Mobile Learning - A Quick Start Guide

An Upside Learning eBook

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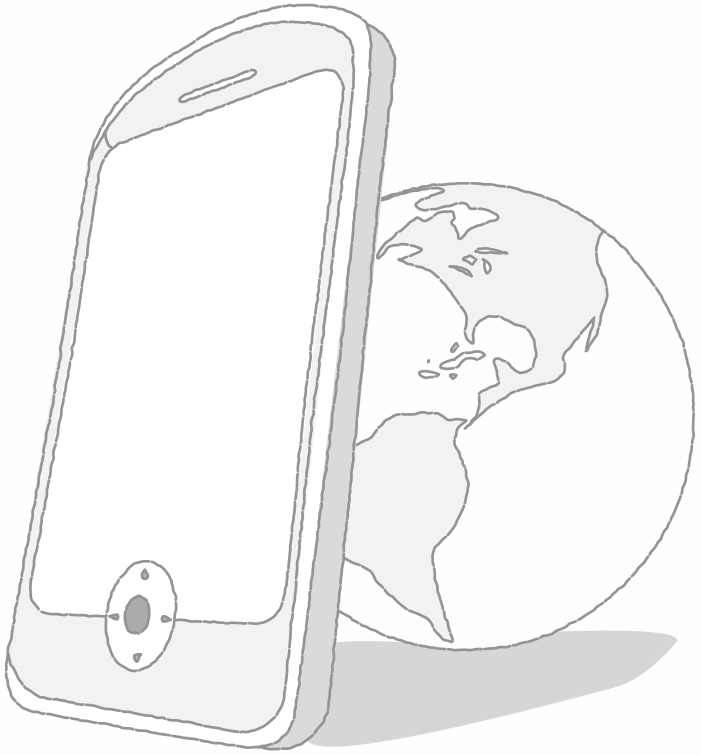
CHAPTER 1

A Mobile World



01
A Mobile World

A Mobile World

Mobile technology, by far, has been the most rapidly adopted technology in history. Today, it is the most popular and widespread technology on the planet, with the global mobile industry expected to grow to $1.9 trillion by 2015 from the current $1.5 trillion level. Research suggests the global subscriber base is estimated to increase to 4.6 billion, while the number of mobile connections would reach 9.1 billion by 2015.*

In the 2011 Horizon Report, mobile computing has moved into the 'Time-to-Adoption Horizon: One Year or Less' timeframe. This is further underlined by a recent report from mobile manufacturer Ericsson, which shows that by 2015, 80% of people accessing the Internet will be doing so from mobile devices. This shift in the means of connecting to the Internet is being enabled by the convergence of three trends: the growing number of Internet-capable mobile devices, increasingly flexible web content, and continued development of the networks that support connectivity.

Mobile phones are misnamed. They should be called
'gateways to all human knowledge'
-Ray Kurzweil, Futurist (at Handheld Learning '09)

*Source : From the Economic Times and GSM Association - http://articles.economictimes.indiatimes.com/2012-02-27/news/31104598_1_mobile-operators-number-of-mobile-connections-gsma)

01
A Mobile World

A Mobile World

When viewed through a performance and learning lens, mobile technology offers distinct advantages that instructional technology till this point in time did not.

- Mobile is the first personal mass medium – Quite simply everyone has one. Chances are that the workplace is already crowded with such devices, and each device can be tied to an individual. This differs drastically from radio, television and early computing technologies; it is now possible to provide a personalized experience on a mass medium.

- Persistent network connection – Unlike devices in the past, mobile devices mostly tend to be turned on and connected to a telecommunications network at all times. While this was restricted to voice and text messages earlier, data connectivity for internet access is a fairly standard feature across devices and networks.

- Carried on person – Mobile devices are perhaps the first to be carried on person at all times. Individuals have come to rely on them for more than their communication needs – they have become cameras, music players, wallets and much more. This multifunctional nature only ensures that individuals carry their devices wherever they go.

- Includes a built-in payment channel – A casual look at mobile device usage will show that they are being used for more than voice calls and text messaging. Newer technology allows devices to function as wallets and lets users make digital payments using their phone. There is great potential in such applications of NFC (Near Field Communications) technology.

Source : From Tomi Ahonen's book, Mobile as the 7th of the Mass Media, 2008

A Mobile World

When viewed through a performance and learning lens, mobile technology offers distinct advantages that instructional technology till this point in time did not.

- Is available at creative impulse – because mobile devices are always on, always connected and always carried on person, they are available at the time an individual gets a creative impulse. Providing the right software tools on the device can let the user utilize that impulse productively and capture it for further action later.

- Allows for most accurate audience tracking information – A direct result of a mobile devices network connected nature is that it allows for users to be tracked at all times as they carry devices on their person. Couple this with knowledge of demographics, and a variety of possibilities emerge for performance and learning.

- Captures the social context of consumption – Mobile devices can keep an accurate track of transactions between users (their calls, messages and other activities). This provides large amounts of data that can be analyzed to understand the usage patterns and preferences of mobile devices users. Not only could you identify key users (movers and shakers), but also the social context within which they operate.

- Enables the augmentation of reality with data – mobile devices are perhaps the first that allow data from the internet to be superimposed on a view of the real world around a user. Augmented reality browsers are a good example of how this works. The impact of this technology on performance and learning will be significant, as there are many areas of the workplace that will benefit from such technology.

Source : From Tomi Ahonen's book, Mobile as the 7th of the Mass Media, 2008

CHAPTER 2

Understanding mLearning

02

Understanding mLearning

Understanding mLearning

Wikipedia defines mobile learning as “Any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies”.

In other words, mLearning decreases the limitation of learning location by leveraging the mobility of general portable devices.

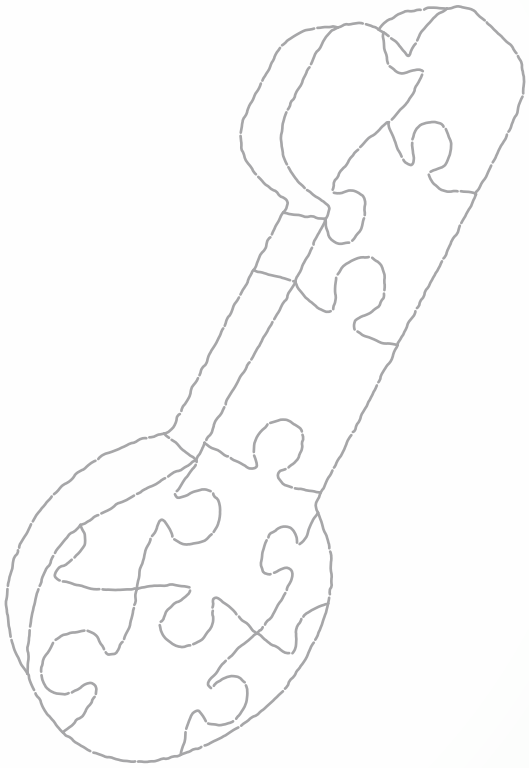
Simply put, **“Mobile learning is the acquisition or modification of any knowledge or skill through the use of mobile technology, anywhere, anytime and which results in the modification of behavior.”**

In this simple definition:

- Mobile Technology – refers to any device that is designed to provide access to information in any location, or while on the move.
- While terms such as teaching and training are not used in this definition, it is not suggested that these methods of facilitating learning will disappear; however, greater emphasis will be placed on self-directed learning.
- The behaviorist idea of an ‘alteration in behavior’ is used because as the information age continues to progress, more people will have access to knowledge, often and easily. However, without an alteration in behavior, it is not deemed to be learning.

CHAPTER 3

Key Considerations In Mobile Learning



Key Considerations In Mobile Learning

It is only appropriate for mLearning to be adopted for specific learning situations. This makes it imperative to determine whether mLearning is really needed from a performance, learning and audience perspective. Some drivers that help make that choice are:

The Capability for Learning Enhancement or Performance Enhancement

Consider whether the capabilities offered by mobile technology can actually enhance the learning experience you want to deliver. If your answer at this point is 'no', stop right here and consider other options. Mobile devices can do a lot of things; however they may not be apt for all learning needs or for performance support. Two key questions to ask are: Will it enhance the learner experience or assist performance? And will it be effective using mobile technology and its applications?

The Capabilities of Devices and Technology

Determine the capabilities of mobile devices and technology that would actually interest learners. It's important that the learners/ would-be learners have an interest in that capability, or any learning associated with the use of that capability just won't happen. A good example is the use of cameras -most mobile devices today are equipped with one, and would-be learners have probably been exposed to this function during routine use of the device. Ask if the capability (the use of the camera) truly interests the learner and adds to the learning experience.

Key Considerations In Mobile Learning

It is only appropriate for mLearning to be adopted for specific learning situations. This makes it imperative to determine whether mLearning is really needed from a performance, learning and audience perspective. Some drivers that help make that choice are:

Evaluate
Service Requirements

Determine from amongst the range of service options, which is most suitable for learners to use such that learning or performance is enhanced. Mobile technology and devices are clubbed to offer a wide variety of services. Given the huge variety of these services, it can be difficult to pin down ones that are useful for learners, and to understand in what context they will prove useful. However, if the organization plans to deliver this service (unlike free web services), careful consideration must be given to its choice. For example, one common service requirement we've encountered is the need for secure data exchange from servers, over the internet to and from devices.

What
Content?

Determine what content is already on hand that could be made easier to access via mobile devices. Existing materials that lend themselves to conversion into a mobile format give you a distinct advantage in adopting mLearning. Also, when looking for such content, remember to look beyond your regular training department or L&D; consult with acknowledged subject matter experts, and look up the recognized power users and leaders. We must mention here that content is not the be-all and end-all of mLearning, the ambit of performance and learning using mobile technology is vast.

Key Considerations In Mobile Learning

It is only appropriate for mLearning to be adopted for specific learning situations. This makes it imperative to determine whether mLearning is really needed from a performance, learning and audience perspective. Some drivers that help make that choice are:

Administration and Tracking

Decide how will learning activities or content be administered and tracked. This is typically where the learning/knowledge management system comes in, and a determination of how it will track these mobile based activities must be made. Tracking activities and content accessed by learners can be troublesome as most current LMSs do not offer tracking for users accessing services using mobile devices. Secondly, if your organization requires that programs have SCORM compliance, it complicates matters further as SCORM wasn't really designed for course tracking on mobile devices.

Need for Integration

As with determining tracking of learning activities, one also needs to consider the need for integration or data exchange of mobile learning with established corporate management information systems or human resource information systems. The larger your enterprise, the more complex the tracking requirements tend to be – this will be one of the driving factors in the design of the mLearning solution.

Key Considerations In Mobile Learning

It is only appropriate for mLearning to be adopted for specific learning situations. This makes it imperative to determine whether mLearning is really needed from a performance, learning and audience perspective. Some drivers that help make that choice are:

Support
Function Analysis

Decide who will handle user support and how it will deal with issues that emerge while piloting your mLearning initiative. There will be definite need for support, as with any technology initiative, and users will need to have questions answered. While users may be familiar with mobile devices and technology, they will not be conversant with the service/content you require them to use for performance and learning – leading to questions. It might help to prepare help/support documentation in advance and provide this with the mLearning content.

CHAPTER 4

The Basics Of mLearning Strategy

The Basics Of mLearning Strategy

Before you plan your mLearning strategy, it is important to understand some fundamental characteristics of mobile devices and those of mobile learning.

The mobile is a unique device with following devices rolled into one:

- phone
- PC
- networked device
- audio/video capable of recording and playback
- GPS enabled
- live TV
- games device
- accelerometer and other sensors

When thinking mLearning, consider carefully how you can use one or more of these capabilities.

The Basics Of mLearning Strategy

Before you plan your mLearning strategy, it is important to understand some fundamental characteristics of mobile devices and those of mobile learning.

Inputs to mobile could be through many interfaces including:

- keypad
- touch screen
- camera (photo & video)
- barcode scanners
- microphone voice
- motion sensor
- location awareness (GPS)

Each of these interfaces present possibilities to embed mLearning right into the workflow of your learners, making just-in-time learning or performance support possible.

The Basics Of mLearning Strategy

Before you plan your mLearning strategy, it is important to understand some fundamental characteristics of mobile devices and those of mobile learning.

Consider Moments of Learning Need:

- Learning for the first time
- Wanting to learning more
- Trying to remember
- When things change
- When something goes wrong

Mobile is better suited for the latter three and not so much for the first two *(More on this in Section 5 – Determining mLearning Strategy).* This is probably the most important aspect to consider when creating mLearning strategy for your workplace.

04

The Basics Of mLearning Strategy

The Basics Of mLearning Strategy

Before you plan your mLearning strategy, it is important to understand some fundamental characteristics of mobile devices and those of mobile learning.

There's a whole lot more you can do with your mobile than view courses

The tag cloud below shows you just some of those. You really need to think what mobile devices could be used for. Keep the learner in mind and create learning or support elements as the learner would need/use them.

Source : http://www.mlearnopedia.com/mlearncon/

04

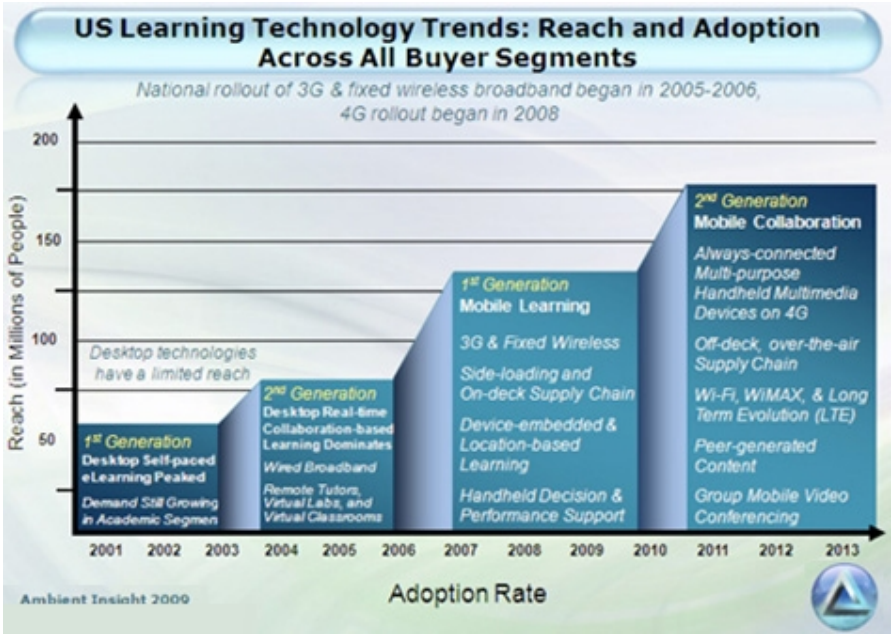
The Basics Of mLearning Strategy

The Basics Of mLearning Strategy

Before you plan your mLearning strategy, it is important to understand some fundamental characteristics of mobile devices and those of mobile learning.

The advances in mobile technology have been rapid to say the least

It would help to be aware of what's coming and how it will change the learning landscape and learner habits. Ambient Insight predicts the 2nd generation of mobile learning will largely be about mobile collaboration. Ask yourself if the learners will benefit from collaborative tools - in most cases, they will see huge benefits.

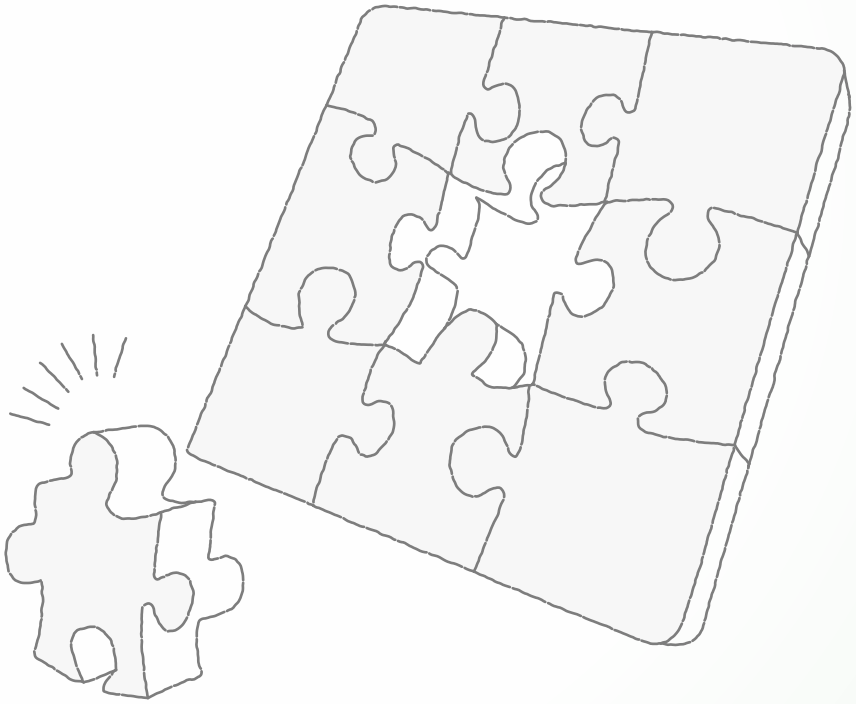


Source : Ambient Insight 2009

CHAPTER 5

Determining mLearning Strategy

Developing **a robust mLearning strategy** requires planning, having a well formed road-map, and **knowing the situations** and **context** in which to use mobile learning.



05
Determining mLearning Strategy

05.1
When To Use Mobile Learning

When To Use Mobile Learning

Dana Alan Koch, learning strategist at Accenture, suggests doing a self evaluation to check if mLearning is right for you. Ask yourself the following:

Business Need

Do you need to increase the speed of uptake and/or ease of access of training by your target audience?

Receptive audience

Is your target audience highly mobile and crunched for time?

Enabling technology

Do you have sufficient number of target audience members with supported devices?

"Knowledge" content

Is the content you need to provide primarily knowledge-based content and can it be put in small chunks?

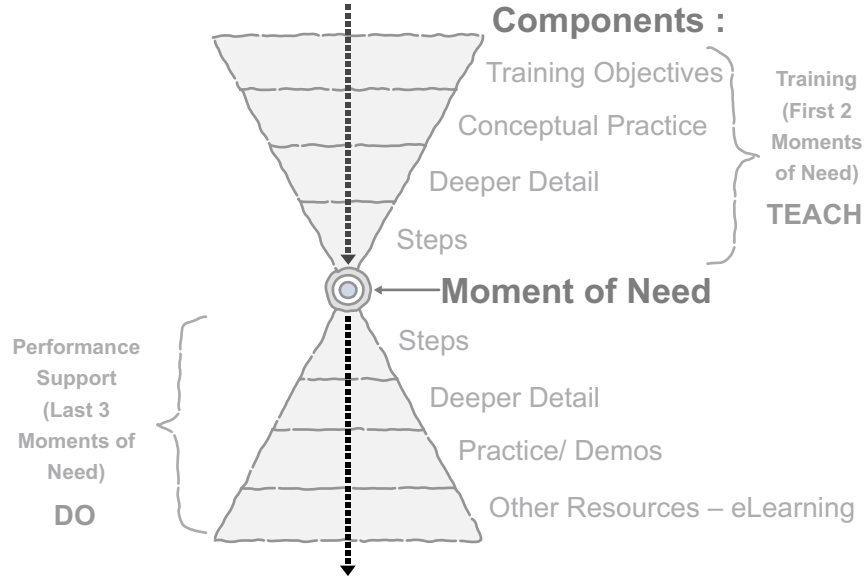
05
Determining mLearning Strategy

05.1
When To Use Mobile Learning

When To Use Mobile Learning

The diagram below shows how the various types of training/ learning formats sit around the 'moment of need'. The upper funnel is focused on 'teaching' while the lower inverted funnel is focused on 'doing'. Mobile learning is most suitable for the lower funnel. The three moments of learning need where mobile learning would work best are:

1. When trying to remember
2. When things change
3. When something goes wrong



Source : Adapted from Judy Brown's Presentation at mLearnCon 2010
http://www.mlearnopedia.com/mlearncon/

05
Determining mLearning Strategy

05.1
When To Use Mobile Learning

When To Use Mobile Learning

When
trying to remember

Mobile technology can perform very well as a learning aid. Mobile devices' ability to search and access content that helps in remembering makes it an excellent tool. Just a few years ago, such just-in-time access to information was not possible. Mobile technology fits the niche for such learning situations perfectly.

When
things change

In a workplace that's changing rapidly, employees are expected to keep their knowledge and skills in line with that change. This demands continuous learning. eLearning remedied the situation somewhat by providing computer based training but it was bound to the desk, or the computer itself at the very least, while the change that led to the learning need wasn't necessarily confined to the desktop. Mobile devices offer an opportunity to change that – their nature as personal communication devices leads to them being carried on the person and at almost all times. This means any content associated with change can be made available through that device regardless of the learner's location and time of day. Learners can quickly access information related to the change meeting their learning need.

05
Determining mLearning Strategy

05.1
When To Use Mobile Learning

When To Use Mobile Learning

When
something goes wrong

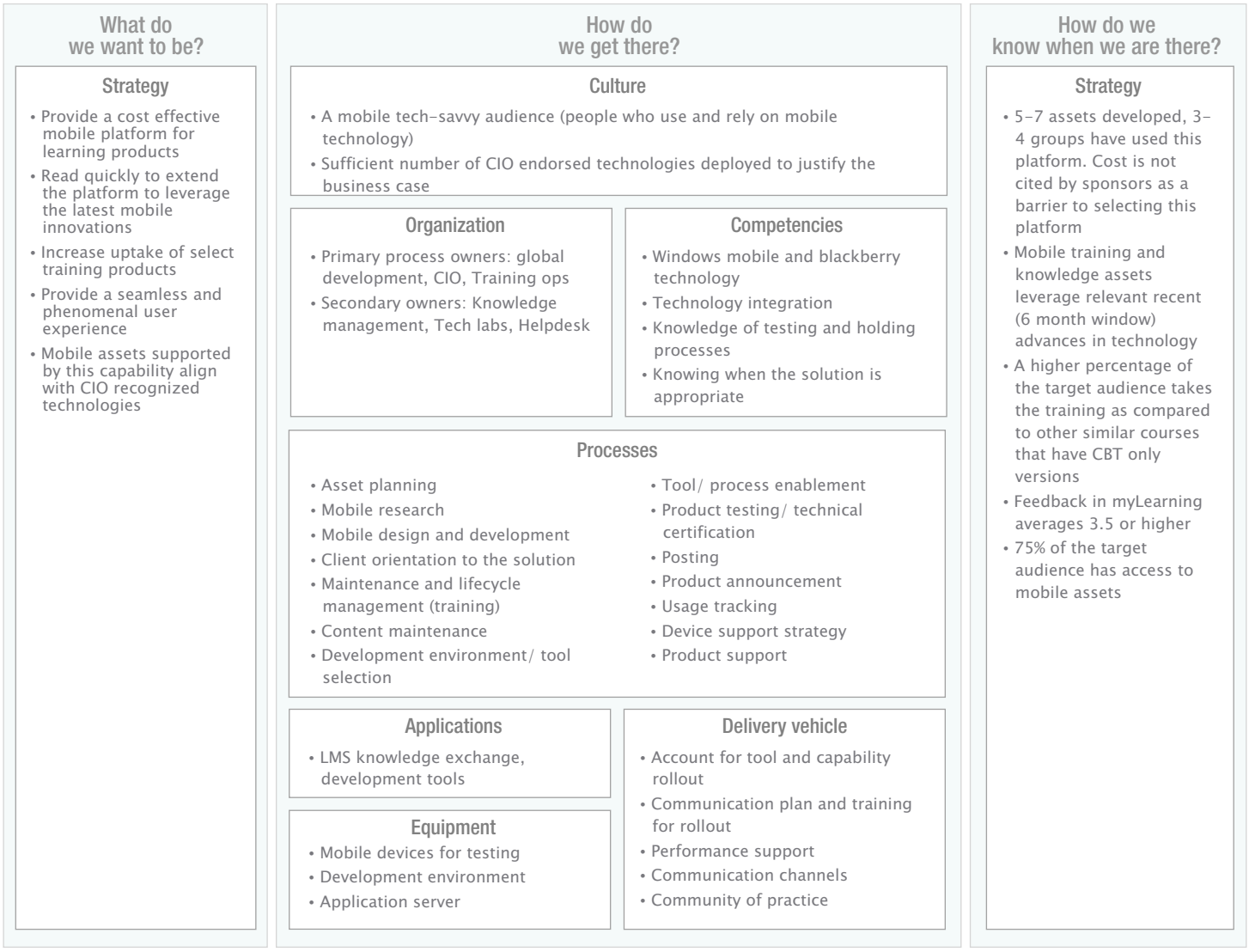
The most demanding of all learning needs is the situation in which something has gone wrong. Typically, at such times learners are under pressure to come up with answers, to fix things and restore normalcy. Learning at this time is mostly restricted to accessing information about the type of problem encountered, its varied solutions, and troubleshooting while implementing those solutions. Again mobile learning fits this situation perfectly, by allowing learners to access information through a device carried on their person, irrespective of location and time.

It's important to note that the 'content' referred to is not conventional eLearning, but more of knowledge units that document the varied knowledge the enterprise generates and manages using a knowledge management system. Mobile devices will soon be able to seamlessly integrate with such knowledge systems providing up-to-minute information from across the enterprise.

A Planning Framework

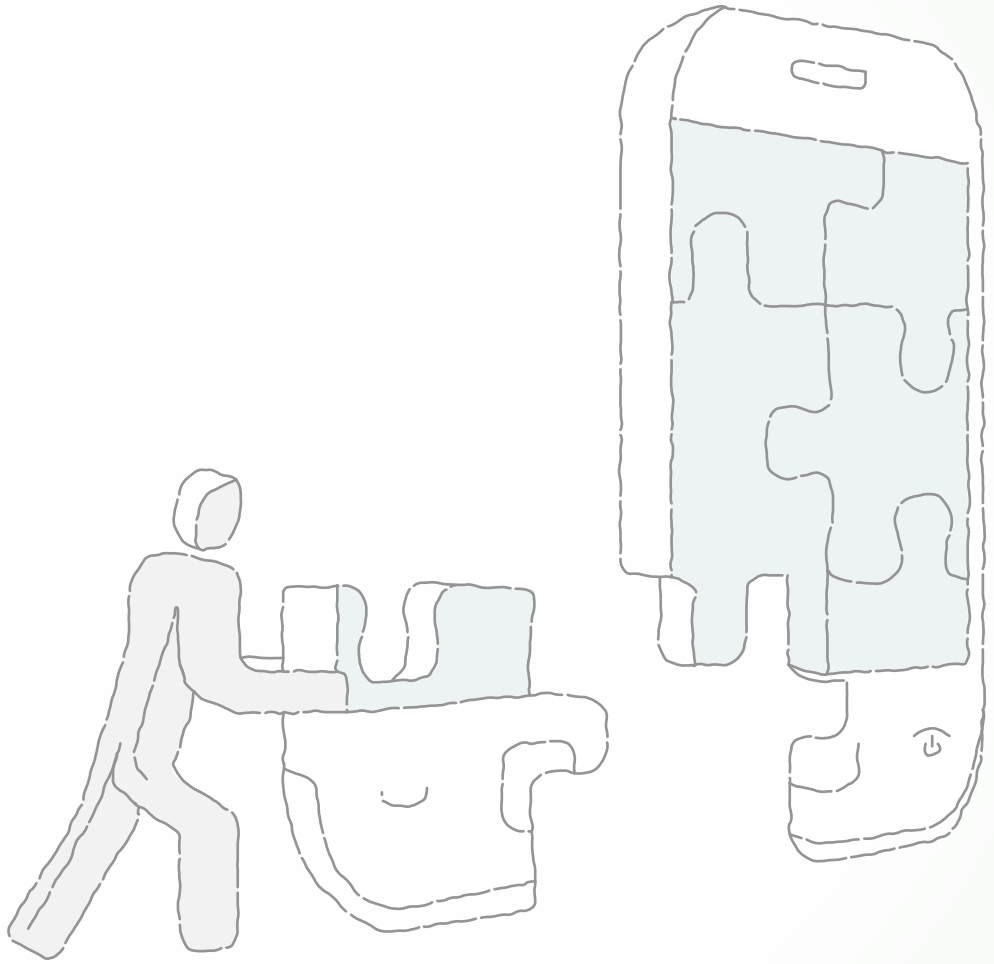
The Mobile Learning Blueprint requires evaluation about **the goals for a mLearning initiative**, what elements must be considered to **achieve those goals**, and how to measure the results.

To understand the areas around which planning is focused, let us consider Accenture's award winning mobile learning initiative as a case study. In a true consulting style, they present a blueprint for defining your goals and how to reach them.



CHAPTER 6

The Technical Approach



06
The Technical Approach

The Technical Approach

You want to reach the broadest possible audience with your mLearning service/application. Unfortunately, given the huge fragmentation at platform and device level, reaching a critical mass with a disparate audience is quite the challenge. In this section, we attempt to briefly describe types of mLearning and various technical approaches that are appropriate in varied situations. Of course, no one approach might work for your situation. It is vital to mix, match and experiment with the blend. There are also evolving and rapidly emerging technologies not mentioned here that may have a key impact on the technical approach organizations adopt for mLearning.

06
The Technical Approach

06.1
Some Types Of mLearning

Some Types Of mLearning

LMS

A mobile extension/interface to learning management systems (Upside2Go) that allows users to access features/functions that are found the in desktop version of the system.

Content Delivery

The classic delivery of courseware/presentations that are page-based and contains varied media elements. Users access and 'learn' as and when they wish.

Assessment Instruments

Mobile devices are well suited to quick assessment that can serve as records of performance. Smart phones can render a variety of assessment types.

Performance Support

This is one of the most common use-cases a learning designer will encounter. Where a learner needs to access reference material for completing a task on hand.

Social Learning

Provide tools that allow for social interaction and collaboration, which in turn promote learning. Consider providing tools like video/audio conferencing, message board systems, micro-blogging, etc.

Augmented Reality

These are newish tools that allow learning context and content to be delivered based on geographical relevance and using sensor data from the mobile device. Augmentation of reality simply refers to overlaying data in the form of video, pictures or text over the live real-time image captured by the device's camera sensors.

06
The Technical Approach

06.1
Some Types Of mLearning

Some Types Of mLearning

Learning support

Where the mobile device can help facilitate learning happening while using other tools or content. For example, using a calculator while reading solving numerical problems in a book. Or looking up a technical glossary when referring to a user manual for a product.

There are several other types of mLearning, not limited to mobile games, applications that use phone sensors, etc.

Development Approaches

Given the current state of mobile platforms and devices, there are three primary development approaches one can adopt for development of mLearning product/services.
These are:

(A) Native Application

(B) Web Application

(C) Hybrid Application

Development Approaches

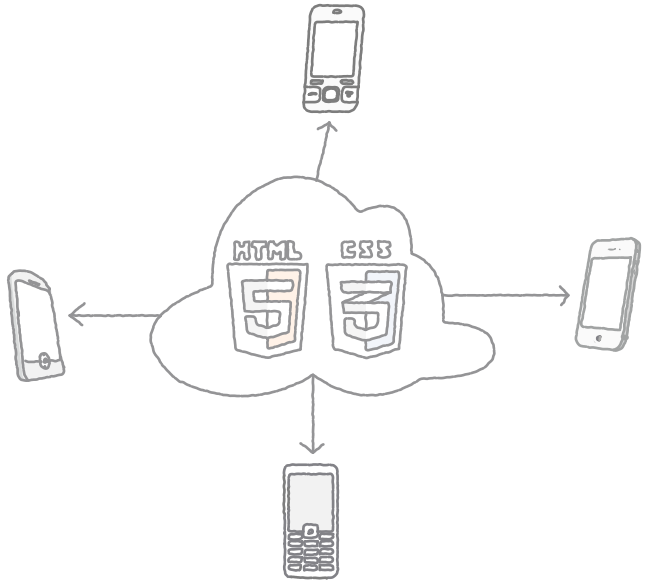
(A) Native Application

- Can access device hardware – cameras, accelermoter, proximity sensor, etc. or software platform features – address book data, networking, video, voice, messaging features, etc.
- Ability to use native UI components, platform specific features (ex. – touch gestures) can provide better user experience and usability.
- Native applications will only work on a targeted platform and devices.
- Takes time and money to develop; any sort of changes to the application requires technical expertise.

Development Approaches

(B) Web Application

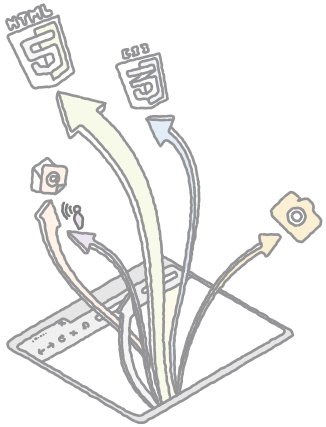
- Platform independence, but still browser dependent – can reach a wide range of devices with browsers and data connectivity.
- No application delivery, installation and configuration are required. Access through a browser means it is almost instantaneously available to all.
- Performance is relatively lower than native apps, and is dependent on the browser implementation on platform devices and type of network connectivity available.



- Quicker development, easier to modify (relative to native apps), but typically requires some sort of delivery framework. s
- HTML5 and CSS3's eventual emergence as a choice web-app platform will include multimedia integration (the type currently offered by native platforms).

Development Approaches

(C) Hybrid Application



- Build interfaces and functions as a native app; data interfaces through web.
- Relatively cheaper to develop than native apps, but comparable to the cost of developing web-apps.
- Delivery can be easy, but requires some installation and configuration on the part of the user.

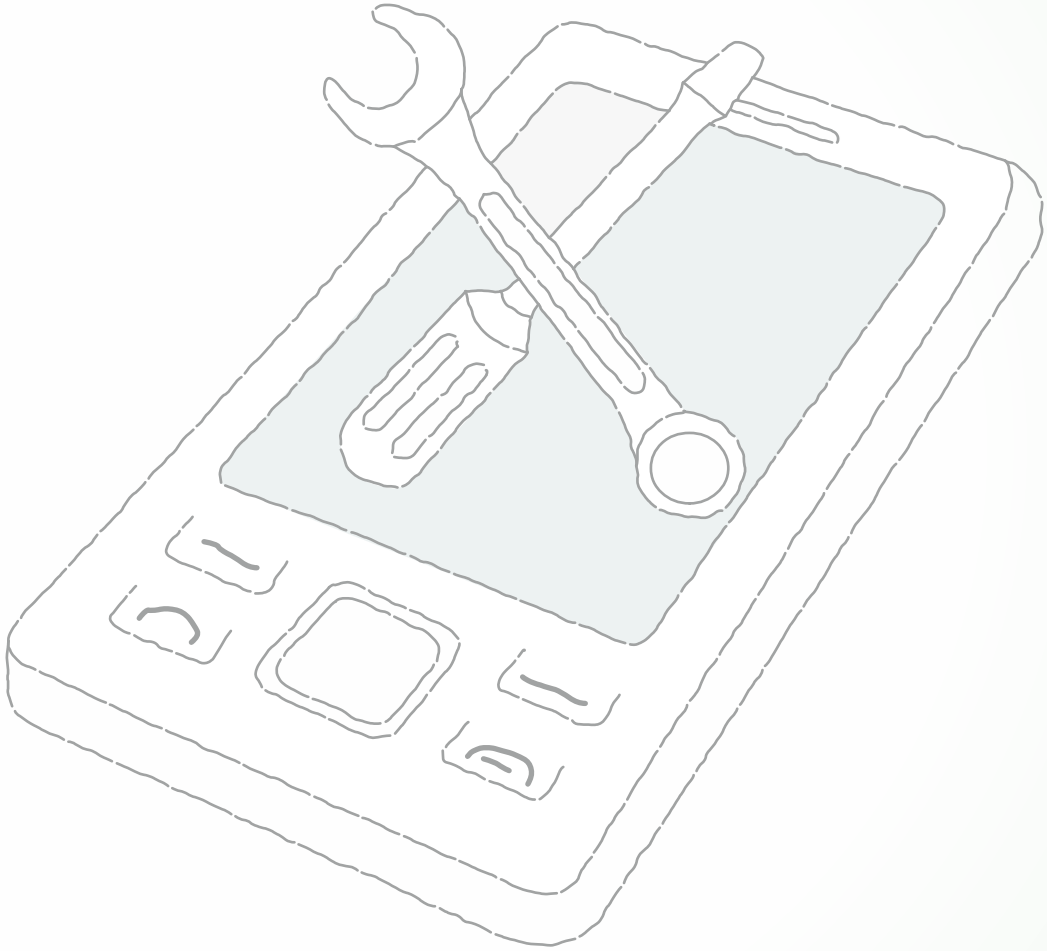
Making a choice between Native, Web and Hybrid applications depends on what you are trying to achieve, and the devices that your audience will possess. Mobile platforms will continue to evolve, some will die, new ones will emerge.

At this time, the state of cross-platform development is still quite chaotic. While there are solutions/frameworks that offer cross-platform delivery, there is still time for such development tools to mature and become easily available and usable. HTML5 will eventually provide the converging point for such frameworks.

There is no one single solution for mLearning development. There are a variety of platforms, development tools, frameworks and delivery mechanisms out there. The truth is a single silver bullet to provide mLearning across platforms and devices doesn't exist at this time. It is important to reiterate that getting mLearning to work for you will involve blending available technology to best serve the learning need.

CHAPTER 7

Tools



07
Tools

Tools

The final step in developing a mLearning strategy is finalizing the tools and techniques required to develop the learning resources.

The moment you start thinking about tools the varied platforms and their differences come up as real challenges. You could create simple HTML based courses (nuggets) or even simpler good old SMS-based assessments. Flash is not supported on all devices; and to create something with a richer user experience, you need to look at creating Smartphone applications. The big question is – Are you building a web, native or hybrid app? *(Already covered in section 6 – The Technical Approach)*

07
Tools

07.1
Mobile Learning Development Tools

Mobile Learning Development Tools

Coming back to the tools and technologies, on a broad level, they can be categorized into tools for:

(A) Tools for Enterprise application like LMS, LCMS

(B) Tools for Games

(C) Tools for Augmented Reality

07
Tools

07.1
Mobile Learning Development Tools

Mobile Learning Development Tools

(A) Tools for Enterprise application like LMS, LCMS

Enterprise applications can be created as Native, Cross Platform or Web based.

Tools to develop Native Applications

SDK provided for mobile device

- iPhone
  iPhone SDK can be used for developing iPhone, iPad and iPod touch applications.

- Andriod
  Android SDK currently supports development platforms like x86-architecture computers running Linux, Mac OS X 10.4.8 or later, Windows XP or Vista. The officially supported Integrated Development Environment (IDE) is Eclipse using the Android Development Tools (ADT) Plugin.

- Blackberry
  Blackberry SDK can be used to develop applications using Java. Blackberry Widget SDK available from device software 5.0 onwards can be used to develop native application in HTML.

07
Tools

07.1
Mobile Learning Development Tools

Mobile Learning Development Tools

(A) Tools for Enterprise application like LMS, LCMS

Tools to develop Cross-Platform Applications

- Phonegap
  PhoneGap is a cross-platform mobile development framework that supports Palm. It is basically a collection of WebView wrappers for different platforms.

- Rhomobile
  Rhodes is an open source framework to rapidly build native apps for all major smartphone operating systems (iPhone, Windows Mobile, RIM, Symbian and Android). These are true native device applications which work with synchronized local data and take advantage of device capabilities such as GPS, PIM contacts and camera.

- Titanium
  Titanium is a powerful and robust mobile web development framework allows you to use your existing HTML, CSS and JavaScript knowledge to make native-like mobile apps for iOS and Android.

- Sencha
  Sencha provides JavaScript web app frameworks and tools to develop rich web apps based on HTML5.

07
Tools

07.1
Mobile Learning Development Tools

Mobile Learning Development Tools

(A) Tools for Enterprise application like LMS, LCMS

Tools to develop Web Applications

- iUI
  iUI is a framework consisting of a JavaScript library, CSS, and images for developing advanced mobile web apps. It supports iPhone and most smartphones & tablets.
- iWebkit
  iWebKit is a free framework designed for the creation of iPhone and iPod touch compatible websites or webapps.
- jQuery Mobile
  jQuery Mobile is a touch-optimized web framework for smartphones and tablets. It provides a unified user interface system across all popular mobile device platforms, built on the rock-solid jQuery and jQuery UI foundation.

07
Tools

07.1
Mobile Learning Development Tools

Mobile Learning Development Tools

(B) Tools for Games

You can always use native SDK provided for mobile devices like iPhone to develop games, but then you will have to start from scratch. To make it easier, you can use engines/frameworks which will help you in developing games.

- EDGELIB
  EDGELIB is the most powerful, true multi-platform game engine for mobile devices. The EDGELIB platform, written from scratch in C++, enables you to produce high quality, commercial games.

- Unity3D
  Unity is an integrated authoring tool for creating 3D video games or other interactive content such as architectural visualizations or real-time 3D animations. Unity's development environment runs on Microsoft Windows and Mac OS X, and the games it produces can be run on Windows, Mac, Xbox 360, PlayStation 3, Wii, iPad, iPhone, as well as the Android platform.

- Jgame
  Jgame is an open source 2D game engine that makes multiplatform development easier. It runs on the Java JRE 1.3+ platform with optional OpenGL (JOGL) enhancements, the J2ME (MIDP2.0/CLDC1.1) mobile platform, and the Android (2.1+) platform. There is also a Flash (Actionscript 3) version.

07
Tools

07.1
Mobile Learning Development Tools

Mobile Learning Development Tools

(C) Tools for Augmented Reality

- Layar

  Layar is the world-leading Augmented Reality browser for mobile devices that uses the technology already built in iPhone 3GS, iPhone 4 or Google Android device to feed additional information about the surroundings. Using the smartphone's mobile camera, Layar reveals practical data that can link into more detailed web-based content. In addition to this, the Layar Stream enables the user to browse location-based data quickly and easily.

- Unifeye

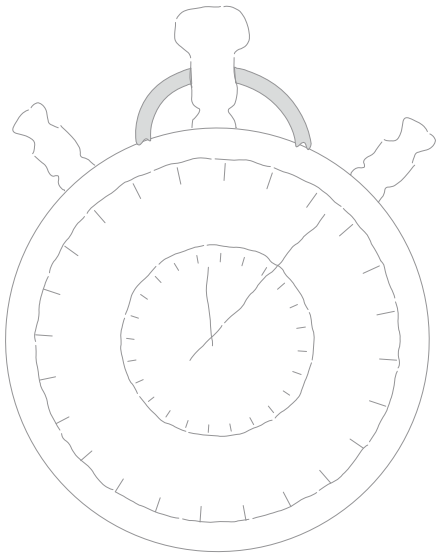
  Metaio's Unifeye Mobile platform is the most comprehensive solution to create Augmented Reality applications for iPhone, Android, Symbian and WinMobile devices. Featuring a high-level API and latest image recognition technologies it allows developers to produce high-quality applications with low effort.

- Aurasma

  Aurasmsa is an augmented reality app by Autonomy that works with smart phones and tablets. Using the smartphone's camera, GPS, Bluetooth, WiFi internet and its position, acceleration and direction, the technology combines image recognition and a conceptual understanding of the 3D world to recognize objects and images and seamlessly merge augmented reality actions into the scene. Without the need for barcodes or tags, the app is able to see its surrounding environment and make it fully interactive.

Rapid Authoring Tools

While these the tools mentioned above can assist you in developing mLearning applications, each one needs a fair bit of knowledge and skills before you can actually implement solutions using these tools.



However, to alleviate such difficulties, there are some rapid authoring tools available that can create mLearning without needing to acquire the technical skills. Here are some authoring tools that let authors develop content targeted at mobile devices.

Rapid Authoring Tools

(A) HotLava LMA (Learning Mobile Author)

Lets you create single authored source content deployable across multiple formats and supported devices.

- Supports major types of images, audios, videos, bulleted/numbered lists and text integrated in the form of templatized format, tests, quizzes, polls/surveys.
- Simple form-based content authoring with support for interlinking the content.
- Content can be directly deployed on device OR can be delivered via web.
- Web delivered content can be tracked and managed through their proprietary mobile delivery and tracking system (MDTS).
- Supported mobile platforms are all the Java supported phones, Windows Mobile, PocketPC, Palm and virtually all those that have XHTML web browser – including iPhone and iPod Touch.

Rapid Authoring Tools

(B) Chalk Pushcast

Lets you author mLearning through a plug-infor MS PowerPoint, targeted specifically for BlackBerry smartphones.

- Uses familiar freeform authoring of PowerPoint.
- Content is published to BlackBerry Enterprise Server and external stakeholders.
- Published content can be accessed through Pushcast Player installed on user's BlackBerry smartphone.
- The Pushcast Player handles tracking and reporting to server.

Rapid Authoring Tools

(C) Lectora

Although Lectora doesn't have implicit “publish to mobile” option, one can easily configure and publish their titles (authored courses) to be viewable on mobile web browsers.

- Lectora provide templates specifically designed for multiple tablets and smart-phones.
- Lectora supports seamless publishing to iPad and iPhone devices using templates.
- Claims to use HTML5 to achieve seamless delivery across multiple platforms.

Analytics Tools

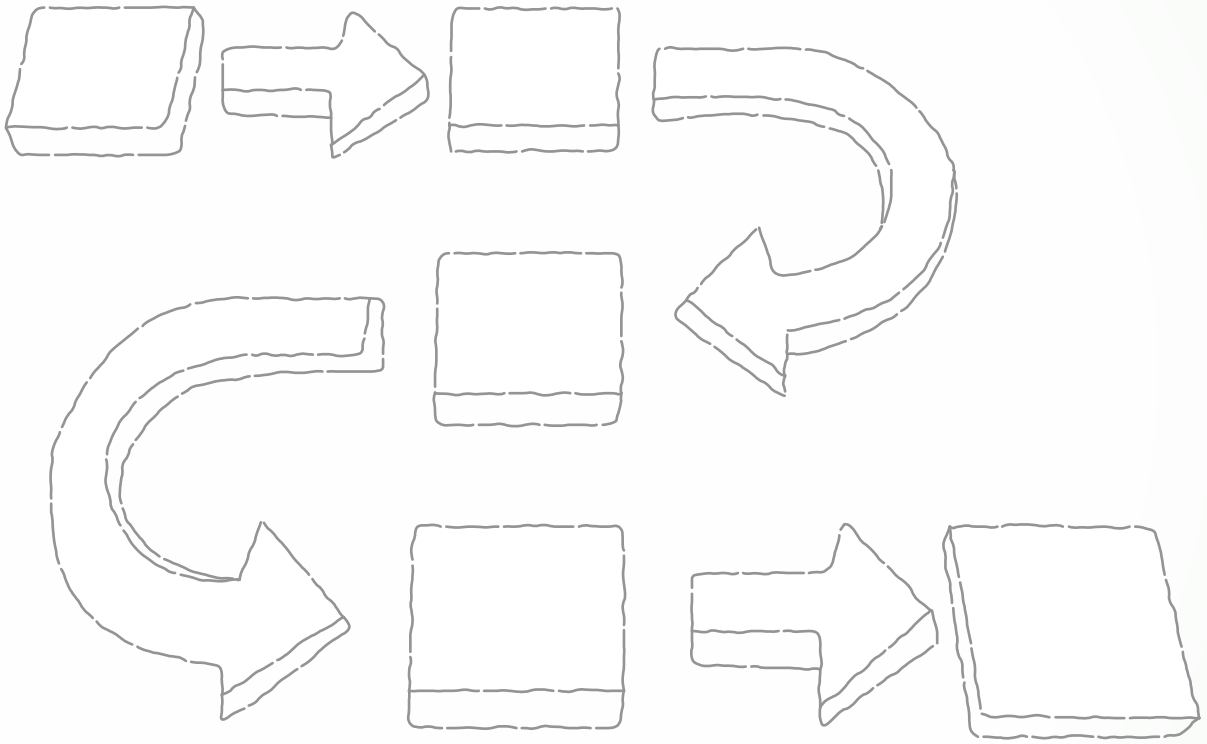
Once your mobile learning resources have been developed, implemented and provided to your learners, it is important to analyze these resources to ensure that they are delivering as per expectations.

Analytics tools provide statistical evaluation of rich data sources to discern patterns that can help individuals at companies, educational institutions, or governments make more informed decisions. One such mobile learning analytics tools is Flurry Analytics.

Flurry Analytics provides accurate, real time data to developers about how consumers use their mobile applications, as well as how applications are performing across different handsets. Application developers receive anonymous, aggregated usage and performance data, as well as robust reporting and analysis tools. With this data, developers can identify issues and opportunities, create a more informed product roadmap, increase retention and grow their user base. The opportunities for using a tool such as this to analyze learner activity are varied and can lead to much improved decision making on the administrative side of things.

CHAPTER 8

Conclusion



Conclusion

The use of mobiles as an alternative source of learning and information is rapidly gaining ground in the learning environment. This is compounded by the fact that a large number of organizations and institutions are opting for new modes of learning as part of their training and development. Mobile Learning is slowly but clearly emerging as the 'future' of learning.

Before joining the flood of implementers trying out mobile learning, it is imperative you conduct a thorough analysis of your requirements, plan a framework and then implement the strategy. Do this correctly, and the chances are your mobile learning strategy will be successful and the learners in your organization will see substantial benefits as a result.

References

Mobile usage statistics 2010-2015 by Dave Chaffey on Smart Insights
http://www.smartinsights.com/analytics-conversion-optimisation-alerts/mobile-usage-statistics-2010-2015/

The Horizon Report (2011 Edition.)
http://net.educause.edu/ir/library/pdf/HR2011.pdf

Developing a Mobile Strategy by Jeremiah Owyang on www.slideshare.net
http://www.slideshare.net/jeremiah_owyang/developing-a-mobile-strategy

Mobile industry to reach 2 percent of global GDP in 2011: Report
http://fixed-mobile-convergence.tmcnet.com/news/2011/07/08/5624689.htm

General Considerations for Mobile Learning (mLearning) by Abhijit Kadle on Upside Learning Blog
http://www.upsidelearning.com/blog/index.php/2010/01/14/general-considerations-for-mobilez-learning-mlearning/

The Practice of Mobile Learning by Abhijit Kadle on Upside Learning Blog
http://www.upsidelearning.com/blog/index.php/2010/03/17/the-practice-of-mobile-learning/

References

How To Create Successful M-Learning Strategy: mLearnCon - Part I, II and III by Amit Garg on Upside Learning Blog
http://www.upsidelearning.com/blog/index.php/2010/06/23/how-to-create-successful-m-learning-strategy-mlearncon-part-i/

http://www.upsidelearning.com/blog/index.php/2010/07/14/creating-successful-mobile-learning-strategy-mlearncon-part-ii/

http://www.upsidelearning.com/blog/index.php/2010/08/04/creating-successful-m-learning-strategy-part-3/

Creating a Successful mLearning Strategy: From Planning to Implementation by Judy Brown, Rovy Branon, Jason Haag, Chris Raasch at mLearnCon 2010
http://www.mlearnopedia.com/mlearncon/

Tools For Mobile Learning Development by Amar Jadhav on Upside Learning Blog
http://www.upsidelearning.com/blog/index.php/2010/03/21/tools-for-mobile-learning-development/

Mobile Learning Considerations - Native Apps or Web Apps by Amar Jadhav on Upside Learning Blog
http://www.upsidelearning.com/blog/index.php/2010/07/13/mobile-learning-considerations-native-apps-or-web-apps/

References

Rapid Authoring Tools For Creating mLearning by Sushil Kokate on Upside Learning Blog
http://www.upsidelearning.com/blog/index.php/2010/06/17/rapid-authoring-tools-for-creating-mlearning-2/

Content too dynamic to go native? Hybrid Apps might be the answer ...by Eoin Dunne on The Discovery Blog
http://blogs.semantico.com/discovery-blog/2011/03/content-too-dynamic-to-go-native-hybrid-apps-might-be-the-answer/

Cross platform mobile development report by Gustavo Hartmann, Geoff Stead and Asi DeGan
http://www.mole-project.net/images/documents/deliverables/WP4_crossplatform_mobile_development_March2011.pdf

5 Cross-Platform Mobile Development Tools You Should Try by Jolie O'Dell on Mashable
http://mashable.com/2010/08/11/cross-platform-mobile-development-tools/

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About Upside Learning

Established in 2004, Upside Learning is one of the leading names in Custom Learning Solutions, including Custom eLearning Development and Mobile Learning Solutions, and Learning Management Systems, the world over. With a collective experience of 600+ person-years, it has successfully completed more than 300 corporate and academic projects for over 150 clients worldwide.

Upside Learning has been consistently picking up awards and other recognition every year and today, it boasts of 28 such awards and recognitions received from renowned bodies in eLearning and technology. These include Brandon Hall Research, Training Industry, Chief Learning Officer (CLO), Deloitte, Red Herring, APEX to name a few.

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