# Beyond mobile

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## Mobile apps and devices:
## their importance in the near future

The mobile ecosystem is moving at lightning speed. Hyper-connected social media and global adoption of natural user interfaces - voice, gesture and beyond - are creating numerous new possibilities for user engagement. The opportunity goes well beyond using mobile applications to do what you have always done differently, it is about doing fundamentally different things.

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The big challenge here is meeting user expectations, including those that users are not yet aware of, with a specific focus on 'Gen Y', which cannot live in a not fully connected world any longer. Understanding their needs, desires and routines drives the mobile and application innovation strategy. Because customers interact with the surrounding market through a variety of touch points - from browsing a website to calling customer services - it is important to consider each interaction through the eyes (and fingers) of the customer.

In terms of technology, the rise of the mobile web offers publishers a means to reach many screens at once, without having to invest in expensive native 'apps' (i.e. mobile applications) made for an ever-growing number of specific platforms (e.g. iOS, Android, Windows Phone, etc.). Time will tell if the mobile web represents a real threat to native apps, but the battle has definitely been engaged.

## Augmented reality and wearable technology – a new era for mobile?

Unlike virtual reality environments, in which users are immersed in computer-simulated surroundings, augmented reality environments are those in which the real-world experience is augmented by computer-generated data and visuals.

A few years ago, considering this as technology for the masses would have sounded improbable, and yet today it is available and already used by millions of people on their smartphones to find the nearest metro station, an ATM or review real-time data about their immediate environment. The Google Glass concept, being the natural hands-free evolution in the augmented reality area, promises to bring user experience to an unexplored level.

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Today, nobody can tell if Google Glass or any other Internet-linked eyewear is likely to be a mass market item, but it so happens that Apple, Google, Samsung and all the big players are massively investing in the broader and promising area of wearable computing.

### The mobile approach - impact on government and private corporations

The prevalence of Augmented Reality (AR) applications is expected to grow in the coming years. With the amount of digital data growing drastically each year, this technology will be considered as an increasingly valuable tool in connecting individuals with the information they need to make improved decisions and engage even more with the services on offer.

In the near future, it seems that even governments (especially security organisations) should consider how AR can be used as a platform to incorporate video analysis, facial and gesture recognition software and remote visual collaboration.

Many companies and governmental bodies find themselves off to the mobile race as mobile is moving too fast for the usual academic 'strategic planning'. Strategy is important, however, it should happen in eight weeks instead of eight months, and it should start with opportunity identification, helping deciders discover ideas for reshaping customer, employee, product and partner experience through mobile.

Prioritisation and focus remain critical, but just as important is a bold vision to think beyond the simple adaptation of existing business and processes. It also goes with the adoption of a more agile approach to delivering first a prototype, and then successive functional iterations.

### The challenges of m-payments in the Luxembourg market

With the prosperous development of e-commerce and mobile Internet, and the rapid growth of potential demand from consumers, mobile payment (or m-payment) is increasingly under the global spotlight.

The terms 'mobile banking' and 'm-payment' are often used interchangeably, however, they are quite distinct. Mobile banking refers to any online banking transaction, excluding third-party payments or peer-to-peer fund transfers, which may be conducted via a mobile phone. These transactions may include checking an account balance, receiving alerts or transferring funds between accounts. M-payment refers to the purchase of goods or services using a mobile device. Essentially it involves adding a payment/transaction point to the existing payments network which can either be enabled through near proximity or remotely. These can be peer-to-peer, consumer-to-business or business-to-business.

Luxembourg, with a high level of smartphone equipment and a small market, is the almost perfect testing ground for m-payment. As a consequence, local consumers are already offered two m-payment solutions: Digicash and FLASHiZ (a third one is on its way - Yapital). After installing the dedicated smartphone application and pre-loading money (FLASHiZ) or connecting the application to an existing Bank account (Digicash), both solutions enable the consumer to pay for goods and services in local businesses (e.g. carparks, restaurants, post offices, etc.) by simply scanning a QR code at the counter.

Beyond confidentiality and integrity of exchanged data, the big challenge of m-payment globally is the industry's current lack of maturity. Technology and regulatory standards defining m-payment largely still need to be defined, mainly driven by the fact that consumers do expect a 'user-friendly' and homogeneous m-payment experience.

## The big challenge here is meeting user expectations, including those that users are not yet aware of

### Ipv6, Cloud and Gamification: their impact on mobile

As we know, mobile devices - smartphones, tablets and future wearable devices - are highly dependent on their underlying technology. As an example, AR would not be possible without the complex combination of a GPS, an accelerometer, a camera and fast and permanent internet connectivity, all embedded in one device and used at the very same time to create the user experience.

Beyond what is in the device, answering questions such as 'How do I connect?' or 'What should I connect to?' innovatively is also critical to creating value for customers. As the Cloud does today in the data dematerialisation area, tomorrow IPv6 will be a powerful enabler for the next generation of content and services (e.g. peer-to-peer, push, VoIP, broadcast, etc.) which will require always-on global reachability and seamless mobility.

Gamification is a bit more conceptual: it is about taking the essence of games (i.e. fun, play and passion) and applying it to real-world situations. As a process (not a set of features), Gamification proposes switching users from passive exposure into an interactive play within their environment, especially when accessed from mobile devices, as specific and real-time surrounding data are therefore part of the game to further empower, engage and retain users.

In a business setting, that means designing solutions using gaming principles in almost everything (e.g. back-office tasks, career counselling, marketing activities, learning, etc.). Gamification can help to get stakeholders passionately and actively involved with their organisation. More than just a 'buzz-word', Gamification is likely to metamorphose from a tactical concept to a strategic imperative for companies.

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