

**ASTD 2012 TechKnowledge® Conference & Exposition
Las Vegas, NV, USA**

TH303

Enhancing Mobile Learning with Geolocation and Augmented Reality

Learning Objectives:

- Apply the basics of Lean, GPS and AR to learning
- Use lean thinking to create mobile-ready content
- Identify critical knowledge locations at organizations
- Assess the applicability and success of mobile learning
- Select and implement mobile learning projects.

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Lean Methods for Knowledge Transfer

Step #1: Set Stretch Goals

Improving performance starts with thinking different. And setting stretch goals is a simple, powerful way to kick start this process.

What levels of performance and results do you expect from your training today? Do you have goals to continually improve performance every year? More important, do you have goals to *dramatically* improve performance? The latter are stretch goals and they are, by their very nature, uncomfortable. Not reaching them is a real possibility.

By definition, stretch goals require new approaches. If you think you can achieve a goal with the current way you do things, then it's not a stretch goal.

The real benefit of stretch goals is being forced to think creatively about what you have to change to achieve them. You may have to revamp assumptions, metrics, staffing, infrastructure and company policies. You may have to kill some sacred cows. That's scary stuff which requires support and commitment.

What would you have to change to attain goals like these at your company?

“In 2 years, people will learn twice as much in half the time and never make a mistake on the job.”

“People will retain 90% of what they learn 30 days after they learn it.”

“Only 10% of our organizational learning will be formal, structured training; the other 80% will be informal learning. And we'll perform better than we do today.”

Doubtful? Think these goals are nuts? When you start to think they may, in fact, be possible, you'll have taken the first step on your 'lean journey.' Keep going!

What more specific learning and performance stretch goals would you set for your company? What would you have to change to meet them? Who has to support you in these efforts?

Learning goals should be a catalyst to change your organization and dramatically improve its performance. It may take years to accomplish, but you must first create a vision of the new reality you want.

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Step #2: Eliminate Waste

How much non-value added activity is present in your training and learning processes? Here's a handy sheet to help you identify inefficiencies and areas for improvement. Removing these wastes leaves behind the real value that your learners need and want.

Waste	Operations	Learning/Training
Overproduction	<ul style="list-style-type: none"> Producing too much, i.e., more than customers want Producing in larger batches than necessary 	<ul style="list-style-type: none"> Teaching more content than needed to solve the current problem Teaching more content than a learner can handle at one time
Delay	<ul style="list-style-type: none"> Process queue time Machine downtime Set up time 	<ul style="list-style-type: none"> Time to assess and create content Waiting for classes or information Time to update content
Inventory	<ul style="list-style-type: none"> Raw materials WIP Finished goods 	<ul style="list-style-type: none"> Unused knowledge and information Course materials waiting to be used Trainers not training
Transportation	<ul style="list-style-type: none"> Moving inventory, work in progress and finished goods Shipping 	<ul style="list-style-type: none"> Moving people and materials for instruction Consultants and contractors coming on site for meetings and courses
Defects	<ul style="list-style-type: none"> Scrap and rework Field failures Incorrect specifications 	<ul style="list-style-type: none"> Incorrect content Forgetting information On-the-job mistakes
Motion	<ul style="list-style-type: none"> Picking up parts and tools Bending and turning 	<ul style="list-style-type: none"> Searching for information Typing, pointing and clicking Attaching and emailing
Extra Steps	<ul style="list-style-type: none"> Inspection Aligning Steps that don't add value 	<ul style="list-style-type: none"> Proofreading Installing software, hardware or other devices and applications Elaborate and overly complex graphics and animation
Talent	<ul style="list-style-type: none"> People assigned to the wrong jobs Latent talent unused 	<ul style="list-style-type: none"> People with expertise are excluded from teaching People teaching the wrong topics Too much focus on "professional" trainers

Lean Methods for Knowledge Transfer

How much non-value added activity could be eliminated implementing the new technologies I talked about today? Think about it from both the learner *and* the content creator point of view. Here's a handy worksheet to help you collect your thoughts.

Waste	Geolocation (GPS)	Augmented Reality
Overproduction		
Delay		
Inventory		
Transportation		
Defects		
Motion		
Extra Steps		
Talent		

Lean Methods for Knowledge Transfer

Step#3: Implement New Methods

Applying lean thinking to training improves measurable business performance by delivering exactly what people need to know, exactly when they need it and in the way how they like to learn it. The following principles characterize successful lean knowledge transfer. How does your company stack up?

PRINCIPLE	DESCRIPTION
Numbers Driven	Training is seen as a tool to solve a specific, measurable problem within a timeframe and budget. No 'shotgun approach' to training.
Clear Learning Signal	People know when they need to learn before attempting an activity. People understand the limits of their knowledge and skills.
Inside Out	There's no 'internal bias' towards content creation. Real experts, internal and external, create content and make it available. Learners access the best content.
Pull, Not Push	Individuals 'pull' the knowledge they need to accomplish a specific task. Training events that 'push' information in advance of need are minimized and specific.
Individualized	The format, amount and rate of learning are all tailored to the individual's learning style, previous experience and the specific situation they're facing.
Instant Gratification	Knowledge is available exactly when people need it. The time required to find content is instantaneous. Learning is directly tied to application. Feedback on results is immediate.
Alignment	The learning process reinforces and complements the organization's business model, values and operational cycles.
Credibility	The most credible sources, from the point of view of the learner, are used to communicate information and influence behavior.

Lean Methods for Knowledge Transfer

How can the technologies I talked about today improve learning in light of the principles listed below. Does one technology work without the other or do you need both of them to get the full benefit? Does one work better in certain situations?

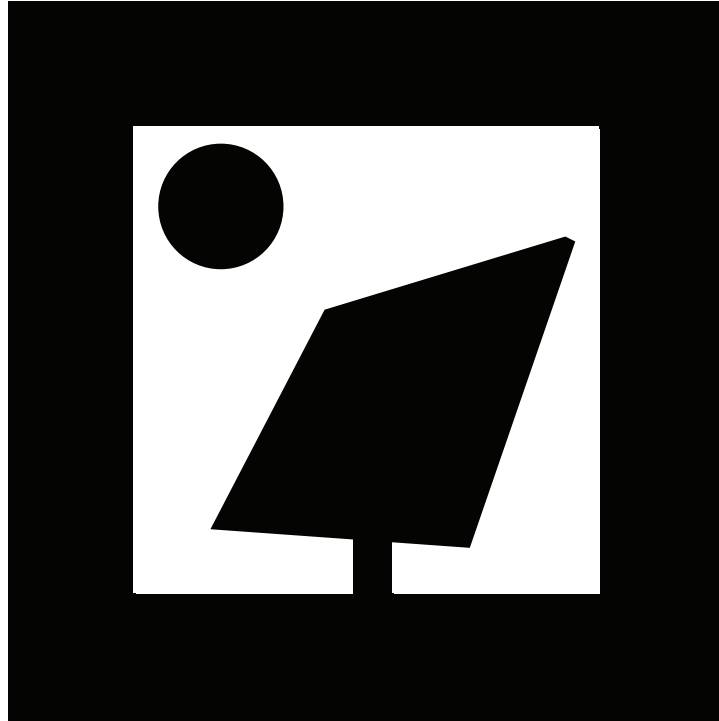
PRINCIPLE	Geolocation (GPS)	Augmented Reality
Numbers Driven		
Clear Learning Signal		
Inside Out		
Pull, Not Push		
Individualized		
Instant Gratification		
Alignment		
Credibility		

Lean Methods for Knowledge Transfer

Where are the distinct and critical knowledge locations in your company. Distinct locations are, for example, different sites or buildings. Critical locations are places within sites or buildings where specific knowledge is required to perform jobs where mistakes have dire consequences. Which of the technologies I talked about today could bring critical knowledge to learners at the moment of need.

DISTINCT/CRITICAL KNOWLEDGE LOCATIONS	Geolocation (Geofencing)	Augmented Reality (Markers)

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SNEAKER

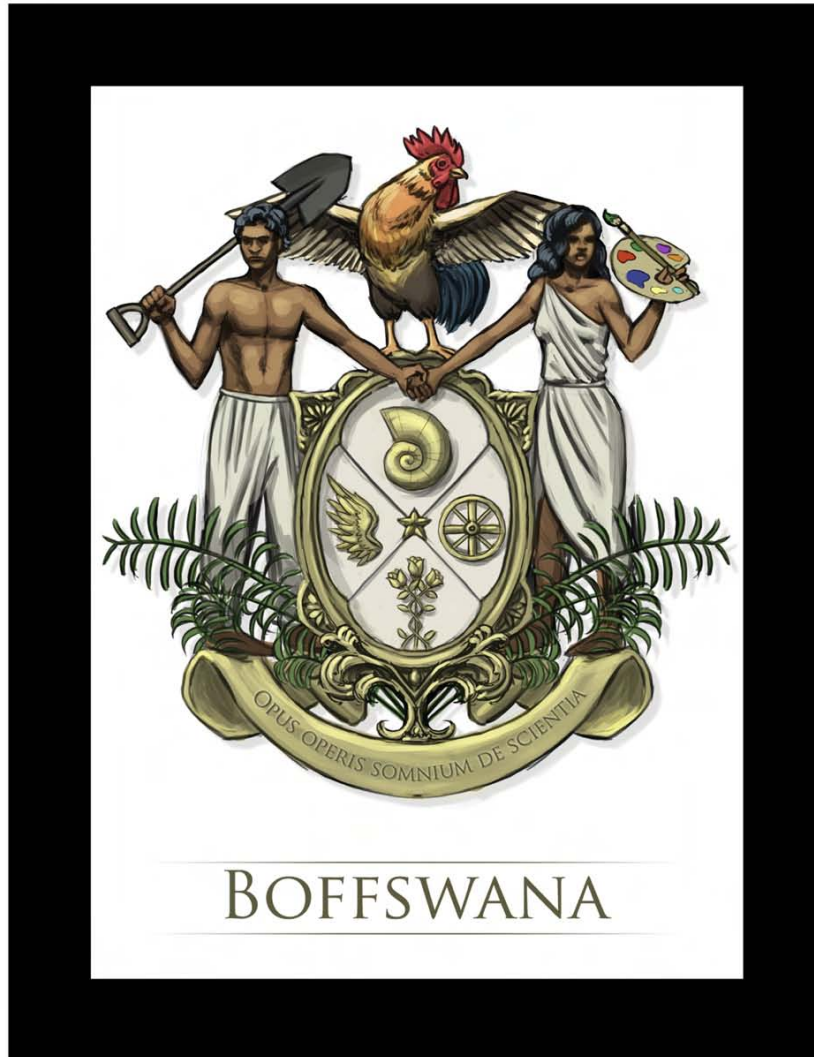


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