The reality is that if you take a waterfall approach, you miss the opportunity for consumers to give you feedback sooner. It's almost always better to ship a product with fewer features, get feedback and every few weeks do another release. Resist at all costs people pushing things further out. If it takes more than 3 months you should rejig features so it can ship more often.

4.2 Hunter Walk - YouTube

How do you define the role of product management at YouTube? What are the core elements of the role?

Product management at YouTube is about working cross functionally to define long-term vision and near-term roadmaps for our products. Product managers tend to have technical backgrounds although they are expected to work well with both engineers and non-technical team members in marketing, sales, etc.

How well understood is it by the rest of the organisation and where does it sit - in engineering, marketing or a separate division?

Product management is in a separate division apart from engineering or marketing. Although the job of product management is rarely routine, cross-functionally we're expected to be the glue which holds teams together and helps everyone succeed in creating amazing products and healthy businesses

How do you split the product roles? Do you have sub-products, senior people, more technical product managers for components etc?

We attempt to keep the organisation as flat as possible so the majority of product managers won't have any direct reports. In many ways the job of the product manager doesn't change based on their seniority, rather the scope and complexity of their projects grow. The number of product managers at YouTube/Google is tied to a ratio of product managers: engineers but can differ based on the product.

How does product management fit with the other roles (marketing, UX, commercial, engineering) – which are the most important interfaces/relationships for you?

We work cross-functionally with all these other groups. Most often the product manager of an effort is paired with an engineering tech lead (who may not be the people manager of the engineering team). All of the interfaces are important. A product manager will assemble a core team for their effort which includes representatives from the major functions that they need to help their product succeed. For example, a monetization product manager might have someone from Sales on their virtual core team, while someone building a consumer product might not have Sales representation.

How important is a product vision and product principles – do you have them – how do you ensure that all those working on the product understand these?

Fundamentally these are what the product manager is responsible for delivering in addition to the tactical day-to-day execution. We manage largely through collaboration and transparency. We have quarterly objectives and a key results template where individuals and teams identify their goals. These goals are linked to projects and metrics. The projects and metrics are linked to a strategic plan/vision. All of this information is published and visible.

How do you do product definition? What is the Product Manager role in the build and launch of products or new features?

Product managers drive the process to get to a plan of record. This always means collaboration but not necessarily consensus - hard decisions make for good products. The PM needs to ensure that people on the team have a chance to input, to own the outcome and clarity on what decisions were made, even if every individual doesn't agree with every conclusion. We use a process that is relatively bottom-up in terms of teams figuring out the best way to accomplish target goals and advance the overall product strategy.

How do you keep in touch with what people think about your product, what specific methods do you find most useful to understand how people use the product and how do you feed that back into roadmaps?

We use a variety of quantitative and qualitative feedback ranging from metrics/dashboards, user research/testing, social media monitoring and our own team feeling/usage of our products. We definitely practice constant iteration and prioritise bugs/feature requests in order to ensure we don't lose the trees when we look at the forest. We try to focus on a subset of metrics which we believe are the key health indicators of our business and know that sometimes these will change over time. These are the metrics which are then used in our quarterly/annual planning cycles.

How do you manage your prioritisation (new features or just bugs) – what to do next. How do you keep focus? How do you keep strategic...Any tips or tricks?

This is one of the greatest challenges when you have a lot of ideas. We try to balance bottom up interest and top down priorities. We provide engineers the flexibility to work on features they think will improve the overall YouTube experience. At the end of the day, teams are focused on their measurable stretch goals and so are able to

prioritise based upon these metrics, experiential goals and the overall objectives of the company.

If we have clarity on those guiding truths, then teams/individuals are able to, in the moment, ask themselves what features/bugs will be most useful in accomplishing these goals. We attempt to work on high impact/low work features, then high impact/high work.

Low impact/low work are good for experiments and we try to avoid low impact/high work projects although sometimes you don't know until you're able to test impact.

That's why we think a lot about minimum viability for testing an idea - build the minimum to prototype it before you throw too many resources behind it.

5. Conclusions and reflections on product success

New technology has brought unparalleled opportunities to create new products and services, but the reality is that the vast majority of these fail. “The internet is littered with things you *could* do,” says Channel 4’s Richard Davidson-Houston. “The winners are the things you *should* do.” Creating successful products is all about understanding the difference between the two.

In a world of endless possibility, there is little value in offering a ‘me too’ service. Audiences are smart. Winner takes all. Successful products must offer something distinctive and useful enough to entice people back again and again. That’s why the top practitioners in this study focus so much on getting the *product vision* right in the first place— on *discovering* a product that meets the strategic objectives and capabilities of a company and a fundamental audience need.

The heart of the product manager’s job is to co-ordinate that process and then doggedly to see it through, developing that vision over time. There are many tricks and tools that can be deployed to help – a number are set out in this report – but ultimately success comes down to a small number of key qualities:

- **Passion:** Great products are made by people who live and breathe them. It’s a 24x7 passion that gets the BBC’s Anthony Rose checking his product at airport terminals and in the homes of his relatives. It can be infuriating, but is also infectious – and it is essential in persuading stakeholders and audiences to come on your journey. As YouTube’s Hunter Walk points out: “No one is going to care more about your product than you do, so you need to be the keeper of the flame”.
- **Empathy:** It is crucial to be able to see the product from other people’s point of view; to really get close to audiences, for example, and to feel their pain. But it is also important to understand where all your different internal stakeholders are coming from. Marketing, UX, editorial, engineering and sales will have pain points too. Understanding these won’t just make your relationships easier, it will lead to a better product.
- **Judgement:** Listening to others and gathering good data is essential - but it is not enough. A product manager needs to back this up with the confidence to weigh up the evidence and make judgements - to make clear decisions and live with the consequences.

- **Curiosity:** inspiration and ideas can come from anywhere – but only if you are open to the possibility. “Never stop learning,” advises Hunter Walk.

Not all of these qualities can be taught; certainly not in a classroom. They come from within – but also from watching and learning from others. There’s also a huge body of good practice in this study and other reports which can be shared – driving a virtuous cycle of improvement.

Clarifying and the explaining the product development process, and the different stages and roles within it, is an essential pre-requisite for success not just for product managers but for the wider industry. Only if each group : UX, Editorial, Product, Engineering, Operations, Marketing and Sales – understands its role, can individuals feel secure and confident about their contribution. The Guardian News and Media chart in section 2.5 might be a good basis for creating a simple overview for the media industry; as a starting point for more common standards and terminology.

Beyond that the many case studies in this report demonstrate that product management skills and processes themselves are making a significant difference to how media companies transition into the digital age:

- There is widespread recognition of the value of putting “audiences at the centre of the frame,” in the words of BBC iPlayer’s James Hewines. That is not just about usability testing at the end of the process, but rigorous consultation up front as the proposition is being developed and an ongoing culture of listening to audiences.
- There’s increased confidence in more agile and iterative processes – not just for software coding but as a way of increasing the visibility and understanding of the entire product vision.
- There’s a realisation that evidence-based approaches, such as data analysis and proposition testing, can improve decision making, reduce risk and increase profits.
- And there’s an increased understanding that product management is not just about launching something new, but is about rigorously planning and managing an entire lifecycle.

Many have come to recognise the key ingredients of success. “It has to be the right idea and have good taste, but the execution and delivery are what's key,” says Google’s Sergey Brin²⁷. The modern product manager is at the centre of all of these

²⁷ <http://www.guardian.co.uk/technology/2009/jun/17/google-sergey-brin>

things providing the good taste and judgement that turns good ideas into great products. As this study has shown there is increasing recognition of the importance of these skills as product management is taken more seriously across the industry.

GLOSSARY OF TERMS

Agile process: a group of software development methodologies based on iterative and incremental development. Common types are Scrum and XP

Application definition statement: like a vision statement, expresses the usefulness of a web or mobile application in terms of audience benefit

Audience insight: individual or team which works closely with product managers to understand and interpret audience need and behaviour

B2B products: describes products that are sold to other businesses. Contrasting terms are business-to-consumer (B2C) and business-to-government (B2G)

Business analyst: traditional IT function to interpret business rules and requirements for technical systems. A generic role, not normally product specific

Business case: a formal document with outlines the cost/benefit of a product or project, normally with the aim of getting approval to spend money

Business objectives: overarching business goals which need to align with and inform product targets and investments

Business owner: owner of the overall business strategy and often of profit and loss (P&L). Key sponsor of product roadmap, business cases and the rest

Commissioning: How linear TV and radio programmes are brought into being - through spending of budgets. Commissioners sometimes play a similar role with digital products in a multiplatform world.

Competitive analysis: process of evaluating the competition used in *discovery* phase

Discovery: the process of working out what a product should be and how it can provide compelling benefit(s) to users

Domain: an area of specialist knowledge and expertise e.g search technologies, mobile, or news

Editorial lead: works with a product manager to focus editorial input and feedback into projects and product roadmap

Functional specification: key document in the Waterfall project management process. See also Product Definition Document

Interaction designer: see user experience (UX) design

Minimum scope: a key role of the product manager is to define the minimum scope

Multivariate testing: a technique for testing hypotheses on complex multi-variable systems such as different website layouts – also A/B testing

Net promoter: commonly used measure of quality derived from asking audience if they would recommend a product to friends

Opportunity assessment document: a document that looks at the potential for a new product area

Portals: a product that acts as a gateway to a wide range of content e.g. a homepage

Product backlog: A list of features that still need completing. The backlog is typically used in agile methodologies, where backlog items are prioritised by a product manager

Product council: a group that approves and inputs into products and prioritises between products in a product portfolio

Product Definition Document (PDD): Sets out the scope and key functions of a product. Normally used in a waterfall process.

Product line: a collection of products that make sense to group together

Product marketing representative: oversees a communication plan to sell a new product or explain major changes to a product to existing audiences

Product owner: the role of product manager in the agile process is prioritising and making decisions on behalf of audiences and as proxy for the business owner

Product planning: the ongoing process of identifying and articulating market requirements that define a product's feature set

Product principles: a set of statements that help guide the development of the product

Product roadmap: a plan for how the product will be developed and how and when new features will be released

Product vision: an expression of the value/benefit of the product to users. A product vision is a key outcome of a product discovery process

Product vision statement: a pithy summary of the vision, normally in terms of audience benefit

Proposition development: alternative term for product discovery process (e.g. Yahoo)

Prototype: initial product version which demonstrates the very basic functionality of a proposed development for purpose of testing or to build common understanding.

Platform: hardware architecture and software framework (including application frameworks), that allows software products to run

Success criteria (KPI): measurable audience or technical targets that normally are part of a business case or other internal planning and evaluation process

Technical Product Manager: description of product managers that work on platform products, content systems or other deeply technical areas

TV Platforms products: a software driven product that appears on a television such as an interactive TV or IPTV application

User experience (UX) design: relates to the creation of the architecture and interaction models that impact user experience of a product, device or system. Relates to interaction design, user centred design

User story: an artefact of the agile process that describes a required feature through its user benefit

Vertical: a product aimed at addressing the needs of a specialist area e.g. Guardian environment section or motors section of a newspaper

Vision and Scope document: see *Product Definition Document*

Visual design: often a specialist function within a design group that adds typography, branding and emotional connection to interaction models and product wireframes

INTERVIEWS AND CONTRIBUTORS

Garry Avery, CEO, Tarigo

Martin Eriksson, VP Product Huddle

Richard Davidson-Houston, Head of Online Channel 4

Alison Crowe, Lead Product Development Manager, Online Products, Channel 4

Marc Frons, Chief Technology Officer, New York Times Digital

Fiona Spruill, Editor of the Web newsroom, New York Times

Hunter Walk, Product Manager, YouTube

Mary-Beth Christie, Head of Product Management, FT.com

Tanya Cordrey, Guardian News & Media (former Product Director eBay)

Mike Bracken, Technology Director Guardian News & Media

Piers Jones, Head of Product Development Guardian News & Media

Mairead O'Connor, Product Manager, Guardian News & Media

Robin Pembroke, Group Director, Online and Interactive, Global Radio

Shaun Barriball, MD and founder Mobile IQ

Elaine Roberts, Project Manager Mobile IQ

Anthony Rose, CTO Project Canvas – former Head of BBC iPlayer and former CTO of Kazaa/Altnet

Fabian Birgfeld, Head UX News and Knowledge, BBC Future Media

Marcelo Marer, General Manager UX&D, BBC Future Media

Chris Russell, Head of Product Management News and Knowledge, BBC Future Media

Rebecca Salisbury, Head of Product Delivery, Online Technology Group, BBC Future Media

Lisa Sargood, Commissioner BBC Vision

Penny Hunter, editorial lead BBC Wildlife Finder

James Hewines, Head of BBC iPlayer

David Madden, Executive Product Manager BBC Mobile

Tom Scott, Digital Editor and product manager Wildlife Finder

Peter Deslandes Product Manager BBC Weather

Nicki Sheard, Head of Marketing for BBC News

Silver Oliver, Interaction Designer BBC Weather

Anthony Sullivan, Product Manager BBC News

Louise Vinter, Research Manager BBC Journalism

Ian Hunter Managing Editor, BBC Online (Editorial Lead, iPlayer)

BIBIOGRAPHY AND FURTHER READING

Marty Cagan, *Inspired: How To Create Products that Customers Love* (SVPG Press 2008)

Marty Cagan, *SVPG blog* <http://www.svpg.com/articles>

Mike Cohn, *User Stories Applied: For Agile Software Development* (Addison-Wesley 2004)

Robert G Cooper, *Winning at New Products: Accelerating the Process from Idea to Launch* (Perseus publishing 2001)

Steven Haines, *The Product Manager's Desk Reference* (McGraw Hill 2009) – for reference

Anthony W Ulwick, *What Customers Want* (McGraw Hill 2005)

Roman Pichler, *Agile Product Management with Scrum: Creating Products that Customers Love* (Addison-Wesley 2010)

Roman Pichler, *Product manager as product owner in agile*
<http://www.romanpichler.com/blog/>



sharing skills, training & expertise

www.bbcacademy.com