



UNIVERSITY OF
CAMBRIDGE

Guidance and Support for Apps and Websites

Are you looking to translate some research into an app or a software product? Perhaps you have an idea that could be mobilised to benefit public users on a daily basis, as a commercial or not-for-profit product. As social and economic impact becomes increasingly important to academia, websites or mobile apps can provide a direct link between your research findings and society.

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However, there are a number of important issues to consider before you start the process of designing and developing an app or website. This leaflet contains some hints and tips, as well as guidance on where to go for advice and support within the University of Cambridge.

Intellectual Property

It is important to consider who will own the Intellectual Property (IP) of the finished product. In the University, IP is considered to be the outcome of research projects, collaborations and consultancies, amongst other activities. IP Rights (IPR) cover the licensing of copyright, which can be described as the 'expression of ideas', such as software. Databases, patents and trademark also fall under IPR.

Do seek advice on the University's **Policy** regarding ownership of IP. IP may be owned by funders, the creators, the University, other third parties or a combination thereof and it is important to consider the implications of this at the outset of a project, especially if the research is translated into a commercial product. **Cambridge Enterprise** can provide a wealth of advice related to the University's IP Policy, licensing, copyright, procurement and negotiating.

It is also worth bearing in mind that students who are not employed by the University automatically retain any IP they generate. There are exceptional circumstances, such as if the student's agreement with their sponsor states otherwise, or if the student is engaged in a collaborative research project with a third party governed by an agreement which stipulates the transferral of IPR. There may also be exceptions if the student is involved in the collaborative, interdependent creation of IP. Therefore, if a student is engaged in your project it is advisable to produce a 'Research Understanding Letter' to cover the event of the student's work being commercialised.

Similarly, any IP generated by an external software developer (such as writing code) may be retained by the author of that code unless otherwise stated in a contract.

For further advice, consult Cambridge Enterprise or the **UK Intellectual Property Office**

Lambert Toolkit – an online tool developed by a government working group that offers 7 model research collaboration agreements. It also contains some information about IP.



Licensing: Commercial, Open Source or Open Access?

If your app or website has been created using public funding and if it has no commercial potential, it should be licensed as open source to maximise its potential re-use (in accordance with the UK Concordat on Open Research Data). However, it is often difficult for Open Source software to be used for developing products which will later become commercial.

The Digital Curation Centre and Software Sustainability Institute have written guides to help you **choose an open-source licence for your software**.

Creative Commons also provide open licensing tools which can be used for Open Access resources.

Should your app end up on a commercial marketplace such as App Store, there may be complications regarding the licencing of the product, its ownership and regulation.

Cambridge Enterprise are able to consult on these issues, or alternatively the **Legal Office** may be able to help you.

Data Protection

If an app is going to be used to collect data for research purposes, development should be governed by the considerations of research ethics. Commercial apps may also collect data from the end user, and although they do not have to follow the same research ethics criteria, they do still need to follow data protection legislation. These issues should be carefully considered and creators ought to be aware of industry-specific standards around data collection and retention. The **Information Commissioner's Office** is a good resource for information, and the University's **Information Compliance Office** can also help.

Collaborators

Cambridge Enterprise and the **Research Strategy Office** hold a list of approved developers and designers, who have previously collaborated with academics at Cambridge.

Toptal is an online brokering site for developers and designers.

Dribbble is an online marketplace where designers showcase their work. It's a good resource if you're looking for ideas about design and implementation.

There are also a number of initiatives based within Cambridge or affiliated with the University that can offer advice on development:

The **Centre of Global Equality** are a network of developers, social scientists, and startup companies who offer incubation space and can help establish connections with other resources.

Contact: Lara Allen at lara.allen@centreforglobalequality.org

Networking 4 Development @ Computer Lab Information Communications Technologies for Development — can be approached for help with building teams and finding development resources.

Contact: Arjuna Sathiaselan at as2330@cam.ac.uk

Techfugees are a tech community who can help direct you towards developers who can help get refugee-related projects off the ground.

Contact: Oscar Gillespie at oscar.e.gillespie@gmail.com

Procurement and Negotiating

Where should you go to attain the necessary software? How do you negotiate a good deal? Cambridge Enterprise can help, or you can use our list of approved collaborators to find industry experts you may want to approach.



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Marketing and Monetising

If your idea is commercially feasible, it will need a marketing strategy designed to reach your target users. You also need to consider routes for generating income – such as charging users to download it, or providing the app for free but charging to host advertisements.

Alternatively, the **Software Sustainability Institute** can provide advice on how to maintain your app or software sustainably.

The Judge Business School **Management Studies Tripos Project** can undertake market analyses or provide business models for successful applicants to their scheme.

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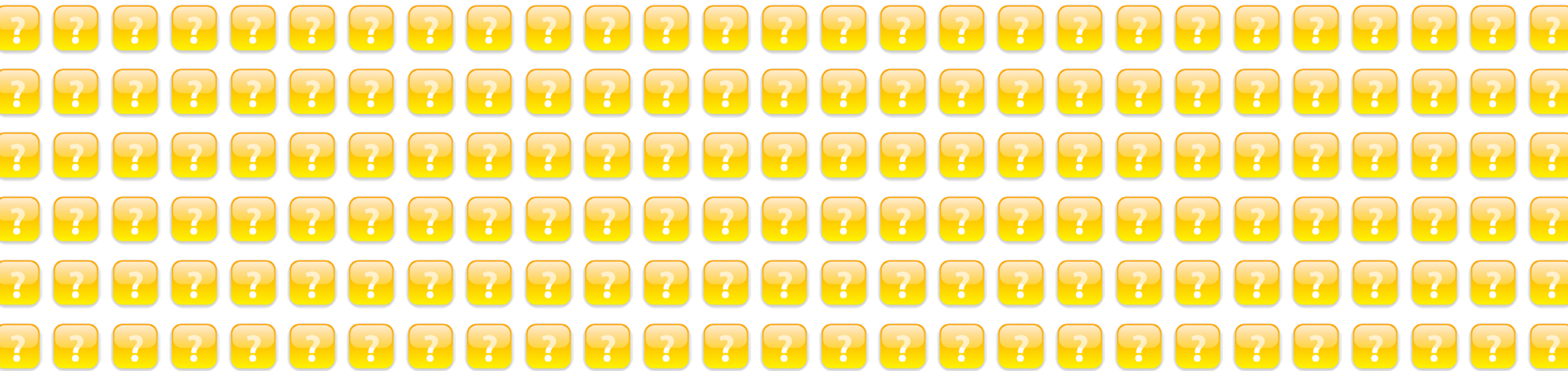
Quantifying Impact

Linking your app or website to **Google Analytics** is free and gives insight into the number of site visits, downloads and user sessions taking place. This information is invaluable for measuring the impact of your application.

Designing a Prototype App

If you want to design an initial prototype before professional developers become involved in your project, then the following steps are a good basic reference guide:

1. **Sketch** out the main features and the approximate layout of your application. How do you want the interface to look? What do you want it to do?
2. Create a **Wireframe**, or initial prototype using some online tools. Popular options include **Balsamiq**, **Moqups** and **HotGloo**. They allow you to drag and drop all your graphics into the right place, and to add button functionality.
3. Create a **Storyboard** which maps the connections between each screen. Storyboards also show how the user can navigate through the app.
4. Define the **Back End** of your Mobile App. Your wireframes and storyboard now become the foundation of your back-end structure. Draw a sketch as a reference for the developer.



Step-by-Step for websites

You can use one of the **web-based site builders** that take you through the process step by step and host your finished website. **Square Space** offers some design flexibility, but it carries a charge. **Weebly** and **WordPress** are popular free choices.

If you plan to build it yourself, the following steps apply:

- **Budget** – all of the following steps may have financial implications. Website building can also go awry, requiring extra iterations to be developed or unforeseen outsourcing to programmers or copyeditors that was not originally planned.
- **Get a URL** – **godaddy** is a good resource
- **Hosting** – your website will need somewhere to live. This could be on the University's server (speak to IT), or you may want to use a **private server**. However Wordpress also offer both hosted and non-hosted options, so it's worth having a look around.
- **Design** – sketch out how you would like your website to look, and how you would like it to function. The **Digital Communications** team can offer advice.
- **Programming** – the **University's IT department** may be able to help, but if you need to outsource then **TopTal** can provide a 'risk free' brokering service for programmers and designers. You will also need to know which programming language you want the website to use.
- **Copyediting** – if there is a significant amount of text on your website, you may need a copyeditor to check it before it becomes publicly available.
- **Licencing** – **see page 5**
- **Pictures** – for free pictures with no copyright restrictions, use **Creative Commons**. For content-rich websites or applications, sourcing images and managing copyright permissions may take longer and cost more than originally anticipated.

Contacts

Cambridge Enterprise

UIS

Software Sustainability Institute

Legal Office

Research and Knowledge Transfer Facilitators

Software Carpentry

Research Strategy Office