

Eleven lessons: managing design in eleven global brands

Design at Yahoo!

Founded in 1994, Yahoo! has grown from a pioneering search engine to become one of the most popular portals on the Internet. An organisation that uses technology to focus on customer needs, Yahoo! operates a highly customer-centric design process, with user research instrumental in the development of new products and the evolution of existing ones.

Overview

Yahoo! has a 'one size doesn't fit all' attitude towards the concept of a formalised design process. However, the speed of its market and the pace of technology both require Yahoo! to be keenly aware of how to best manage product development.



Project management tools, such as Agile (described in detail later), provide the backbone for product development while allowing the design team to be creative. Key elements of this process include:

- Using product development methodologies with short design iterations, continual prototyping and product development and small, tightly integrated development teams
- Providing designers and other project team members alike with the business tools needed to relate design actions to financial goals
- Building of methods and patterns libraries to encourage consistency and reduce repetition across products and teams.

Meet the team

The design function at Yahoo! has a staff of over 300. The majority of them are based at the organisation's US headquarters, the remainder spread around the world.

The company's User Experience Design group includes user researchers, visual designers and interaction designers. In addition to this, specialist knowledge is heavily

drawn on from teams at Yahoo! on a project by project basis, such as the Mobile team who advises on the transfer of technology to small user interfaces.

Yahoo! completes 90 percent of its design activities in-house, but occasionally uses external design resource for unusual or high-profile projects, a type of activity the company calls 'hyper design.'

Designers at Yahoo!

Typically, Yahoo! recruits highly qualified designers with a decade or more of professional experience and high levels of academic qualification (often PhD level, particularly in its user research activities).

Some Yahoo! businesses also hire staff with creative backgrounds that fall outside the typical web-development career path. The company's news and sports portals hire professional photographers, for example, in order to inject added visual insight into their product ranges.

Yahoo! requires all its designers to have a business focus, to be capable of understanding the business goals of the projects in which they are working. 'The designers who take the time to learn the business do not think that their value is just making great designs, it's making designs that move the needle,' says Joseph O'Sullivan, Senior Design Director. 'They're the ones who are successful.'

Indeed, designers are encouraged to think more widely than the boundaries of their own discipline. 'The design industry in general has the tendency to only own half the problem. If you want to take a strategic leadership role in any problem then you need to own it,' says Luke Wroblewski, Senior Design Principal for Search at Yahoo!.

In more depth

Find out how other companies in our study hire designers who demonstrate a [wider skill set](#) including: multi-disciplinary working, business acumen and strategic thinking

Innovation

Perhaps like no other industry in history, the Internet exhibits a relentless pace of innovation. Being first to market with a successful new technology or a popular application can earn its owners millions. Successful Internet businesses have learned how to scale their activities with great rapidity and to evolve the business models and roll out new services with similar speed. This sometimes involves buying out smaller niche market product or service providers in order to remain at the frontline of market developments.

Yahoo! fits this model precisely and its board cites a policy of continued and accelerated product innovation as being fundamental to its sustained growth. Recent innovations brought to the market by Yahoo! include its Yahoo! Go product (a multi-device interface for its mail and personal information management products), a new interface of its email

application, and continued expansion into new content areas including Yahoo! Answers, which allows users to post a question online and view a series of relevance-ranked responses from the overall web community.

History

Yahoo! is one of the big successes of the Internet revolution. Founded in 1994, Yahoo! has grown from its beginnings as a pioneering search engine to become one of the most popular portals on the Internet. Working with hundreds of partners around the world, Yahoo! is today the face of the Internet for 500 million people.

The evolution of design at Yahoo!

Yahoo!'s current design process has evolved in response to the need to continue a rapid pace of innovation and new product development in a business that has grown rapidly from entrepreneurial roots into a global service provider.

Design process evolution

Yahoo! clearly acknowledges the fast pace of change in its industry, and recognises that the company's rapid growth in this context must be sustained. This has required Yahoo! to understand its internal working patterns and processes.

When it comes to a design process, Joseph O'Sullivan, Senior Design Director, does acknowledge that this normally covers three key stages of inspiration, ideation and execution. However, he maintains that Yahoo! is not wedded to having a formalised design process. Rather, it is deemed more important to strike a balance between formalised tools and methods and the allowance for designers to be creative while communicating effectively with other teams.



Consequently, in 2006 O'Sullivan set about identifying and capturing best practice in design. This was not about standardising and formalising processes, but about defining success. 'Nobody's going to want to talk about process, but what they will talk about is success,' says O'Sullivan.

The result has been the use of business and project management tools, such as the Agile development process, to set the direction and guide the activities for product development. In parallel, O'Sullivan is also ensuring that design finds its place in this process, and is spearheading an initiative to capture design methods and encouraging multi-disciplinary working.

Organisational position and influence

While design and user research have always had a key role within the development of Yahoo!'s products, the introduction of project management tools like Agile have enhanced the role of design in the process. 'Design has had the opportunity to step forward and say "Here's what we think we should do and should be doing." Now there is an official place for design within a given process,' says O'Sullivan.

Luke Wroblewski, Senior Design Principal for Yahoo! Search, says that design's role is to paint the vision. 'It can communicate the long term vision for the corporation and the impact of data, technology and what it means to the customer.'

Capability building

While it has traditionally relied on the recruitment of highly experienced staff, Yahoo! has more recently established a Design Innovation Team in San Francisco. Top designers spend three or six month sabbaticals at the studio, where they are free from the need to work on production projects and can devote time to creative experimentation. A spell in the Design Innovation Team is also part of the development process for newly hired designers, and it serves to increase Yahoo!'s desirability as a destination for top talent. O'Sullivan notes, 'It's a way to bring in really good designers, bring them into the fold slowly, and let them experiment through this space, and then come to Yahoo! and start working on projects.'

Business focus, says O'Sullivan, is one of the most powerful things that designers learn during a career at Yahoo!. 'They've become supercharged designers by the time they leave,' he says. 'Because the numbers are so ingrained: you know what you are doing and how it has an effect on the business.'

In more depth

Find out how other companies in our study hire designers who demonstrate a [wider skill set](#) including: multi-disciplinary working, business acumen and strategic thinking. And see how to [manage and plan](#) the design process

Market

Today, Yahoo! is much more than a search engine. It offers a broad range of services to its customers; acting as an on-line marketplace, a broad news and information portal and source of diverse entertainment offerings such as music downloads.

Increasingly, the company is positioning itself as a core element of the online life of its customer base, delivering email and other communication services to customers on a broad variety of platforms including PCs, PDAs and mobile telephones.

Yahoo!'s popularity and its broad user demographic also make it an extremely valuable advertising platform. Advertising on its Internet 'properties' accounts for a significant and growing proportion of its revenues today.

Where some Internet businesses have sought success through specialisation, targeting particular user and customer groups with increasing precision, Yahoo! remains steadfastly a mainstream player, offering its services to millions of customers worldwide. This focus makes the usability of Yahoo!'s services a key element in their design. Its customer population is typically not formed of highly skilled enthusiasts, indeed Yahoo! services may be users' first experience of Internet technologies.

The Yahoo! design process

Design activities at Yahoo! are kicked-off at the business unit level, but are closely tied into the business and innovation objectives set by the CEO.

Needs identification is carried out by product managers in association with the marketing department. New needs can be identified as a result of user feedback, through the identification of an emerging trend or by the acquisition or development of a new technology. The company's product teams also look externally for development opportunities, studying emerging trends and frequently acquiring promising technologies from other organisations.



In cases where the Agile development process is used, this requires a Product Requirements Document (PRD) to be completed, which captures insights from the research, presents likely product features and business goals. This is signed off by the General Manager of the relevant business unit, and leads to the establishment of a project team, including designers, user interaction researchers and software engineers.

In reality, says O'Sullivan, there are variety of ways in which projects are initiated and signed off.

In more depth

Read more about [project development](#) and initial ideas generation

Roadmaps

Product lines have their own roadmap for the expansion and implementation of new technologies. Historically, such roadmaps were developed looking a year or more into the future, but such is the pace and unpredictability of change in Yahoo!'s industry that

today managers typically develop a roadmap for a shorter time period. Design representatives usually collaborate in the roadmap development process.

In more depth

Find out how to [manage and plan information](#). See how other companies, including LEGO, use Roadmaps to track and plan the design process by reading other [company case studies](#)

Definition and expansion

Initial dialogue involving the designers and the project team will be used to explore and stretch the project goals, to identify other opportunities that can be exploited during the project and to define any user evaluation and research needs or technology developments required to deliver the project.

Sometimes, the project definition phase can take unusual forms. Yahoo!'s Local team, which is responsible for maps, were developing their local information service. In doing so, the entire product development team spent a day walking around a specific local area and spoke to business owners to get a flavour of their daily activities. Their objective then became the replication of this rich information gathering experience in the software product. Naturally, such activities also have the benefit of building team cohesion at an early stage.

In more depth

Find out how other companies identify and [define](#) what to target in the design process Agile and the design team

The Agile process operates as a stage gate mechanism for the development of products, and is one of the main tools used internally at Yahoo! It enables all those involved to understand where they are and where they are going at any one time. Agile also enables designers to feed into the process at the most timely and constructive junctions without restricting the creative process.

For example, the Agile process makes extensive use of rapid, highly visual techniques (cartoons, story boards etc.) to build the initial product requirements. The adoption of techniques like this, says O'Sullivan, has made the input from the design team highly visible at the early stage of the project.

Design teams at Yahoo! are co-located which, according to O'Sullivan, provides an important creative environment for designers. However, the team adhere to tight project and time management principles, and are responsible for communicating back to the project team with information about their activities and outputs at regular intervals. Designers themselves have a daily morning meeting, and regularly engage in scrums with the project team of engineers, product managers, and user researchers.

The Agile process requires regular review meetings and the teams have to demonstrate a functional product wherever possible. An RSS feed alerts all team members to any project document updates. This keeps the designers' input closely aligned with the overall progress of the project.

Yahoo! has made particularly strenuous efforts to align the activities of its user research teams to the Agile development process. The extremely short development loops of the Agile process are incompatible with longer timescales required for traditional usability research. To avoid research findings failing to keep up with the requirements of the project team, researchers have altered their methods, running more, smaller studies to produce specific answers for the design and engineering teams.

At the same time, emphasises O'Sullivan, user interaction research is valuable because even in quite brief studies it often throws up findings that lay outside their original scope. Such findings are absorbed into existing projects wherever possible, or retained for future use. This approach was applied during the development of Yahoo! Personal, when initial ethnography revealed results so surprising that they eventually resulted in a fundamental shift in the product roadmap and level of complexity involved.

The Agile methodology has been readily adopted by the project teams, including designers. 'What's fascinating about this is that everyone hated it at first and now the teams that do it love it. One of the reasons is that people work more closely and the collaboration that comes with that,' says O'Sullivan.

In more depth

Find out how other companies use a [double diamond](#) to help them manage the design process

Status

The size and pace of growth of Yahoo! is quite startling. The company's revenues in 2005 were some \$5.3billion US. In the same year revenues grew by 47 percent. Today the company employs just less than 10,000 people worldwide.

Yahoo! case study: Yahoo! Local / Maps

The development of the Local / Maps section of the Yahoo! website gives a snapshot of how a structured design process helps Yahoo! manage different projects. After every project is completed, the company agrees evaluation is key to ensuring the process keeps running smoothly.

Tom Wailes, Design Director in Yahoo! Local / Maps & Travel, gave us an example of the design process within Local / Maps. He said the key points in the process are:

- **Customer insights** – once the target audiences are identified, ethnography and other user research methods are used to uncover needs, issues and opportunities. Key tools used as part of this stage include video cameras
- **Brainstorming** – designers generate a wide variety of ideas that could address the needs raised during the research. This engages the entire team early on in the process
- **Concept visualisation** – loosely called the 'show me' process, at this stage core concepts from the brainstorming sessions are developed and communicated through cartoon storyboards, concept simulations and video. This involves discussions and decision-making, and early customer reactions are sought. Tools used at this stage include Flash, Photoshop/Illustrator, paper and pencil, digital camera and video
- **Prototyping** – interactive prototypes and simulations are completed around the key ideas from the concept visualisation stage. Again, initial customer feedback is sought, and rapid iteration ensues. Flash, AJAX and sketching are commonly used
- **Design documentation** – depending on project needs, formal wireframes, flow diagrams and other documentation is generated to ensure that the interactions and information architecture is clear. According to Wailes, this is the more typical “tell me” process of detailed, textual requirements, documents and static design specifications. In some cases the requirements of Concept visualisation and Prototyping have already fulfilled the project documentation needs.

Visual project management

Visual project management tools are used extensively to support the development process, with wall charts demonstrating project schedules, progress to date and examples of current design iterations. These areas provide an opportunity for team members to comment and feedback on each others' work in between project meetings and allow outsiders to gain a rapid understanding of the project status.

For the future, O'Sullivan sees embedding the use of the case study library and planned methods library more firmly into corporate culture as a key challenge. Just as the Agile development process has now become well-liked by all that use it, so he expects the adoption of best practices in the design environment to become well accepted too.

In more depth

Find out more about what [visual project management](#) lessons other companies in our study have learnt

Evaluation

Project evaluation is quite complex at Yahoo!. While every project begins with a business case against which it is measured, the company also carries out extensive user satisfaction research. Also, they make use of the information gathering possibilities offered by the Internet to collect data on a wider range of parameters, such as the



duration of visits to particular sites, spend in certain areas and the likelihood of customers recommending services to friends and colleagues.

Tools, techniques and tips

The provision of enabling tools for designers is a key part of Yahoo!'s design strategy. 'No-one wants a process, they want methods, fluid methods that enable them to be successful,' says O'Sullivan

In order to drive home the message about design's ability to add value and enable success, O'Sullivan oversaw the development of an electronic case study library, where the outcomes of design and user research activities are documented using a wide variety of simple, accessible methods, such as online video clips. O'Sullivan



emphasises that these are not seen as definitions of best practice, but as examples of good practice upon which designers are encouraged to build based on their experience.

In the future, O'Sullivan hopes to complement the case study library with a methods library. Drawing on the 'proof of success with design' illustrated in the case studies, the methods library could include a variety of techniques, such as rapid product prototyping, and, addressing an area that designers can find challenging, simple models for product scheduling. Tools and techniques used during the product definition phase, such as card sorting, videoing users, storytelling from user research, cartoons and storyboard production, could also be held in the methods library.

The overall objective with these tools, says O'Sullivan, is to balance process with creative freedom. This is thought to maximise the chance of a successful cost-effective project without overly constraining the design team.

In more depth

Read more about the [tools of the trade](#) other companies from our study use to manage design

Pattern Library

Another key tool used in Yahoo! is the Pattern Library. The company experienced that different design solutions were being developed to address similar problems, potentially weakening the corporate brand. It was thought that this stemmed in part from the decentralisation of user experience teams in Yahoo!. One way of addressing this was to develop an accessible tool that would effectively capture the standards for interaction design within Yahoo!.

The Pattern Library serves as the basis of a body of standards for Yahoo! user experience design and contains information on a wide range of user experience



elements. It is also searchable in different ways to enable designers to quickly access possible solutions for key problems. Each element in the library, for example the 'narrowing history' technique for browsing complex product categories, is given a single 'importance of adherence' score, which indicates to designers how important the use of particular patterns is to 'The Yahoo! way.'

While the Pattern Library was intended primarily for internal use at Yahoo!, web developers have drawn on the model of the Pattern Library and created the Yahoo User Interface Library. This will function as a site where code-sharing and best practice will be exchanged on an open-source basis.

In more depth

A history of the development of the Yahoo! Pattern Library is available as a

 [downloadable PDF](#)

Learn more about  [formal design process management](#) and  [visual management techniques](#) from other companies in our study

Agile software development principles

Overall, Yahoo! believes that there is not one process that fits all projects, and therefore internal teams use a variety of methods and tools. However, there is an internal cultural shift towards using the Agile process for product development, and the corporation provides training and materials for its use internally. Indeed, designers and other experts often find that Agile principles are equivalent to their own ways of working, and have adopted the methodology over time.

Agile is a software engineering philosophy devised in the late 1990s. It is based on the assumption that project specifications are likely to change during the product development cycle. Therefore, rather than creating a comprehensive specification upfront and engineering a product to fulfil it, the Agile process treats product development as a series of short iterative loops, lasting only days or weeks. The process aims to deliver a functioning product at the end of each and every one of these loops, with additional functionality being added or modified as the result of the review processes that take place at the end of each iteration.

Agile processes help designers, software engineers, product managers and user representatives to work closely together, since the interests of all must be considered at each product iteration. In many cases these groups are co-located for the duration of the project in order to foster the maximum amount of cross-functional collaboration and communication.

A key element of the Agile process is that ongoing changes to the product specification are actively encouraged, with participants rapidly assimilating new ideas and incorporating them in the next iteration of the product. For designers, this environment

demands an ability to work quickly and flexibly in order to change their ongoing work as a result of shifts in project requirements or inputs from other team members.

In more depth

Find out more about how [user research](#) can benefit the design process

Demo or die

The Agile process means that functional product prototypes are delivered continually and repeatedly during the design process. Yahoo! has, says O'Sullivan, a culture of 'demo or die' and prototype code is subject to acceptance testing at every review.

Advances in Internet technology are assisting this process, however, with modern development environments such as AJAX and Flash making the production of functional prototypes quicker and less costly than ever before.

In more depth

Read more about the importance of [setting targets for evaluation](#)

With thanks to Yahoo!

For the purposes of the design process study, we spoke to Joseph O'Sullivan, Senior Design Director with Yahoo! and based in Sunnyvale, California. Telephone interviews were also held with Tom Wales, Design Director Local/Maps & Travel, Luke Wroblewski, Senior Design Principal for Search, and Matte Scheinker, Director of User Experience, Real-time Communication Products.

To find out more about Yahoo!, visit info.yahoo.com

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