Projeto:
Os próximos 30 anos
apda

DISRUPÇÃO TECNOLÓGICA

The Good, the Bad and the Ugly

ANTÓNIO GRILO
Professor FCT NOVA, VP UNIDEMI
Lisboa, 23 e janeiro 2017

ONDA TECNOLÓGICA

Cloud Computing

Mobile Computing

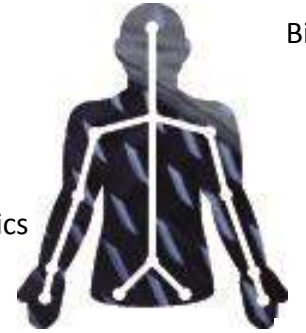
Artificial Inteligence

Internet of Things

3D Printing

Big Data

Genomics



Robotics

Clean technologies & renewable energies

Nanotechnology & new materials

Energy storage)

Autonomous Vehicles

TENSÕES EMERGENTES

VS

airbnb

VS

Hilton

VS

TESLA

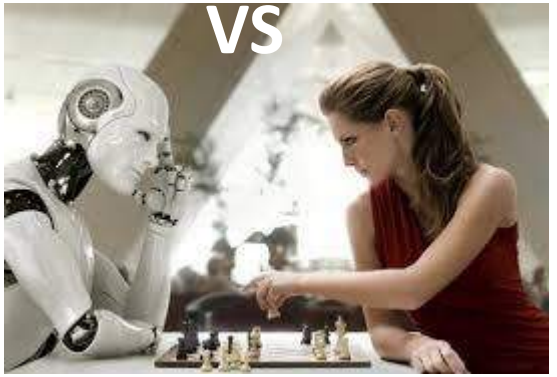
VS

Volkswagen

VS

Spotify

SONY



VS

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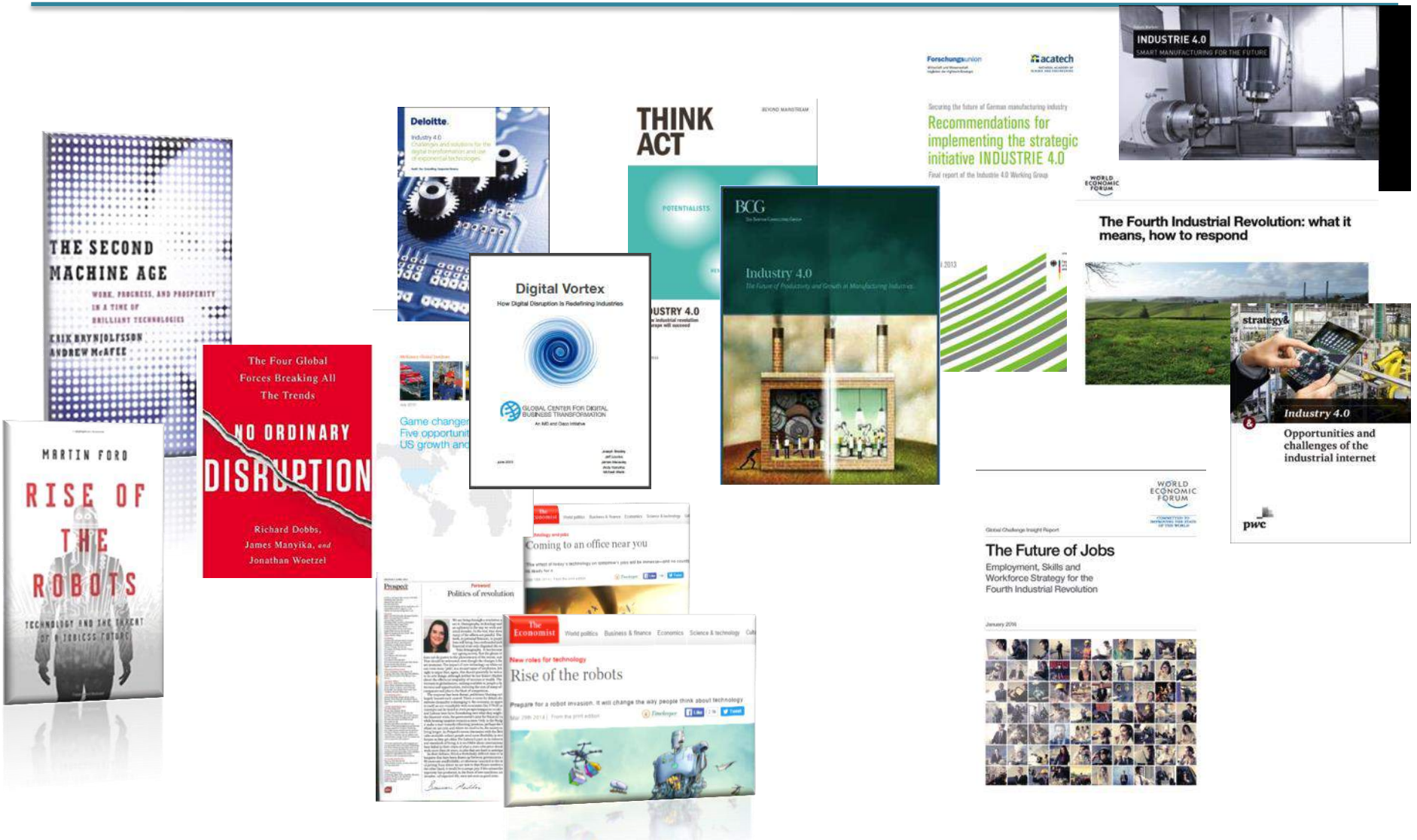
PREOCUPAÇÃO...



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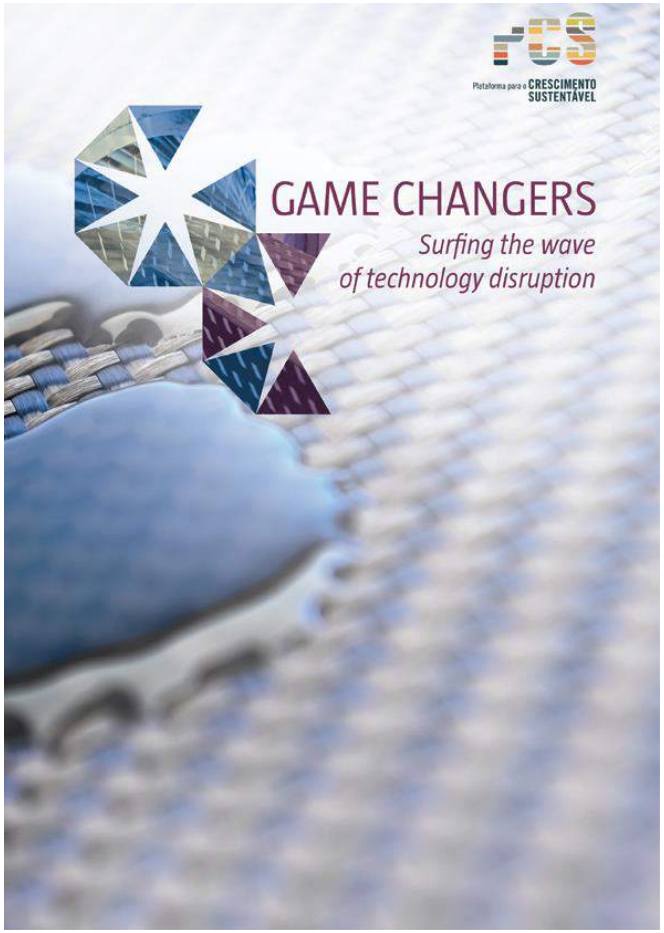
DIFERENTES PERSPETIVAS

COMPREENDER MELHOR



1. Is this Technology Wave for Real?
2. Disruptive Technologies
3. Catching the Wave
4. Learning T-Surf
5. Bridging the Gap: Fostering a Societal Cooperative Contract

The Good

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Em 30 Anos...

Realidade ficou LONGE da Ficção...

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Em 30 Anos...

Realidade MUITO PRÓXIMA da Ficção...

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Em 30 Anos...

Realidade IGUALOU a Ficção...

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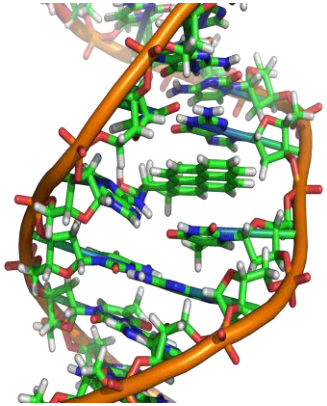
TECNOLOGIAS DISRUPTIVAS!?

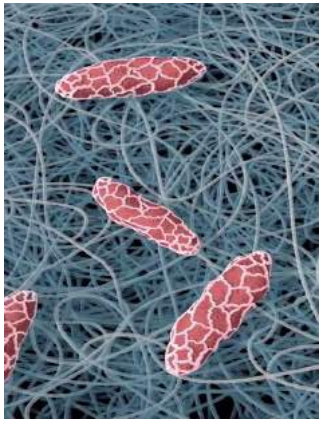
Digital

Robotics

Genomics



Advanced Materials



Energy

As verdadeiras tecnologias disruptivas estão a emergir no cruzamento de DIFERENTES ÁREAS DE CONHECIMENTO!

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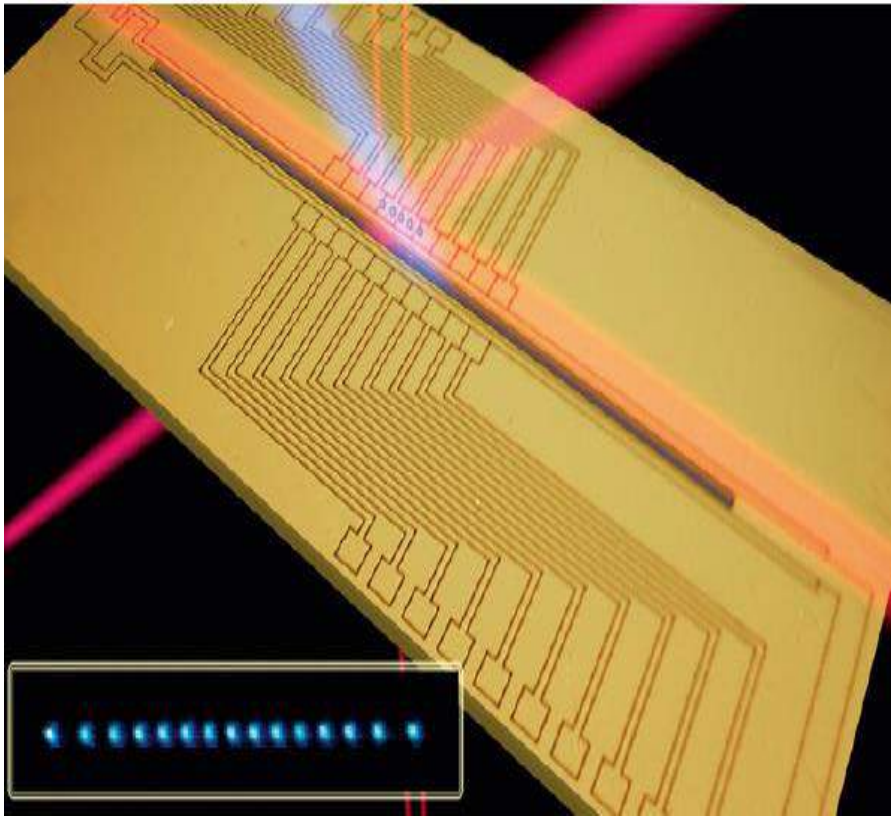
EXEMPLO: ROBOTS E SAÚDE

EXEMPLO: MATERIAIS E ROBOTS

EXEMPLO: MATERIAIS E DIGITAL



Quantum Computers

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INCRÍVEIS IMPACTOS POSITIVOS!

Mais Saúde

Maior Longevidade

Melhor Qualidade de Vida

Maior Transparência na Sociedade

Menor Criminalidade

Melhor Trabalho

Menor Poluição

The Bad

EMPREGOS...

6 MILHÕES DE EMPREGOS EM CAUSA...

MUITO DO DESEMPREGO SERÁ QUALIFICADO...

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AUTOMAÇÃO E EMPREGOS...

MAS NO EMPREGO MUITO QUALIFICADO É NOVIDADE...

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International Business

UK World Business Politics Fintech Technology Science Sport Entertain

Technology Innovation

IBM's Watson cracks medical mystery with life-saving diagnosis for patient who baffled doctors

The super-computer powered by artificial intelligence prescribes leukemia treatment within minutes.

By James Billington

August 8, 2016 18:40 BST

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"CREATIVE DESTRUCTION"...

COM MELHORES CONDIÇÕES DE TRABALHO

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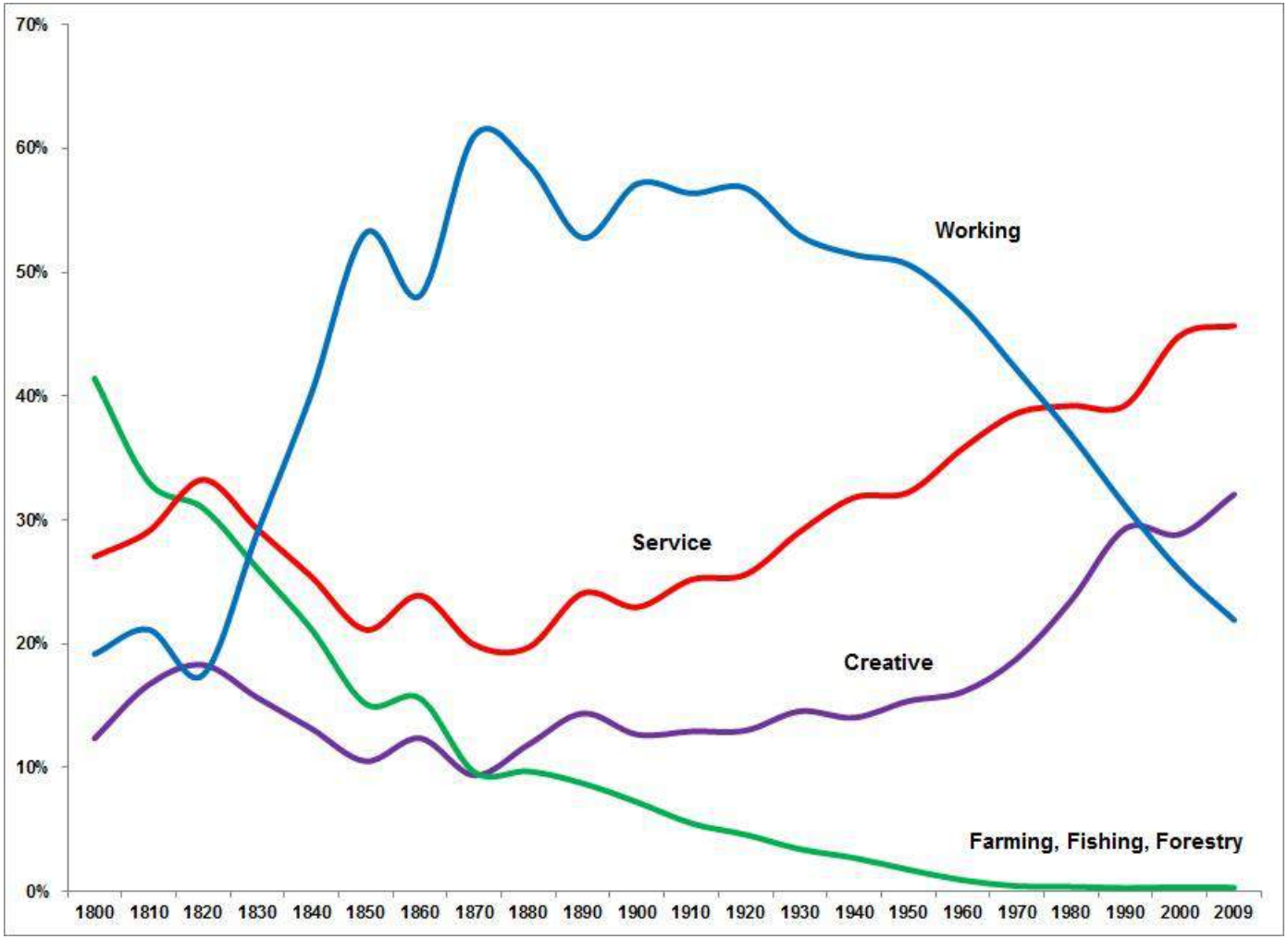
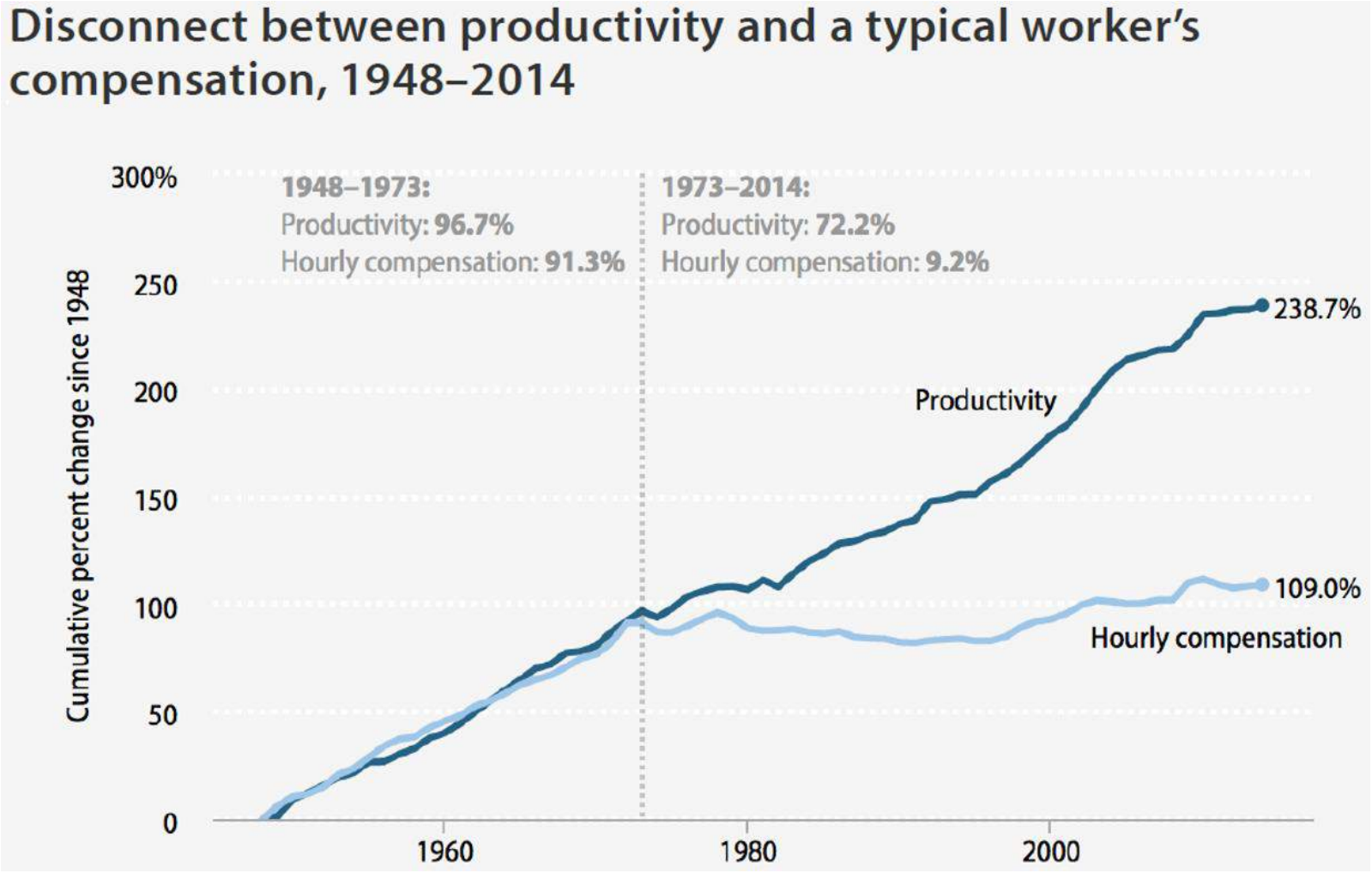
O PERFIL DO TRABALHO MUDOU DRÁSTICAMENTE



by Richard Florida, University of Toronto (2012)

PRODUTIVIDADE E RENDIMENTO DO TRABALHO



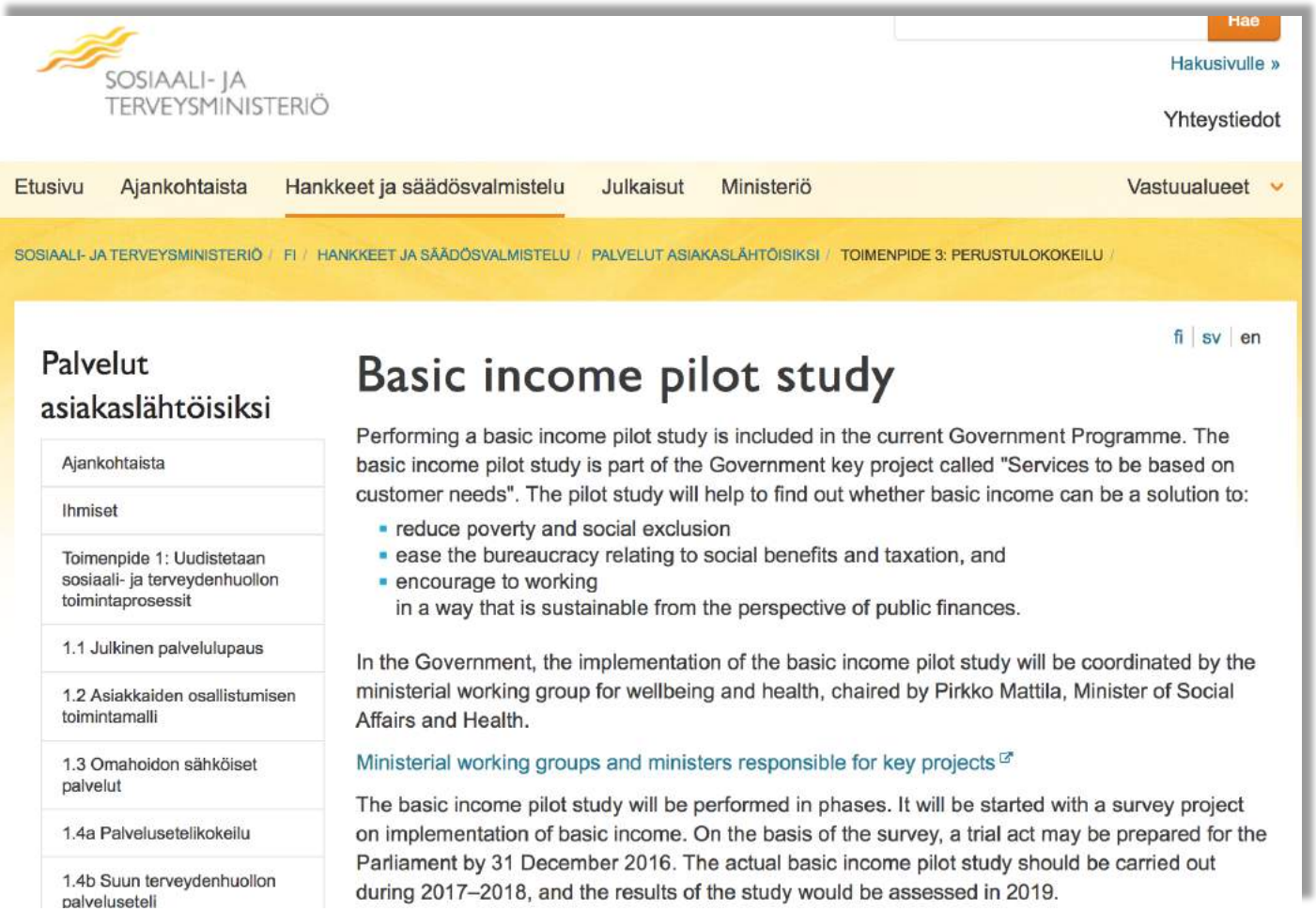
by Simon Taylor, Director of the University of Cambridge (2015)

RENDIMENTO MÍNIMO...

"THERE IS A PRETTY GOOD CHANCE WE END UP WITH A UNIVERSAL BASIC INCOME, OR SOMETHING LIKE THAT, DUE TO AUTOMATION."

-Elon Musk, Founder and CEO of SolarCity, Tesla, and SpaceX

RENDIMENTO MÍNIMO...



SOSIAALI- JA TERVEYSMINISTERIÖ

Hae

Hakusivulle »

Yhteystiedot

Etusivu | Ajankohtaista | Hankkeet ja säädösvalmistelu | Julkaisut | Ministeriö | Vastuualueet

SOSIAALI- JA TERVEYSMINISTERIÖ / FI / HANKKEET JA SÄÄDÖSVALMISTELU / PALVELUT ASIAKASLÄHTÖISIKSI / TOIMENPIDE 3: PERUSTULOKOKEILU /

fi | sv | en

Palvelut asiakaslähtöisiksi

- Ajankohtaista
- Ihmiset
- Toimenpide 1: Uudistetaan sosiaali- ja terveydenhuollon toimintaprosessit
- 1.1 Julkinen palvelulupaus
- 1.2 Asiakkaiden osallistumisen toimintamalli
- 1.3 Omahoidon sähköiset palvelut
- 1.4a Palvelusetelikokeilu
- 1.4b Suun terveydenhuollon palveluseteli

Basic income pilot study

Performing a basic income pilot study is included in the current Government Programme. The basic income pilot study is part of the Government key project called "Services to be based on customer needs". The pilot study will help to find out whether basic income can be a solution to:

- reduce poverty and social exclusion
- ease the bureaucracy relating to social benefits and taxation, and
- encourage to working

in a way that is sustainable from the perspective of public finances.

In the Government, the implementation of the basic income pilot study will be coordinated by the ministerial working group for wellbeing and health, chaired by Pirkko Mattila, Minister of Social Affairs and Health.

Ministerial working groups and ministers responsible for key projects

The basic income pilot study will be performed in phases. It will be started with a survey project on implementation of basic income. On the basis of the survey, a trial act may be prepared for the Parliament by 31 December 2016. The actual basic income pilot study should be carried out during 2017–2018, and the results of the study would be assessed in 2019.

The Ugly

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CONFIANÇA E SEGURANÇA

CIBER(IN)SEGURANÇA

Obama Order Sped Up Wave of Cyberattacks Against Iran

By DAVID E. SANGER JUNE 1, 2012

WASHINGTON — From his first months in office, President Obama secretly ordered increasingly sophisticated attacks on the computer systems that run Iran's main nuclear enrichment facilities, significantly expanding America's first sustained use of cyberweapons, according to participants in the program.

Mr. Obama decided to accelerate the attacks — begun in the Bush administration and code-named Olympic Games — even after an element of the program accidentally became public in the summer of 2010 because of a programming error that allowed it to escape Iran's Natanz plant and sent it around the world on the Internet. Computer security experts who began studying the worm, which had been developed by the United States and Israel, gave it a name: Stuxnet.

RELATED COV

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Iranian Oil

APRIL 23, 2012

"Stuxnet worm entered Iran's nuclear facilities through hacked suppliers"

CIBER(IN)SEGURANÇA

ANDY GREENBERG SECURITY 09.22.16 12:15 PM

HACK BRIEF: YAHOO BREACH HITS HALF A *BILLION* USERS

167 million LinkedIn accounts and, in the following week, 360 million emails and passwords for MySpace users.

CIBER(IN)SEGURANÇA

21st Century Oncology

A cancer care provider, announced that a data breach had exposed the information of 2.2 million patients based across all 50 states and internationally. Hackers broke into a company database in October, the company said, accessing personal information of patients, including names, Social Security numbers, physician names, diagnosis, treatment data and insurance information.

CENTENE® Corporation

950,000 members had potentially been impacted by a data breach. The breach was caused by the loss of six hard drives that included personal health information on members who had had lab services between 2009 and 2015. It also included names, addresses, dates of birth, Social Security numbers, ID numbers and other health information

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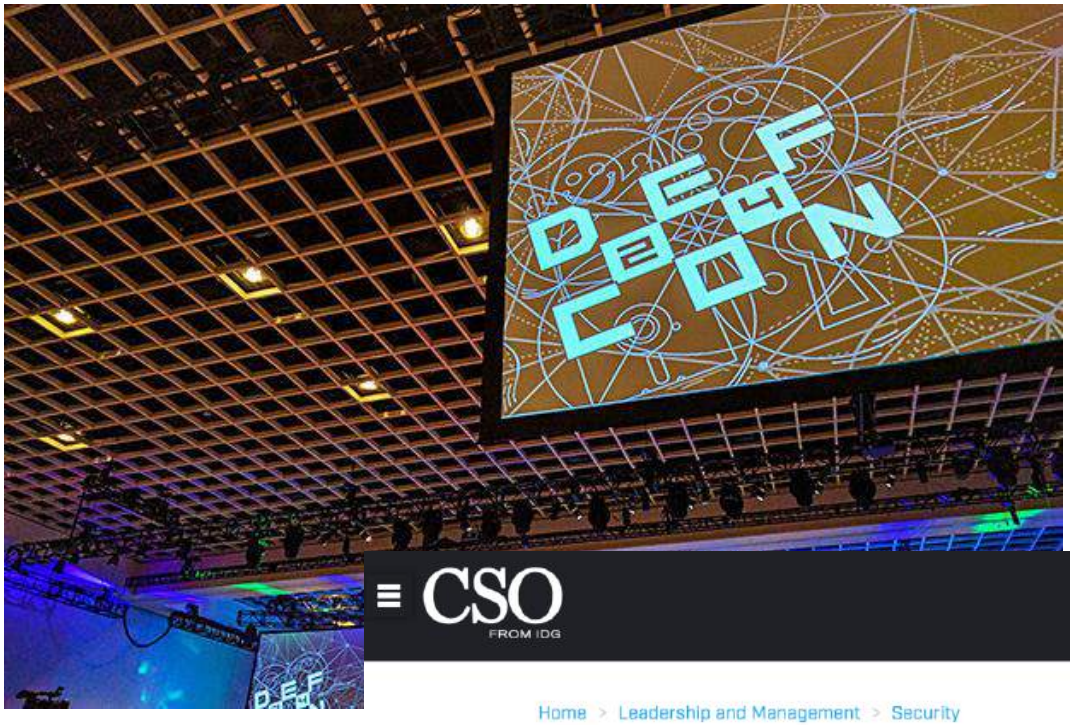

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NEWS

Hackers found 47 new vulnerabilities in 23 IoT devices at DEF CON

The results from this year's IoT hacking contest are in and it's not a pretty picture

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Hackers used 'internet of things' devices to cause Friday's massive DDoS cyberattack

Hackers say the attacks, which affected major sites like Twitter, Netflix and PayPal, were just a dry run

The Associated Press Posted: Oct 22, 2016 3:52 PM ET | Last Updated: Oct 22, 2016 4:15 PM ET

Friday's DDoS attackers now have a secret weapon in the increasing array of internet-enabled household devices they can subvert and use to wreak havoc. (Kacper Pempel/Reuters)

CBCnews | Technology & Science

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Major cyberattack knocks Twitter, Paypal, Spotify offline Friday

Not yet clear who is responsible for attack, but FBI is investigating

Thomson Reuters Posted: Oct 21, 2016 9:53 AM ET | Last Updated: Oct 21, 2016 5:39 PM ET

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EXCLUSIVE NEWS DEC 15 2016, 7:43 AM ET

U.S. Officials: Putin Personally Involved in U.S. Election Hack

by WILLIAM M. ARKIN, KEN DILANIAN and CYNTHIA MCFADDEN

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Background to "Assessing Russian Activities and Intentions in Recent US Elections": The Analytic Process and Cyber Incident Attribution

6 January 2017

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DATA CENTRE SOFTWARE SECURITY TRANSFORMATION DEVOPS BUSINESS PERSONAL TECH SCIEN(

Water treatment plant hacked, chemical mix changed for tap supplies

Well, that's just a little scary

24 Mar 2016 at 12:19, John Leyden

Hackers infiltrated a water utility's control system and changed the levels of chemicals being used to treat tap water, we're told.

The cyber-attack is documented in this month's IT security breach report (available here, registration required) from Verizon Security Solutions. The utility in question is referred to using a pseudonym, Kemuri Water Company, and its location is not revealed.

A "hacktivist" group with ties to Syria compromised Kemuri Water Company's computers after exploiting unpatched web vulnerabilities in its internet-facing customer payment portal, it is reported.

The hack – which involved SQL injection and phishing – exposed KWC's ageing AS/400-based operational control system because login credentials for the AS/400 were stored on the front-end web server. This system, which was connected to the internet, managed programmable logic controllers (PLCs) that regulated valves and ducts that controlled the flow of water and chemicals used to treat it through the system. Many critical IT and operational technology functions ran on a single AS400 system, a team of computer forensic experts from Verizon subsequently concluded.

> **Our endpoint forensic analysis revealed a linkage with the recent pattern of unauthorised crossover. Using the same credentials found on the payment app webserver, the threat actors were able to interface with the water district's valve and flow control application, also running on the AS400 system. We also discovered four separate connections over a 60-day period, leading right up to our assessment.**
> **During these connections, the threat actors modified application settings with little apparent knowledge of how the flow control system worked. In at least two instances, they managed to manipulate the system to alter the amount of chemicals that went into the water supply and thus handicap water treatment and production capabilities so that the recovery time to**

IMPACTOS DESCONHECIDOS

Science News *from research organizations*

Nanoparticles in polluted air, smoke & nanotechnology products have serious impact on health

Date: June 11, 2012

Source: Trinity College Dublin

Summary: New groundbreaking research has found that exposure to nanoparticles can have a serious impact on health, linking it to rheumatoid arthritis and the development of other serious autoimmune diseases. The findings have health and safety implications for the manufacture, use and ultimate disposal of nanotechnology products and materials. They also identified new cellular targets for the development of potential drug therapies in combating the development of autoimmune diseases.

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RELATED TOPICS

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- Graphene

Earth & Climate
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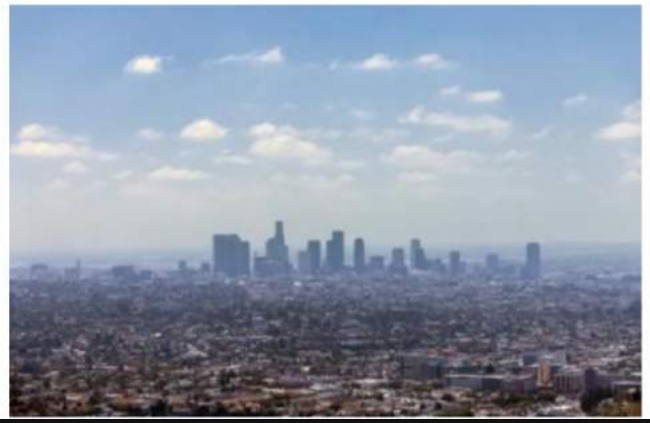
FULL STORY



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Technion - Israel Institute of Technology > Archive @en > Exposure to nanoparticles may threaten heart health

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13/01/2015

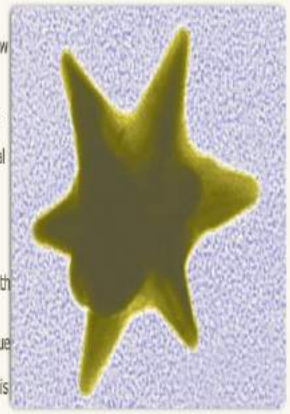
Exposure to nanoparticles may threaten heart health

Technion-Israel Institute of Technology research shows for first time inhaled nanoparticles of silicon dioxide increase risk of atherosclerosis; laboratory, manufacturing workers may be at greatest risk.

Nanoparticles, extremely tiny particles measured in billionths of a meter, are increasingly everywhere, and especially in biomedical products. Their toxicity has been researched in general terms, but now a team of Israeli scientists has for the first time found that exposure nanoparticles (NPs) of silicon dioxide (SiO_2) can play a major role in the development of cardiovascular diseases when the NP cross tissue and cellular barriers and also find their way into the circulatory system.Their study, published in the December issue of Environmental Toxicology, can be found on-line at http://onlinelibrary.wiley.com/doi/10.1002/tox.22084/abstract.

The research team was comprised of scientists from the Technion Rappaport Faculty of Medicine, Rambam Medical Center, and the Center of Excellence in Exposure Science and Environmental Health (TCEEH).

"Environmental exposure to nanoparticles is becoming unavoidable due to the rapid expansion of nanotechnology," says the study's lead author, Prof. Michael Aviram, of the Technion Faculty of Medicine, "This exposure may be especially chronic for those employed in research laboratories and in high tech industry where workers handle, manufacture, use and dispose of nanoparticles. Products that use silica-based nanoparticles for biomedical uses, such as various chips,



Transmission electron microscope (TEM) image of a star-shaped nanoparticle

QUESTÕES ÉTICAS E MORAIS

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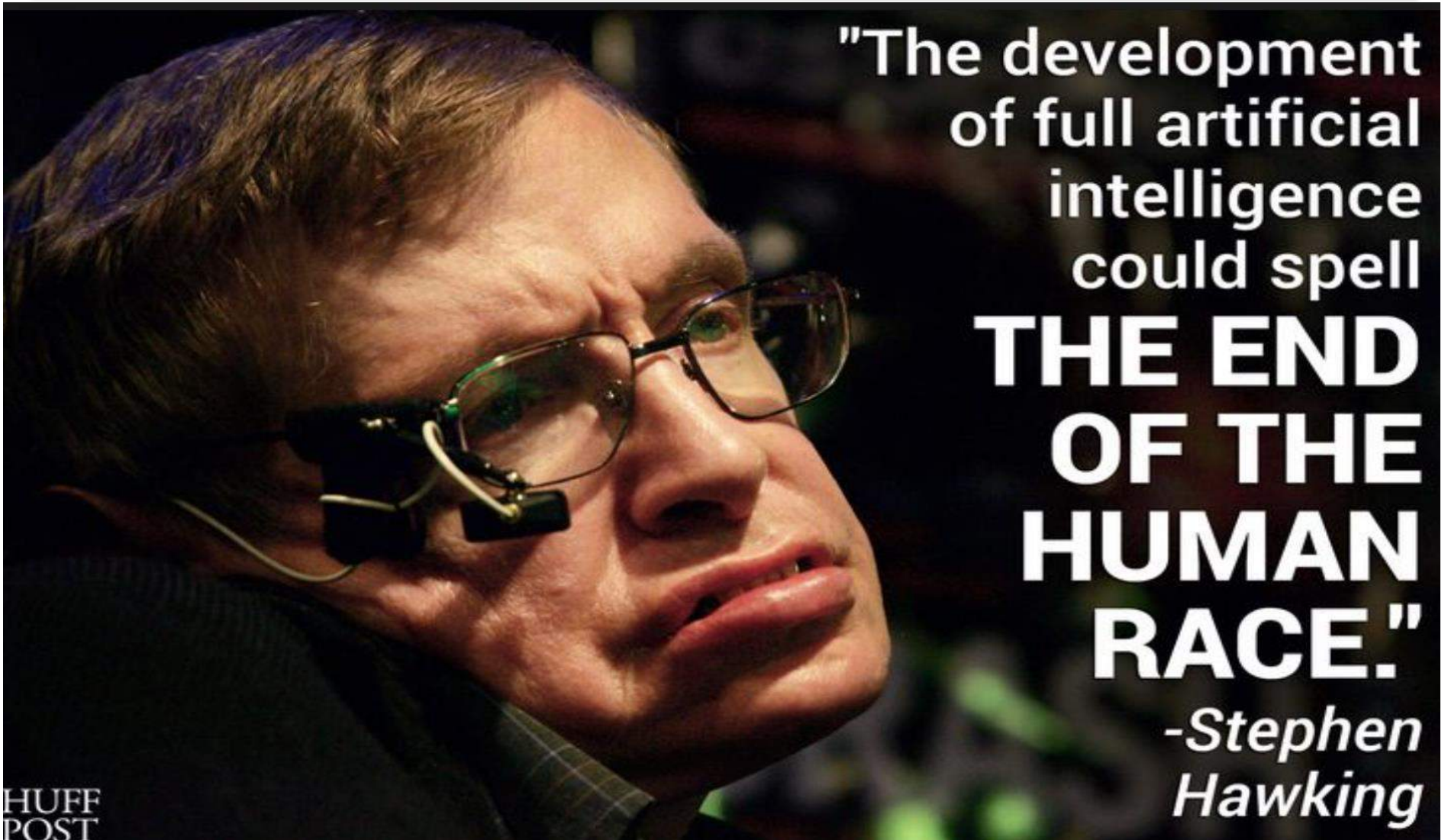

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Q & A