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get employed*

ICT Innovation Trends & The Future of Entrepreneurship

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Get Online Week 2014, Deree – The American College of Greece, April 4, 2014

<http://www.getonlineweek.eu/greece/> #GOW14 #YouthSpark



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Network Era Connected Society - Smart Spaces

ICT Convergence Creates New Experiences for Consumers Anytime, Anywhere, on Any Device

Anyone



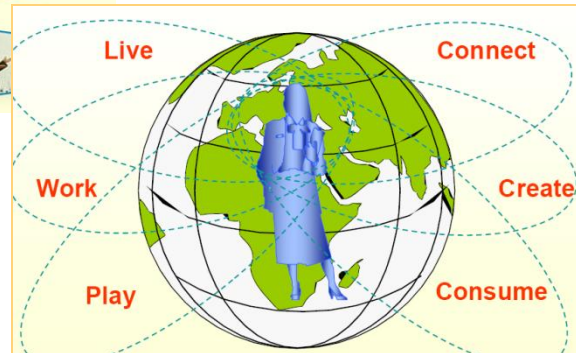
Anywhere



Any Device



Any Content or Application



"The phone means more than talking"





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The Future of Retail Business

Virtual Supermarket in South Korea

Virtual Supermarket Allows South Koreans To Shop In Subways With Their Phones

- In Sep. 2011, Mega supermarket chain **Tesco** designed and launched a **virtual supermarket** in South Korea in hopes to gain more business than its competitor **e-Mart**.
 - Koreans are the second-most hardworking people in the world and for them, grocery shopping once a week is a dreaded task.



Flow – Amazon’s Amazing Search Engine ...and, the death of retail business???

- FLOW lets you compare prices of items you see in retail shops just by waving your smartphone at them – and then buy those items from Amazon instead
 - But that **doesn’t mean brick-and-mortar stores are dead***
 - or it does???

Why Flow, Amazon's Magical Search Tech, Won't Kill Off Retail

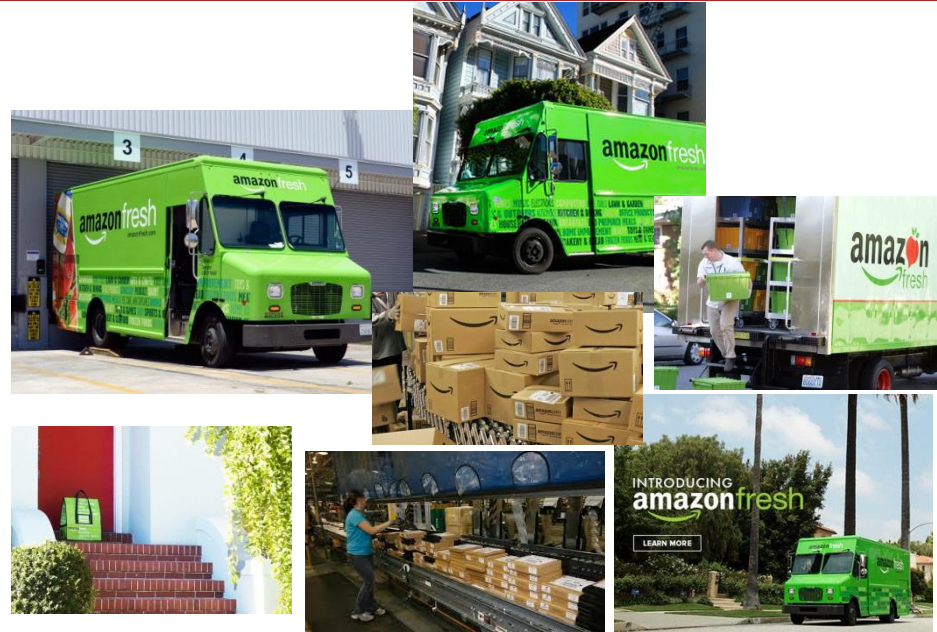
FLOW LETS YOU TO COMPARE PRICES OF ITEMS YOU SEE IN RETAIL SHOPS JUST BY WAVING YOUR SMARTPHONE AT THEM--AND THEN BUY THOSE ITEMS FROM AMAZON INSTEAD. BUT THAT DOESN'T MEAN BRICK-AND-MORTAR STORES ARE DEAD.

SAVE YOUR BACK. SLIM YOUR WALLET. **bellroy**

AmazonFresh – Grocery Delivery

- On Dec. 11, 2013, Amazon announced it is expanding its **AmazonFresh**, *same-day, grocery-delivery service* to San Francisco, its third market, allowing customers to receive fresh fruit, milk and other goods on their doorsteps.

- Amazon faces competition in grocery delivery from heavyweights **Kroger Co.**, **Safeway Inc.**, and **Wal-Mart Stores Inc.**



- Amazon offers the same-day delivery service for goods from its namesake site for **\$8.99**, plus 99 cents per item, in 11 U.S. cities provided customers complete their order by certain times.
- Deliveries are **free for orders over \$35**.

Amazon – Drone Delivery

Amazon, the world's largest online retailer, is testing unmanned drones to deliver goods to customers, Chief Executive Jeff Bezos says (BBC - Dec. 1, 2013) *.

- The drones, called **Octocopters**, could deliver packages weighing up to **2.3kg** to customers within **30 minutes** of them placing the order, he said.
- The US Federal Aviation Administration is yet to approve the use of unmanned drones for civilian purposes.
- It is expected that it could take up to five years for the service to start.

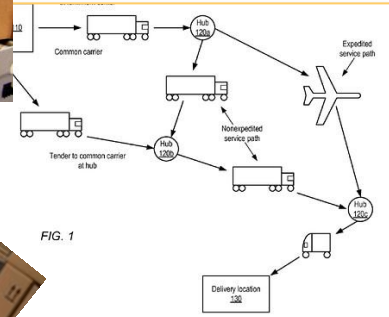


* <http://www.bbc.com/news/technology-25180906>

Amazon's Anticipatory Shipping

Amazon Wants to Ship Your Package Before You Buy It

- Amazon knows you so well it wants to ship your next package before you order it.
- The Seattle retailer in December 2013 gained a patent (**Patent #: US008615473**) for what it calls “**anticipatory shipping**,” a method to start delivering packages even before customers click “buy.”
 - According to the patent, the packages could wait at the **shippers' hubs** or **on trucks** until an order arrives.”



Rugeley, a town in the British Midlands, is home to a new Amazon fulfillment center.



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The Future of Healthcare

Future of Healthcare Strategy & Technology Trends

EU Strategy

The eHealth2020 task force of the EU has compiled five levers for change in healthcare using Information and Communication (ICT) technology:

- **My data, my decisions**
- **Liberate the data**
- **Connect up everything**
- **Revolutionize health; and**
- **Include everybody**

Integrated Care – the American Way



EHTL symposium, Bruxelles – 30 November 2011:

Dr. Amy Compton-Phillips, Kaiser Permanente, USA:
Setting the Scene: New Care Models for Persons with Chronic Diseases

accenture

Top Three Healthcare
Technology Trends:
Big, Personal, Social

mHealth in an mWorld
How mobile technology
is transforming health care



Future of Healthcare

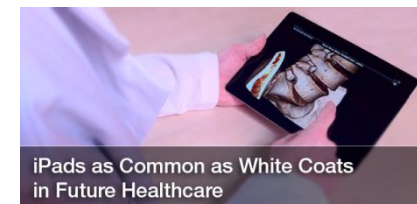
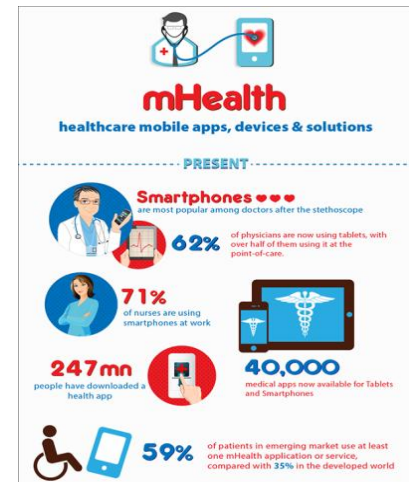
“Technology has the power to create a step change in healthcare delivery,”

Mike Jackman, Senior VP,
GE Healthcare IT *



* Mike Jackman, Senior VP, GE Healthcare IT, **“How IT will shape the future of healthcare”**, *The Guardian*
<http://www.theguardian.com/healthcare-network/healthcare-innovation-partner-zone/how-it-will-shape-future-healthcare>

What's Next for Healthcare?





Life Sciences

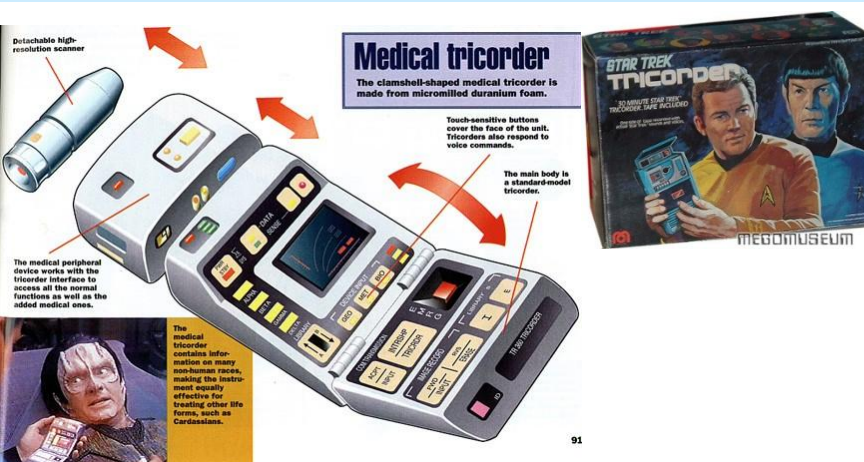
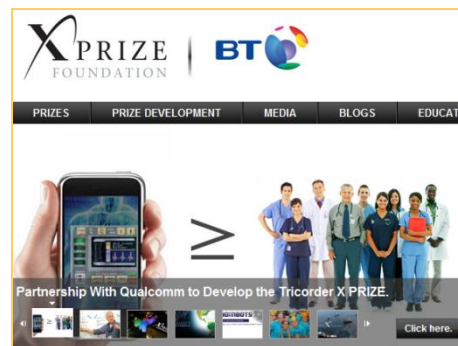
XPRIZE®

- The goal of the **Life Sciences Prize Group** is to **improve health care** and **extend healthy living**.
- Inspired by *Star Trek*, \$10 Million X-Prize Searches for Real-Life **Tricorder**

<http://www.xprize.org/prize-development/life-sciences>

QUALCOMM
TRICORDER **XPRIZE**

X Prize Offers **\$10M** For Star Trek Medical Scanner Jan 12, 2012.



NOKIA
SENSING **XCHALLENGE**

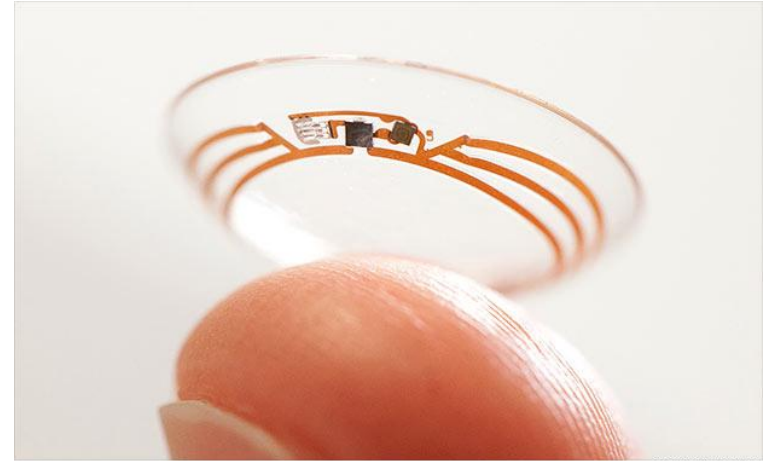
The Nokia Sensing XCHALLENGE is a **\$2.25 million** global competition to stimulate the development of **health sensors** and **sensing technology**.



Google Smart Contact Lenses

Jan 17, 2014 - **Google** is developing smart **contact lenses** that will measure blood glucose levels in diabetics' tears. *

- They are able to measure blood sugar levels **once per second**, and Google is working on putting **LED lights** inside the lenses that would flash when those levels are too low or high.
- They're still in the testing phase and not yet ready for prime time.
- Google has run **clinical research** studies, and the company is in discussions with the U.S. Food and Drug Administration.



COURTESY: GOOGLE

The electronics in the lens are so small that they appear to be specks of glitter, Google said. The wireless antenna is thinner than a human hair.



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Integrated Health & Wellbeing Ecosystem

Food Industry



Supermarket



Physical Activity



Home



Pharma Industry



Workplace



Media Industry



School



Hospital



Medical Doctor



Pharmacy



Pharma Industry





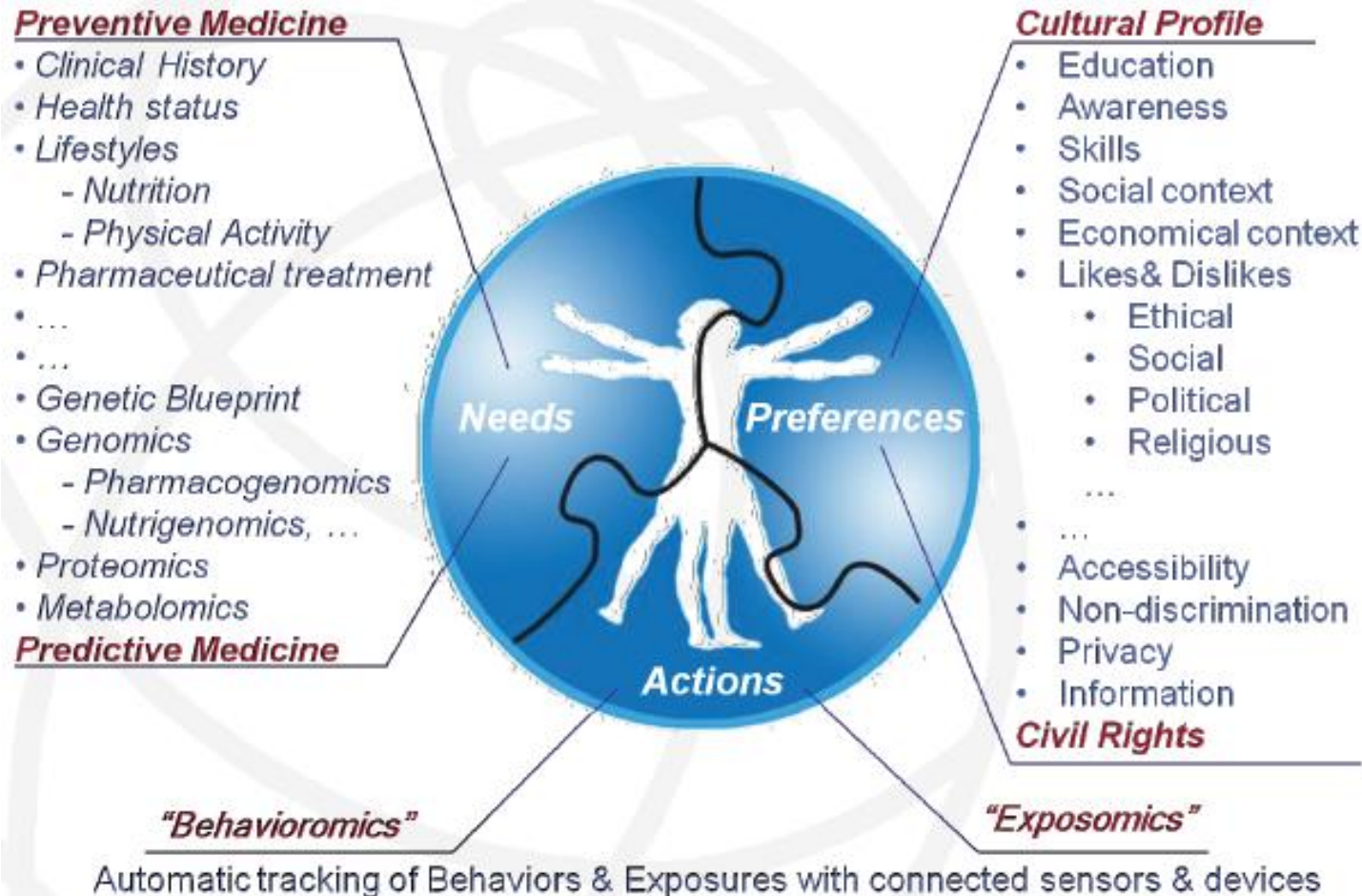
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Personalized m-Health Services to Promote Healthier Lifestyles





Lifestyle & Individual's Profile: User-centered BIG DATA Paradigm





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The Future of Transportation

Autonomous Cars – Is This The End of Driving?

- **Self-driving cars** are a reality, with a host of companies developing autonomous systems *
- In fact, the first driverless vehicle – the **Induct Technology Navia** - is now on sale, and test vehicles from **Google**, **Mercedes-Benz**, **Lexus** and many others have driven themselves on public roads (under strict supervision).
- The world's first large-scale test of driverless cars will involve **100 Volvos** taking to the streets of **Gothenburg** in **2017**



The Navia self-driving shuttle finds its way around using **laser-based lidar** (light detection and ranging) sensors



*** Andrew English, *The Telegraph*, 16 Jan 2014, 6:30AM GMT.

<http://www.telegraph.co.uk/motoring/road-safety/10570935/Autonomous-cars-is-this-the-end-of-driving.html>

Tomorrow's Ships Will Use AR to Sail the Seas

- **VTT Technical Research Centre of Finland & Rolls-Royce** have designed the tug boat bridge of the year 2025 which will be fully customizable, and featuring Augmented Reality (AR).



The tug boat bridge of the future will be fully customizable and feature augmented reality (AR). *Photo: VTT*

The Pursuit of Personal Flight



Photograph by Alain Ernoult
"I steer myself in space with only my body," says
pilot **Yves Rossy**, who invented his **jet-powered
personal wings**. www.ernoult.com

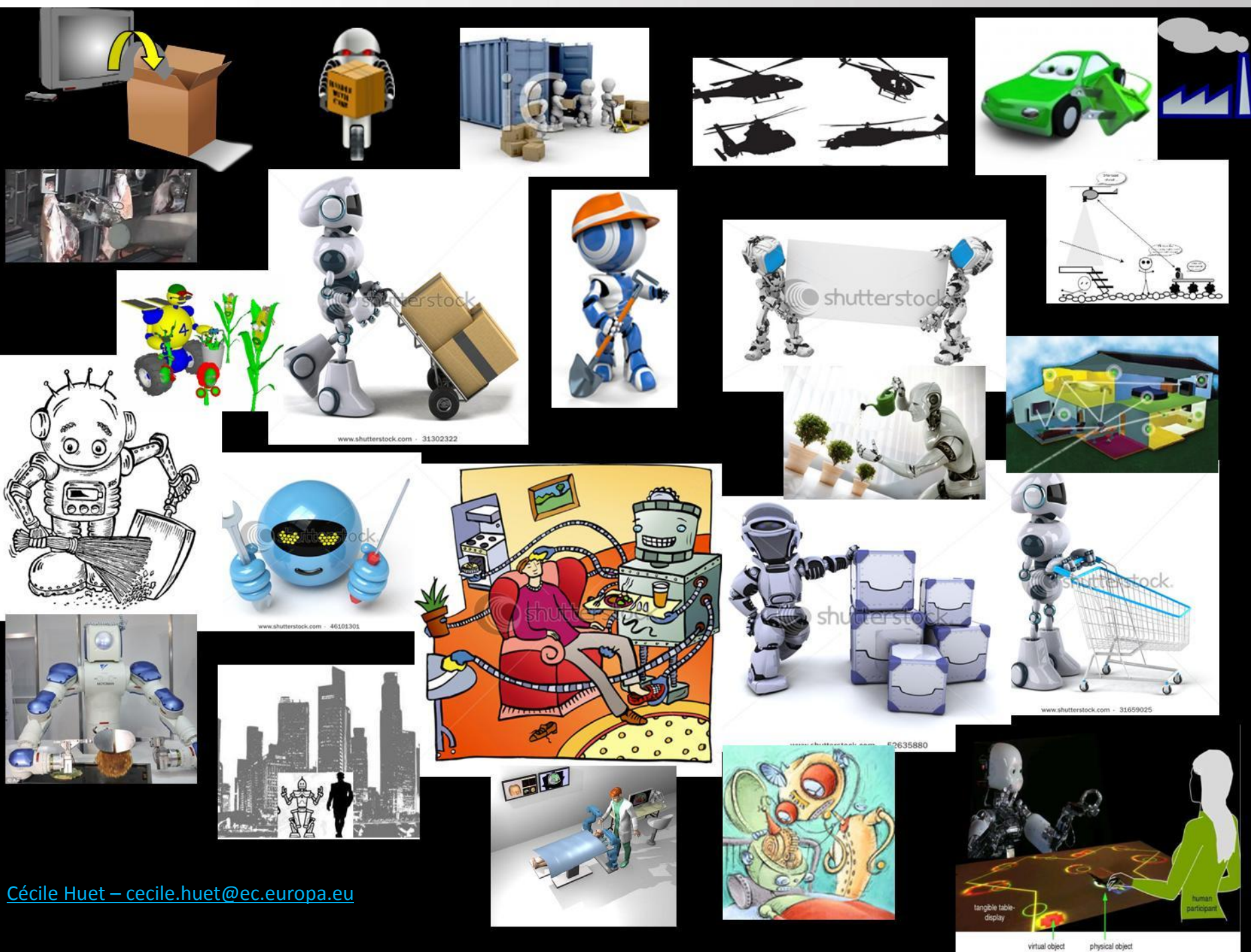


www.ohgizmo.com



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The Future of Manufacturing





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2030 Manufacturing

Baxter: Building the Future



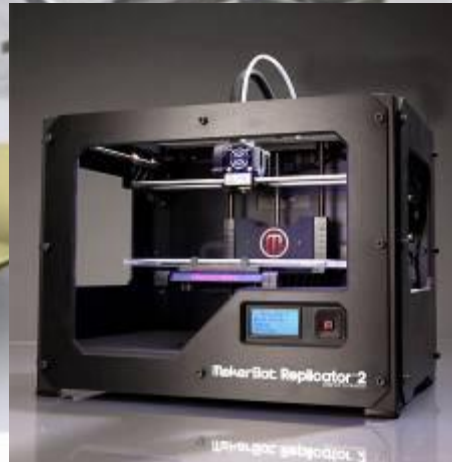
Wheel Robot Vehicle

Rear Module Li-Ion and control bus
Storage and Supplementary Power



Interior Mod
Vehicle Cont

Ryan Chin:
Urban Mobility



Maker-Bot: Replicator 2



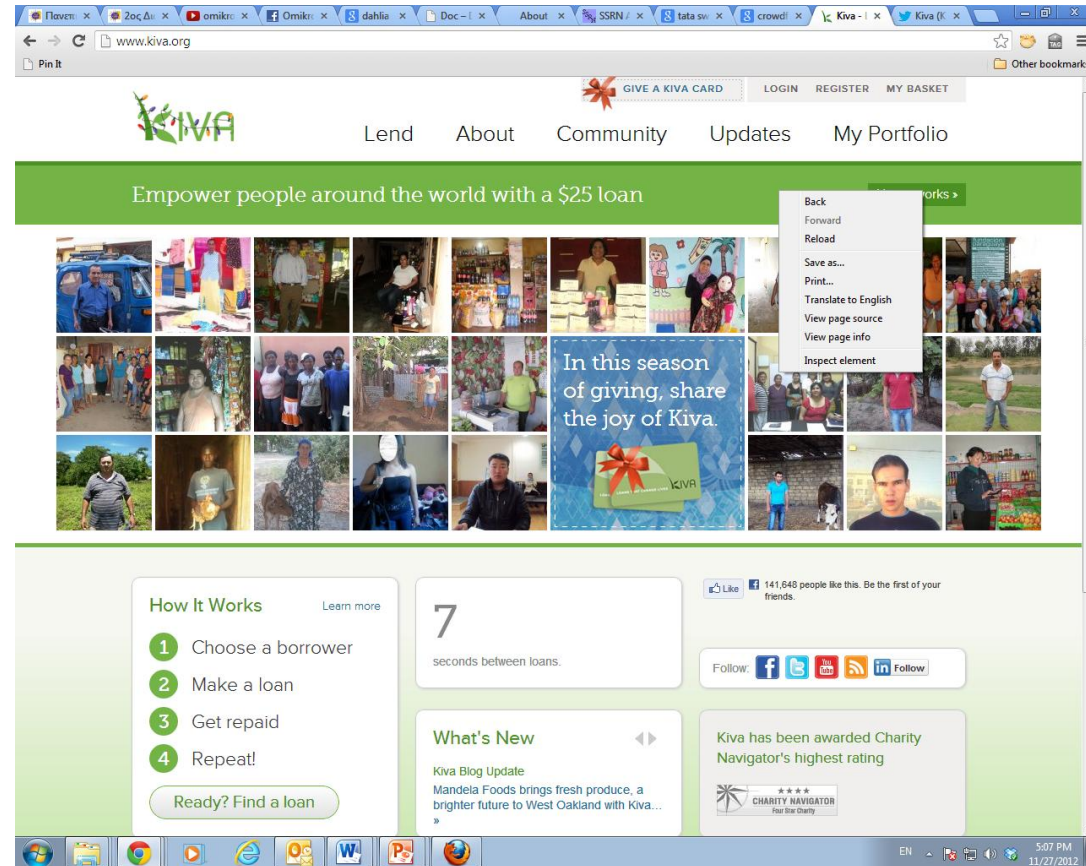


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The Future of Entrepreneurship

Crowd-funding & Micro-financing Platforms

- **KIVA**, www.kiva.org
San Francisco, CA
- Connecting people around the world through lending to alleviate poverty -
Change a life with a \$25 loan.



How it works: <http://vimeo.com/16991128>



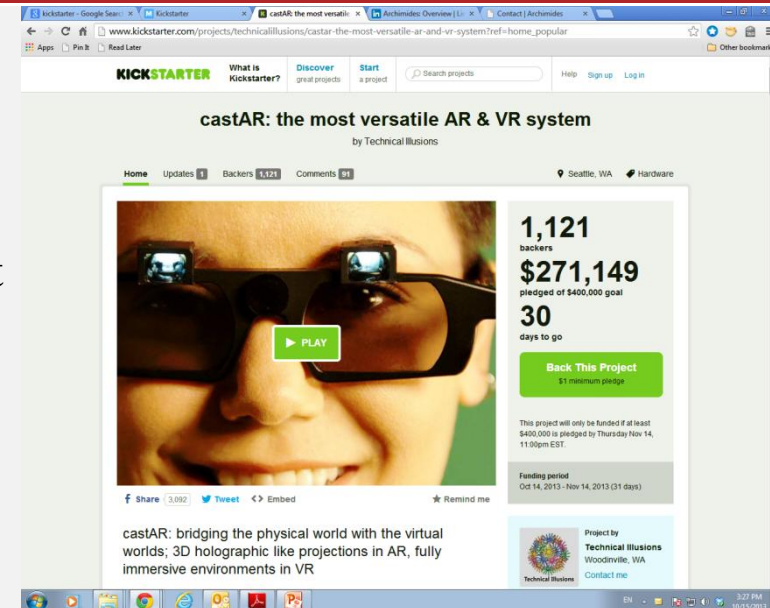
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Kickstarter Project By Technical Illusions

- **castAR: the most Versatile AR & VR System**
 - castAR is a projected augmented reality system that displays holographic-like 3D projections right in front of you.
- **Project by:** [Technical Illusions](http://www.technicalillusions.com) , Woodinville, WA
- **Funding Status** 1,122 backers **\$271,150** pledged of **\$400,000** goal (as of: 4/10/2014 10:42 AM)
 - This project will only be funded if at least \$400,000 is pledged by **Thursday Nov 14, 11:00pm EST**.
- 30 days to go / Funding period: Oct 14, 2013 - Nov 14, 2013 (31 days)

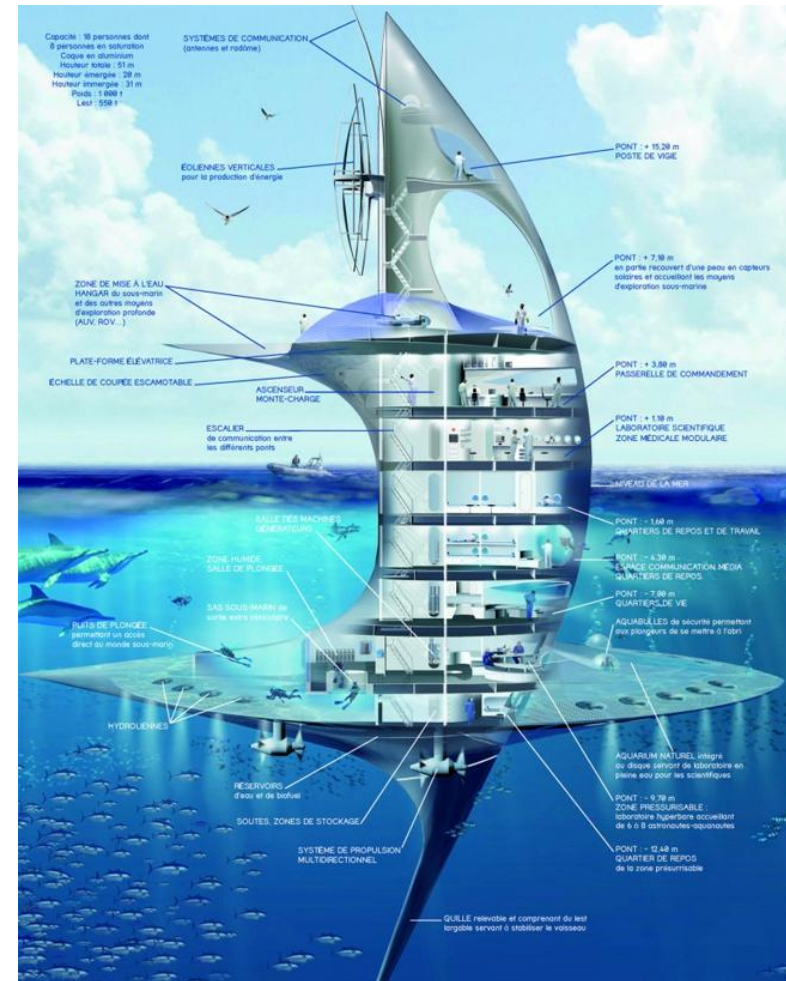
- **Reason for selection:**
 - **Futuristic Technology**



- **Link to Kickstarter:**
http://www.kickstarter.com/projects/technicalillusions/castar-the-most-versatile-ar-and-vr-system?ref=home_popular
- **Pledge Level:**
 - Pledge **\$60 or more** *** **MAGIC WAND** *** This input device is a single handed joystick that is fully tracked in 3D space. Interact in your virtual world natu... [view more](#)
 - Estimated delivery: **Sep 2014**
 - **Add \$60 USD** to ship outside the US

Crowd-funding Project r2014 Research Vessel

- **SeaOrbiter**, once dubbed a pipe dream, a massive oceanic research vessel designed by French architect **Jacques Rougerie**, is set to begin construction sometime during 2014.
- **Crowdsourcing For Science:** Sea Orbiter has been partially financed by a successful crowd-funding campaign!



Oculus Rift – From \$2.4 million Kickstarter project to \$2 billion sale

- **Facebook's** acquisition of **Oculus VR** on March 25, 2014 for **\$2 billion**, stunned the game industry.
- On August 1, 2012, Oculus Rift lands on Kickstarter. The Oculus exceeds its **\$250,000** funding goal **within 24 hours**, going on to raise over **\$2.4 million** by the end of its Kickstarter drive.



Who Innovates?

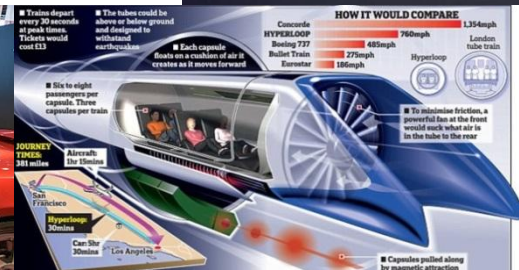
- What is the link between: **Paypal**, **Tesla** (luxury electric-car maker), **SolarCity** (solar energy firm), **SpaceX** (Space Exploration Technologies), & **Hyperloop** (a *subsonic air travel machine* with an average speed of just under **598 mph** (962 km/h), and a top speed of **760 mph** (1,220 km/h)?



Who Innovates?

- What is the link between: **Paypal**, **Tesla** (luxury electric-car maker), **SolarCity** (solar energy firm), **SpaceX** (Space Exploration Technologies), & **Hyperloop** (a *subsonic air travel machine* with an average speed of just under **598 mph** (962 km/h), and a top speed of **760 mph** (1,220 km/h)?

Elon Musk (born in South Africa, 28 June 1971) is an American business magnate, investor, and inventor. Musk's net worth **\$6.7 B** as of Sep. 2013 (#61 in Forbes 400 List)



Web 2.0 - Entrepreneur

- **Entrepreneur:**
A dynamic person who gets the right people together to make something happen



18 months & \$1.65B later...



Larry Page, Sergey Brin
(Google, IPO Aug. 20, 2004)

- ❑ Larry Page (President of Products at Google) has a net worth estimated at **18.5 billion** dollars (2007), making him the 5th richest person in the America together with Sergey Brin according to [Forbes'](#) annual list of billionaires of 2007.

Can We Teach Entrepreneurship?

Future of Engineering in the 21st Century

The Entrepreneurial / Enterprising Engineer of the 21st Century

- **Knows everything**
- **Can do anything**
- **Works with anybody anywhere**
- **Imagines and can make the imagination a reality**
 - has the entrepreneurial spirit, the imagination, and the managerial skills to identify needs, come up with new solutions, and see them through.

Future of Engineering Education

- The rapid changes occurring in the world necessitate an extensive **re-engineering of engineering education**





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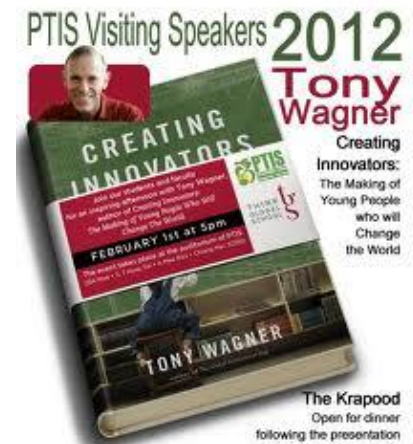
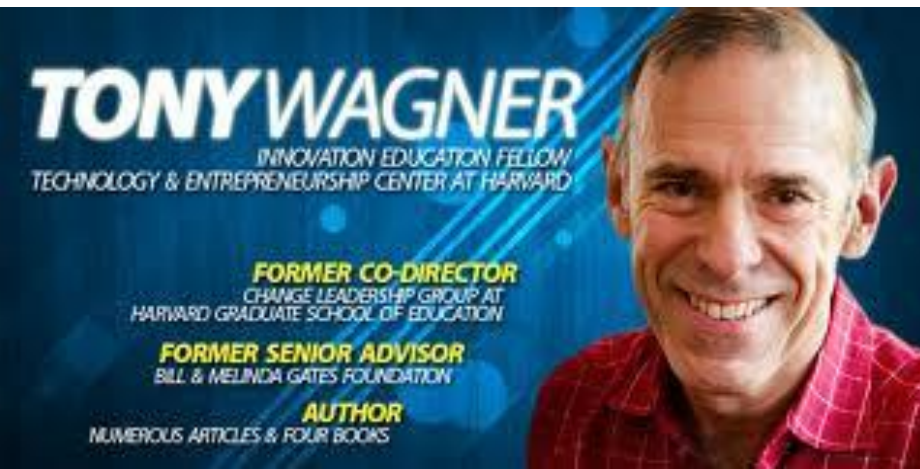
Need a Job? Invent it!

Thomas Friedman, NY Times, March 30, 2013

“Creating Innovators: The Making of Young People Who Will Change the World”

- **Tony Wagner** tony_wagner@harvard.edu
 - Co-Director of the **Change Leadership Group (CLG)** at the Harvard Graduate School of Education
 - **Innovation Education Fellow** at Harvard University
- What we must do to prepare students?
- How Finland became an education leader

- “The goal of education today is to make every student **“innovation ready”** – *ready to add value to whatever they do*”
- “Because knowledge is available on every internet connected device, **what you know** matters far less than **what you can do with what you know**.



EU Strategy 2020

- **Europe 2020** a 10-year strategy proposed by the European Commission on 3 March 2010 for advancement of the *economy of the European Union*.
 - It aims at "**smart, sustainable, inclusive growth**" with greater coordination of national and European policy.
- The EU 2020 strategy highlights the need to embed **creativity, innovation** and **entrepreneurship** into education and promotes actions to unleash Europe's entrepreneurial and innovative capabilities.

Objectives are to be reached through **entrepreneurship education**:

- Improvement of the entrepreneurship mindset of young people to enable them to be more creative and self-confident in whatever they undertake and to improve their attractiveness for employers.
- Encourage innovative business start-ups;
- Improvement of their role in society and the economy.

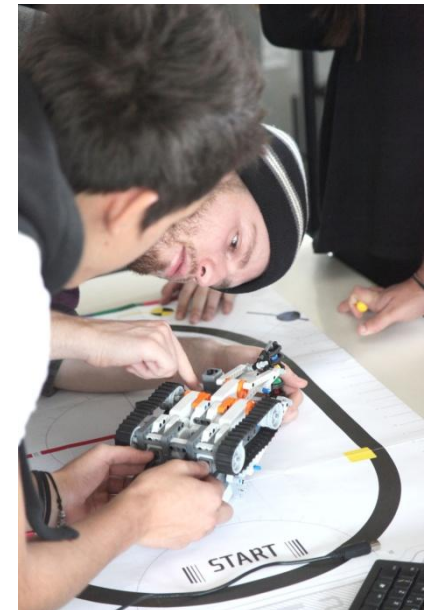
Athens Information Technology



- A leading technology institute that offers world-class **education & research**
- **Non-profit** organization founded by INTRACOM Group in **2002**
- Largest **privately funded** education research center in SE Europe

Academic Education

- **MSc** in Information and Telecommunications Technologies
- **MSc** in Management of Business, Innovation and Technology
- **PhD** in Telecommunications & Information Technologies
in collaboration with Aalborg University
- **Summer Schools**
Meet Your Future for High School students + parents
Technology, Innovation – Entrepreneurship
& Career Guidance



Innovation Related Activities at AIT (1/2)

- Academic Education
 - **MBIT** / MSc in “*Management of Business, Innovation & Technology*”
 - **MSITT** / MSc in Information and Telecommunications Technologies
- Frontier Research in: *Information Technology, Telecommunications & Innovation Management*
 - **€21.0M** (since establishment) as of Sep. 2013
 - RIE / Research in Innovation & Entrepreneurship
- Executive Education
 - Executive Training Programs in Leadership, Negotiation and Strategy in collaboration with: *Harvard Kennedy School of Government*
 - Certification in Product & Marketing Management, AIPMM
 - Professional and Corporate Training in emerging technologies
- Technology Transfer Office (TTO)

EU Running Projects

Ambient Assisted Living

AGNES

eLearning & Social Media

CAPTAINS

iSIMPLY

Image, Video Processing

SMART

ARGOS

MASELTOV

SAFECITY

PROACTIVE

Security, Sensors Situational Awareness of Critical Infrastructures

INMOTOS

Optical Communications Networks and Services

GEYSERS

COCONUT

NAVOLCHI

ASTRON

EUROFOS

CONTENT

ACCORDANCE

SOFI

CHRON

IoT & RFID Technology

openIoT

RFID-ROI-SME

Wireless Communications Cognitive Radio Antenna Design

HARP

HIATUS

SMARTEN

CROWN



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Management of Business, Innovation & Technology (MBIT) @ AIT

MSc program on Early Phase Entrepreneurship

Raw Ideas / Investigation / Development / Successful New Product / Launch

MBIT Curriculum			
Courses	Fall Semester	Spring Semester	Summer Semester
Core	Innovation Management & Entrepreneurship	Strategic Management	Graduate Project
	Accounting & Finance	Strategic Marketing of Services & Products	
Mandatory Executive Course		Harvard Executive Course on Negotiation	
Elective		Independent Research I	Independent Research II
	Market Perspective of the Information & Communications Technologies (ICT) Industry	Techno-Economic Value Analysis	Logistics & Supply Chain Management
	Systems Analysis & Design	Management of Information Systems, MIS	Project Management
	Regulatory Framework of the ICT Industry	e-Business	ICT Security
	Decision Making & Risk Analysis	Market Risk Management	Quality Management
			Human Resource Management & Organizational Behaviour

>>>>>>>>>>

**Innovation Mgt
Industry Dynamics**

>>>>>>>>>>

**Strategy
Business Model**

**Operational
Excellence**

Innovation Related Activities at AIT (2/2)

- **5th innoFORUM** “*The Art of Change: Innovating Our Way Out of the Crisis*”, May 31, 2013, AIT, Peania, Greece
- **1st Gaming Forum** “*Playing the Games of Tomorrow*” & Gaming Forum Arena, April 27-28, 2012, The HUB, Athens, Greece
- “**Sustainable Waste Management**”, July 1-5, 2013, AIT, Athens, Greece
- AIT – Supporter of **TEDx Athens Challenge 2011**
- AIT @ The Cube Athens





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Thank you!

Gregory S. Yovanof

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