

# Inovação e o Sector da Água

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# Inventando o futuro

## Modelo linear

**Academia, innovation & industry –  
traditional model  
(Francis Bacon; 1561 – 1626)**



### LINEAR TECHNOLOGY EVOLUTION



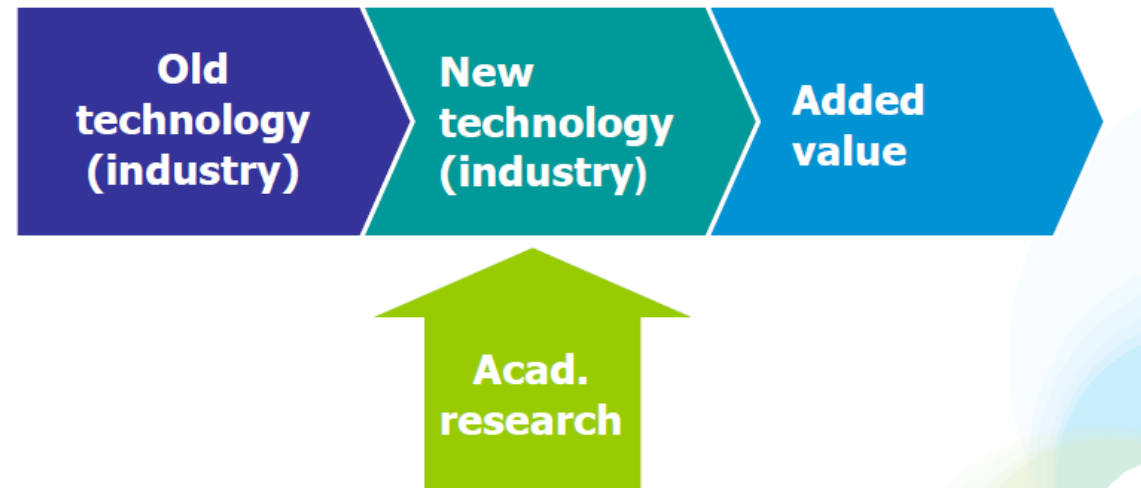
# Inventando o futuro

## Modelo Californiano

**Academia, innovation & industry:  
the Californian model**  
(Adam Smith; 1723 – 1790)



### BRANCHED TECHNOLOGY EVOLUTION MODEL



\* Leary et al  
2002

**More than half of economic growth during 1945 – 2002 is attributed to innovation within the high-technology sector\***

# Iniciativas da Melinda and Bill Gates Foundation



Sanita sem água



Omniprocessor

# Modelo do Silicon Valley

Angel funded start-ups



User Traction  
VC Backing



Billions of revenue  
Winners



# “Smart Cities”



**PARKING**

- ETC P
- EZ Parking
- Passport
- PARKWHIZ
- ParkiFi
- SPOT.
- get my PARKING
- CivicSmart
- evopark
- SPOT HERO
- oopyarking
- MeterFeeder

**ENVIRONMENTAL/LOCATION SENSORS**

- plume LABS
- BreezoMeter
- UNDERSTORY
- aclima
- blyncs
- soofa
- AMBIENCE DATA
- asichens
- Clarity

**DISASTER MANAGEMENT**

- 1concern
- ZENYSIS

**TRANSPORT/TRANSIT DATA**

- moovit
- Citymapper
- remix
- STREETLIGHTDATA
- TransLoc
- Transit App
- TRANSIT SCREEN
- Swiftly
- Double MAP
- INRIX
- miovision
- metrotech
- moovel
- ally
- WhereIsMyTransport
- TRANSITLABS
- ridlr
- TRAFI

**SMART TRANSPORT (SHUTTLE/BIKE)**

- Zagster
- SOBI SOCIAL BICYCLES
- mobike
- URBEE
- ofo
- BRIDJ
- ZipGo
- ubike
- city flo
- Shuttl
- limo

**DATA-DRIVEN URBAN PLANNING**

- Mapillary
- stae
- CALTHORPE ANALYTICS
- Civic Insight
- Neighborland
- azavea

**WASTE MANAGEMENT**

- RUBICON
- compology
- RTS
- enevo
- zerocycle
- AMCS

**WATER SOFTWARE & ANALYTICS**

- FATHOM
- FLOW LABS
- rachio
- VALOR WATER ANALYTICS
- pluto
- BANYAN WATER
- WaterSmart
- EMAGIN
- AYYEKA

**CONNECTIVITY**

- VENIAM
- 华视互联
- sigfox
- purplewifi
- FILAMENT

**GRID/ENERGY**

- SPACE-TIME INSIGHT
- Trilliant
- AutoGrid
- varentec
- Telensa
- Dispatchr
- GRIDCLUE
- opusone
- energyworx
- Utilidata
- CRINICHTS



# “Startups”

## “Crowdfunding”



Removes  
99.9999% of bacteria



Removes  
99% of viruses



Filters particles



Reduces odors  
& pesticides



Fits onto your faucet



Replaceable core/  
reduces bottle waste  $\geq 99\%$



Easy to use, up to 500 L



Self-disinfecting



<https://www.kickstarter.com/projects/drinkpurehome/drinkpure-home-safe-and-tasty-water-from-the-tap>

<https://www.kickstarter.com/projects/mayuwat/mayu-keep-your-water-healthy-with-a-natural-swirl>

# “Startups”

Aceleradores

<https://www.imagineh2o.org/accelerator/>

I M A G I N E {  } H<sub>2</sub>O



# “Startups”

B2C em vez de B2B

Propriedade intelectual pode ser monetizada

Redes sociais reduzem custos de comunicação, marketing e vendas

Amazon, Walmart e AliBaba facilitam logística, “procurement”,  
marketing e vendas globalmente

150 milhões de investidores “online”

# Agenda de inovação da EPA

Conserving and Recovering Energy

Conserving and Recovering Nutrients

Improving and Greening of the Water Infrastructure

Conserving and Eventually Reusing Water

Reducing Costs and Improving Techniques for Water Monitoring

Improving Performance of Small Systems

Reducing Water Impacts from Energy Production

Improving Resiliency of Water Infrastructure to the Impacts of Climate Change

Improving Access to Safe Drinking Water and Sanitation

Improving Water Quality of our Oceans, Estuaries, and Watersheds

# Manuais do KOFAC para estudantes do ensino secundário



- 1 [Artificial Intelligence](#)
- 2 [Driverless vehicles](#)
- 3 [Internet of things](#)
- 4 [Virtual reality](#)
- 5 [CRISPR](#)
- 6 [Space launch vehicles](#)
- 7 [Natural disasters](#)
- 8 [Smart medicine](#)
- 9 [Game engines](#)
- 10 [Sports statistics](#)

Ver ainda <http://theinventors.io>

## ADDING AND "TAGGING" INTELLIGENCE IN OBJECTS



### ● Augmented reality

**By image recognition:**  
"it is a bottle"

**By reading the bar code:**  
the cost is 50c

**By using a QR CODE:**  
extended descriptions, images,  
videos

### ● Sensorization

RFID: may provide detailed product information including the possibility of positioning

Additional sensors: may provide quality related information such as Ph and temperature

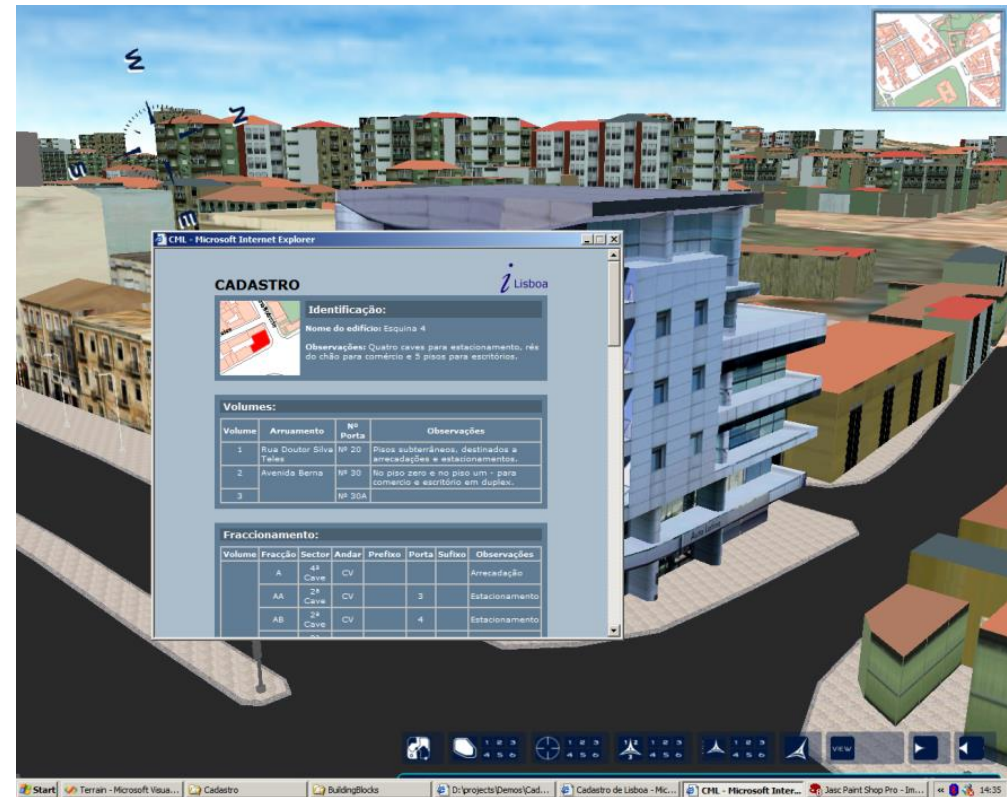
### ● Robotics

Sensors/actuators/processors  
— A bottle may have a robotic exo-skeleton



# “Internet of Everything”

“Smart tags” do ARIA, um “browser”  
para a “Internet of Everything”



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<https://facebook.com/groups/183536175571026/>