



# EX MACHINA

## INTERNET OF THINGS

Internet of Things, Open technologies & Startups

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# Let's introduce

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# Ex Machina

## Internet of Things Solutions



Εταιρεία Παροχής Αερίου Αττικής Α.Ε.



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# Learning outcomes

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By the end of this workshop you will be able to

1. define Open Data
2. describe what Internet of Things (IoT) is about
3. describe an IoT use-case where the use of Open Data adds value for the involved stakeholders

# Did you know that...

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“ $\frac{2}{3}$  of companies are not fully taking advantage of their data”

Forrester\*

“In IoT you never know who is going to help you unlock the value of your data”

Vassilis

# What is *Open data*?

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Speak your mind!

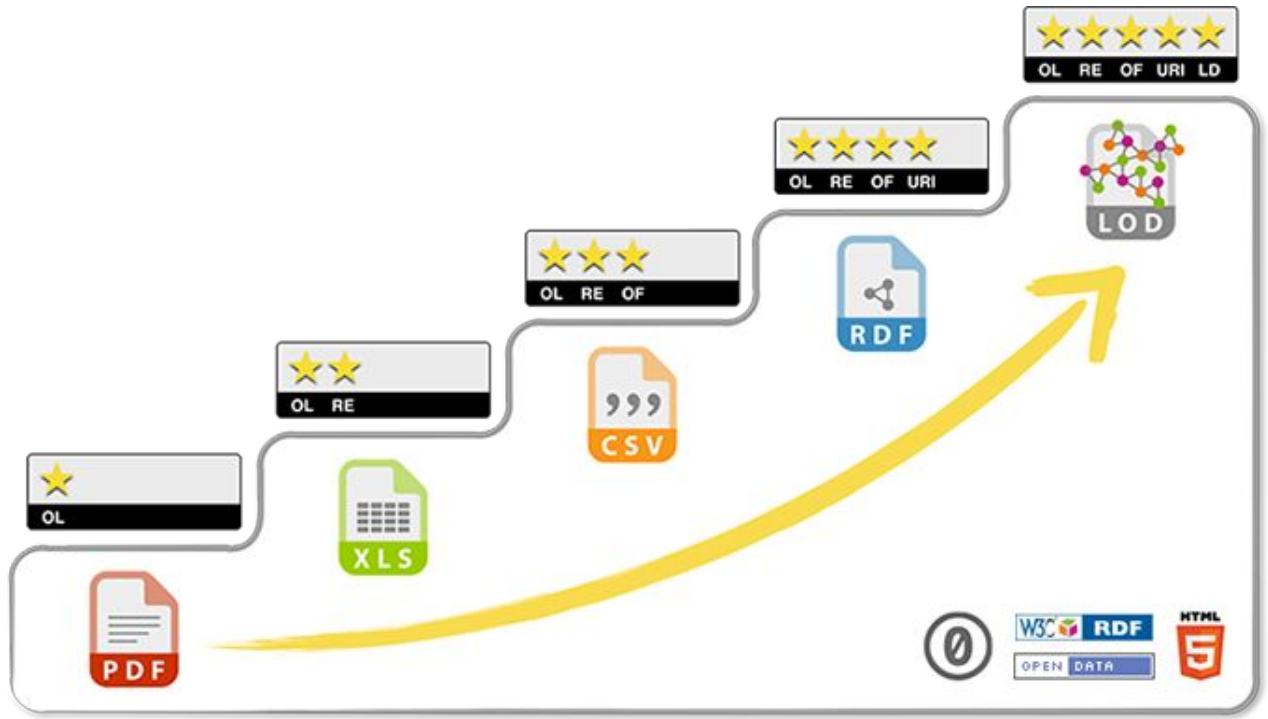
# Open Data definition by ODI

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Open data is data that anyone can  
access, use or share.

<https://theodi.org/what-is-open-data>

# 5-star system by Sir Tim-Berners Lee





# Licensing data

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Data is distinct from content =>  
new set of licenses

- Public Domain Dedication & License (PPDL)
- Attribution License (ODC-By)
- Open Database License (ODC-ODbL)

# Where to start with open data?

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- Know your way around open data  
e.g. EU data portal e-learning program
- Study success stories on your sector  
e.g. Open Data stories
- Find and start using the right tools  
e.g. LinDa
- Get in touch with experts in the field  
ODI Athens node!

# How would you define IoT?

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Shoot out words or phrases that describe what IoT is for you!

# Internet of Things

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The evolution of programming, where

- Computers (Hardware & Software)
- Communications (networking)
- Sensors (data collecting) and actuators (acting) with a unique ID
- Automated processes (data exchanging)
- (Big) Data analysis (computing)

interconnect to provide

- Insights / Business Intelligence

# It's all about data!

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Make data available as **open data**:

- Complete
- Primary
- Timely
- Accessible
- Machine processable
- Non-discriminatory access
- Non-proprietary data formats
- License-free

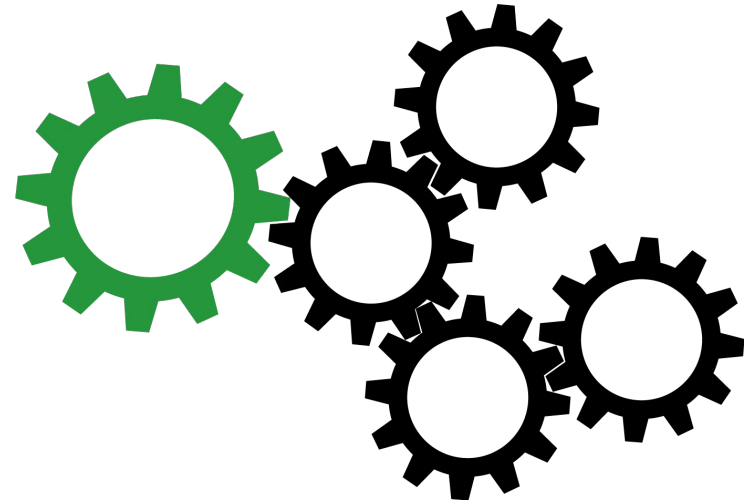
# What about the hardware?

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**IoT bill of rights.** Consumers have the right to:

- control their privacy
- control the devices in their home
- control the data collected about them
- transparency
- change: against proprietary lock-in, open standards

Let's get to work!



# An IoT startup opportunity!

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Consider a Greek island, where drinking water is supplied on demand by private companies to consumers.

Involved stakeholders are:



# Involved stakeholders / Tools

## ROLES



Water tank



Homeowner



Water company



Municipal water dept



Database

## TOOLS



import



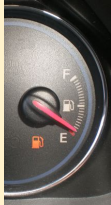
DB



export



phone



sensor



manual check

# Action!

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Let's become them!

# Other IoT use-cases?

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Can you think of other Internet of Things  
use-cases?

How would open data add value to these?

# Time for a RECAP...

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1. Open data is data we can access, use or share.
2. IoT is the evolution of computing that interconnects resources to produce data about human and machine activity. Data drive knowledge and intelligence.
3. Making this data available as open data adds value, engaging diverse stakeholders.

# Further reading & Sources

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- ODI Athens node: <http://athens.theodi.org/>
- Open data stories: <http://theodi.org/stories>
- LinDa project: <http://linda-project.eu/>
- IoT Bill of Rights: <http://openiotfoundation.org/bill-of-rights/>
- EU data portal e-learning program:  
<http://www.europeandataportal.eu/elearning/en/#/id/co-01>
- School of data handbook: <http://schoolofdata.org/handbook/>
- Forrester report:  
<https://www.xively.com/resources/simplifying-the-complexity-of-iot>
- Open data licenses: <http://opendatacommons.org/licenses/>



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THANK YOU!

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