

# IoP



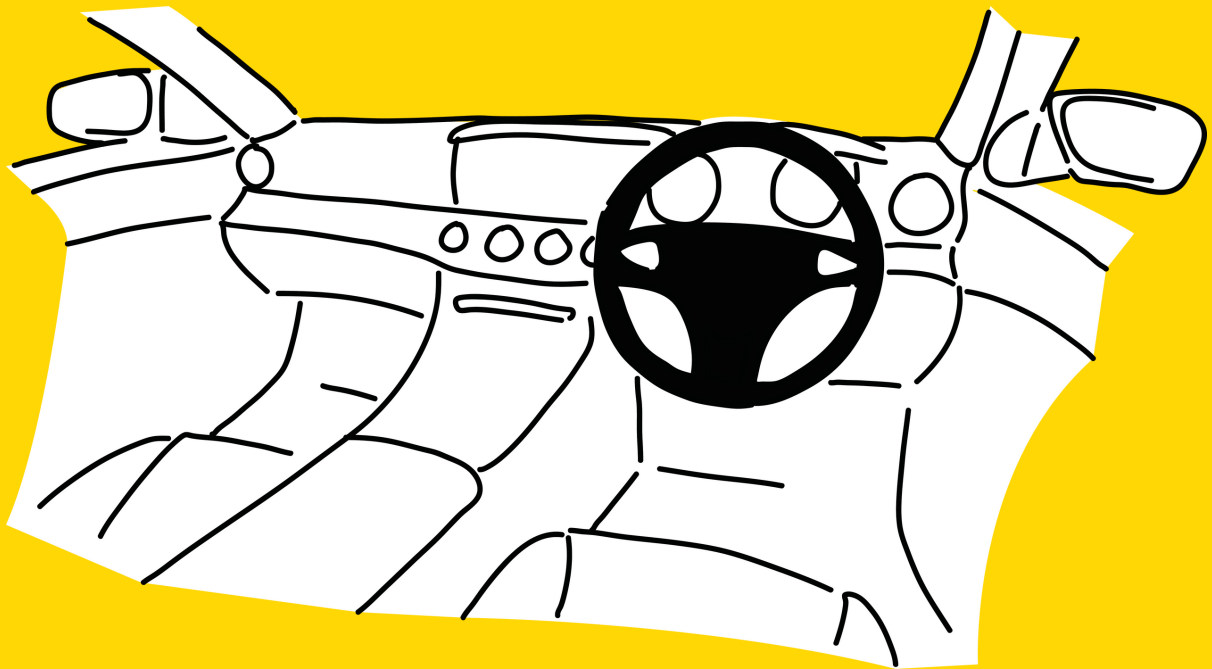
What the Heck is that ?!

**nORBR**  
#PayDecoding

**explained  
to kids!**

**Your car orders and pays for a coffee...  
by itself!**

**It's the great vacation departure:  
direction the wide open spaces and  
the hikes in the mountains!  
My brother and I settle in the new  
mom's car.**



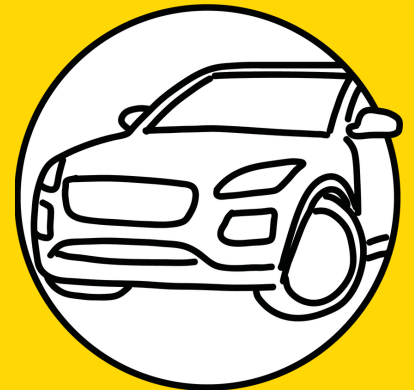
**2 hours later ... "Mommy, pee!"  
My little brother, in the back seat, is  
wiggling around...**



**"Hey MyCar, how many miles to the next highway station?"**

**Then a voice suddenly echoes through the car:**

**"The next station is two miles away. It has a gas station and a restaurant"**

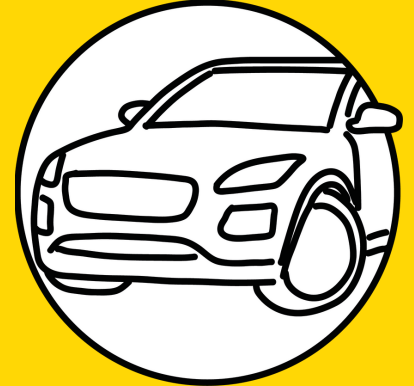


**Is the car talking to you Mom???**



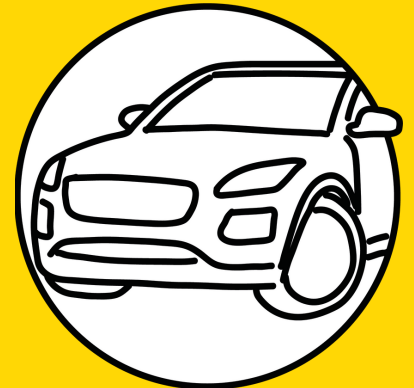
**"Hey MyCar, get me a long coffee"**

**"The long coffee is €3.50.  
Should I order?"**



**"Hey MyCar, yes.  
I authorize the payment"**

**"Very well. Your long coffee  
is available at counter #2  
in 5min. Enjoy your coffee!"**



**What was that?**

**Did the car pay for your coffee Mom?**



**"It's the Internet of  
payments my dear ;-)"**

**... AND DETAILED FOR**

**SPECIALISTS**

Whatever the sector, whether in the automotive industry, retail, leisure, food, ... **all human activities are** more or less quickly **moving into the world of the Web** and this virtualization of the physical world opens the door to new use cases in payment.



In its most basic sense, the **Internet of Things (IoT)** includes any object or "thing" :

- uniquely identifiable,
- connected to an Internet network (Wifi, LoRa, Sigfox, NB-IoT, 5G etc.),
- that can communicate by exchanging data.

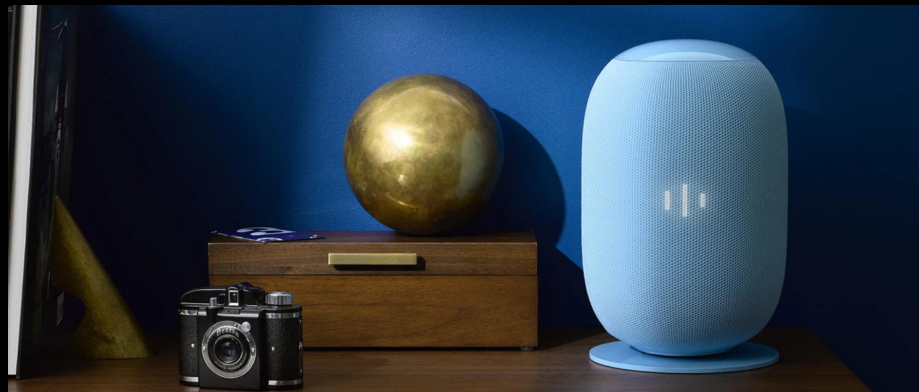
The lot includes **3 natures of devices**:

- objects directly connected to the internet,
- machine-to-machine communication (M2M),
- and communicating terminals (tablets, smartphones, watches, etc.).





Over the past 10 years, **IoT has grown exponentially**: factory equipment, monitoring tools, smart meters (water, gas, electricity, ...) and thermostats, home appliances, trackers, healthcare equipment, wearables, car equipment, mobile devices, smartwatches, connected speakers, robot vacuum cleaners, etc.



IoT devices are the endpoints that collect retail and customer data. In the finance industry, this information is invaluable.

For fintech, **IoT multiplies the payment acceptance network** by converting any connected device, or terminal, into a shopping platform.

This new set of capabilities is called the **"Internet of Payments" (IoP)**.



**The protocols that govern IoP are still evolving, but when combined with the cloud, big data, artificial intelligence and biometrics, they have the potential to become the next hypergrowth sector.**

**The relationship between IoT and IoP is becoming obvious:**

**Any object become a payment terminal!**



And it is **the M2M market of IoP that is growing fastest** (it is expected to reach more than \$27 billion by 2023): that is, devices that manage to execute payments themselves without human mediation.

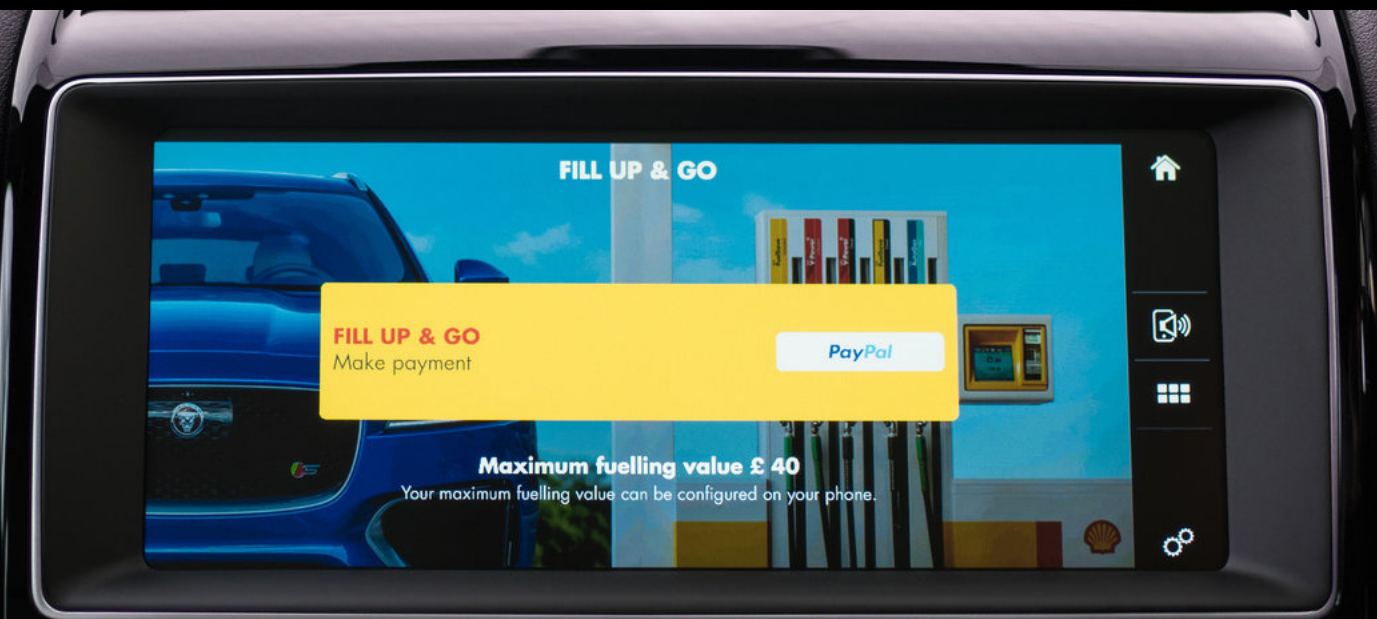
In an M2M transaction the human is informed **after** their device has made a purchase.



Smart refrigerator

## EXAMPLES OF IOP

- **A car or bike able to directly purchase insurance**, paying for tolls or parking.
- **Gas stations able to interact with vehicles** to serve them fuel and directly negotiate payment:
  - Chevrolet partnered with Shell to allow drivers to pay for gas from their vehicle's infotainment screen
  - Hyundai partnered with Xevo to pay for gas from the vehicle's screen.



## EXAMPLES OF IOP

- **Printers able to request and pay** for their own toner when they detect that the current toner is running out.
- **Refrigerators able to make product purchases** based on the needs they detect and then making payment.
  - Samsung's Family Hub™ connected refrigerators allow users to order groceries and pay through the MasterCard Groceries app.





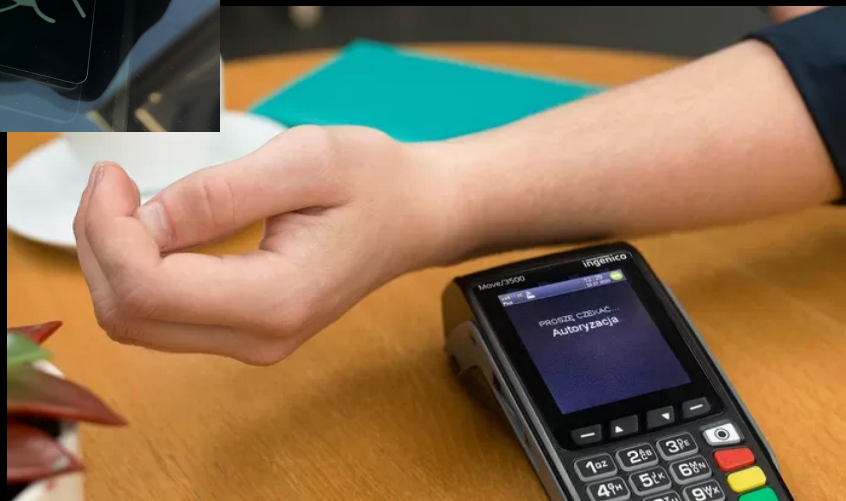
## EXAMPLES OF IOP

- **Heating or cooling systems that**, in the event of a breakdown, **can contact the technical service** to correct the problem and pay the technical service later.
- **Supermarket checkouts that automatically collect** the balance of purchases calculated at the checkout from the user.



## EXAMPLES OF IOP

- **A ring** (Aeklys), a child's object (Moneywolkie) **or an implant** (Walletmor) that replaces sensitive payment account information with a secure token so that consumers **can make payments with a single touch**.



But the "**cloak of invisibility**" placed on the act of payment is not without its own reflections on multiple levels: ethical, philosophical, responsibilities, security, trust, governance of the exploding data, regulatory compliance, hardware and software technologies...

The success of the **IoP** will also **depend on the convenience it can offer the customer.**

Today, price is often the determining factor in a purchase, but in the future, customers will increasingly choose the product, which they don't actually have to choose themselves, because the **decision will be made automatically.**

In other words, convenience will trump cost!

In this new world, **market share will not be gained through price but through exclusive partnerships.**



# **6.6 CONNECTED DEVICES WITHIN 3 YEARS, EACH PERSON IN THE WORLD WILL OWN AN AVERAGE OF 6.6 INTERNET- CONNECTED DEVICES.**

("Payment Acceptance Will Never Be the Same After the COVID-19 Pandemic" Gartner - October 2020)



# **12.3 BILLION**

**GLOBALLY, THERE WERE 12.3  
BILLION CONNECTED OBJECTS AT  
THE END OF 2021**

(IoT Analytics market research firm)

# + 29%

**THE GLOBAL WEARABLE  
PAYMENT DEVICES MARKET  
(FITNESS TRACKERS, PAYMENT  
WRISTBANDS, SMARTWATCHES,  
ETC.) IS EXPECTED TO GROW AT A  
CAGR OF APPROXIMATELY 29%  
FROM 2022 TO 2032, WITH A  
PROJECTED MARKET VALUE OF  
US\$171.38 BILLION IN 2032.**

([www.factmr.com/report/wearable-payment-devices-market](http://www.factmr.com/report/wearable-payment-devices-market))

# **+ 125%**

**IOT-BASED TRANSACTIONS IN  
THE U.S. WILL GROW AT A  
COMPOUND ANNUAL GROWTH  
RATE OF 125 PERCENT OVER THE  
NEXT FEW YEARS.**

("Internet of Payments Market Playbook" 451 Research, 2019.)



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word of the week