

Technology and Change Perspective

**Andy
Fawkes**

14
November
2013

Outline

Defence Training Technology Trends



Innovation



The Future





THINKE



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Back to 2002

BBC
CATEGORIES TV RADIO COMMUNICATE WHERE I LIVE INDEX SEARCH

BBC NEWS

You are in: UK: England
Thursday, 24 January, 2002, 18:06 GMT

War simulator unveiled



Soldiers sit inside a replica tank to use the simulator

One of the largest war simulators in the world has been unveiled by high-ranking officers from the British Army.

The £290m unit, at the Warminster army barracks in Wiltshire, can recreate a tank battle involving 1,000 armoured vehicles in virtual reality.

The army hope the training simulator will give British troops the edge over any enemy in combat.

The combined arms tactical trainer, CATT, is also designed to reduce the massive costs of live military exercises.

Training 'watershed'

The simulator can reproduce vast sections of terrain from Salisbury Plain and other regions across Western Europe.

BBC Wiltshire
WHERE I LIVE >>

Internet links:

- The British Army
- Defence Procurement Agency

The BBC is not responsible for the content of external internet sites

Top England stories now:

- Tories attack Brixton drugs scheme
- Police shoot man on the M6
- Leanne killer jailed for life
- IVF mix-up heads for court
- Inquiry into warship accident
- Britain 'sheltering al-Qaeda leader'
- Venables named Leeds boss
- Transplant first for cancer patient

Links to more England stories are at the foot of the page.

BBC SPORT
BBC Weather

SERVICES

- Daily E-mail
- News Ticker
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- Help
- Low Graphics

BBC
CATEGORIES TV RADIO COMMUNICATE WHERE I LIVE INDEX SEARCH

BBC NEWS

You are in: Science/Nature
Thursday, 20 June, 2002, 13:58 GMT 14:58 UK

Troops in virtual combat



Up to eight soldiers can play together

The British Army is using a specially developed version of the celebrated computer game Half-Life to train its troops.

With the first-person shoot-em-up soldiers can try out new weapons and new tactics without encountering real bullets and bombs.

The Ministry of Defence hopes the system may help reinforce some of the lessons learned on more traditional training exercises.

Like the popular modification, or mod, of Half-Life known as Counterstrike, the army version allows up to eight soldiers to go into virtual combat at any one time.

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- Change to World

See also:

- 24 Jan 02 | England War simulator unveiled
- 23 May 02 | New Media US military reveals computer game
- 21 Dec 01 | Reviews Half-Life revives for new generation

Internet links:

- QinetiQ

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Top Science/Nature stories now:

- Date for first Australians
- Fifth closest star discovered
- Mona Lisa smile secrets revealed
- The gene that maketh man?
- Gravity wave detector all set
- Robots get cheeky
- The big and the bizarre
- Botox 'may cause new wrinkles'

Links to more Science/Nature stories are at the foot of the page.

Obviously, being killed in the virtual world isn't quite so serious
Major Bruce Pennell



Source - Wisconsin National Guard Public Affairs photo by Vaughn R. Larson



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Versatility of Modern Simulation Software



- Joint
 - E-Learning
 - Cultural Awareness & Language Training
 - Engineer Training
- Naval
 - Anti-Piracy & Boarding Operations Training
 - Maritime Submarine Training Capability
- Land
 - IED Training & Situational Awareness
 - Land Convoy Collective Training
 - Gunnery and Crew Training
 - Close Weapon Gunnery Training
 - Army Recruiting
- Air
 - Aviation Tactics Training
 - Fixed Wing Aviation Mission Training





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Royal Navy use PlayStations to train sailors

The Royal Navy has begun a programme to issue hand-held PlayStation computer consoles to sailors so they can study for tests in confined quarters.



Marine warfare engineering technicians were the first to receive the devices, and if proved useful they will be distributed around other personnel. Photo: GETTY

7:16AM GMT 27 Nov 2009

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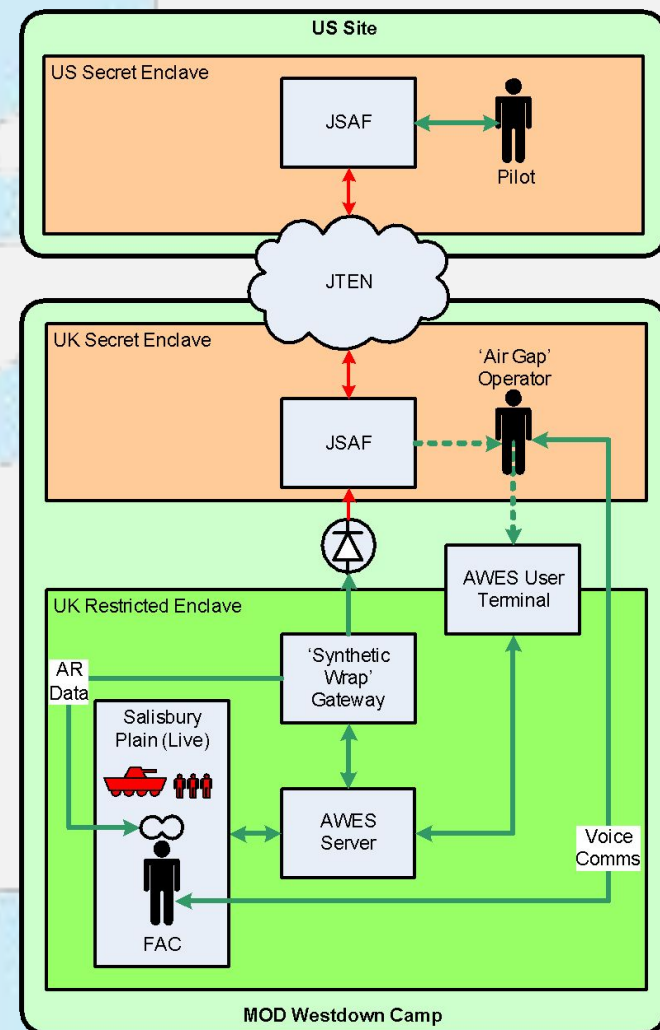
[In Politics](#)



Source - iPad in Real Life: Erik Hess, F-5N Tiger II Pilot

Augmented Reality – 2008

- US Pilot in Flight Simulator
- Transatlantic Connection
- UK Soldier on Salisbury Plain with Augmented Reality Sight
- Virtual Bombs landing on Real Terrain





VOGUE

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defence Learning Portal



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IMPORTANT INFORMATION

Cookies

By logging on to the Defence Learning Portal, you are authorising the implementation of cookies by all DLP services for use as outlined [HERE](#)

Privacy

It is important that Users accessing the DLP over the Internet from a shared device manually delete their Browsing Cache (i.e. Browsing History, Cookies and Temporary Internet Files) after logging out of a DLP Session.

The method for doing this will be dependant on both the Web Browser and version that is used.

Please use the hyperlinks below to navigate to the Support pages of the 4 most popular Web Browsers where you will find instructions on how to delete the Web Browsing Cache.

If you are not using one of the Browsers detailed below then it is recommended you search for the related Browser web page and navigate to the Support section.

[Internet Explorer](#) [Google Chrome](#) [Mozilla Firefox](#) [Opera](#)

Additional Security Note: - Users are advised NOT to choose the 'Remember Password' option should it exist on the Web Browser.



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DLP System Downtime

UsersOnline

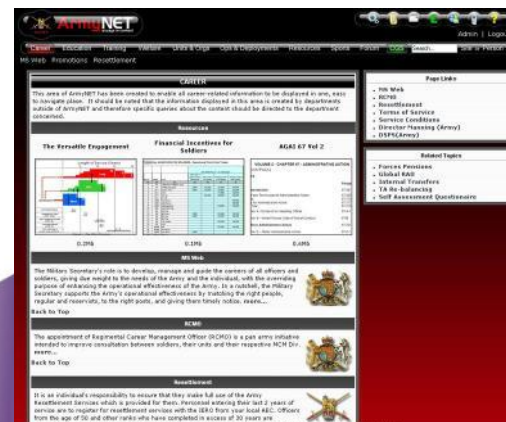


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Visitors: 105

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Total: 173



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Computers & Electronics

Apple Mac and Mobile Devices Support

Nicola Minichiello

If you need assistance to troubleshoot an issue with any Apple product you came to the right place. I can provide help with Apple Macs, iPhone, iPa...

★★★★★ 39

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Japanese 1

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CS: Software Engineering 30

CS: Systems & Security 21

CS: Theory 28

Economics & Finance 61

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with Robert Sedgewick
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with Rosemary Redfield
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with Kevin Wayne & Robert Sedgewick
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with Sian Bayne, Jeremy Knox, Hamish A. Macleod, Jen Ross & Christine Sinclair
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The Power of Markets
with Mark Zupan
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Technology and Societal Change



So
WHAT?

A Revolution

- Military Early Adopters
- Simulation and Beyond
- Digital Innovation





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London, United Kingdom

Founded Jun 7, 2013

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Our calendar

We're about:

Software Developers · New Technology · Web & Mobile development · Wearable Technologies · Web Development and Software Development · Internet Technology Professionals & Startups · google glass · smart glass

Organizers:

Aditya Kaul,

Jonathan Schipper, Moira L. Morrison

Contact

People in this Meetup are also in:

Google Glass and Wearables Hackathon

Export

Tell a friend

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Saturday, November 30, 2013

9:00 AM to 12:00 AM

google campus london

4-5 Bonhill Street, London EC2A 4BX, United Kingdom, london

(map)

The first ever Google Glass and Wearables Hackathon in London

Bringing together platforms like Google Glass and wearables - Smart Watches, Headbands, Wristbands and all kinds of wearables to create interesting possibilities and applications.

One of the best opportunities in London to come, play and hack applications for Google Glass and other wearables!

Agenda

9.00 am - Arrive, Team Grouping and Breakfast

10.00 am - Demos / Talks on developing for Glass and other wearables

11.00 am - Hack Starts

1.00 pm - Lunch

4.00 pm - Tea/Coffee

8.00 pm - Dinner

Will you attend?

Yes

No

10 attending

Aditya Kaul

ORGANIZER

EVENT HOST

Technology geek, strategy consulting and market research professional, interested in disruptive... more

Moira L. Morrison

CO-ORGANIZER

EVENT HOST

Hi I'm moira and I love google glass.

Jonathan Schipper

CO-ORGANIZER

EVENT HOST

Bio

Peter Swallow

software developer

John McM

I'm John and I work in one of the City banks as a tech project manager

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 Power Transforming Lives

BuffaloGrid

People living off-grid can now buy electricity simply by sending a text message. The BuffaloGrid "Hub" is a portable solar-powered device that charges phones and lights. The text pays for the char...

Team



PLAYIR

We've been working on the intersection between web and native technologies for the past year. Of which we developed a cutting edge technique to developer code updates in real-time across published app...

Team



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Technology - Simulation - Training

London, United Kingdom | Information Technology and Services

Current

Thinke Company Limited

Previous

UK Ministry of Defence, Royal Navy, Royal Corps of Naval Constructors

Education

Imperial College London

Improve your profile

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500+ connections

uk.linkedin.com/pub/andy-fawkes/49/bb6/897/

Contact Info

Activity

Share an update...

Andy Fawkes is now connected to [Sigve Hovda](#), Chief engineer and [Tiffany Poeppelman](#), Industrial-Organizational Scientist at Aptima, Inc.

1 day ago

Andy Fawkes has an updated profile (Expertise)

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Background



Summary

A Chartered Engineer with a keen interest in the role of digital technology in transforming organisations and society more generally, I work in business development and consultancy and am a regular speaker on simulation, training and technology.

People You May Know



Paul Wallace 2nd

DCCT UK Project Manager

Connect • 2







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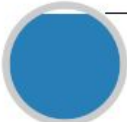
11

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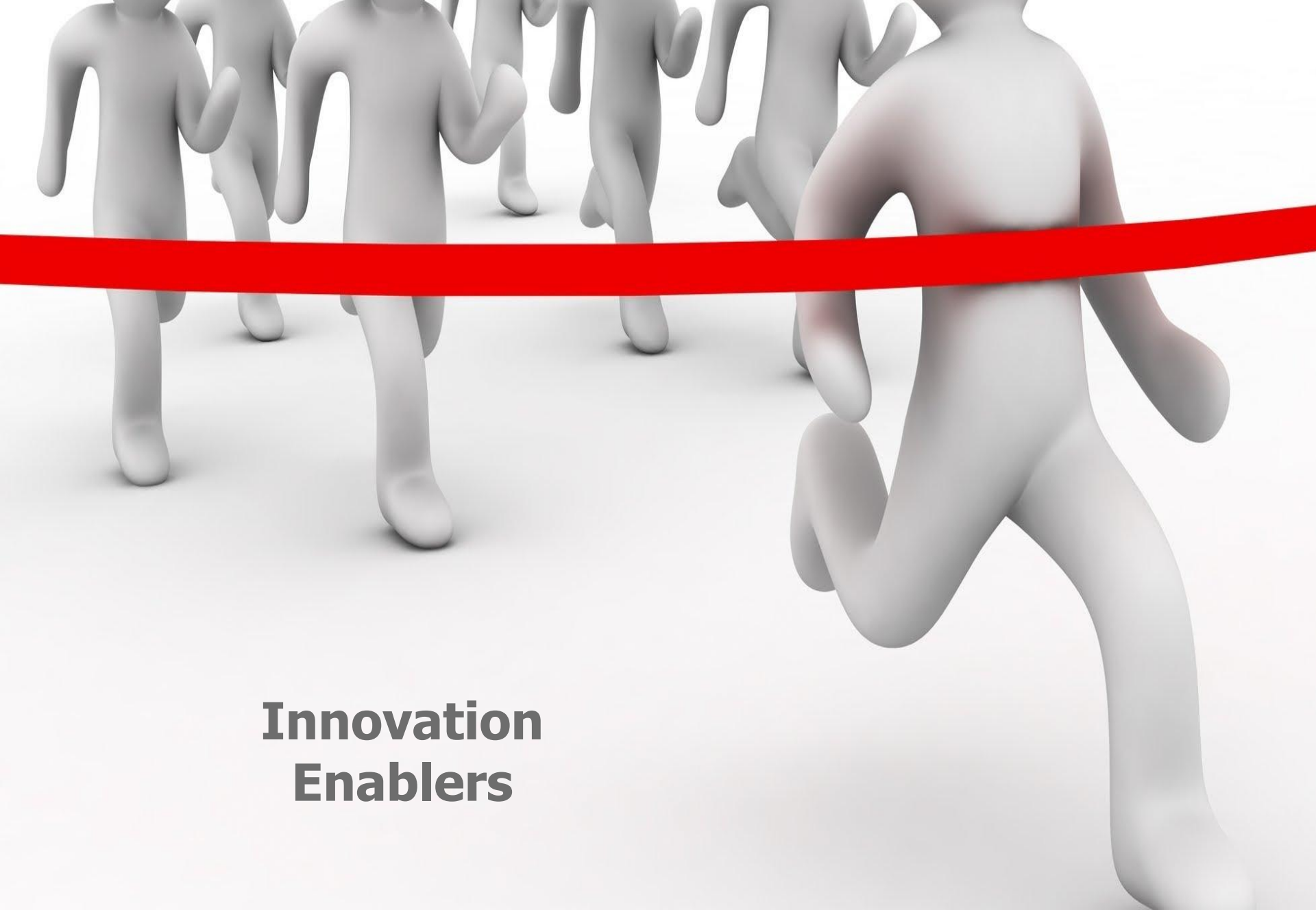
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STEM System: The Best Way to Interact with Virtual Worlds

by Sixense

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Funded! This project successfully raised its funding goal on Oct 12.

Five-Tracker Demo: STEM System Prototype



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Wireless, modular motion tracking system for the most natural and intuitive interaction with video games, virtual reality, and more.

2,383
backers
\$604,978
pledged of \$250,000 goal
0
seconds to go

Funding period
Sep 12, 2013 - Oct 12, 2013 (30 days)



Project by
Sixense
Los Gatos, CA
[Contact me](#)

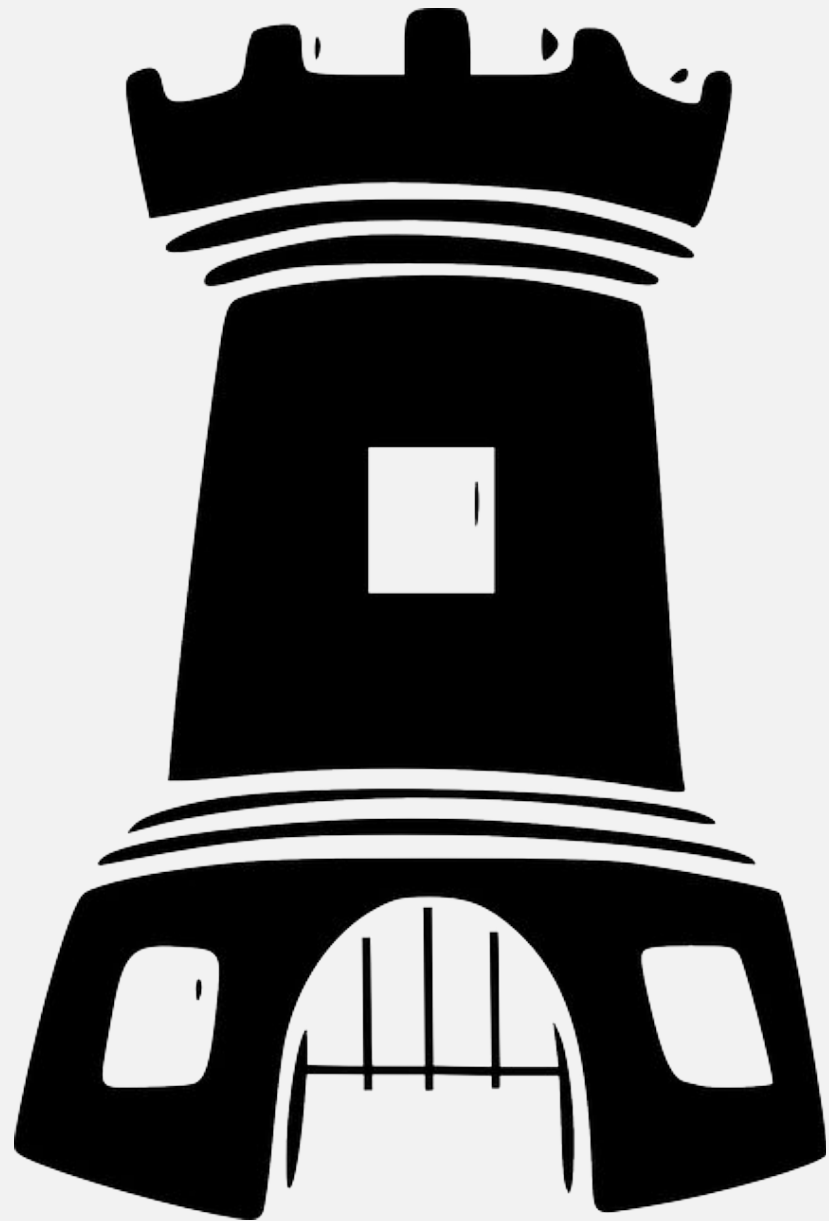
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Website: [sixense.com](#)

[See full bio](#)

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Technology Change



Organisational Realities



Time as a Resource



A green rectangular road sign with rounded corners and a white border, mounted on two wooden posts. The sign features the text "The Future" in a large, white, sans-serif font. The background of the image is a bright blue sky with scattered white clouds. The sign is tilted slightly upwards and to the right.

The Future

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Simulation ↔ Command and Control



Autonomy ↔ Simulation



Boston Dynamics

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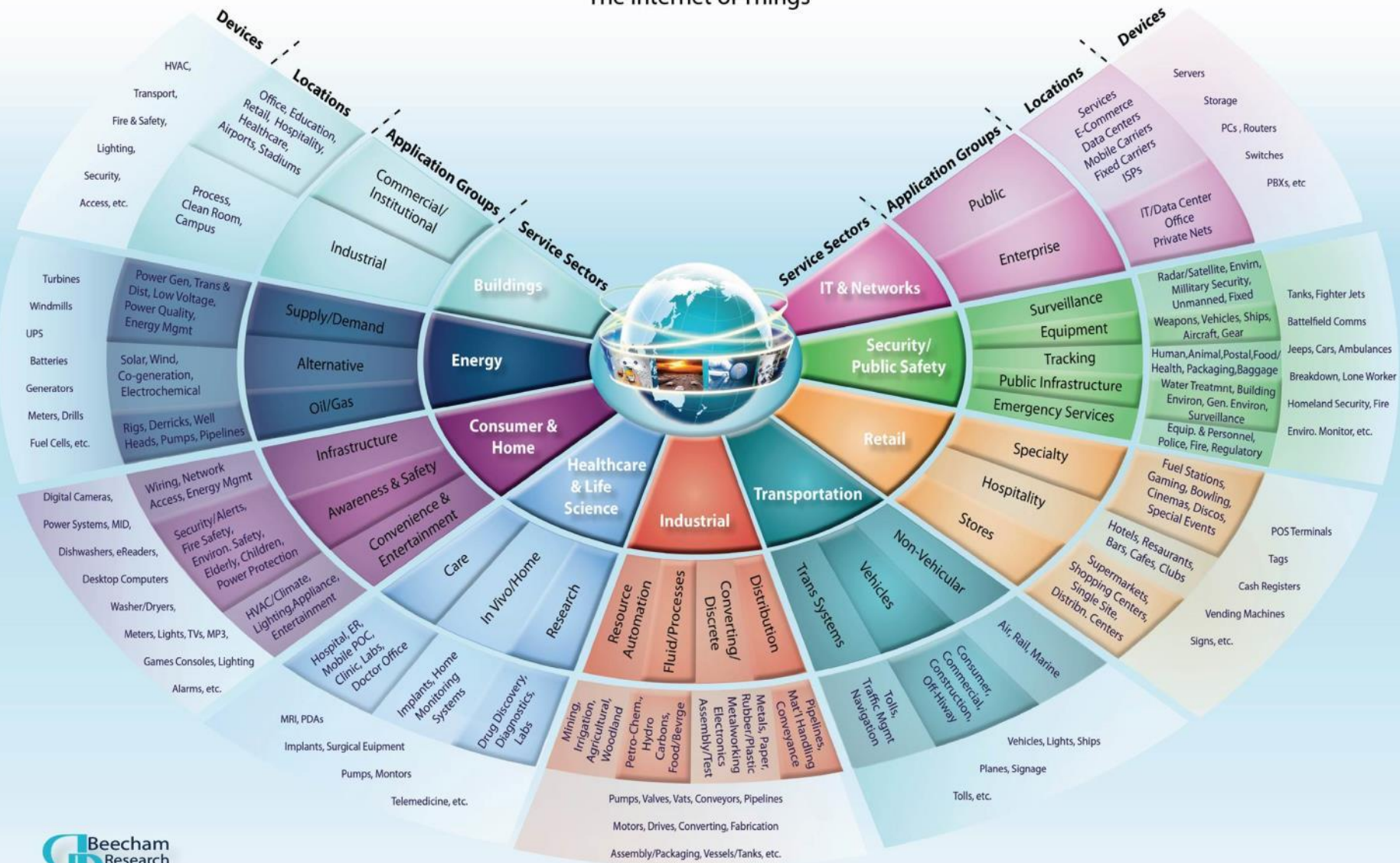
Autonomy ↔ Simulation





M2M World of Connected Services

The Internet of Things





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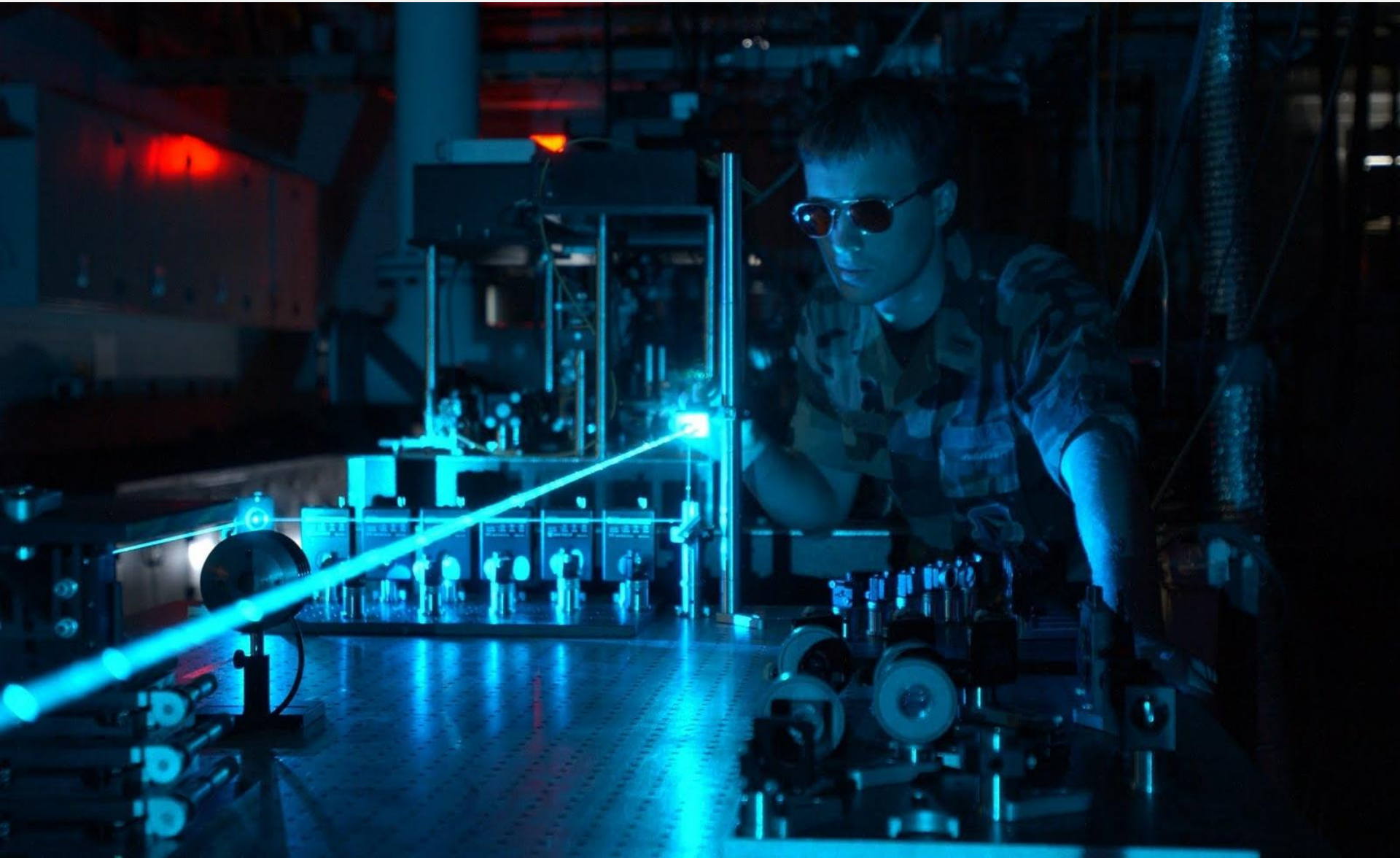
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Digital Revolution – A Golden Era for Training?

- learn
- discover
- practice
- explore
- collaborate
- connect
- test
- measure
- analyse



Carry out Trials with the User!





Questions

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