

Esmorzar d'innovació:

Blockchain, més enllà de les monedes virtuals

Carles Gómar

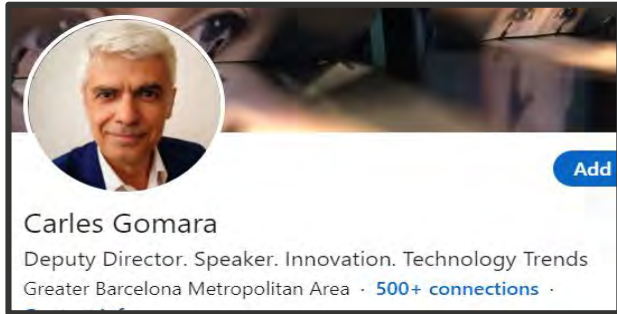


@cgomara



cgomara

cgomara@gencat.cat



Profile card for Carles Gomara. It features a circular profile picture of a man with grey hair and a blue jacket. The background of the card is a blurred image of a person's face. A blue 'Add' button is located in the bottom right corner of the card.

Carles Gomara
Deputy Director. Speaker. Innovation. Technology Trends
Greater Barcelona Metropolitan Area · [500+ connections](#) ·



Profile card for David Belgoff. It features a circular profile picture of a man with a beard and a blue shirt. The background of the card is a blurred image of a person sitting at a table in a meeting room. A green 'Add' button is located in the bottom right corner of the card.

David Belgoff · 1st
Entrepreneur | Training | Research | Keynote Speaker |
Advisory
Barcelona, Catalonia, Spain · [500+ connections](#) · [Contact info](#)



Profile card for Marta Valles. It features a circular profile picture of a woman with dark hair wearing a white top. The background of the card is a blurred image of a person. A green 'Add' button is located in the bottom right corner of the card.

Marta Valles · 1st
Partner - Business Development Manager VOTTUN
Greater Barcelona Metropolitan Area · [500+ connections](#) ·

SATOSHI NAKAMOTO



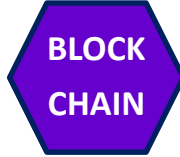
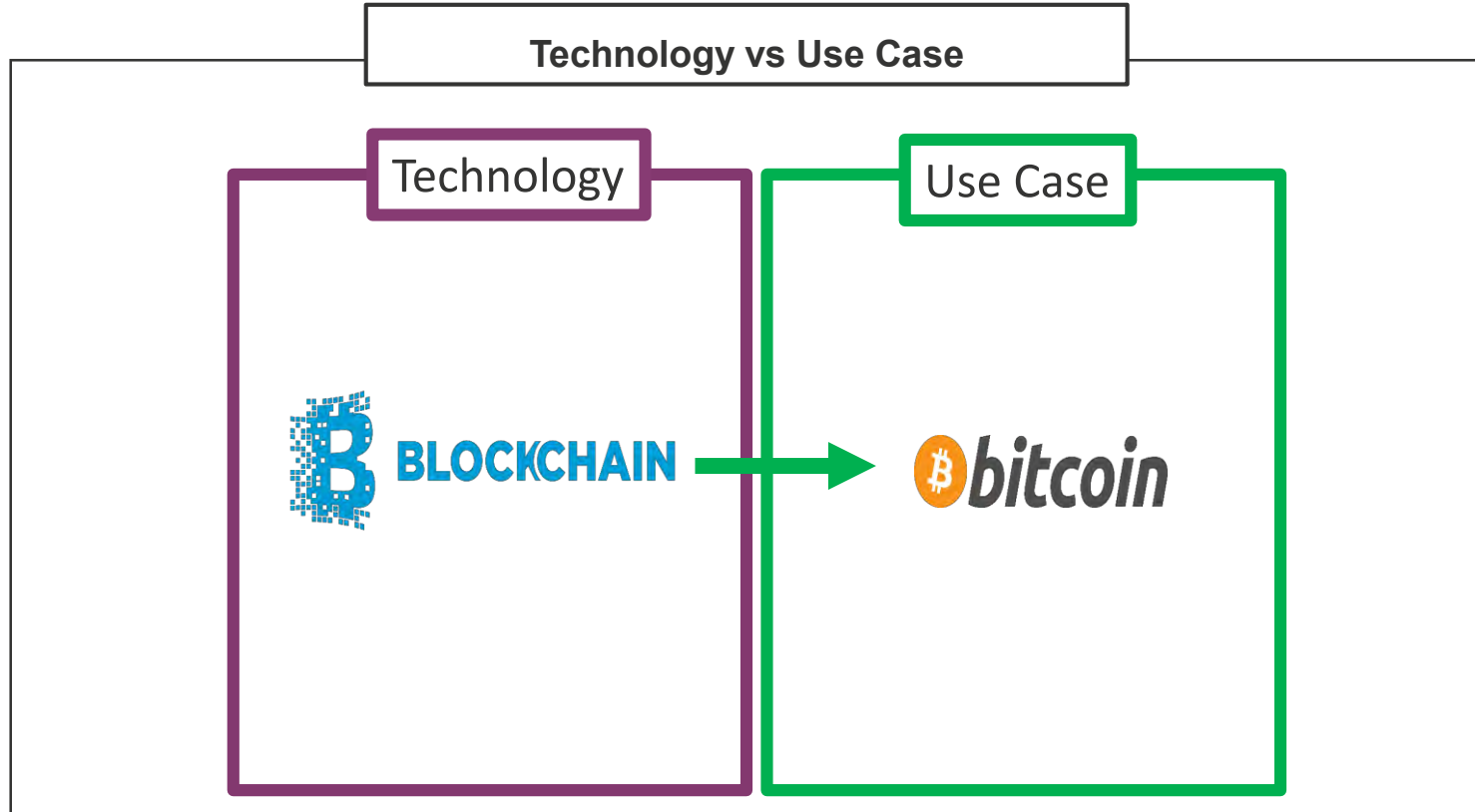
2008



FIRST USE CASE



BLOCK
CHAIN





Encrypted



**BLOCK
CHAIN**

Bitcoin's Network

Distributed

GLOBAL BITCOIN NODES DISTRIBUTION

Reachable nodes as of Thu Nov 26 2020
08:45 GMT+0100 (Hora estàndard del Centre
d'Europa).

11290 NODES

24-hour charts »

Top 10 countries with their respective number of
reachable nodes are as follow.

RANK	COUNTRY	NODES
1	n/a	2926 (25.92%)
2	United States	1908 (16.90%)
3	Germany	1707 (15.12%)
4	France	575 (5.09%)
5	Netherlands	459 (4.07%)
6	Canada	356 (3.15%)
7	United Kingdom	327 (2.90%)
8	Singapore	250 (2.21%)
9	Russian Federation	217 (1.92%)
10	Japan	210 (1.86%)

More (94) »



Map shows concentration of reachable Bitcoin nodes found in countries around the world.

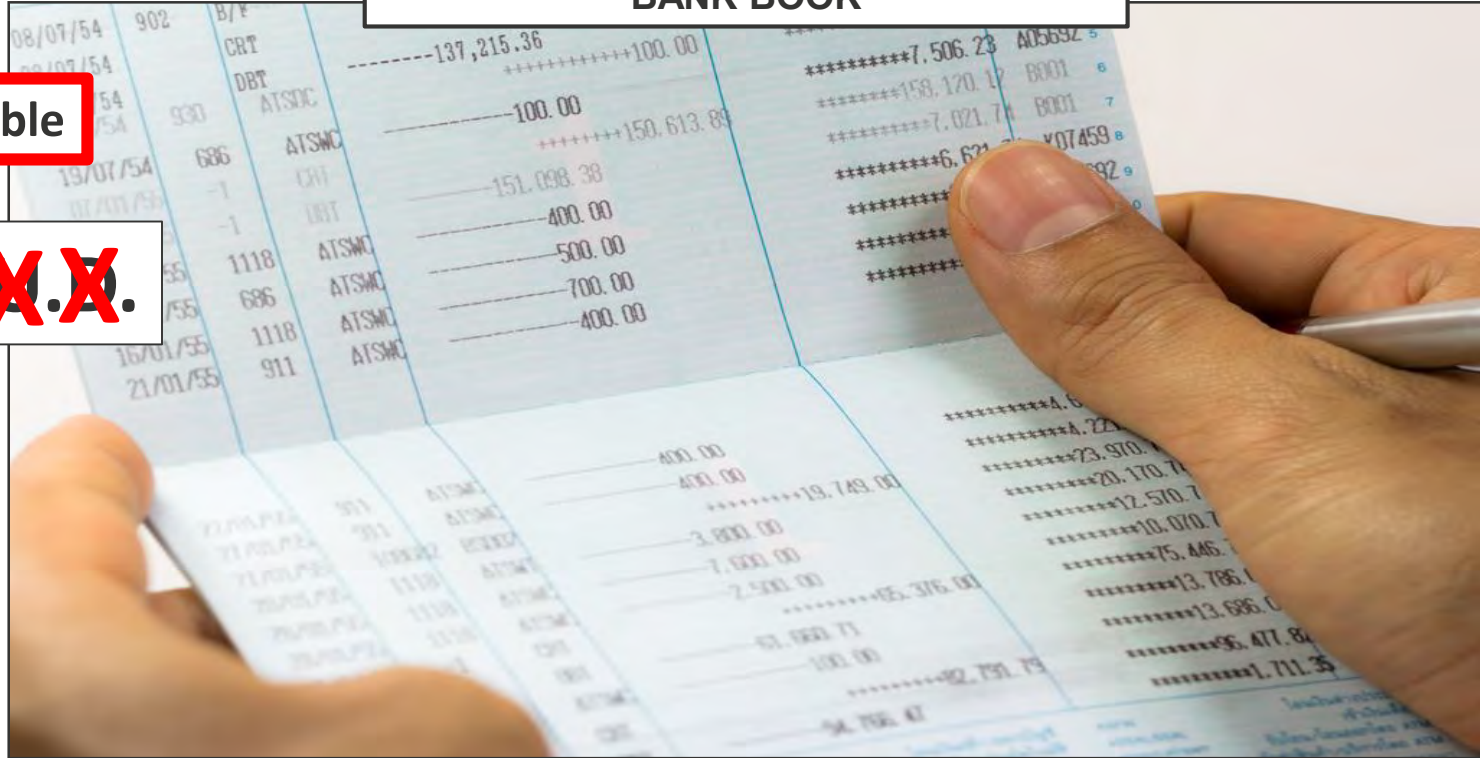
LIVE MAP

BANK BOOK

Inmutable

C.R.X.X.

**BLOCK
CHAIN**



10 Minutes
per BLOCK

SitePoint.com <https://www.sitepoint.com/proof-of-stake-vs-proof-of-work/>

We need to be SLOW



Open Source

**BLOCK
CHAIN**



**OPEN
SOURCE**

ETHEREUM

**FOUNDER
ETHEREUM
VITALIK
BUTERIN**



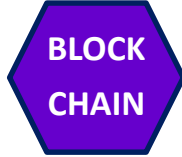
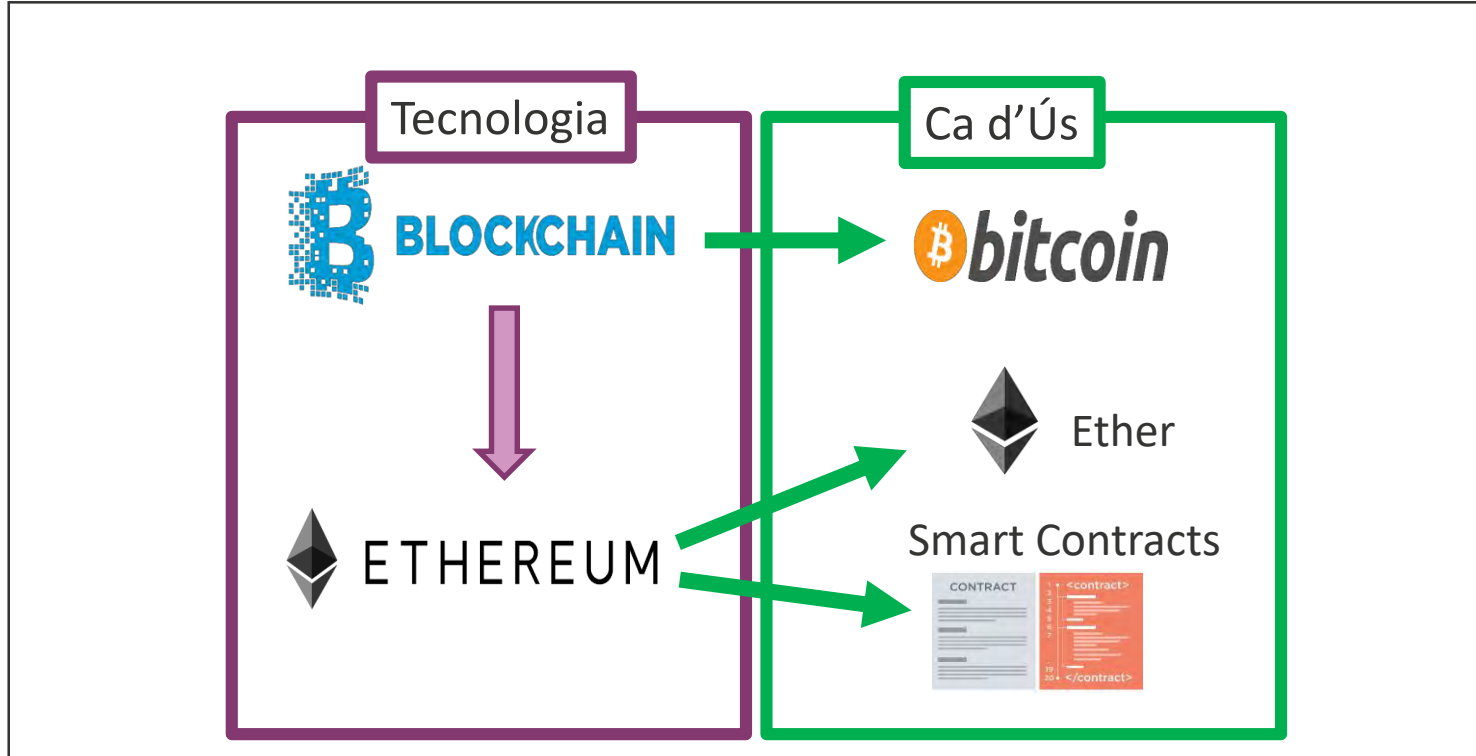
BLOCK
CHAIN

Ethereum



ethereum

<https://www.ethereum.org/>
<https://blockgeeks.com/guides/ethereum/>



Smarts contracts



**BLOCK
CHAIN**

Smart Contracts are
computer codes
running natively inside
a blockchain

Distributed Ledgers Technology

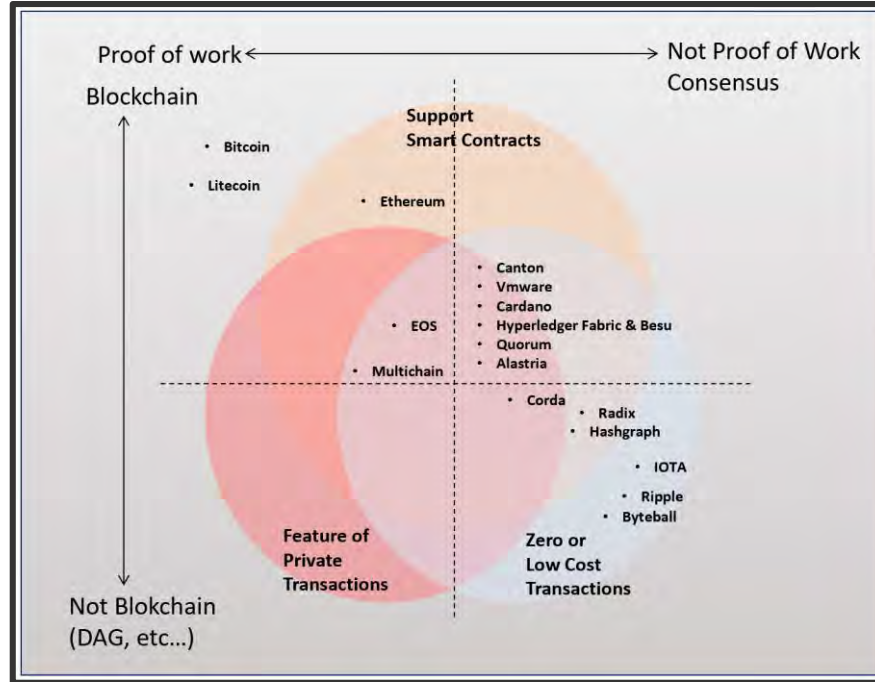
**BLOCK
CHAIN**

DLT

(Distributed Ledger Technology)

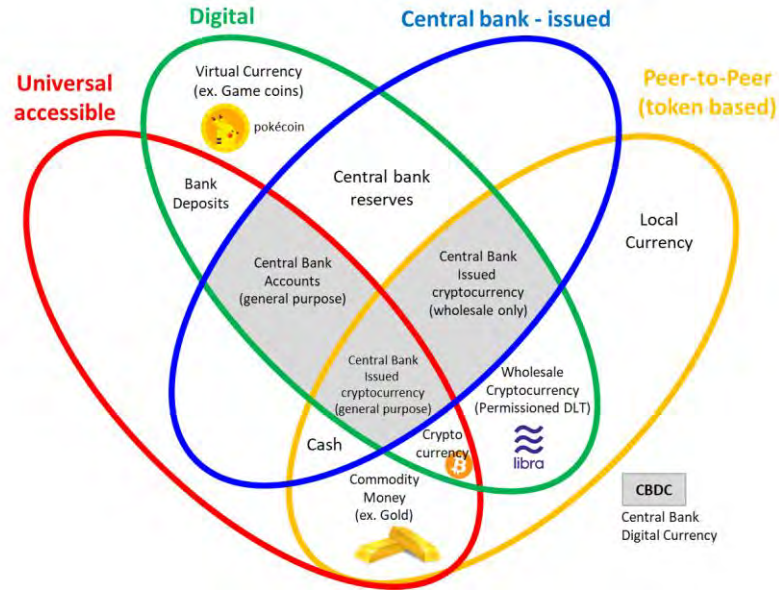


Distributed Ledgers Technology



DIGITAL CURRENCIES

The money flower: a taxonomy of money
Adaptation from Bank for International Settlements (2017)



Definition

Encrypted

Distributed

Inmutable

Blockchain is an open technology for the creation of distributed/replicated databases.

Each database is made of a continuously growing list of [records](#), called *blocks*, which are linked and secured using [cryptography](#).

Each block typically contains a [cryptographic hash](#) of the previous block ID, a [timestamp](#) and transaction(s) data.

“...” Once recorded, the data in any given block cannot be altered retroactively without the alteration of all subsequent blocks, which requires collusion of the network majority.

Own source and Wikipedia



**BLOCK
CHAIN**

**Open
Source**

BLOCKCHAIN EXAMPLES

- ✓ **Cryptocurrencies**
- ✓ **Notary**
- ✓ **Certification of authenticity**
- ✓ **Tracing**
- ✓ **Smart contracts**
- ✓ **Paperless**
- ✓ **No Intermediaries**
- ✓ **Token / Coupon**
- ✓ **ICO**

**BLOCK
CHAIN**

ALERT

**BLOCK
CHAIN**



ENTRY BARRIERS

Some of the current obstacles

1. Energy wastage
2. Data replicated
3. Centralized may be a good thing
4. Slow transactions
5. Security
6. Laws

Blockchain consume an exorbitant amount of energy



<https://www.cnbc.com/2018/02/23/bitcoin-blockchain-consumes-a-lot-of-energy-engineers-changing-that.html>
<https://www.ccn.com/bitcoin-mining-carbon-footprint-other-bitcoin-research-papers/>
<https://www.theguardian.com/technology/2018/jan/17/bitcoin-electricity-usage-huge-climate-cryptocurrency>

as strong as its weakest link

WEB | TECH | CULTURE

Hackers stole \$400 million from cryptocurrency exchange Coincheck

500 Million NEM tokens were stolen

By Andrew Lipsitz | @AndrewLipsitz | Jan 27, 2018, 4:12pm EST

f t SHARE



Illustration by Alex Castro / The Verge

One of Japan's largest cryptocurrency exchanges has revealed that it's lost nearly \$400 million in a security breach. [Coincheck says](#) that it has restricted deposits and withdrawals for a cryptocurrency called NEM, and [Bloomberg reports](#) that 500 million NEM tokens have been sent from the company "illicitly," and that it's not sure how.

The company has since suspended most trading and withdrawals, and is working to trace where the missing digital currency ended up. [In a Tweet](#), the exchange said that it was considering compensating those who lost money.

MOST READ

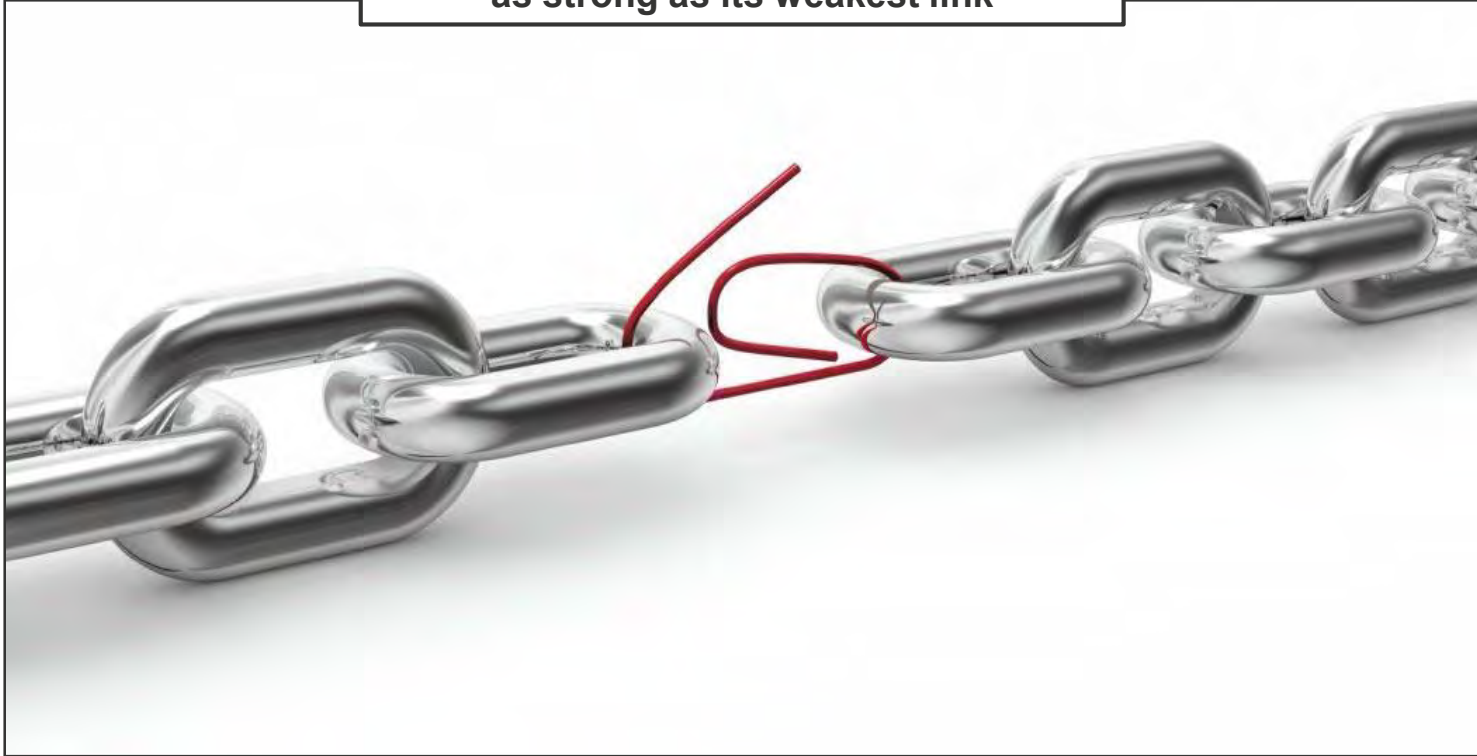


Netflix says over 48 million accounts watched Bird Box — here's what that means



Everything coming to Netflix, Amazon Prime,

as strong as its weakest link

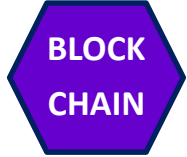


BLOCK
CHAIN



BLOCK
CHAIN

ALASTRIA (alastria.io)



Source: <https://alastria.io>

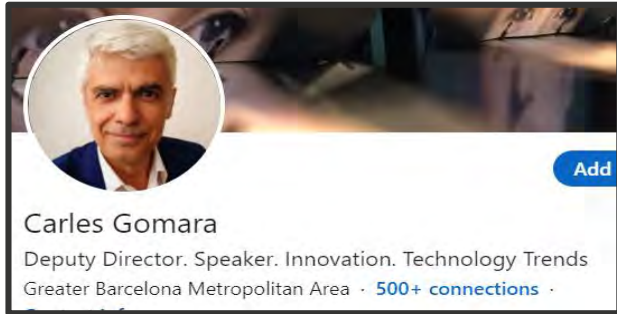


GDPR

C.R.~~X~~.~~X~~.

EU General Data
Protection Regulation
25 May 2018

Source imatge: <https://secure-anchor.com/still-don-t-know-gdpr/>



Profile card for Carles Gomara. It features a circular profile picture of a man with grey hair and a blue jacket. The background of the card is a blurred image of a person's face. A blue 'Add' button is located in the bottom right corner of the card.

Carles Gomara
Deputy Director. Speaker. Innovation. Technology Trends
Greater Barcelona Metropolitan Area · [500+ connections](#) ·



Profile card for David Belgoff. It features a circular profile picture of a man with a beard and a blue shirt. The background of the card is a blurred image of a person sitting at a table in a meeting room. A green 'Add' button is located in the bottom right corner of the card.

David Belgoff · 1st
Entrepreneur | Training | Research | Keynote Speaker |
Advisory
Barcelona, Catalonia, Spain · [500+ connections](#) · [Contact info](#)



Profile card for Marta Valles. It features a circular profile picture of a woman with dark hair wearing a white top. The background of the card is a solid light blue color. A green 'Add' button is located in the bottom right corner of the card.

Marta Valles · 1st
Partner - Business Development Manager VOTTUN
Greater Barcelona Metropolitan Area · [500+ connections](#) ·