



Corporate Design
& Print Solutions

White paper:

Augmented Reality.

The Integration of Print and Digital Media.



Something for everyone.





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1. Introduction.

Augmented Reality (AR) involves the use of devices that relate to the environment then supply the user with additional, computer-enhanced information about it. Specifically, devices like smartphones are used to view a version of the user's actual real-time environment in which certain elements have been 'augmented' by computer generated content such as video, sound, graphics or GPS data.

Early AR devices include one produced in the early nineties by Professor Tom Caudell at Boeing's Computer Services' Adaptive Neural Systems Research and Development project. The device comprised a headset worn by mechanics during building processes. Images of the positions that cables were supposed to be placed in were projected onto lenses in front of the mechanics' eyes, allowing them to work on complex builds without the need to constantly refer to instructions.

It's only in the last 5-6 years that AR has reached consumers, thanks to advances in mobile technology and its increased affordability. Specifically, it was the invention of the smartphone – a simple, handheld device with a camera and an internet connection – that brought AR to the masses.

Smartphones are capable of video capture tracking the real world and integrating this input with virtual objects and information, allowing for the creation of AR experiences. Moreover, advances in object recognition technology mean almost any physical object can be programmed to 'trigger' an AR experience.

Now traditional printed media can be programmed to trigger AR content, creating a direct link between a business's printed and digital marketing materials. This integration of print and digital via AR has the potential to reposition print in a whole new market.

Augmented Reality at a glance.

- AR has been used to give customers access to exclusive offers, video content, 3D experiences, additional product information, games and the ability to virtually try on clothes and accessories.

- Advances in object recognition technology mean almost anything can be used as a 'trigger' to connect the user to an AR experience.
- AR is a great way to connect print and digital, creating unique and engaging customer experiences.

2. What Exactly is Augmented Reality?

Printed marketing materials can be designed with certain 'trigger' images that give the user access to additional digital content when scanned by an AR enabled device.

Some AR apps use markers such as logos as triggers, while advancements in object recognition technology have also made it possible to create 'markerless' apps, where AR experiences are deployed by scanning an entire image, or part of an image.

After scanning the trigger image, the user's smartphone or tablet acts as an interface through which the world is viewed, with digital content integrated with the user's actual real-time environment.

AR experiences can include multiple types of content, including but not limited to:

- Additional product details and images
- Expanded nutritional information for food products
- 3D graphics
- Video content
- Games
- eCommerce site
- Exclusive offers
- The ability to virtually try on clothes
- Store locator

3. Uses of Augmented Reality.

1. **Transfer Information** – AR can be used to convey additional information about products, in an exciting and engaging way.

Example 1: Instruct customers to scan a certain part of a product's packaging to view a 3D model of what's inside, creating a memorable and multi-dimensional customer experience.

Example 2: Scan an item in a catalogue to view additional information such as customisation options, more in-depth features and additional images of the product. For items like furniture, this could include the option to view certain products in a room or styled with other items in the company's product range.

2. **Enhance and reuse print materials** – AR doesn't require the use of any specific image (e.g. a QR code), rather any element within a piece of artwork can be programmed to trigger AR content when scanned by an AR-enabled device. With AR, you can respond to the competitive environment by enhancing existing print materials with AR content, adding another dimension to those materials while avoiding the cost of reprinting.
3. **Boost Search Engine Ranking** – An effective AR campaign can significantly increase traffic to your website, boosting your ranking in search engine results, and consequently improving awareness of your business.
4. **Track Traffic** – Previously, the advertising effectiveness of printed materials couldn't be measured accurately. AR gives you access to metrics revealing how, where and for how long consumers are interacting with your printed materials. AR is one of the most measurable media channels in the market, enabling you to track a customer's journey from the moment they scan an AR-enhanced print ad, through to the moment they make a purchase.
5. **Create Dynamic Experiences** – AR is a great way to connect print with digital, creating memorable experiences through the integration of real and digital content. With AR, customers can engage instantly with your brand, and for longer than with traditional media. By incorporating AR into your marketing plan, you will set your brand apart as an innovative leader.

4. How Does Augmented Reality Work?

AR-enabled smartphones, tablets and other mobile devices utilise their inbuilt cameras, both to recognise the trigger object and to record and reproduce an image of the user's environment in real-time.

New information is blended into the existing image, with the 3D graphics and other digital media rendered by the AR software platform.

5. Business Benefits of Augmented Reality.

Rapid adoption of smartphones and tablets and advancements in their capabilities means the number of consumers to which businesses can deliver AR experiences is growing.

By enhancing your printed marketing materials with AR content, you can provide these consumers with dynamic experiences that will keep them engaged with your brand for longer, increasing the likelihood of converting them from visitors into customers.

You could:

- Update and add new AR content to your printed materials throughout the course of a campaign, encouraging consumers to revisit those materials, thus creating higher levels of engagement with your brand than with traditional printed media.
- Create several AR experiences, with each one accessed by scanning the packaging of a different product in your range. Customers will be incentivised to explore, and make purchases from, your entire collection of products.
- Include a store locator in your AR app, whereby the user views their surroundings with their smartphone or tablet camera, while directions to your nearest store are integrated with the image. You could also include information about any new products, or coupon codes for promotions available in-store, giving the user a greater incentive to visit.

6. Best Practice for Augmented Reality.

- **A Strong Call to Action** – When using AR content in your marketing campaign, it is crucial that you include a strong indicator (e.g. a logo or a unique image) that lets consumers know that the material contains interactive content. Keep this logo consistent across all of your AR-enhanced marketing collateral, so that consumers begin to associate it with the action of picking up their smartphone or tablet, opening your app and interacting with your content.
- **Instruct Users** – AR is a fairly new technology, so include ample instructions in your AR app. Let users know whether they should hold their smartphone over the whole page or just a certain part of it, how long they will need to scan the image for and why they need to do this. Make the experience as easy as possible for the user to ensure higher levels of engagement with your brand.
- **Invest in Your Content** – For your AR campaign to have an impact, it must provide users with a unique and valuable experience. Don't simply 'wow' users with fancy graphics, rather incorporate valuable features that will increase the chance of repeat use. Including interactive features like the ability to virtually try on clothes, or games that reward users with coupon codes, will give consumers a reason to revisit your app and to associate your brand with exciting experiences.
- **Keep Your Content Fresh** – Imagine you have incorporated an interactive logo into your marketing materials and intend for it to remain a part of your brand indefinitely. No one wants to see the same content over and over again, so stay on the ball by regularly updating the logo with new AR content. If you are always updating your logo with valuable content that relates to current events, holidays or trends, users will want to scan your logo on a regular basis, and the buzz generated will drive more consumers to interact with your brand.
- **Social Media** – Maximise return on investment by promoting your campaign across several channels. Post an article about it on your company's blog, tweet about it, share it on Facebook and promote it in-store and on product packaging. Create a short video demonstrating your AR app and distribute it across these channels to promote far-reaching interest in your AR content and increased likelihood of generating return on your advertising spend.

7. Augmented Reality Adoption.

AR has only been introduced to the consumer market in the last 5-6 years, meaning some businesses haven't yet worked out how to effectively incorporate it into their marketing strategies. On the consumer side, some do not know how AR works, or are wary of the amount of battery power consumed while running AR apps, and thus not as willing to engage with AR content.

A German company, Metaio, has developed an AR processing unit, which it hopes to integrate into mobile chips. The inclusion of such a chip in smartphones would allow them to run AR apps for much longer while consuming less power, and could significantly increase usage and consumer awareness of AR technology.

However, as more companies adopt AR, and the number of 'must-have' AR apps increases, consumers' devices could become clogged up with apps, many of which would be neglected and eventually removed.

AR companies such as Blippar make the content they have developed for all of their clients accessible through one common AR platform app, allowing users to access new AR content without downloading a dedicated app for each brand. Companies that choose to use a platform app for their AR content avoid the risk of their AR app becoming neglected, while delivering their content to a built-in user base who already have the platform app.

The establishment of a recognisable leader in this field of platform AR apps could foster consumer adoption of AR.

Nonetheless, Juniper Research forecasts that 60 million consumers will use AR apps in 2014 and that this number will have grown to 200 million by 2018¹.

1. Juniper Research: Mobile Augmented Reality ~ The 8th Mass Medium: 2013

8. Leading Brands and Augmented Reality.

Amazon.

In an attempt to reduce the time taken to convert shoppers into customers from 30 to just 2 seconds, Amazon has integrated AR into its shopping app. The app, Flow, allows a user to scan an item in a store or in their home, using their smartphone or tablet camera, and Amazon will find the item in its inventory. The user can then purchase the item, or save it in their search history to access later. With Flow, consumers can take care of their shopping in a matter of seconds.

Topshop.

Topshop has recently launched an AR shopping tool, Topshop Kinect, which allows customers to try on clothes without the use of changing rooms. Working with the Russian agency AR Door, Topshop Kinect uses Microsoft's Xbox Kinect software to produce virtual 'mirrors' in which customers can view themselves in virtual clothes from the brand's inventory. The user simply stands with their hands above their head, and the Kinect determines their size. They can then motion their hands to try on different items of clothing, while the built-in camera scans their every move and imposes the chosen garments onto the image of their body in the virtual mirror.

Kia.

Having found that 32% of the Australian television audience used their smartphone while watching the Australian Open broadcast, Kia decided to integrate AR into its 2011 marketing campaign. During matches, viewers were encouraged to download a dedicated Kia AR app that gave them access to digital content about the match, as well as information about the Kia Optima model. The app was downloaded 12,630 times, while searches for the Optima increased by 58%. Moreover, during the month of the Australian Open, Kia achieved 57% more sales of the Optima than expected.

9. Is Augmented Reality on Your 'To Do' List?

AR is a great way to connect print with digital. As the point of access to AR content, print materials become dynamic and exciting when used as part of an AR marketing campaign.

Not only does AR enhance the value of your physical marketing materials, it creates memorable experiences and higher levels of engagement between consumer and brand.

A study carried out by the LEGO AR Campaign team found that parents aged between 29 and 55 were more inclined to purchase LEGO toys for their children after viewing AR-enhanced advertising materials. 74% of parents who were exposed to the AR experience were willing to purchase LEGO toys, versus only 45% of those exposed to 2D advertisements. Moreover, parents exposed to the AR-enhanced ads spent longer examining the products and were willing to pay more for them.

So if AR isn't on your business's to do list, it should be. With smartphones and tablets acting as the platform for AR experiences, as their popularity and penetration increases you will undoubtedly see more and more AR-enhanced marketing materials.

10. Case Studies.

IKEA.

Finding that 14% of its customers had taken home furniture that ended up being the wrong size for its intended location, IKEA launched a markerless AR app that lets customers sample 3D versions of furniture in their homes.

Customers simply enable their smartphone or tablet with the free IKEA app, flip through the print catalogue and scan an orange cross in the bottom right corner of selected product pages. The customer is then prompted to close the print catalogue and place it where they intend to put their new furniture.

Using the dimensions of the real-world IKEA catalogue in the camera's viewfinder as a guide, the app then displays a virtual 3D version of the new sofa, desk or bookcase in the customer's room. The furniture can be rotated and repositioned, giving customers a better idea of how it will look, reducing the risk of purchasing products that have to be returned.

Scanning selected pages of the 2014 IKEA catalogue also gives users access to other enhanced content, such as additional product information, videos and 360-degree room views of products.



To see IKEA's AR app in action please [click here](#).

Coca-Cola.

In the UK, Coca-Cola's partnership with Spotify led to the creation of a unique AR experience for customers, with a new 250mL can acting as the point of access.

Using the AR app Blippar to scan one of these 250mL cans, customers could listen to five songs for free, while their smartphone or tablet screen displayed a 3D graphic-enhanced version of the can in real-time.

At the time of launch, five songs, chosen from 52 'songs of happiness' recorded for Coca-Cola, were made available to the consumer when they scanned the can with their device. More songs were made available throughout the course of the campaign, encouraging consumers to buy another can of Coca-Cola to find out what the songs were.

The cans also displayed a link to Coca-Cola's music platform Placelists, a Spotify-powered app that displays a map of the world with tags that click-through to songs other users are listening to in those locations.



To see a demonstration of Coca-Cola's AR experience please [click here](#).



LEGO has used AR to work toward its objective of creating a single marketing "Omni-channel" to drive higher engagement with its catalogue.

With 68 retail stores worldwide, a website and seven catalogues, LEGO wanted to create AR mobile experiences across these sales channels to integrate the three.

Powered by the Vuforia software platform, the LEGO Connect app lets consumers view 360-degree 3D images of what a LEGO set would look like fully built, simply by scanning its packaging in store. These same 3D images can be viewed in the home, through the LEGO app or website, creating a new point of engagement with the LEGO brand.

The app also creates a link between print and digital. While perusing one of LEGO's print catalogues, consumers can point their device at pages with the LEGO Connect icon to view related content for the LEGO set displayed, including product information, animated 3D models, reviews and a link to purchase it.

The app has been downloaded more than expected, with about 24,000 return users who spend 4 to 10 minutes interacting with it. It has also received positive user feedback, earning a rating of 4.5 out of 5 stars on the Google Play store.



To see the LEGO Connect app in action please [click here](#).



In 2013, Guinness World Records decided to offer a new take on its traditional annual print book. With declining revenues in the publishing industry, Guinness World Records Marketing Director Stuart Claxton aimed to breathe new life into print, using AR technology to bridge the gap between print and digital media.

Guinness World Records worked with the digital creative agency Appshaker to develop a set of 3D AR-enhanced visuals to accompany its image-driven print book.

Users simply downloaded the free Guinness World Records 2013 app to their smartphone or tablet, then scanned specific pages of the printed book to trigger AR experiences. The 2013 book includes a range of AR features, including the ability to view a life-sized 3D model of Chandra Bahadur Dangi, the world's shortest man, who appears to pop out of the page when a device enabled with the app is pointed at his photo.

At two live AR events to promote its launch, giant screens displayed huge renderings of the AR experiences contained within the book. Hosted by the world's tallest man, Sultan Kosen, these events gave consumers the chance to view and interact with virtual 3D models of the world's largest dinosaur, the heaviest twins and the largest predatory fish, among other things.

With 3.9 million impressions generated by the 2013 AR campaign and the app downloaded more than 290,000 times, Guinness World Records has included AR in its 2014 edition and plans to include it in successive editions.



To see the Guinness World Records 2014 app in action please [click here](#).



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11. About Kwik Kopy.

Kwik Kopy has a longstanding history as a leading provider of print and design services to the Australian small & medium business market. We've recently begun to offer a range of digital services and with over 100 centres operating throughout Australia, you can count on us.

While we haven't yet utilised Augmented Reality, at Kwik Kopy we are always paying attention to new developments in technology, taking into account the changing business environment while working with our customers.

We know that not all businesses are the same, that's why we work with our customers in a consultative process to ensure that we are delivering against their business goals, whilst providing practical advice and superior communication products that enhance their business presence and assist in achieving their goals.

Speak to us today to see how we can help you with your print, design & digital needs.





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