LEDA (Ludic Engagement Designs for All)

Esbjerg, Denmark

Dr Anthony Brooks

Organization type: 
nonprofit/ngo/citizen sector

Project Stage:
Scaling

Budget:  
$10,000 - $50,000

Website: 
http://www.en.aau.dk/

Aging
Disability
Health care
Health education
Mental health
Recreation
Wellness

Project Summary

Elevator Pitch

Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.

Addressing ICT-based intervention training of next-generation therapy and teaching professionals catering for future demographics and related service needs.

About Project

Problem: What problem is this project trying to address?

Future demographics point to increased demands on service providers in healthcare, thus ICT solutions need to be iteratively trained (i.e. designed, applied, evaluated and refined) with allocated time as a part of employment (i.e. paid to train) for life long learning to augment the needs of the future welfare society. Recognition, and global collaborations are needed.

Solution: What is the proposed solution? Please be specific!

I have evolved a platform for collaborative research with the aim of investigating potentials of fun user experiences via ludic engagement (fun/flow/aesthetic resonance) in virtual environments/interactive multimedia to cater for 'all' abilities, ages and rehabilitation/therapy strategy. I create compendiums of input device mapped to selectable responsive content - interactions achieve human afferent efferent neural feedback loop closure. Under the 'fun' layer data is analyzed to support new intervention programmes of microdevelopment with an aim for transfer to ADL. New training regimes for healthcare facilitators, carers, and even families are targeted. New testing/assessment batteries, intervention/evaluation models, and recognition to formal certification from the informal/non-formal approach has/will evolve.

Impact: How does it work

Example: Walk us through a specific example(s) of how this solution makes a difference; include its primary activities.

The research began in the middle 1980s and pioneered the field in using ICT with non-invasive biofeedback whereby bespoke gesture sensing devices was mapped to enable gesture to control music, painting, and robot control. Through the focus on 'PLAY' versus 'THERAPY' the participant does not consciously attempt to push their limits in training - rather the empowered control of multimedia feedback (selected according to profile and session goal) promotes ludic engagement such that the participant is immersed in the 'flow' experience. As (input capture) sensors and VR (responsive content) is safe, repeatable without fatigue to instructor, and can be tailored/programmed according to the participant. New paradigms of intervention become possible. See videos http://www.youtube.com/watch?v=m5-I9NHp2l and http://www.youtube.com/watch?v=oxJRKD7j2ho&list=UUVZz8q2qkKQiTjWmK-xzXg&index=4&feature=plcp and http://www.youtube.com/watch?v=mxOV39MFZw8&feature=related
Marketplace: Who else is addressing the problem outlined here? How does the proposed project differ from these approaches?

I am networked around the world with research labs and personnel that similarly lead this field. International conferences act as a catalyst however, all are engaged in other daily activities (administration, management etc) such that the needed increased focus is lacking. Thus, I offer the LEDA platform as a gathering body to promote transdisciplinary collaborations and investigations to achieve the potentials. I consider such networks as peers not competition as we all wish for societal contribution. The differentiation is the history as pioneering agent and forming of LEDA (also including the platform-entities ArtAbilitation & GameAbilitation). The other players offer increased potentials to grow this concept to achieve significant measurable societal impact.

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Team

Founding Story

I am educated as an engineer. I have a history as an artist. I have intimate experiences with profound disability through my two uncles (One severe Cerebral Palsy, the other Diabetes). Through this background, many years ago I created abstract means to enable my uncle with CP to express through his residual ability to move. Empowerment to freely and creatively express without rules of how to move or when to move was a way to play and establish an alternative communication channel between us. This augmented my understanding of possibilities between us. I later implemented this in applied preliminary research (around 1985) at institutes for disabled children, adults and seniors/aged. The “Aha!” moment was manifold spanning ages, abilities and impairments. I have been passionate about this ever since.

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About You

Organization: Aalborg University

About You

First Name
Dr Anthony

Last Name
Brooks

Twitter URL
Facebook URL

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About Your Organization

Organization Name
Aalborg University

Organization Country
Esbjerg

Country where this project is creating social impact

How long has your organization been operating?
More than 5 years

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Innovation

How long have you been in operation?

Operating for more than 5 years

Which of the following best describes the barrier(s) your innovation addresses? Choose up to two

Access, Cost.

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Social Impact

Please describe the goal of your initiative; outline what you are trying to achieve

To realize recognition for the research platform. To evolve networks of excellence in countries around the globe focused on this application of ICT in healthcare as a shared collaborative open resource.

As an element of the platform, to achieve an online ‘cloud’ resource where, through ‘data mining’, ‘Artificial Intelligence’ and ‘Recommendation Engine’ strategies, healthcare professionals in this field who have access to the resource can gain knowledge of case studies that are profile-matched to their enquiry (i.e. their patient/client).

However, what is missing are new ICT-based test batteries to parallel this adoption in the field. My PhD details two emergent models for in-action intervention and on-action evaluation, thus, these models need to be disseminated and tested by peers.

What has been the impact of your solution to date?

A patent was realized (US 6893407 originally filed in May 2000) and assigned to a company that was formed around the research. I was cheated out of the company and thus the patent. The value of this is questionable as it is vague and non-specific. My PhD is based on the research.
I have established a research laboratory at my university around the work. I have established the International conferences (tracks) ArtAbilitation, GameAbilitation, Ludic Engagement Designs for All (LEDA). There are over 130 publications. The research was responsible for European Funded projects, a company and a commercial product. The work is widely cited. It has been shown around major global events e.g. Inaugural Cultural Paralympics 1996, Millennium Olympics/Paralympics, Cultural Capital of Europe 1996, 2000... and has been exhibited as an interactive room installation in Museums of Modern Art 1998-9 (including workshops for disabled)

Through the research I am a Cordis European Reviewer FP6 & FP7

What is your projected impact over the next five years?

- Local, National, and Global providing support is realized.

What barriers might hinder the success of your project? How do you plan to overcome them?

- Lack of understanding by gatekeepers and funding organizations/bodies as often they fail to fully realize the innate potentials. Global collaborations upon a shared single platform will also augment my learning of the potentials. Thus a lack of a focused organized body to support and promote the research to where it should go will hinder the success. I plan to overcome this main hindrance by making the work more widely known to industry and such targeted funding bodies such as this proposal/application to Ashoka Changemakers.

Winning entries present a strong plan for how they will achieve and track growth. Identify your six-month milestone for growing your impact

A LEDA studio will be realized with regional and national growth indicated by industry & network commitment.

- Identify three major tasks you will have to complete to reach your six-month milestone
  
  **Task 1**
  Achieve industrial support, establish recognition/certification accreditation
  
  **Task 2**
  Build & equip studio, test planned intervention training.
  
  **Task 3**
  Develop marketing strategies, and market for targeted industry customers (lifelong learners in welfare society area)

Now think bigger! Identify your 12-month impact milestone

Building on regional and national impact an international impact will be initiated with a UK studio.

- Identify three major tasks you will have to complete to reach your 12-month milestone
  
  **Task 1**
  Achieve industrial support in UK - collaborative UK-Denmark/Scandinavian initiatives
  
  **Task 2**
  Build & equip UK studio, market for targeted customers. Ensure UK accreditation in place.
  
  **Task 3**
  Train trainers in Denmark to lead in UK and Denmark studio initiatives

Sustainability

Tell us about your partnerships

I have no partnerships. I am employed as a university Associate Professor and through this (and presentations, invited talks etc) I fund the building of the studios and running of the SME (small medium enterprise) called SoundScapes.

Are you currently targeting other specific populations, locations, or markets for your innovation? If so, where and why?

I am based in Denmark. I originate from UK. I am aware of these markets and potential opportunities. I am not aware of the US market but have had an American industry specialist and two USA professionals in the industry to analyse potentials which was highly positive (see appendix 2 in PhD [link](http://vbn.aau.dk/files/55871718/PhD.pdf)).

What type of operating environment and internal organizational factors make your innovation successful?

It is a form of pyramid dissemination and can be scaled to each area of resource according to understood need by regional government and industry sector. I am an experienced public speaker and can "sell" the product.

Please elaborate on any needs or offers you have mentioned above and/or suggest categories of support that aren't specified within the list

I am satisfied at the networks I have established and word of mouth is spreading. The next step is realizing the potentials through market impact and ongoing activities to disseminate globally. This will be targeted under a "Travel for Health" strategy. In line with this it is also foreseen that a help would be to have prominent customers that could spearhead the dissemination via media networks.