

Basler Technologie Apéro 2016

Keynote 1: Zukunft der Effizienz: Mensch
und Maschine im Jahre 2028

Marc Tesch

leanBI

Walt Diggelmann



Agenda

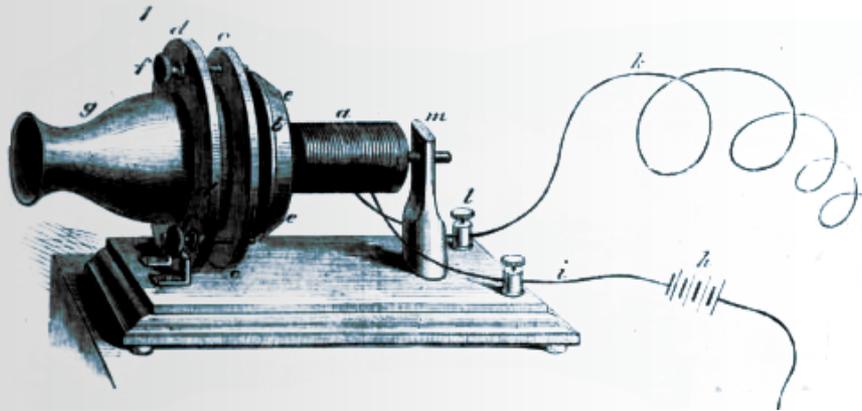
The Truck Driver

The Manufacturing Worker

The Manager & Entrepreneur

The Teacher

Imagine & Predict the Future

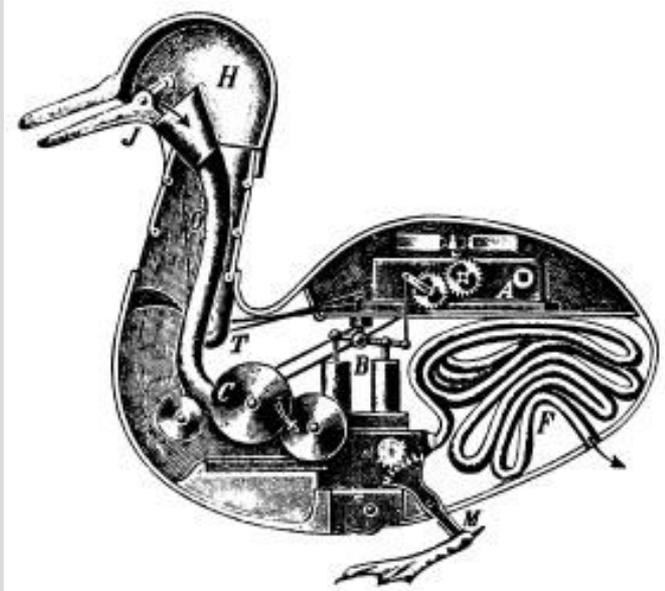


(1840) 1876 Patent
Graham Bell

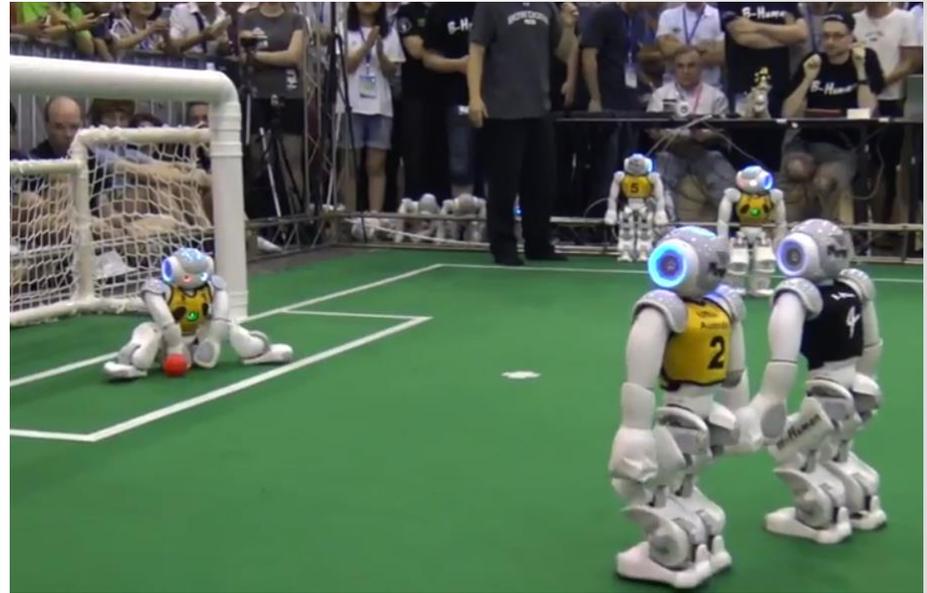


2004 iPhone
Steve Jobs

Imagine & Predict the Future



1740 Automatische Ente von Jacques de Vaucanson



2016 Robo-Soccer Cup Leipzig

Internet 4.0 : The 4th Dimension Time Period

Everything is connected with everything

Internet 4.0 is not only the internet of things where all things are equipped with sensors and enabled to communicate.

Internet 4.0 is also the internet of distributed intelligence

Libelium Smart World

Air Pollution

Control of CO₂ emissions of factories, pollution emitted by cars and toxic gases generated in farms.

Forest Fire Detection

Monitoring of combustion gases and preemptive fire conditions to define alert zones.

Wine Quality Enhancing

Monitoring soil moisture and trunk diameter in vineyards to control the amount of sugar in grapes and grapevine health.

Offspring Care

Control of growing conditions of the offspring in animal farms to ensure its survival and health.

Sportsmen Care

Vital signs monitoring in high performance centers and fields.

Structural Health

Monitoring of vibrations and material conditions in buildings, bridges and historical monuments.

Quality of Shipment Conditions

Monitoring of vibrations, strokes, container openings or cold chain maintenance for insurance purposes.

Smartphones Detection

Detect iPhone and Android devices and in general any device which works with Wifi or Bluetooth interfaces.

Perimeter Access Control

Access control to restricted areas and detection of people in non-authorized areas.

Radiation Levels

Distributed measurement of radiation levels in nuclear power stations surroundings to generate leakage alerts.

Electromagnetic Levels

Measurement of the energy radiated by cell stations and WiFi routers.

Traffic Congestion

Monitoring of vehicles and pedestrian affluence to optimize driving and walking routes.

Smart Roads

Warning messages and diversions according to climate conditions and unexpected events like accidents or traffic jams.

Smart Lighting

Intelligent and weather adaptive lighting in street lights.

Intelligent Shopping

Getting advices in the point of sale according to customer habits, preferences, presence of allergic components for them or expiring dates.

Noise Urban Maps

Sound monitoring in bar areas and centric zones in real time.

Water Leakages

Detection of liquid presence outside tanks and pressure variations along pipes.

Vehicle Auto-diagnosis

Information collection from CanBus to send real time alarms to emergencies or provide advice to drivers.

Item Location

Search of individual items in big surfaces like warehouses or harbours.

Waste Management

Detection of rubbish levels in containers to optimize the trash collection routes.

Smart Parking

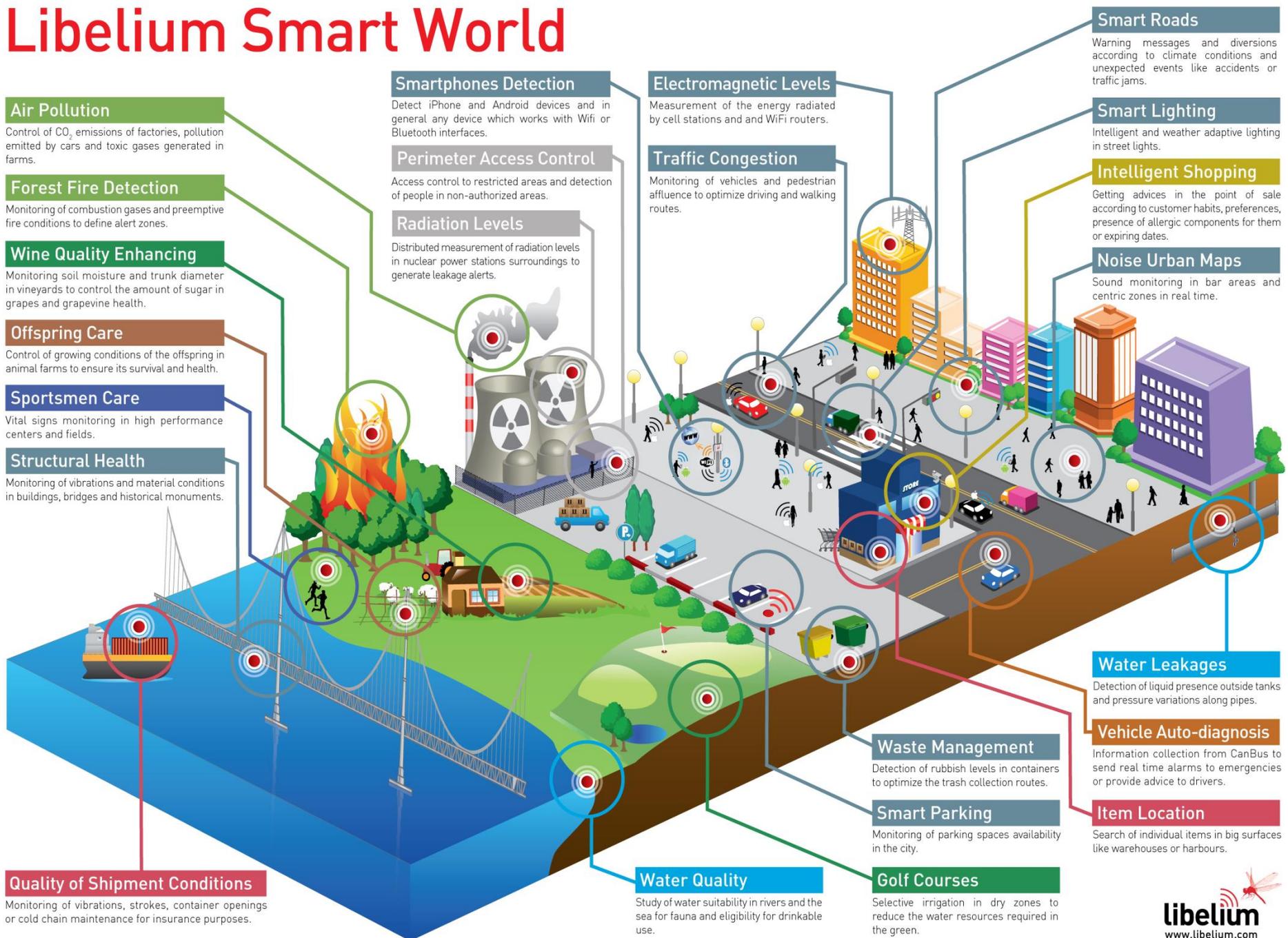
Monitoring of parking spaces availability in the city.

Golf Courses

Selective irrigation in dry zones to reduce the water resources required in the green.

Water Quality

Study of water suitability in rivers and the sea for fauna and eligibility for drinkable use.



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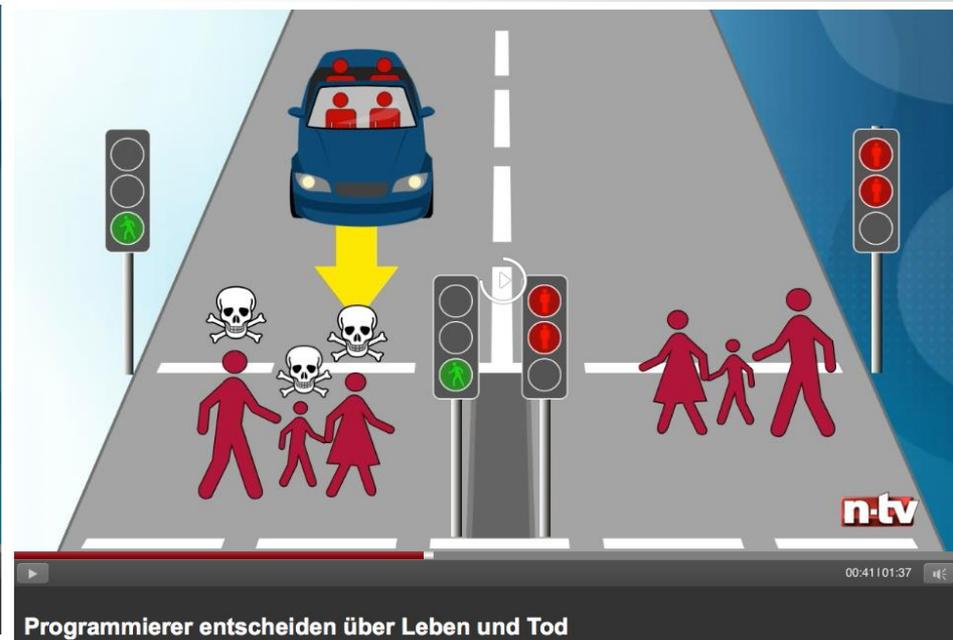
3D Print



Autonomic Delivery & Logistics



Autonomic Driving



Mobility



Leisure and Adventure



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Fabrication & Manufacturing



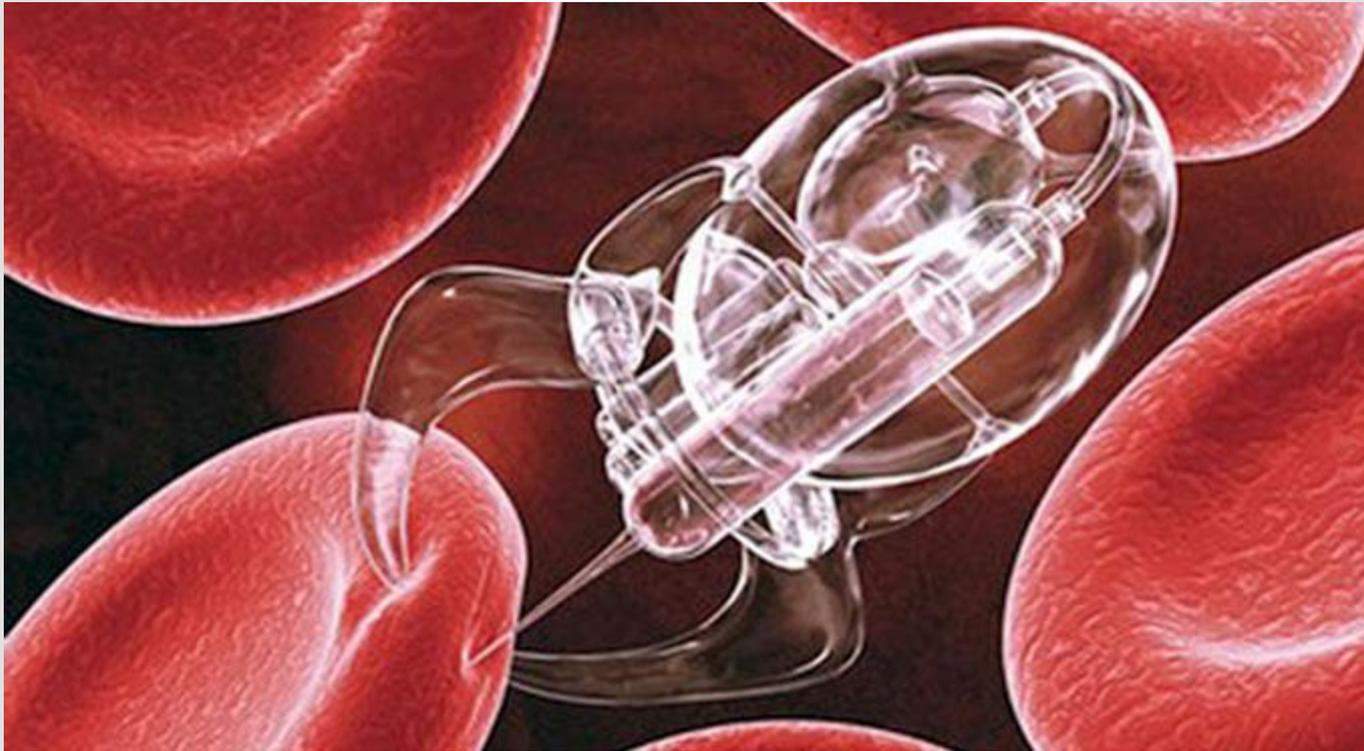
Fabrication & Manufacturing



Construction & Mobile Robotic



Nano Robotic



Home Robotic



Distributed intelligence
Distributed robotics

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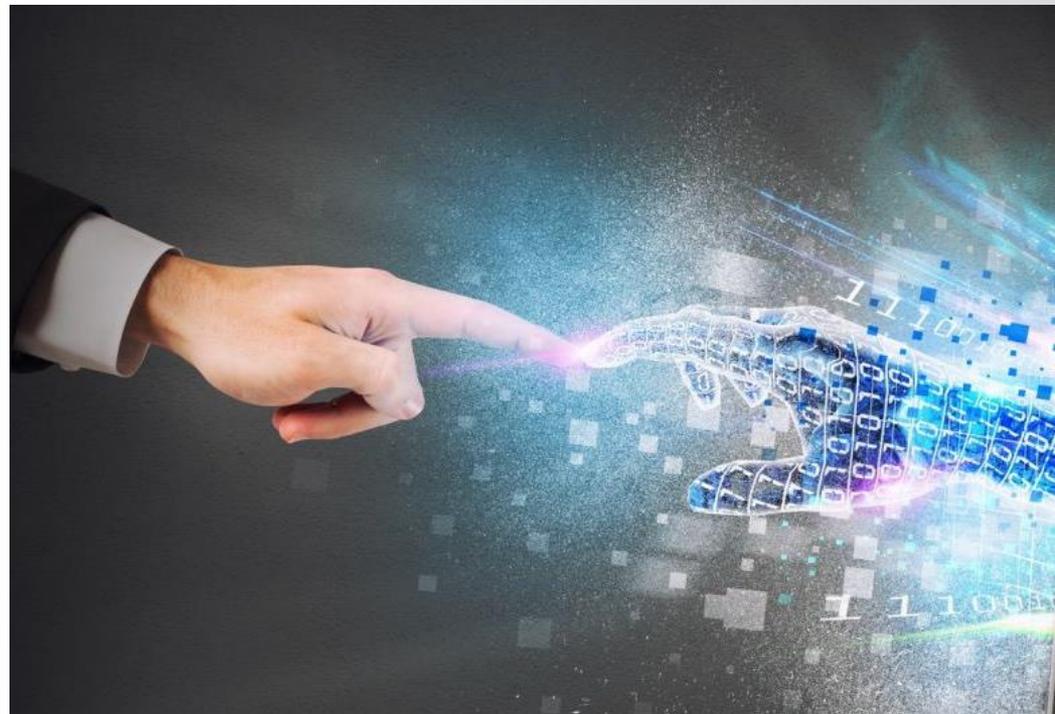
The Manager & Entrepreneurs



TECH Dieser Roboter ist Creative Director bei einer japanischen Werbeagentur

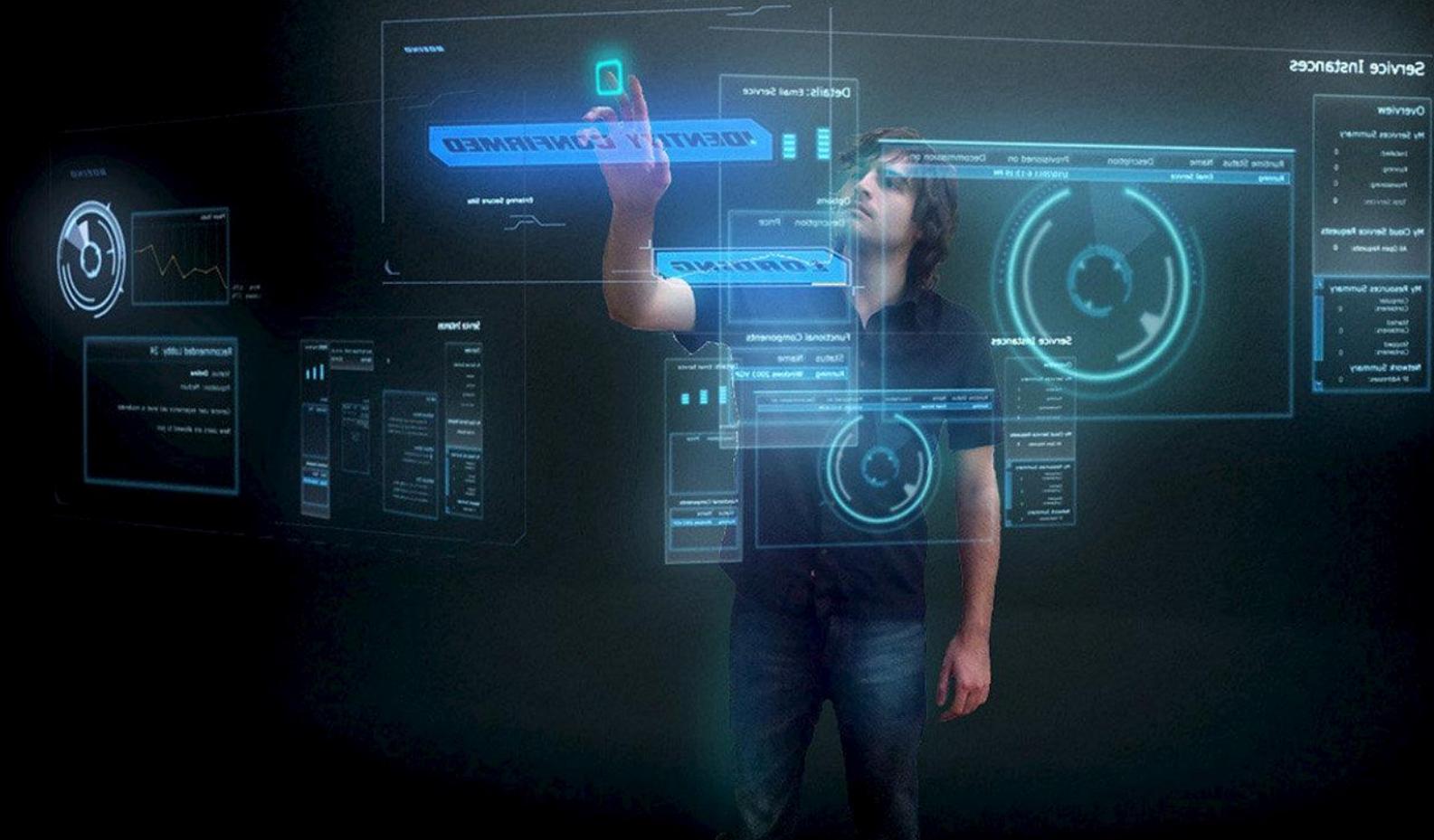


The Digital Twin & Souffleur (Prompter)



*Better Decision Making
Distributed Intelligence*

Better Decisions



... more than ...

20'000 Decisions Daily...!

... more than ...

20'000 Decisions Daily...!

new

20'000 Decisions Daily...!

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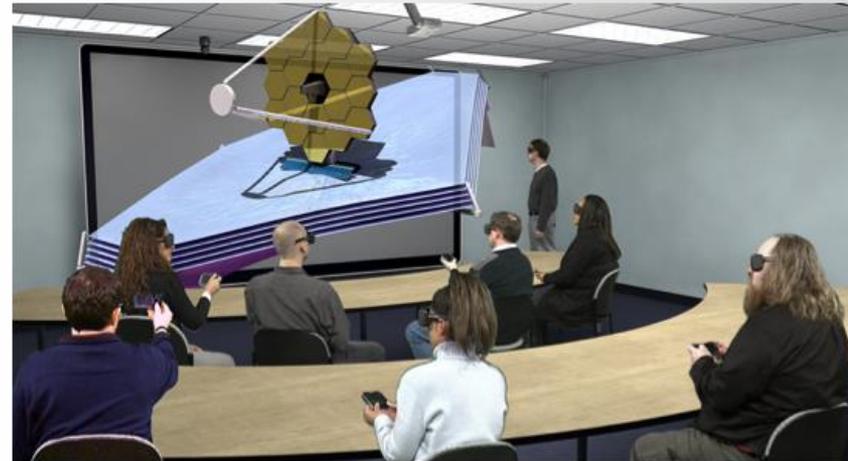
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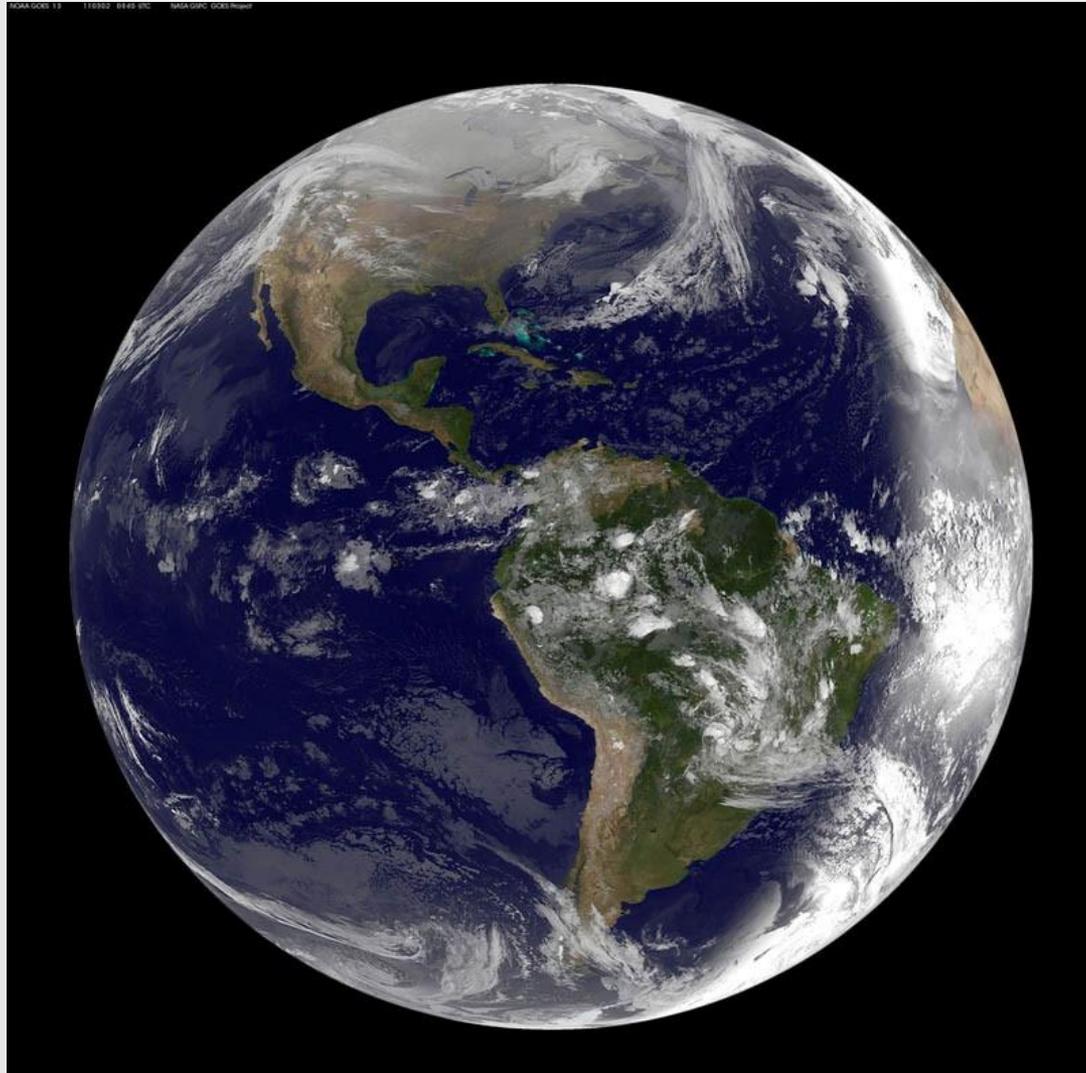
The Teacher and his Classroom



The Virtually Classroom



Environment



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