What is Magic Torch?
Have you ever Imagined you had a “magic” wand? A wand that would allow you to cast spells, reveal hidden information, and manipulate your environment? MagicTorch brings this into reality.

MagicTorch primarily seeks to relieve the tedium of interacting within the confines of a screen, a hindrance to the user experience of smart phones. With the omission of a screen, the user interacts solely with real world objects and the projected data which the Magic Torch system places into the environment. The displays are then updated and altered through the use of voice and hand gestures.

How does MagicTorch work?
MagicTorch is a personal device, that collects information from its environment by using depth, infrared, and standard cameras. From the interpretation of this data and the user’s input (both vocal and gestural commands) MagicTorch then determines related information and projects that onto and around objects.

MagicTorch will initially take the form of a phone case. However, through ongoing iterations, further research and user testing, it will eventually take the form of a standalone device. This will inevitably utilise the principles and technology that are prominent in wearable computing products.

Where can MagicTorch be used?
There are multiple environments, in which MagicTorch can be used. With simple flicks and commands, it can control home appliances, reveal status information, adjust temperatures or lighting.

It can also present translated text live in foreign scenarios and can empower professionals including archaeologists, engineers, and architects to see and annotate live archivable x-ray blueprints of their works.

Similarly, MagicTorch could enhance educational software, providing students with a live interface with which to program tangible toys. Slide decks, and public maps, can be captured and marked. Three dimensional surfaces can be used as a real-time collaborative canvas for art and education.

Unencumbered by small touch screens, MagicTorch is more intuitive to senior members. As a tangible computing device, it can be used in classrooms to complement students with learning disabilities and highly visual or kinaesthetic learning styles.

There are a myriad of recreational uses. Minimalist markers and arrows are powerful serendipitous wayfinders for activities such as biking. The user scenarios stretch across a range of fields, blending seamlessly through many mediums, delivering the information needed through minimal interaction!

Is this currently possible to produce?
Yes! The components that are required for MagicTorch already exist. Pico-projectors, special cameras, and computational power, required for projection and object-recognition are now accessible to consumers and can comfortably fit into portable devices. These elements are simply waiting to be packaged and developed into a refined, marketable, product.

What are the possible commercial benefits?
MagicTorch will open a unique community, allowing the development of technologies that are not screen dependent. It is not the hardware that makes Magic Torch powerful, but the software potential it opens up. These applications, especially those that address niche problems and fields, will benefit the community the most and aid in the generation of revenue.

We also have optioned inviting companies to provide sponsorship, and have extensive connections to the Design Lab at the University of Sydney. Meaning we can draw from a pool of talented students.

MagicTorch occupies a unique market position. It is more than a mere pointing device, it inspires feelings of enchantment and discovery by allowing the the user to become a master of the environment before them.