NEXTSTATION

SMART STATIONS IN SMART CITIES

6th International Conference on Railway Stations

Madrid, 19-21 OCTOBER 2017

Artificial Intelligence in the Railway Industry

Daniel, Martín de Lucas
Managing Director, Limmat Group, Spain
4b. SMART FACILITY MANAGEMENT

UNDER THE HIGH PATRONAGE OF

GOBIERNO DE ESPAÑA | MINISTERIO DE FOMENTO

ORGANISERS

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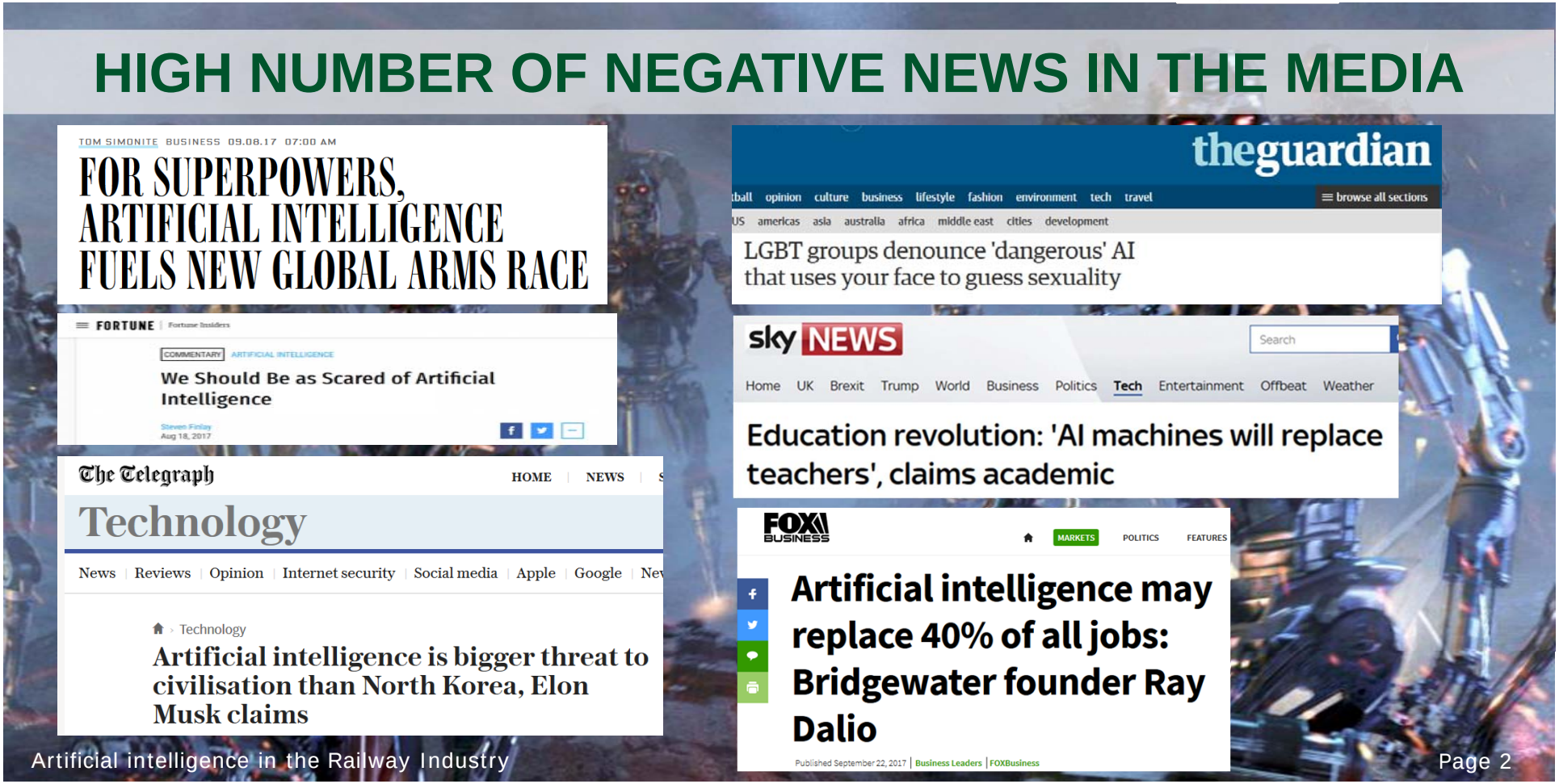
HIGH NUMBER OF NEGATIVE NEWS IN THE MEDIA



TOM SIMONITE BUSINESS 09.08.17 07:00 AM

FOR SUPERPOWERS, ARTIFICIAL INTELLIGENCE FUELS NEW GLOBAL ARMS RACE

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LGBT groups denounce 'dangerous' AI that uses your face to guess sexuality

FORTUNE | Fortune Insiders

COMMENTARY ARTIFICIAL INTELLIGENCE

We Should Be as Scared of Artificial Intelligence

Steven Finlay Aug 18, 2017

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Education revolution: 'AI machines will replace teachers', claims academic

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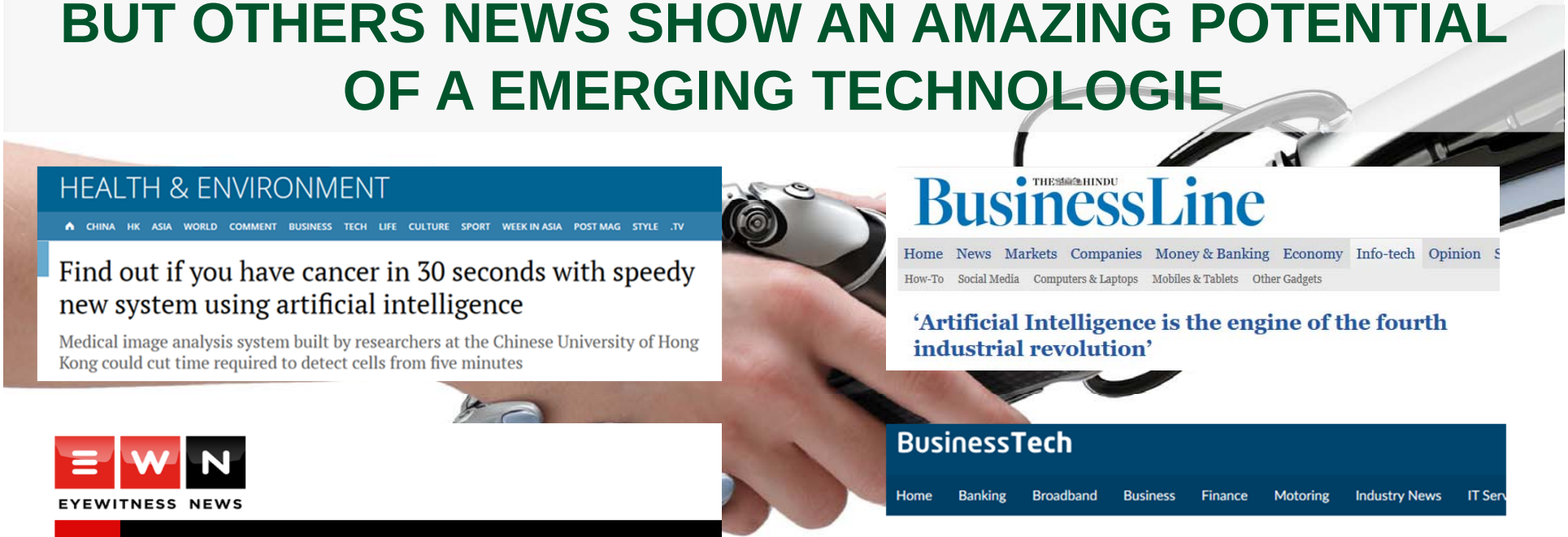
Artificial intelligence is bigger threat to civilisation than North Korea, Elon Musk claims

FOX BUSINESS MARKETS POLITICS FEATURES

Artificial intelligence may replace 40% of all jobs: Bridgewater founder Ray Dalio

Published September 22, 2017 | Business Leaders | FOXBusiness

BUT OTHERS NEWS SHOW AN AMAZING POTENTIAL OF A EMERGING TECHNOLOGIE



HEALTH & ENVIRONMENT

CHINA HK ASIA WORLD COMMENT BUSINESS TECH LIFE CULTURE SPORT WEEK IN ASIA POST MAG STYLE .TV

Find out if you have cancer in 30 seconds with speedy new system using artificial intelligence

Medical image analysis system built by researchers at the Chinese University of Hong Kong could cut time required to detect cells from five minutes

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'Artificial Intelligence is the engine of the fourth industrial revolution'

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[ANALYSIS] ARTIFICIAL INTELLIGENCE WILL DRIVE FUTURE OF AUTOMOTIVE INDUSTRY

BusinessTech

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Artificial Intelligence will boost global GDP 14% by 2030

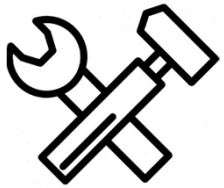
Staff Writer 1 September 2017 1 Comment

WHAT IS ARTIFICIAL INTELLIGENCE?

Multiple technologies that can be combined in different ways to:

SENSE

UNDERSTAND



ACT

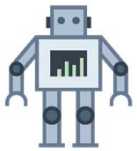
Machine Learning

NLP

Speech

Vision

Expert Systems



Robotics

Planning & Optimization

KEY FACTORS ARE ENABLING AI GROWTH

- Computing Power & Data storage

- Data Availability

- Real time information

ARTIFICIAL INTELLIGENCE FACTS & FIGURES

It is considered a new factor of production

Investment in AI is growing at a high rate, but adoption in 2017 remains low

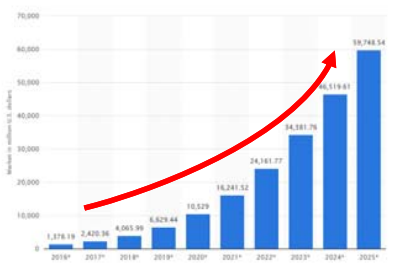
In 2016, companies invest $26B to $39B

TECH GIANTS 77%

STARTUPS 23%

3x External investment grow since 2013

Fast emerging technology market (CAGR) 31% 2016 - 2024



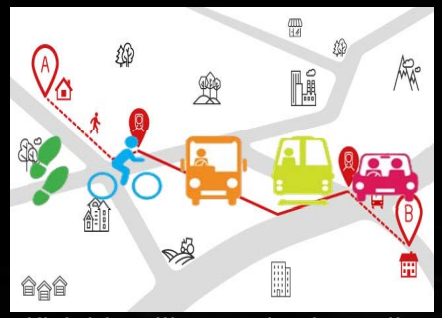
By 2020, 85% of customer interactions will be managed without a human

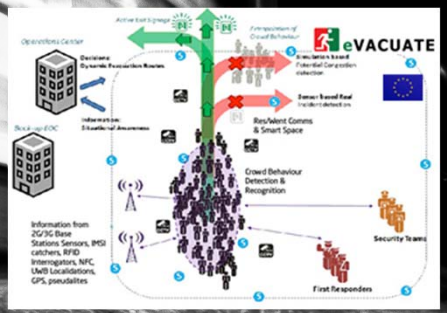
NATURAL LANGUAGE PROCESING

- Customer interactions:
  - Virtual assistants and chatbots: Formulating responses to questions.
  - Social media monitoring: Opinion and feed back of our services.
- Improve the accessibility in the stations.
- Applications for risk analysis and hazard identification.

PLANING SCHEDULING & OPTIMIZATION

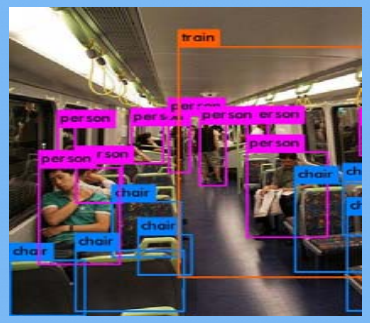
- Door-to-Door Journey Planner for passangers and freights.
- Support tools for dispatches (Optimal decisions).
- Increase the Capacity & Support the liberalization.
- Energy optimisation for Vehicles & ATO.
- Optimal evacuation in real time.





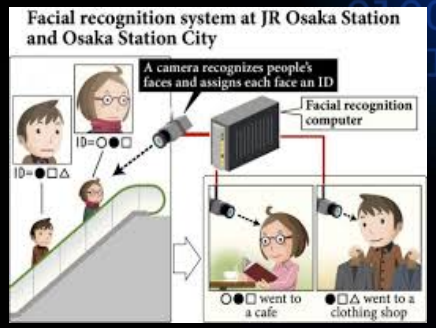
SMART VISION

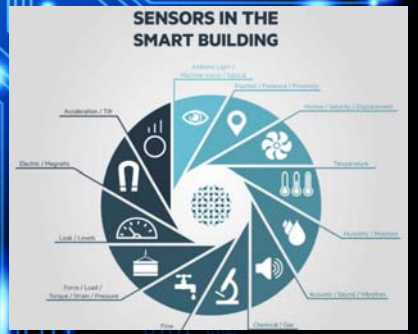
- Security Applications.
- Ticketing.
- User experience and crowd movements.
- Driver Assistance System.



MACHINE LEARNING

- TMS Applications: Predictive algorithm able to forecast delays.
- Retailers applications: Analytics on passenger preferences.
- Predictive maintenance.
- Building Automation.





ROBOTIC

- Assist travellers.
- Help to carry luggage.
- Creating automatons.
- Detect shoplifters.

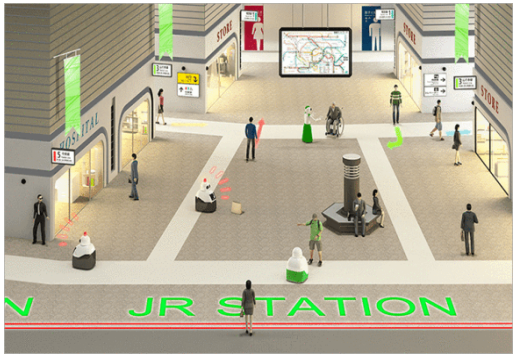


Photo: SNCF Gares & Connexions.

NEXTSTATION

THANK YOU / GRACIAS

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