

TEDx Ambassador for Brazil
TEDx Porto Alegre Organizer
TEDx Unisinos

Photo: Gustavo Zilles and Fábio Mariot


PREPARE
TO
STOP

NESSA MESMA ÉPOCA,

O ÚNICO BRINQUEDO DISPONÍVEL ERA ESSE





2TV + R

Chart 1: Media use across the decades

1930s

Popular media platforms: Movies, print, radio

1950s

Popular media platforms: Movies, print, radio, television

1960s

Popular media platforms: Movies, print, radio, television

1970s

Popular media platforms: Movies, print, radio, television, cable television, arcade video games

1980s

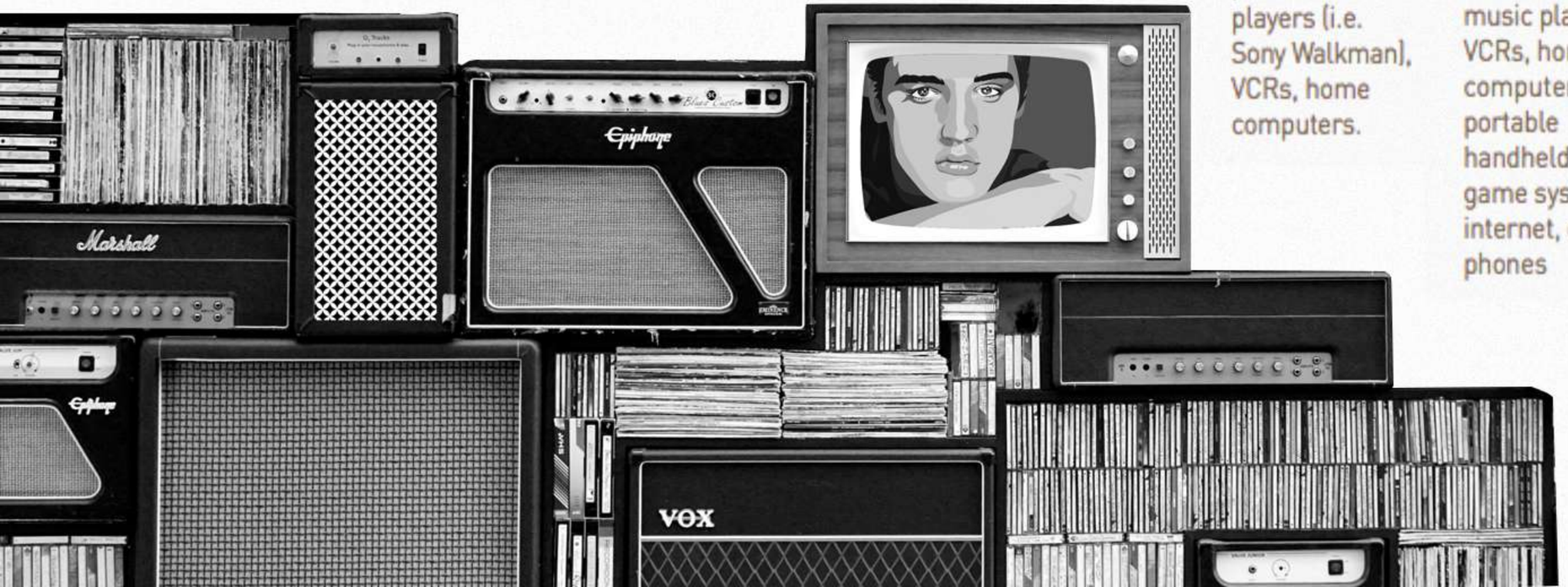
Popular media platforms: Movies, print, radio, television, cable television, home video game consoles, portable music players (i.e. Sony Walkman), VCRs, home computers.

1990s

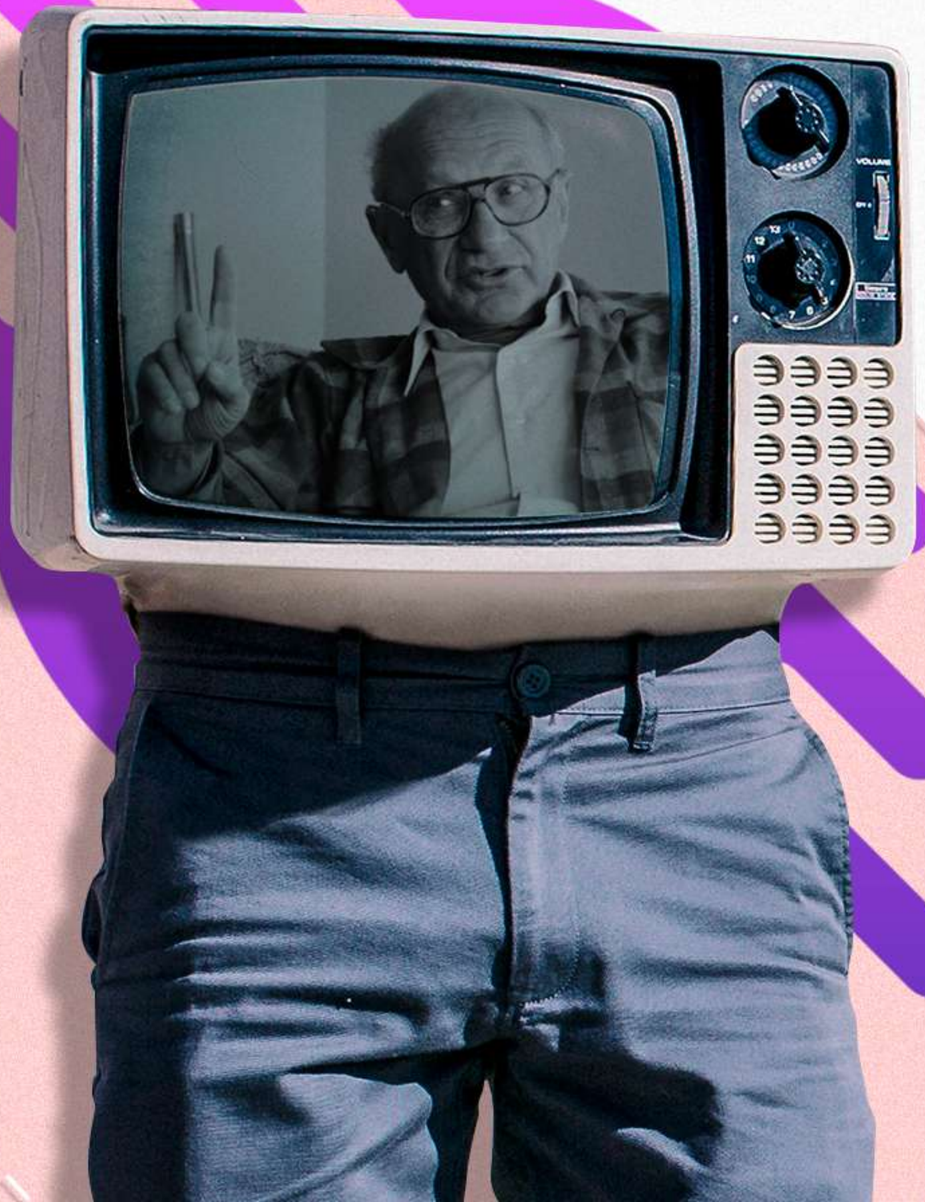
Popular media platforms: Movies, print, radio, television, cable television, home video game consoles, portable music players, VCRs, home computers, portable handheld video game systems, internet, cell phones

2000s

Popular media platforms: Movies, print, radio, television, cable television, home video game consoles, portable music players, DVDs, home computers, portable handheld video game systems, internet, cell phones, MP3 players, DVRs, electronic interactive toys, internet-connected smart phones, tablet computers



http://www.joanganzcooneycenter.org/wp-content/uploads/2011/03/jgcc_alwaysconnected.pdf



2017

Segundo Friedman vivemos o tempo da aceleração, embasada em 3 mudanças:

Globalização (mercado)

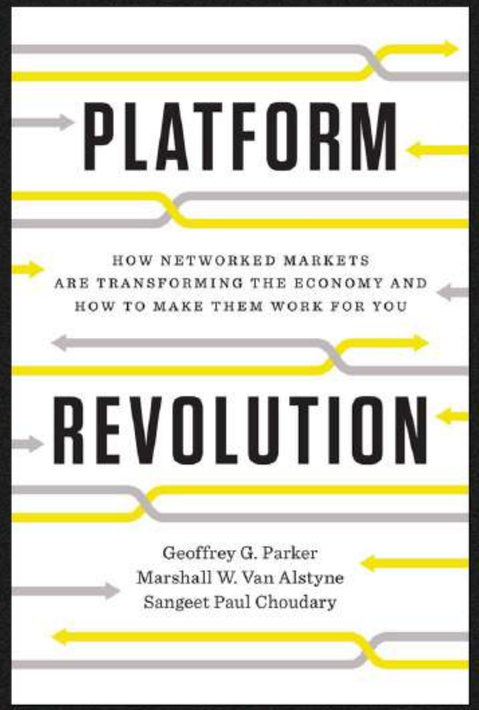
Climáticas

Tecnológicas (lei de Moore – capacidade de processamento dos microchips dobra a cada 2 anos)

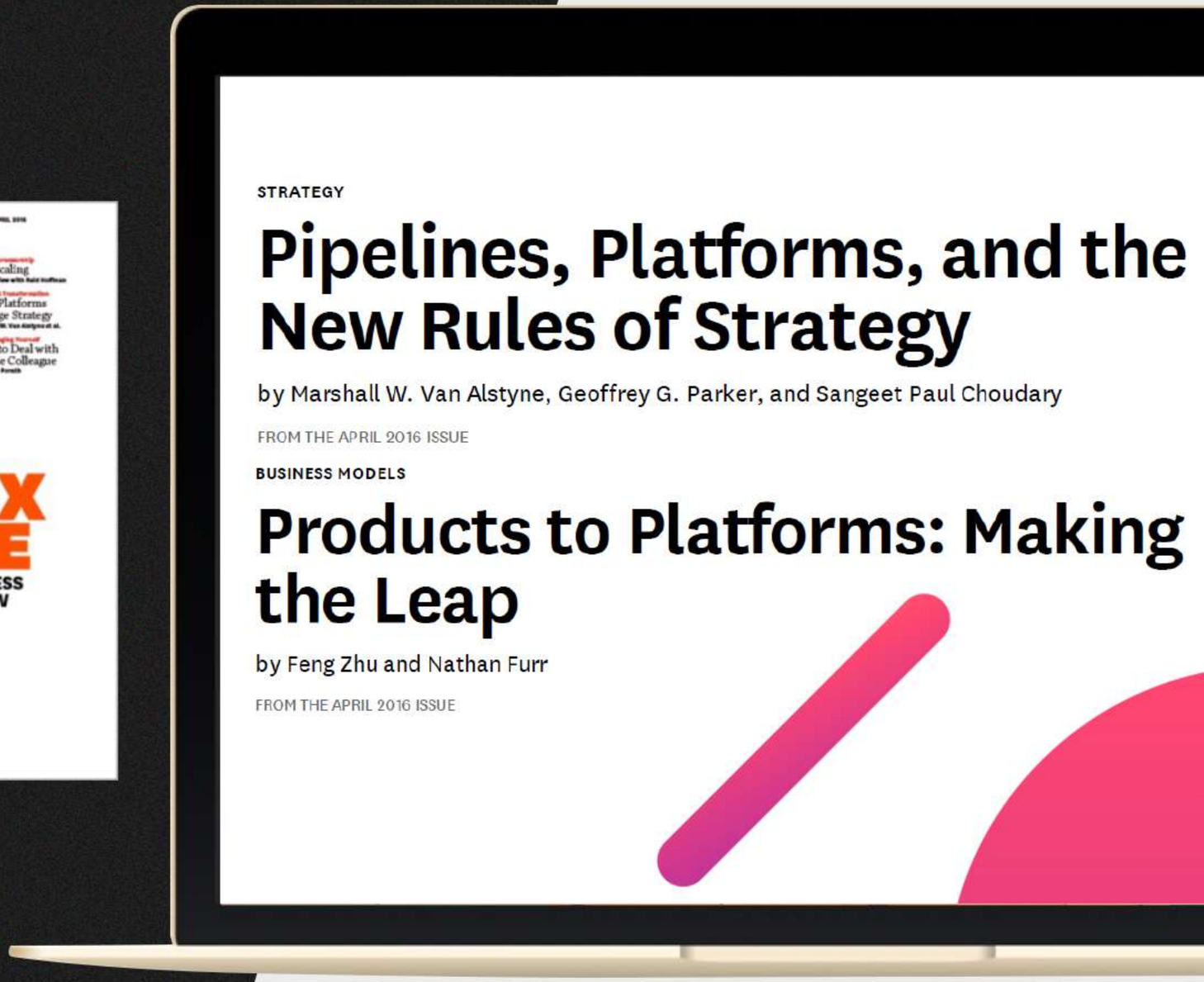
Lei de Moore aplicada aos carros:



Um Fusca da decada de 70 viajaria hoje a 300.000 milhas por hora, custaria poucos centavos e usaria um tanque de gasolina em toda sua história


PLATFORM
HOW NETWORKED MARKETS ARE TRANSFORMING THE ECONOMY AND HOW TO MAKE THEM WORK FOR YOU
REVOLUTION
Geoffrey G. Parker
Marshall W. Van Alstyne
Sangeet Paul Choudary


Harvard Business Review
APRIL 2016
Blitzscaling
How Platforms Change Strategy
How to Deal with a Rude Colleague
PAGE 96
YOU CAN'T FIX CULTURE
JUST FOCUS ON YOUR BUSINESS AND THE REST WILL FOLLOW


STRATEGY
Pipelines, Platforms, and the New Rules of Strategy
by Marshall W. Van Alstyne, Geoffrey G. Parker, and Sangeet Paul Choudary
FROM THE APRIL 2016 ISSUE
BUSINESS MODELS
Products to Platforms: Making the Leap
by Feng Zhu and Nathan Furr
FROM THE APRIL 2016 ISSUE



James L. Adams – Conceptual Blockbusting, 1974

Profissões tradicionais e as novas profissões

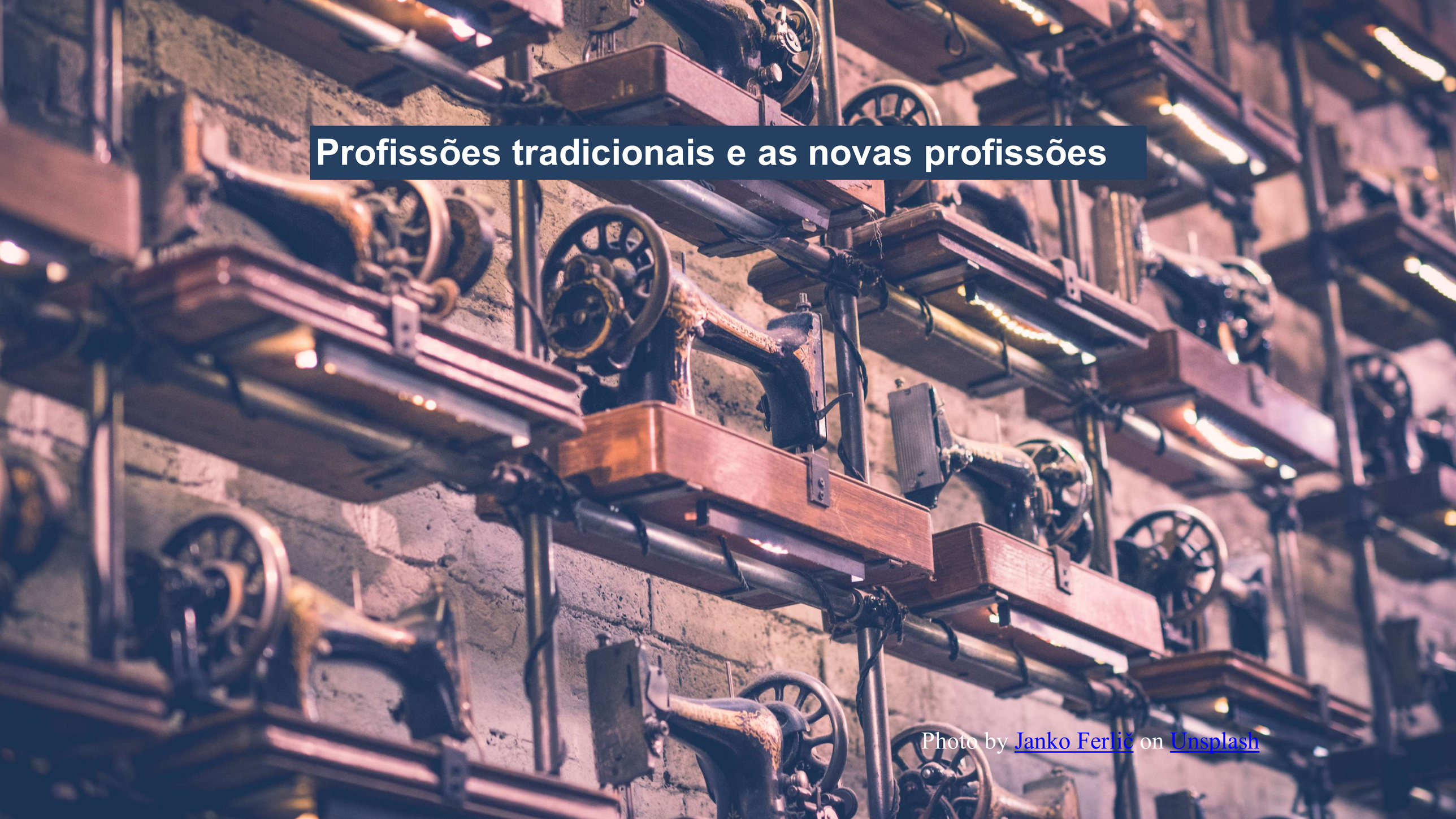


Photo by Janko Ferlič on Unsplash

Como será meu diploma?

Bacharelado
Licenciatura
Tecnológico

Como será meu diploma?

O bacharelado é o tipo de curso superior mais tradicional no Brasil. Nesta modalidade, além da formação específica para atuação como profissional, existe ênfase na pesquisa e formação acadêmica.

Na licenciatura, além dos temas relacionados à área de estudo do curso, você também receberá formação específica para trabalhar como professor. O licenciado dá aulas em escolas de Ensino Médio, Fundamental e cursos pré-vestibular.

A graduação tecnológica é um tipo de formação recente no país e se diferencia por ser mais específica e focada no mercado. O tecnólogo é capacitado para atuar em áreas de inovação e empreendedorismo.

Modalidade

Presencial
EAD



Photo by HuesofDelahaye Delahaye on Unsplash



Photo by Samuel Zeller on Unsplash

Tendências

ênfase crescente na inovação
busca por qualidade de vida
o envelhecimento da população + aumento expectativa de vida
preocupação com o meio ambiente

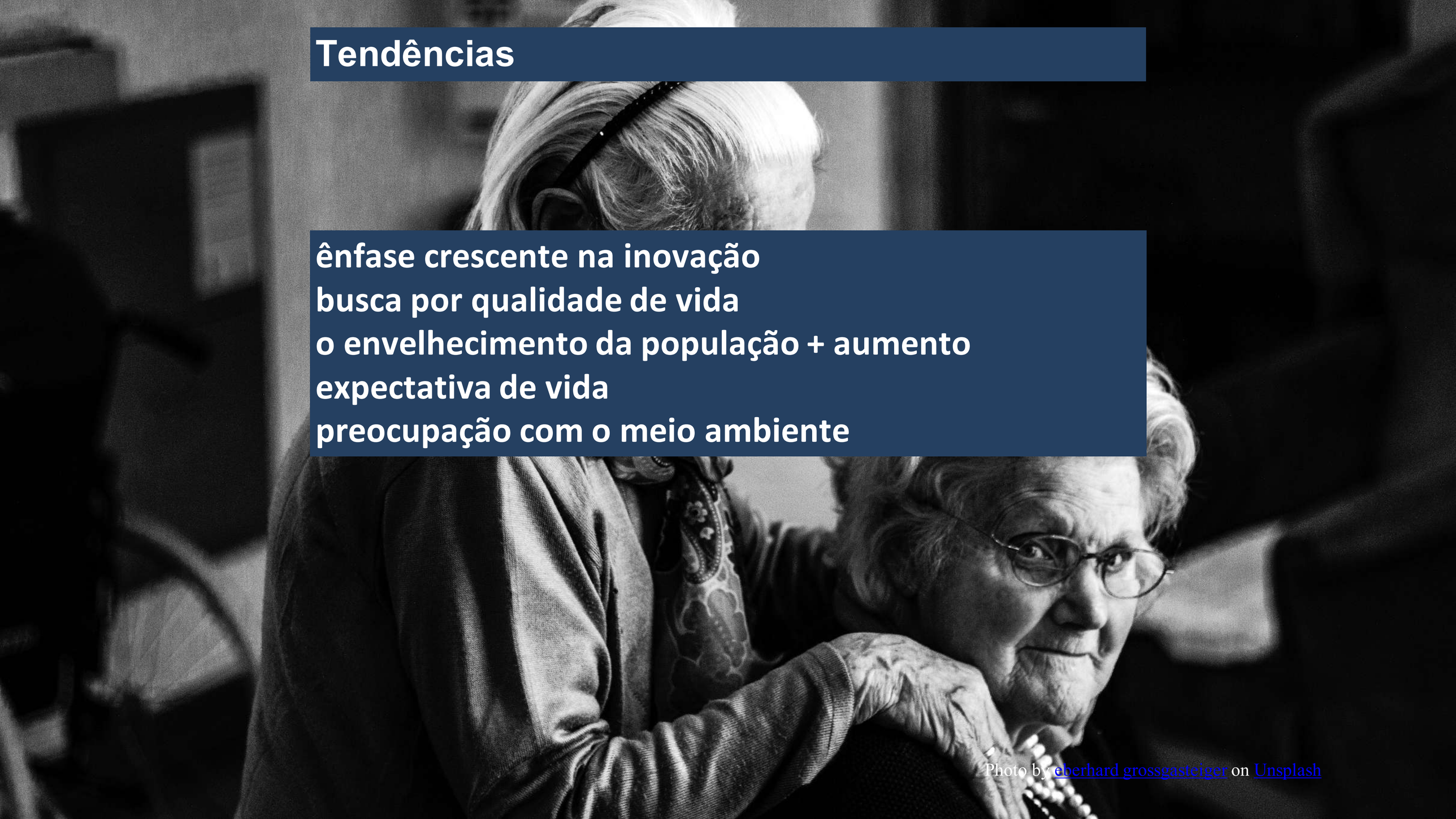


Photo by eberhard grossgasteiger on Unsplash

Careers of the future

December 2014

UKCES
UK COMMISSION FOR EMPLOYMENT AND SKILLS



Agriculture



- **Farmers**
  Farmers play a crucial role in our future; from environmental concerns to the origins of the food on our plates they are involved in everything from cultivation of crops and livestock to land

Manufacturing, Installation, Maintenance



- **Electricians and electrical fitters**
  Electricians fit and repair electrical circuits and wiring and maintain electrical machinery in people's homes or in businesses.

Construction



- **Carpenters and joiners**
  Carpenters and joiners make and install wooden fixtures and fittings as part of construction projects, working in a variety of roles including shop fitter and kitchen fitter.

- **Architects**
  Architects design new buildings and work on the restoration and conservation of existing buildings. They manage the construction process, control budgets and deal with planning issues.

Science, Engineering & Technology



- **Mechanical engineers**
  Mechanical engineers undertake research and design, direct the manufacture and manage the operation and maintenance of mechanical systems, such as engines, vehicles and machinery.
- **Research and development managers**
  Research and development managers are responsible for the process by which new products and services are developed or existing ones improved. This can involve managing market research and design work.
- **Physical scientists**
  Including a range of scientific roles from physicist to geologist, people in this job study the world around us. Their findings act as the scientific basis for practical developments in areas as diverse as oil and gas, and space and satellites.
- **Design and development engineers**
  Design and development engineers take initial product ideas (across a wide range of areas, including for engines, instruments, vehicles, electronic equipment etc) and develop them into designs and prototypes.
- **Biological scientists and biochemists**
  From biologists to horticulturists, people working in this job study living things such as plants and animals and the world they live in. Their work is used widely in sectors such as medicine, agriculture and environmental management.

Business & Finance



- **Sales accounts and business development managers**
  People working in this field engage with customers to understand their needs and also coach and lead a team of sales people to work towards agreed sales targets.
- **Business and financial project managers**
  Project managers work across all areas of business and the public sector to plan and organise resources and people to make sure projects finish on time, stay within budget and meet the requirements of the organisation.
- **Finance and investment analysts and advisers**
  From mortgage advisers to investment analysts, people working in this group help individuals and businesses to choose the right investment for their needs based on research and analysis.
- **Chartered and certified accountants**
  Accountants provide accountancy services for clients as part of private practice or within a business. They handle tax and accounts, carry out audits and advise on financial matters.
- **Management consultants and business analysts**
  Management consultants and business analysts use their business skills to help organisations solve problems, improve efficiency and manage change.

Information Technology



- **Programmers and software developers**
  From designing the software that keeps huge retailers and manufacturers moving, to building the latest hit games and apps, programmers and software developers create solutions in almost every sector imaginable.
- **IT specialist managers**
  From data centre managers to IT support managers, people working in this job manage the delivery of specialist IT services within an organisation.
- **IT business analysts, architects and systems designers**
  People working in this role are employed by companies to design IT systems and processes or analyse existing ones and to recommend improvements.
- **IT project and programme managers**
  IT project managers oversee the implementation of major IT projects, such as the installation of computer systems, to meet the needs of a wide range of organisations.
- **Web designers and developers**
  People working in this group use their creativity and technical skills to design, build and maintain websites.

Health & Care



- **Doctors**
  From GPs to surgeons, doctors diagnose and treat illnesses and disease in patients, providing advice and reassurance.
- **Nurses**
  Every day, Britain's nurses save lives; they're at the coalface of A&E and are the people patients see most while recuperating, providing vital care and assistance to those in need.
- **Nursing auxiliaries and assistants**
  Often known as health care assistants, people working in this area assist doctors and nurses in the day-to-day care of patients, either in hospitals or the wider community.
- **Care workers and home carers**
  Care workers are the frontline staff in all care settings. They work with all types of people who need care and support to ensure the individual's overall comfort and wellbeing and to help them to live as independently as possible.
- **Dentists**
  While their work may set some people's teeth on edge, rather than straight and pearly white, dentists play an important role in our day-to-day health, specialising in the diagnosis and treatment of a range of problems that affect the mouth and teeth.

U.S.News & WORLD REPORT

JOBS IN 2020

The Industries and Occupations to Watch

1. Data crunching (análise de dados)
2. Cientistas/pesquisadores
3. Engenheiros de computação
4. Veterinários
5. Engenharias na area ambiental e de energia
6. Cursos da área da saúde – cuidados com paciente
7. Finanças
8. Empreendedorismo



End of life planner: 63% da populacao mundial em 2025 vai viver mais que 65 anos
Smart Home handyperson
Urban Farmers
Remote Health care specialist
3-D printer design specialist
Freelance professors

http://www.fastcompany.com/3046277/the-new-rules-of-work/the-top-jobs-in-10-years-might-not-be-what-you-expect#6

May 18, 2015

REVISTA EXAME

EXAME.COM

Gestor de ecorrelações
Gestor de resíduos
Engenheiro ambiental
Engenheiro civil
Engenheiro de petróleo e gás
Engenheiro hospitalar
Biomedicina
Gestor de qualidade de vida
Conselheiro de aposentadoria

2013: http://exame.abril.com.br/carreira/noticias/20-profissoes-do-e-com-futuro-segundo-especialistas#2

ESTADÃO POL

Educação

10 carreiras do futuro (maio, 2015)
Designer com foco em inovação
Ciências atuariais
Gestão de Big Data
Engenharia Hospitalar
Economia agroindustrial
Sistemas de informação
Desenho de projetos de arquitetura naval
Econofisica
Gerontologia
Gestor de residuos

Estadão 2015: :http://educacao.estadao.com.br/noticias/geral,10-carreiras-do-futuro,1661013

WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

Global Challenge Insight Report

The Future of Jobs

Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution

January 2016



http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf

Figure 3: Timeframe to impact industries, business models

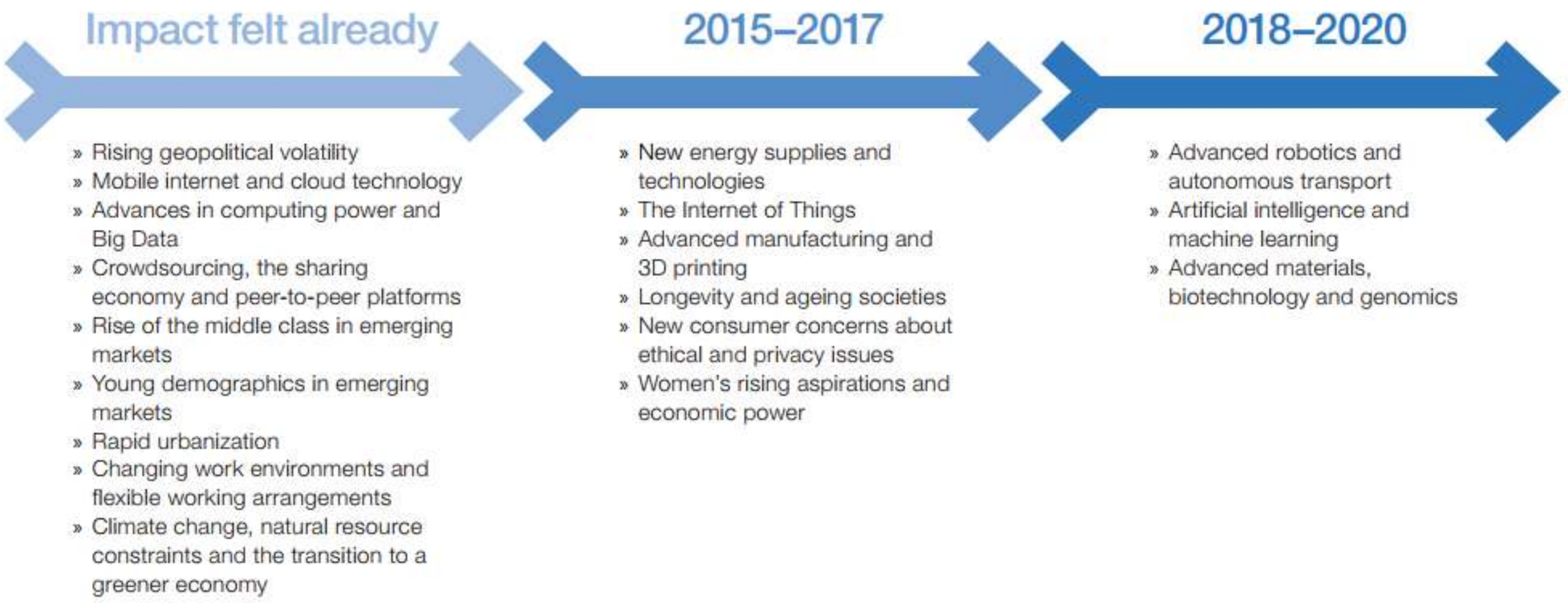


Table 4: Employment effect of drivers of change, by job family

Compound growth rate, 2015-2020, %

Job family/Driver of change	Employment outlook
Computer and Mathematical	**3.21%**
Rapid urbanization	6.11%
Middle class in emerging markets	5.00%
Changing nature of work, flexible work	4.94%
Sharing economy, crowdsourcing	4.88%
Processing power, Big Data	4.59%
Internet of Things	4.54%
Geopolitical volatility	3.89%
Mobile internet, cloud technology	3.71%
Consumer ethics, privacy issues	2.40%
Architecture and Engineering	**2.71%**
Middle class in emerging markets	5.88%
Robotics, autonomous transport	4.49%
Climate change, natural resources	3.68%
Internet of Things	3.54%
Adv. manufacturing, 3D printing	3.33%
Changing nature of work, flexible work	3.18%
New energy supplies and technologies	2.25%
Geopolitical volatility	1.33%
Management	**0.97%**

Job family/Driver of change	Employment outlook
Sales and Related	**0.46%**
Processing power, Big Data	1.25%
Sharing economy, crowdsourcing	0.58%
Mobile internet, cloud technology	0.43%
Internet of Things	–0.89%
Middle class in emerging markets	–1.14%
Consumer ethics, privacy issues	–1.28%
Geopolitical volatility	–1.50%
Changing nature of work, flexible work	–1.51%
New energy supplies and technologies	–1.58%
Installation and Maintenance	**–0.15%**
Climate change, natural resources	3.00%
Changing nature of work, flexible work	0.45%
Mobile internet, cloud technology	–3.89%
Internet of Things	–8.00%
Construction and Extraction	**–0.93%**
New energy supplies and technologies	1.38%
Climate change, natural resources	0.38%
Geopolitical volatility	–0.07%
Changing nature of work, flexible work	–0.11%

Management	**0.97%**
Young demographics in emerging markets	2.14%
Geopolitical volatility	1.67%
New energy supplies and technologies	1.44%
Processing power, Big Data	1.39%
Changing nature of work, flexible work	0.90%
Middle class in emerging markets	0.72%
Mobile internet, cloud technology	0.62%
Climate change, natural resources	0.40%
Longevity, ageing societies	0.23%
Business and Financial Operations	**0.70%**
Sharing economy, crowdsourcing	3.11%
Middle class in emerging markets	1.96%
Changing nature of work, flexible work	1.88%
Young demographics in emerging markets	1.67%
Geopolitical volatility	1.59%
Climate change, natural resources	1.39%
Processing power, Big Data	1.34%
Mobile internet, cloud technology	1.03%
Consumer ethics, privacy issues	0.54%
Changing nature of work, flexible work	−0.11%
Arts, Design, Entertainment, Sports and Media	**−1.03%**
Mobile internet, cloud technology	0.95%
Middle class in emerging markets	−0.83%
Geopolitical volatility	−1.00%
Manufacturing and Production	**−1.63%**
Adv. materials, biotechnology	0.67%
Robotics, autonomous transport	−0.83%
New energy supplies and technologies	−1.81%
Middle class in emerging markets	−2.16%
Climate change, natural resources	−2.45%
Geopolitical volatility	−2.47%
Changing nature of work, flexible work	−2.99%
Longevity, ageing societies	−3.13%
Adv. manufacturing, 3D printing	−3.60%
Office and Administrative	**−4.91%**
Changing nature of work, flexible work	−2.77%
New energy supplies and technologies	−3.33%
Mobile internet, cloud technology	−5.82%
Processing power, Big Data	−6.06%
Consumer ethics, privacy issues	−6.18%
Internet of Things	−6.20%
Rapid urbanization	−6.36%
Climate change, natural resources	−6.67%
Geopolitical volatility	−9.72%

Source: Future of Jobs Survey, World Economic Forum.
Note: Names of drivers have been abbreviated to ensure legibility.

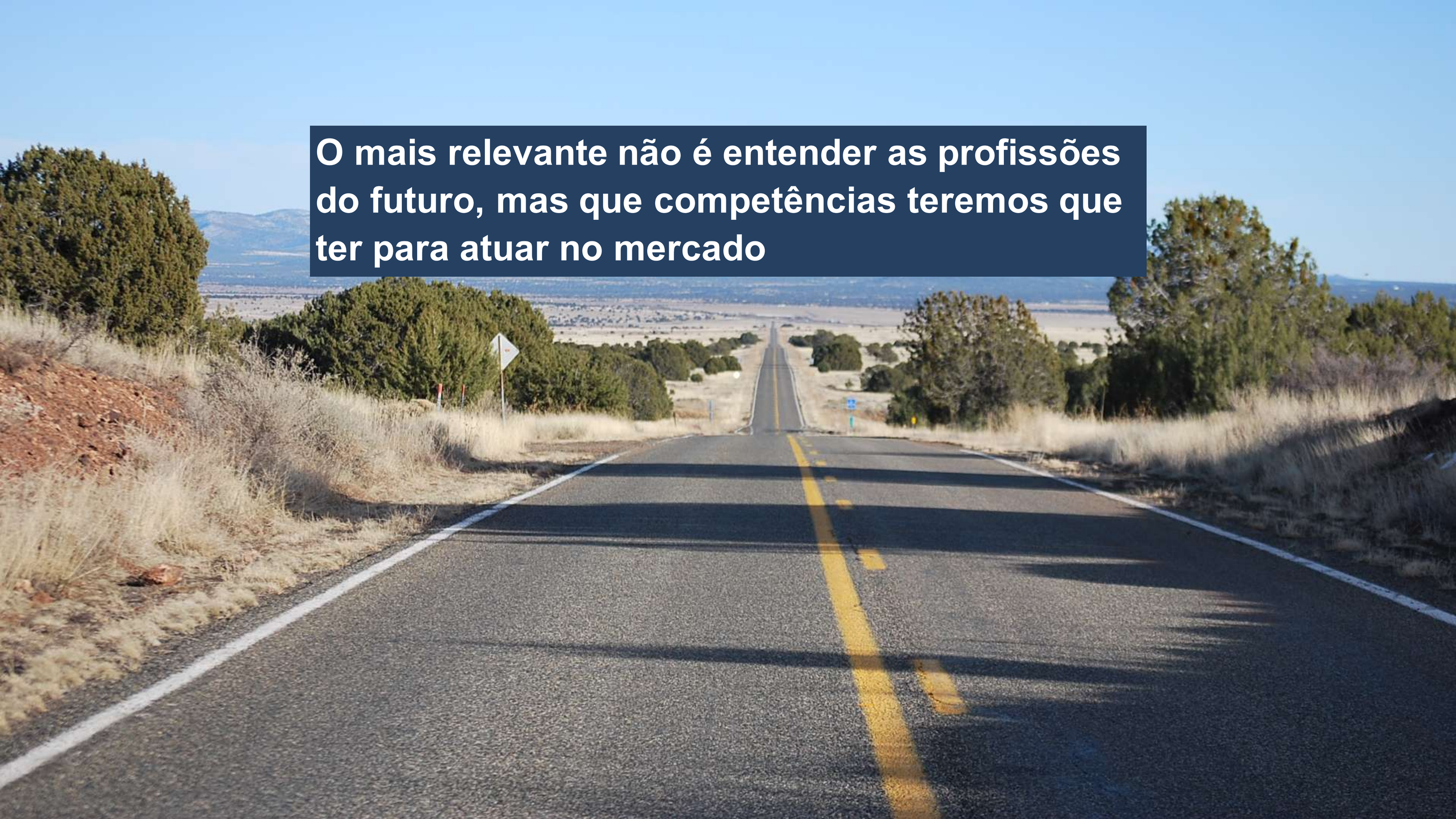
previsões arrasadoras

De acordo com uma projeção da PwC, que dividiu os riscos de automatização por áreas e países, 48% dos trabalhadores serão substituídos por máquinas só nos Estados Unidos nos próximos dez anos. Na Alemanha serão 35%; e no Japão, 21%. Transporte e logística estão entre os setores que aparecem na dianteira, com a possibilidade de troca de 56% da mão de obra real por computadores, seguidos por vendas (44%) e finanças (32%)

previsões maravilhosas

Segundo uma pesquisa da consultoria McKinsey, para cada posto de trabalho eliminado, 2,4 novos serão criados, principalmente em startups.


PREPARE
TO
STOP


O mais relevante não é entender as profissões do futuro, mas que competências teremos que ter para atuar no mercado

UM OLHAR SOBRE A EXPERIÊNCIA DA SALA DE AULA

na perspectiva do *design* estratégico

Isa Mara Alves
Gustavo Severo de Borba

Com capítulos de:
Alexandre Wolffenbuttel
Cristina Damim

1ª edição
Porto Alegre, 2015.

UNISINOS

Tendências Tecnológicas

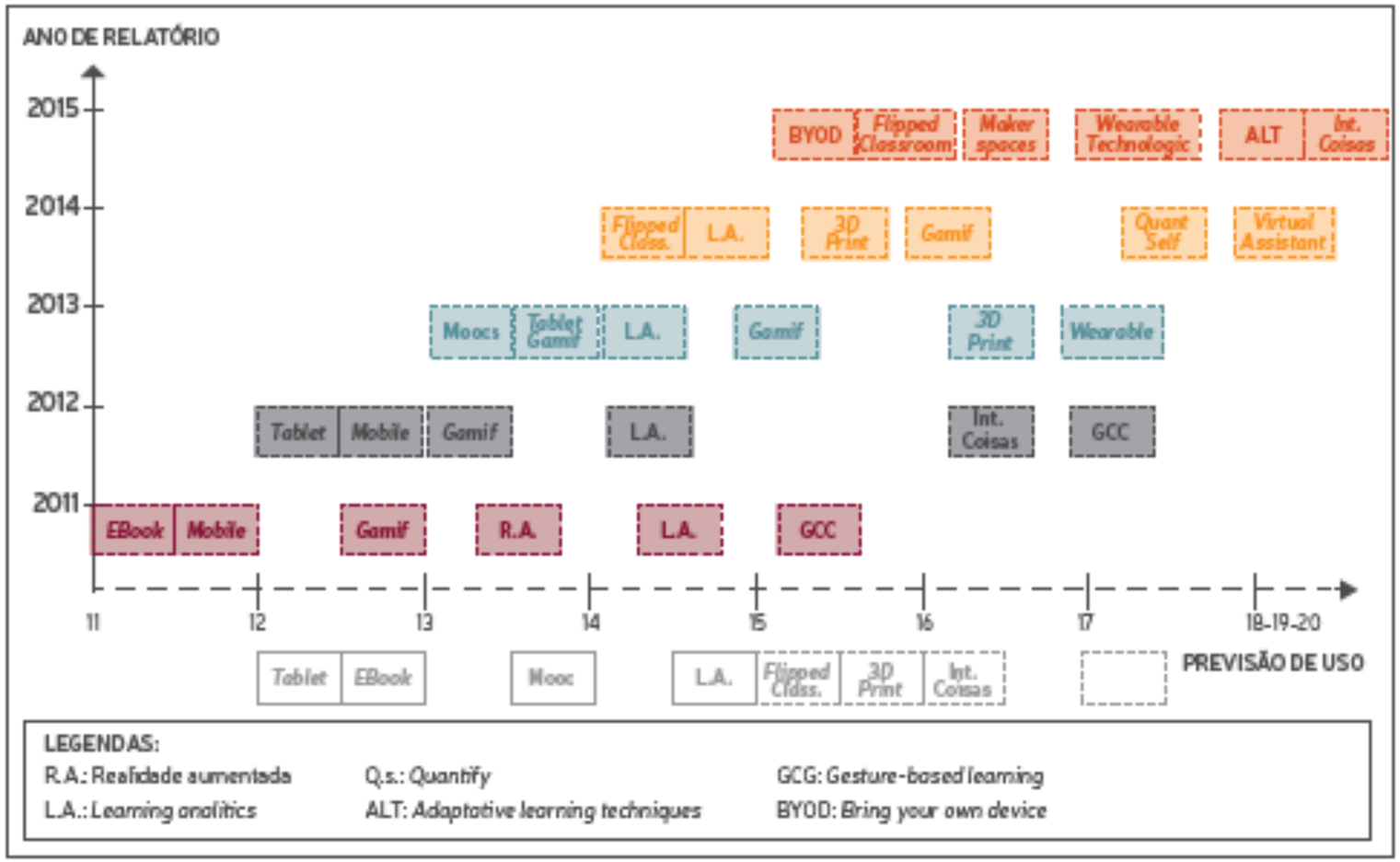


Figura 24 - Tendências tecnológicas para os próximos anos.
Fonte: adaptado de Horizon Report (2011, 2012, 2013, 2014, 2015)

Elaborado por Borba (2014): Adaptado a partir de Horizon Report: 2011, 2012, 2013, 2014 + realidade atual das Universidades

Competências para o século XXI



Figura 2 - Ações inspiradoras na educação.
Fonte: adaptado de http://www.oecd.org/site/eduilebanff/48763522.pdf.

Alberta - http://www.oecd.org/site/eduilebanff/48763522.pdf

Competências para o século XXI



Figura 3 - Future Work Skills.
Fonte: adaptado de http://www.iftf.org/futureworkskills/.

Competências para o século XXI



Figura 1 - Competências para o século XXI.
Fonte: Ministério da Educação de Singapura [http://www.moe.gov.sg/education/21cc/].



COMPETÊNCIAS PARA O SÉCULO XXI

DOMÍNIO ACADÊMICO
E TRANSDISCIPLINAR

EMPREENDEDORISMO E
RESOLUÇÃO DE PROBLEMAS

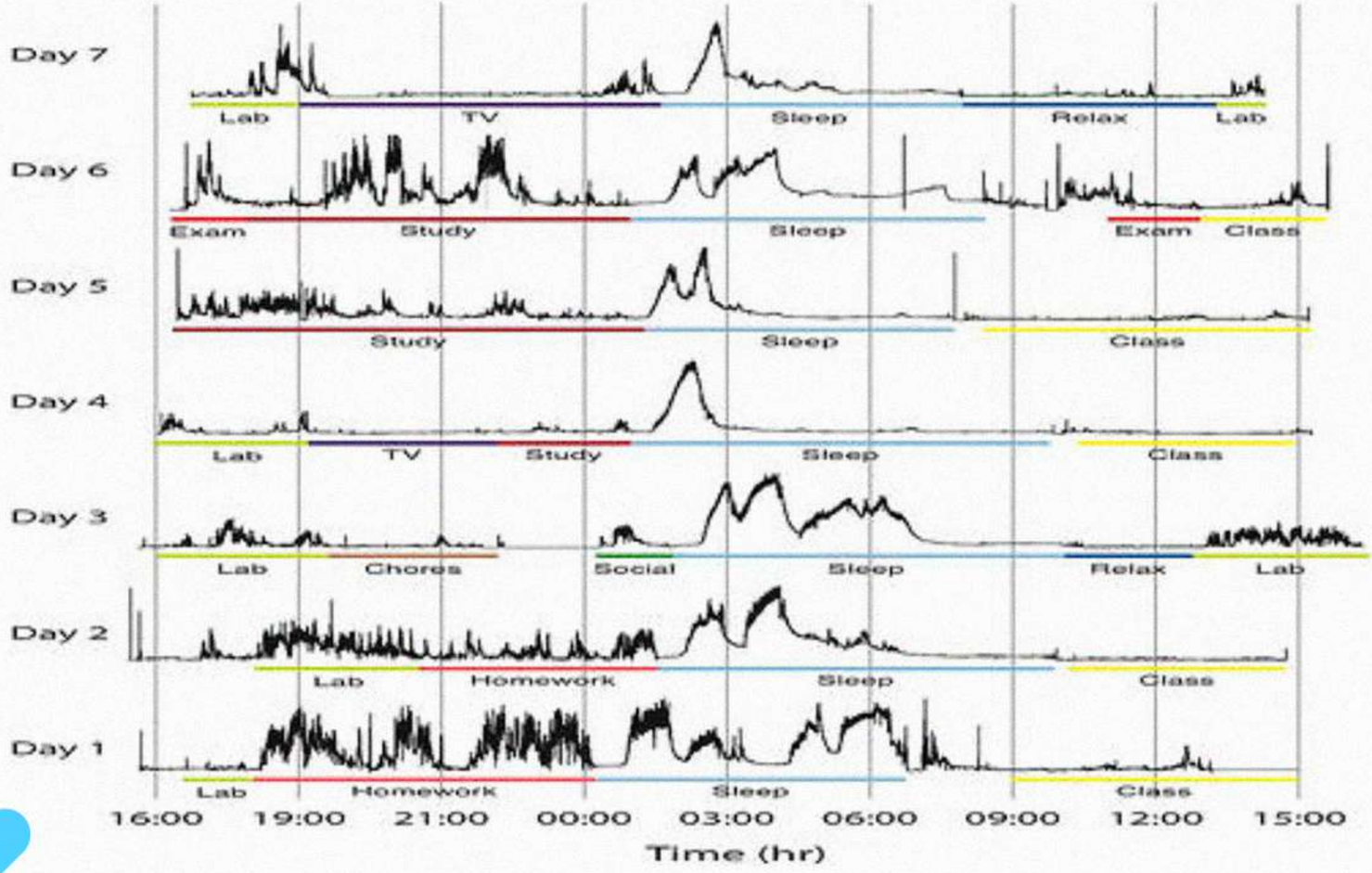
CRIATIVIDADE E
PENSAMENTO INVENTIVO

ÉTICA E
CONSCIÊNCIA GLOBAL

Elaborado por Borba (2014): Adaptado a partir de Gardner, 2007, Ministry of education Singapore, 2010; Government of Alberta, 2011; Brown, 2009

Um estudante que...	será capaz de...
é orientado para a ação	reconhecer problemas e identificar boas soluções.
é conectado	colaborar e de construir a partir da ideia dos outros, além de ter acesso aos recursos necessários.
aceita risco	sugerir e levar em conta soluções inovadoras, não convencionais.
é focado no futuro	antecipar as consequências e os benefícios de uma ação, além de reconhecer o potencial para ideias ganhadoras.
é capaz de superar obstáculos	persistir, e definir e aplicar estratégias para solução de problemas.
é capaz de ajudar no crescimento de boas ideias	desenvolver um processo para que as pessoas apoiem suas ideias.

Tabela 1 - Competência de um aluno inovador.
Fonte: adaptado de Boss (2012).



A Wearable Sensor for Unobtrusive, Long-Term Assessment of Electrodermal Activity

Ming-Zher Poh, Student Member, IEEE, Nicholas C. Swenson, and Rosalind W. Picard*, Fellow, IEEE

TRANSACTIONS ON BIOMEDICAL ENGINEERING, VOL. 57, NO. 5, MAY 2010

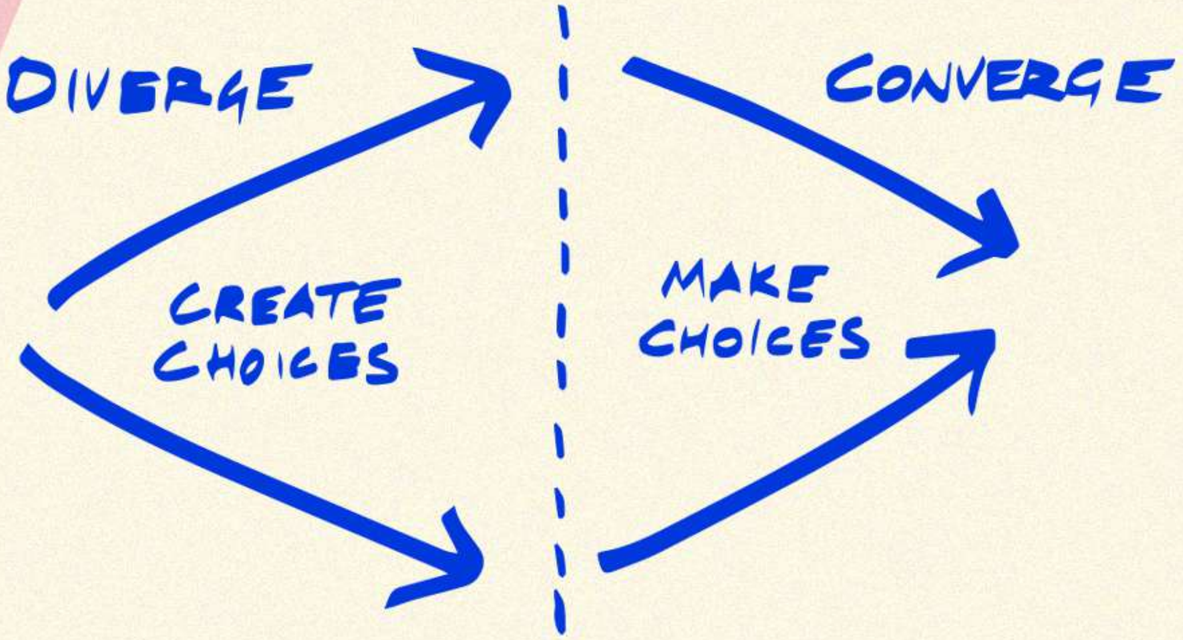


Desafio para o futuro:

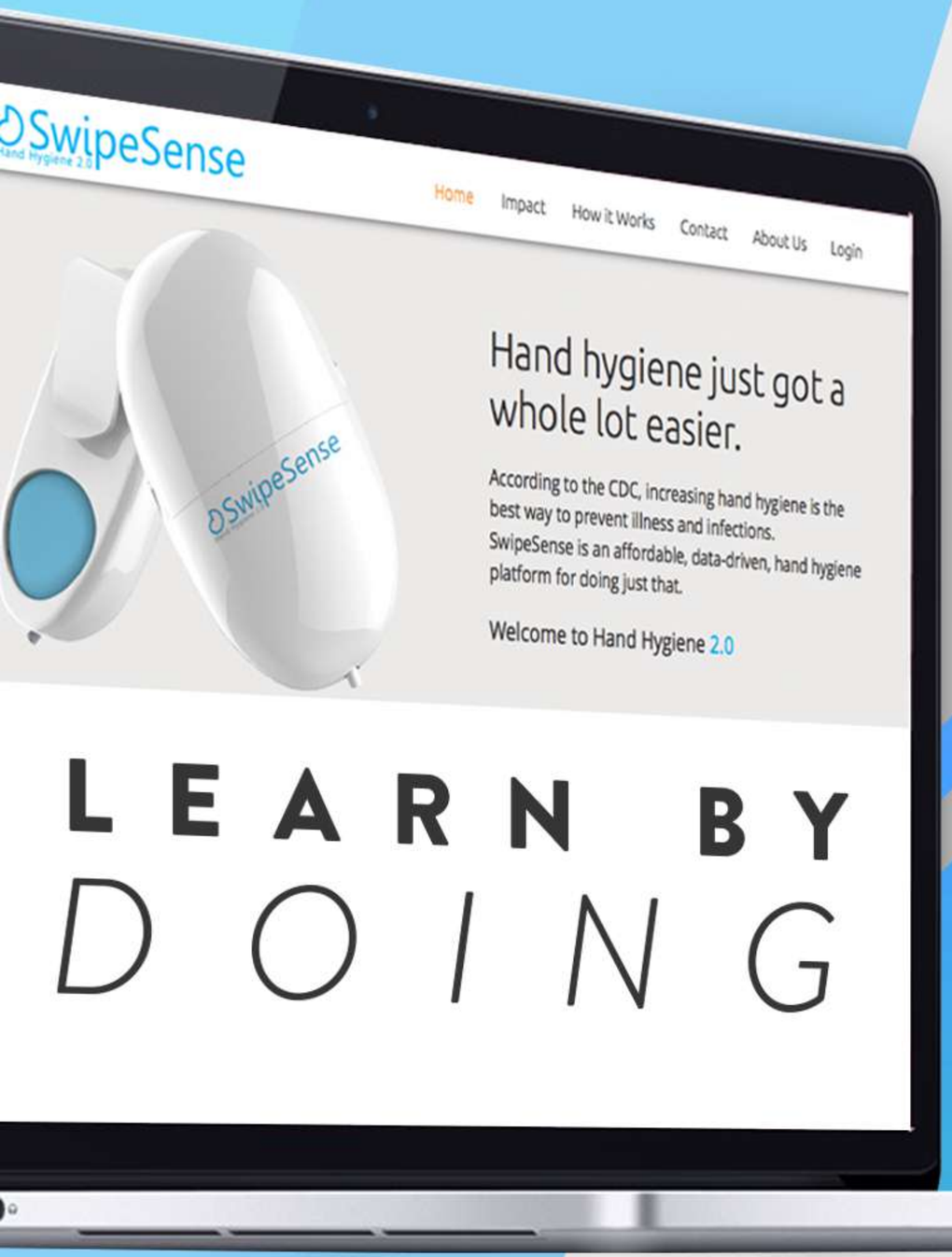
Inverter a ordem



FOCO NO PROBLEMA



BROWN, Tim. Tim Brown urges designers to think big. TED Talks, Julho 2009. Disponível em: http://www.ted.com/talks/tim_brown_urges_designers_to_think_big.html

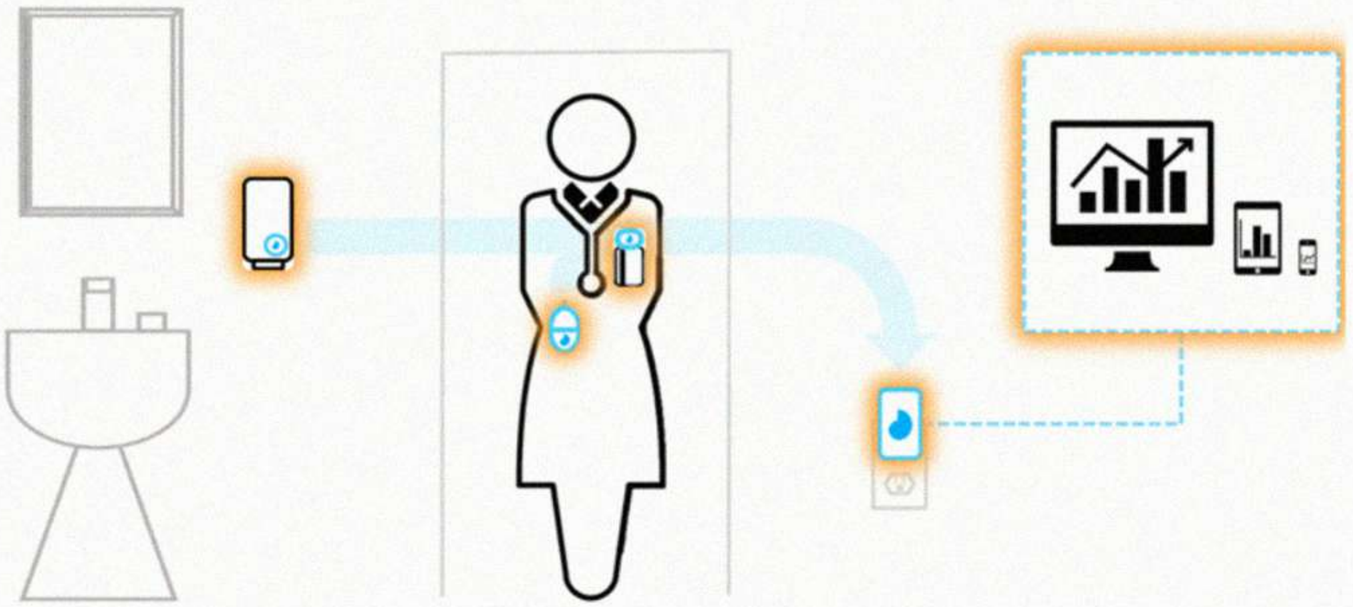


LEARN BY *DOING*

EMPENHO,
FALHA,
APRENDIZAGEM

How it Works

- Overview
- Portable Dispensers
- Badges
- Wall Mounted Dispensers
- Hubs
- Analytics



The complete hand hygiene solution

SwipeSense is the only complete system that combines point-of-care hand hygiene dispensers with real-time data from existing dispensers.

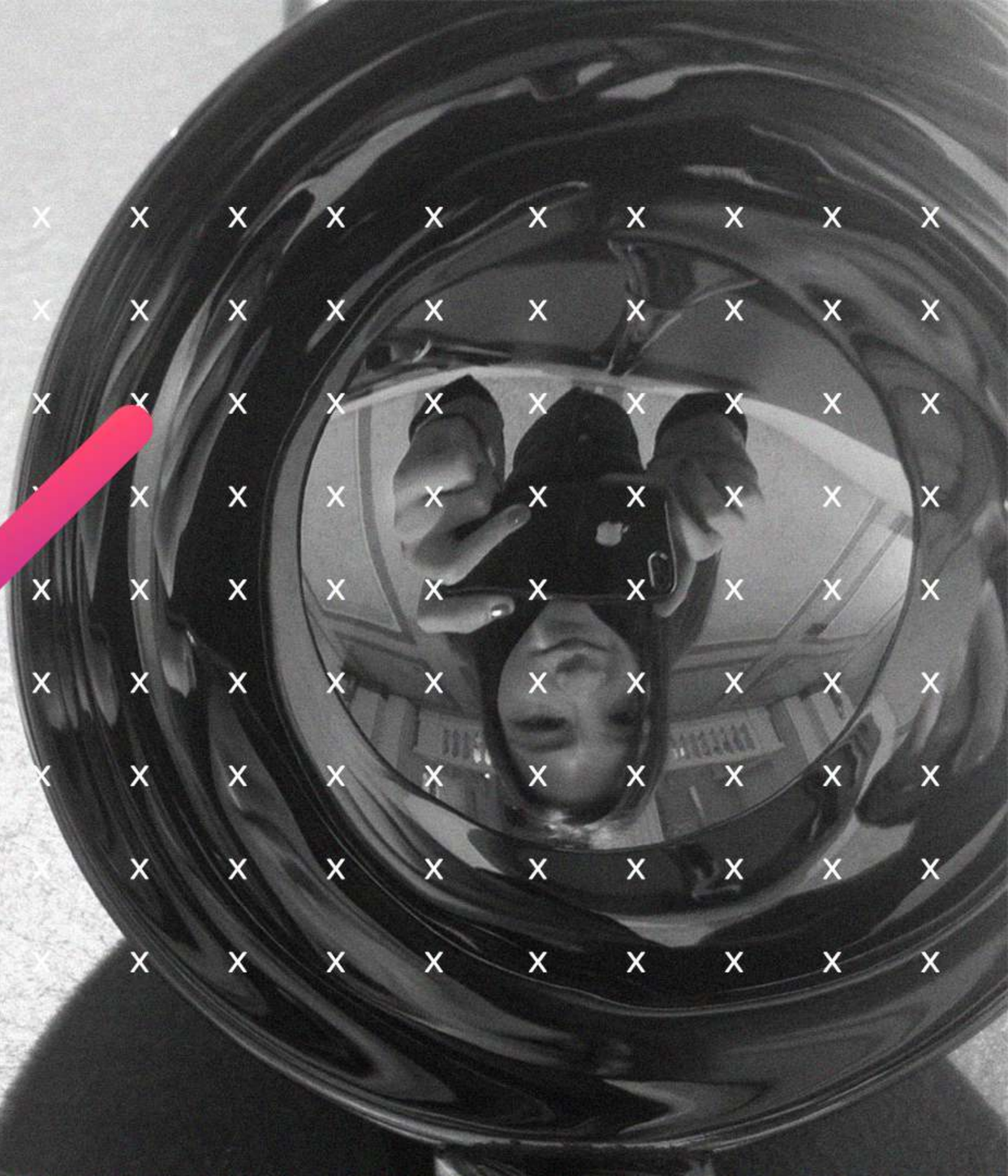
Eliminate dependency on both hand hygiene campaigns and manual observations by leveraging data to encourage sustainable culture change.

View individual compliance levels, unit comparisons, and historical trends through an intuitive web-platform.

FOTO: BRUNO ALENCASTRO



RESGATAR A INSPIRAÇÃO





PROMOVER **INOVAÇÃO**

The three chord trick in every Key

Key	I	IV	V
C	C	F	G
C#(Db)	C#(Db)	F#(Gb)	G#(Ab)
D	D	G	A
D#(Eb)	D#(Eb)	G#(Ab)	A#(Bb)
E	E	A	B
F	F	Bb	C
F#(Gb)	F#(Gb)	B	C#(Db)
G	G	C	D
G#(Ab)	G#(Ab)	C#(Db)	D#(Eb)
A	A	D	E
Bb	Bb	Eb	F
B	B	E	F#

C	Am	F	G
I	**vi**	**IV**	**V**

1,4,5 =c,f,g

http://conradschords.com/2014/03/14/the-three-chord-trick-explained/



INOVAÇÃO? E/A

I want to hold your hand

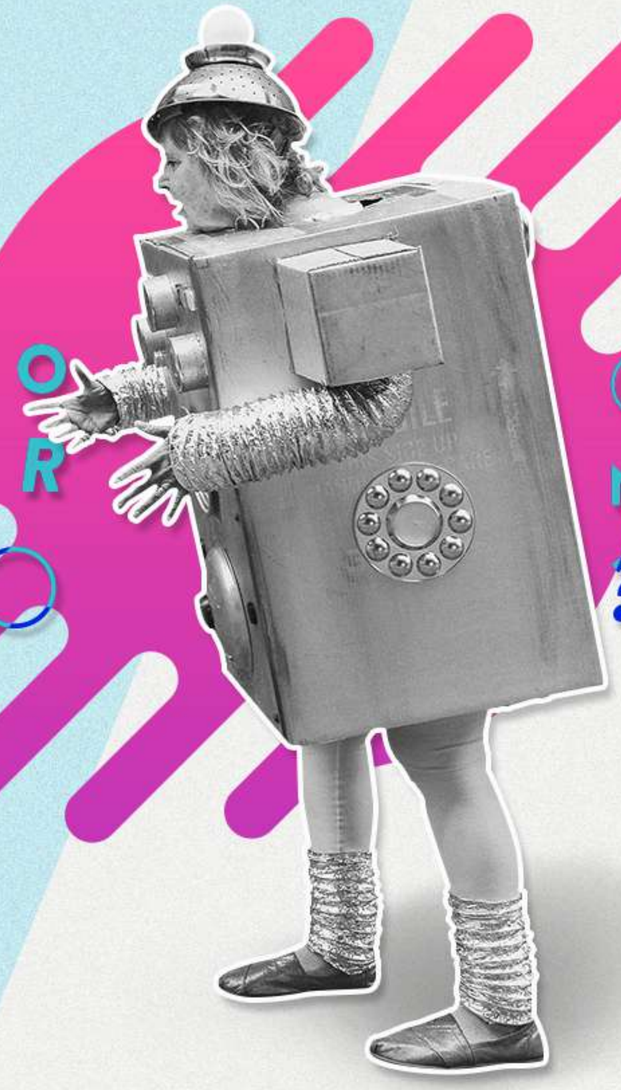
```
      G                    D
Oh yeah I'll tell you something
Em                         B7
   I think you'll understand
```

https://www.youtube.com/watch?v=XQfwW-oeh80

http://www.cifraclub.com.br/the-beatles/i-want-to-hold-your-hand/#font=15

MAS...

TODA PROFISSÃO *PERMITE GERAR* INOVAÇÃO



QUAL O "B7" **NA SUA PROFISSÃO ??????????**

Surfin':The Beach Boys.
#75 in 1962.

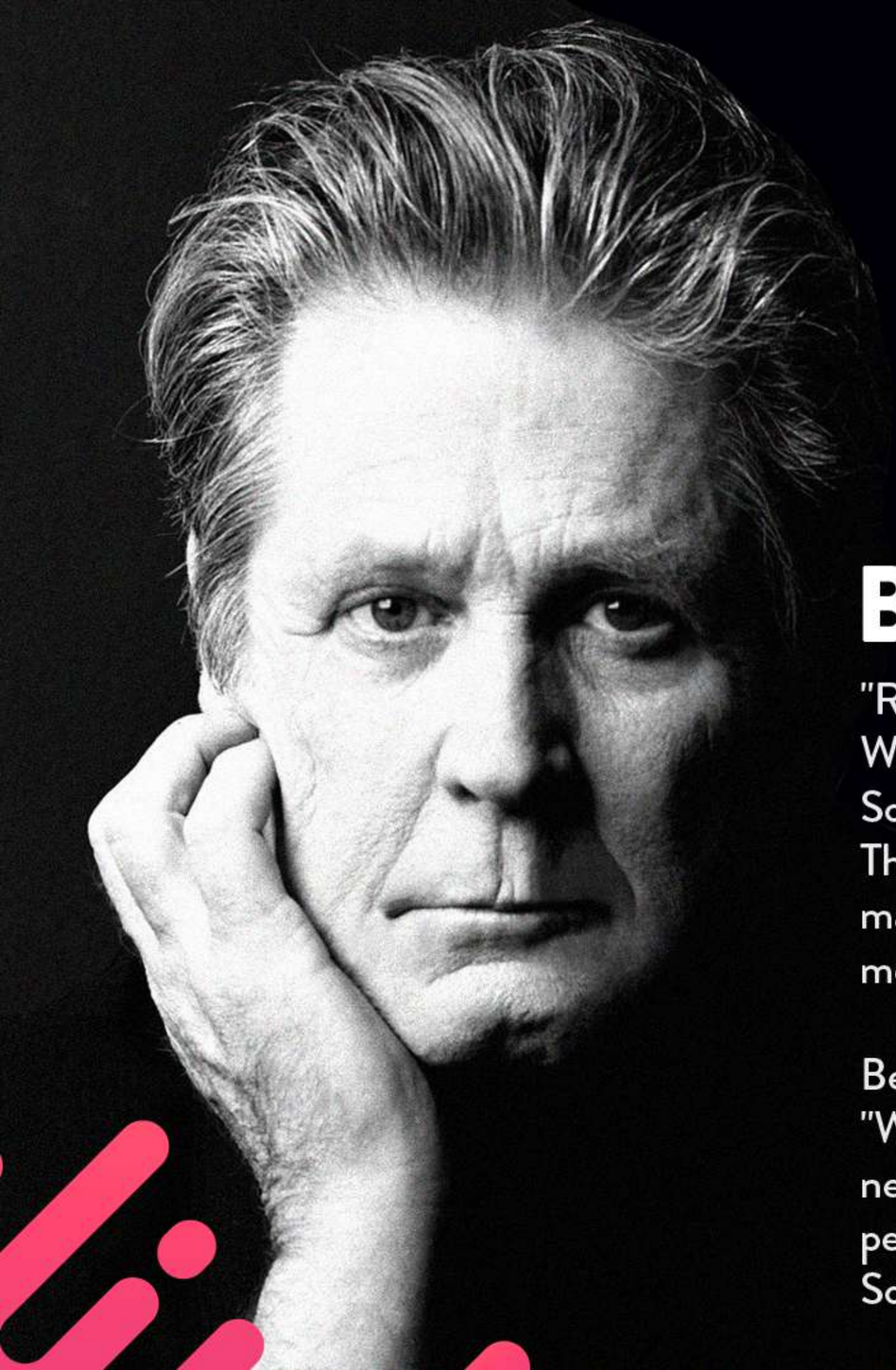
INTRO:

```
D                                C
Surfin' is the only life..the only way for me.
    D     C          G
Now surf, surf, with me..Bom bom dit da dit dit..

bom bom dit da dit dit..

D/A          Bm6
I may not always love you
F#m F#m7                    F#m6/A
But long as there are stars above you
E/B          Cdim
You never need to doubt it
E/B                  A#m7-5
I'll make you so sure about it
A                  E/G#           F#m7          (E)
God only knows what I'd be without you
```

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BOA COMPETIÇÃO

"Rubber Soul blew my mind," Brian Wilson says. "When I heard Rubber Soul, I said, 'That's it. That's all. That's all folks.' I said, 'I'm going to make an album that's really good, I mean really challenge me.

Beatles producer George Martin, "Without Pet Sounds, Sgt. Pepper never would have happened....Pepper was an attempt to equal Pet Sounds." Rolling Stone magazine



REFERENCES

ADAMS, j. Conceptual Blockbusting: A Guide to Better Ideas. Basic Books; Fourth Edition, Fourth Edition edition (October 23, 2001)

BROWN, Tim. Design Thinking, Harvard Business Review, v. 86, n. 6, 2008. p. 84-92. Disponível em: http://www.unusualleading.com/wp-content/uploads/2009/12/HBR-on-Design-Thinking.pdf

FIRESTEIN, S. Ignorance: How It Drives Science [Hardcover]. Oxford University Press, USA; 1 edition (April 23, 2012)

FRANZATO, Carlo. O processo de inovação dirigida pelo design: Um modelo teórico. REDIGE, v. 2, n. 1, 2011, pp. 50-62.
Disponível em: http://www.cetiqt.senai.br/ead/redige/index.php/redige/article/view/72

VERGANTI, Roberto. Innovating Through Design, Harvard Business Review, v. 84, n. 12, 2006. p. 114-122. Disponível em: http://www.ignitiate.com/pdfs/innovating%20through%20design.pdf

WRIGHT, James Terence Coulter; SILVA, Antonio Thiago Benedete; SPERS, Renata Giovinazzo. **O mercado de trabalho no futuro:** uma discussão sobre profissões inovadoras, empreendedorismo e tendências para 2010. RAI – Revista de Administração e Inovação. São Paulo, v. 7, n. 3, p. 174-197, jul ./set . 2010

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