



SIEW
November, 2018

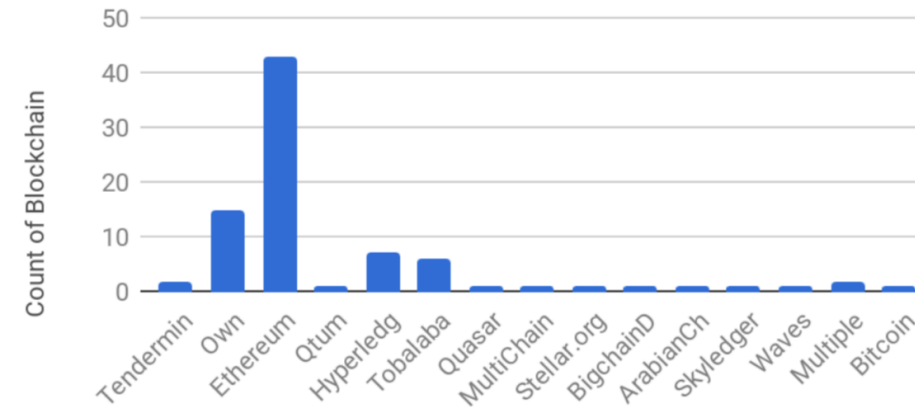
A multitude of **BLOCKCHAIN** initiatives in the energy sector



Payment system for electricity supply	ekWater*	Solarcoin bankymoon	theSunExchange SOLAR POWERED MONEY
EV charging management	RWE Fortum	Slock.it SUNCHAIN	UBS ZE Microsoft
Renewable certificates management	nrg	Solarcoin Evolution Energie	GE SIEMENS
Prosumers P2P trading platform	ENGIE VATTENFALL Fortum powerpeers Share your energy	POWER LEDGER LO3 ENERGY SUNCHAIN SCANERGY Gridgularity	GE Microsoft Nasdaq FILAMENT
Back-office tasks & interoperability	edf nrg ENGIE WIEN ENERGIE	BTL stratumn	Bouygues Immobilier

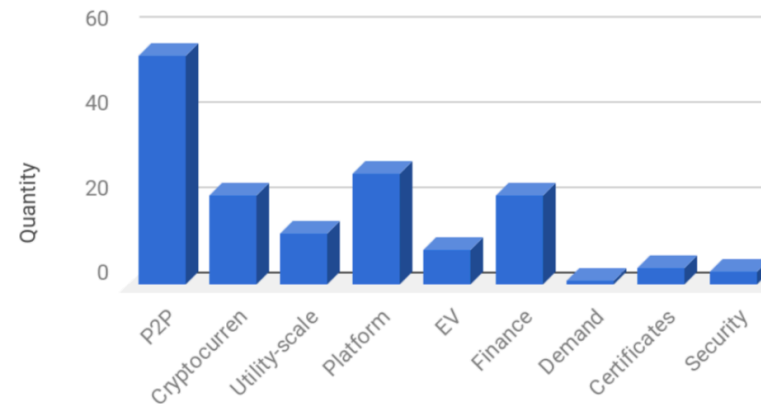
(*): use of Solarcoin as a payment method

Count of Blockchain

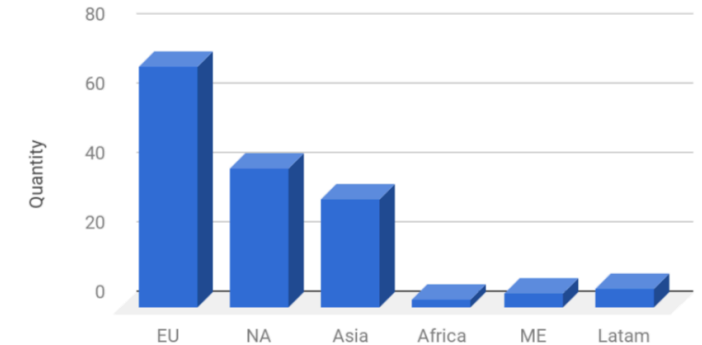


>90
initiatives

Total amount of use cases



Continents with active blockchain businesses



Security Tokens

Asset centric

INVEST IN AN ASSET

Highly regulated (complex)
Early stage
Ecosystem under construction
Public blockchain
ICO
Less prone to Scam

Asset financing
Asset trading

Utility Tokens

Service centric

PAY FOR A SERVICE

Less regulated
Early adoption
Ecosystem maturing
Public blockchain
ICO
!! Scam or Unicorn !!

Peer-to-Peer trading
Retail services
EV Charging
Energy Performance contracts
Demand Response

Distributed

Process centric 

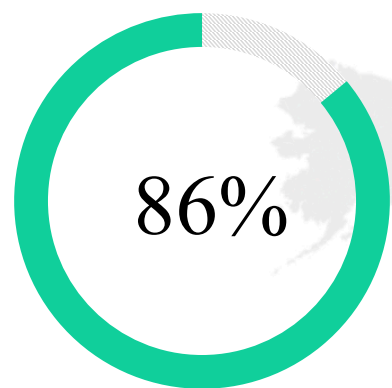
AUTOMATE, OPTIMISE A PROCESS

Low regulation
Early adoption
IBM / Hyperledger / Consortium
Mainly Private blockchain
Less prone to ICO
Next gen of Enterprise Applications

Grid management
Meter reading network
REC trading
Investment process



Investment in power generating capacity by region, 2018-2050 (\$ trillion, 2017 real)



Final shares of yearly renewable energy investments

\$1.9tn

Americas

\$1.9tn

Europe

\$1.6tn

Middle East & Turkey

\$5.5tn

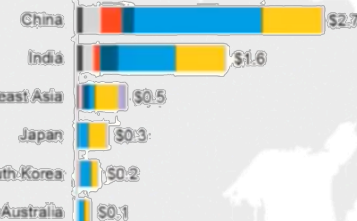
Asia Pacific

\$0.5tn

Rest of the World

Asia Pacific investment in power generation by region, 2018-2050

Cumulative investment (\$tn, 2017 real)

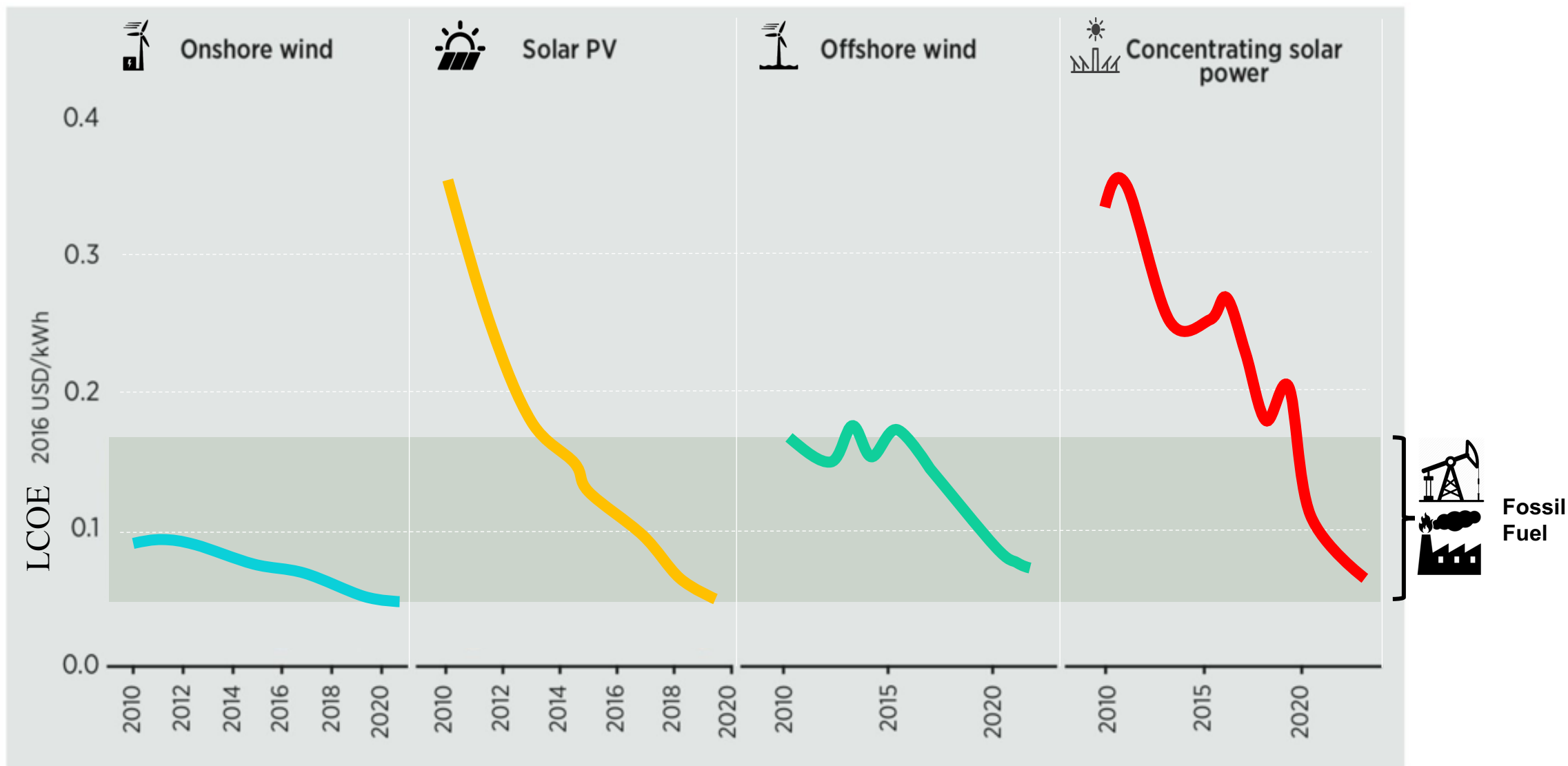


Source: BloombergNEF

Source: Bloomberg New Energy Finance



Renewable Energies are now cost competitive vs coal, nuclear, and fossil fuel energy without governmental subsidies.

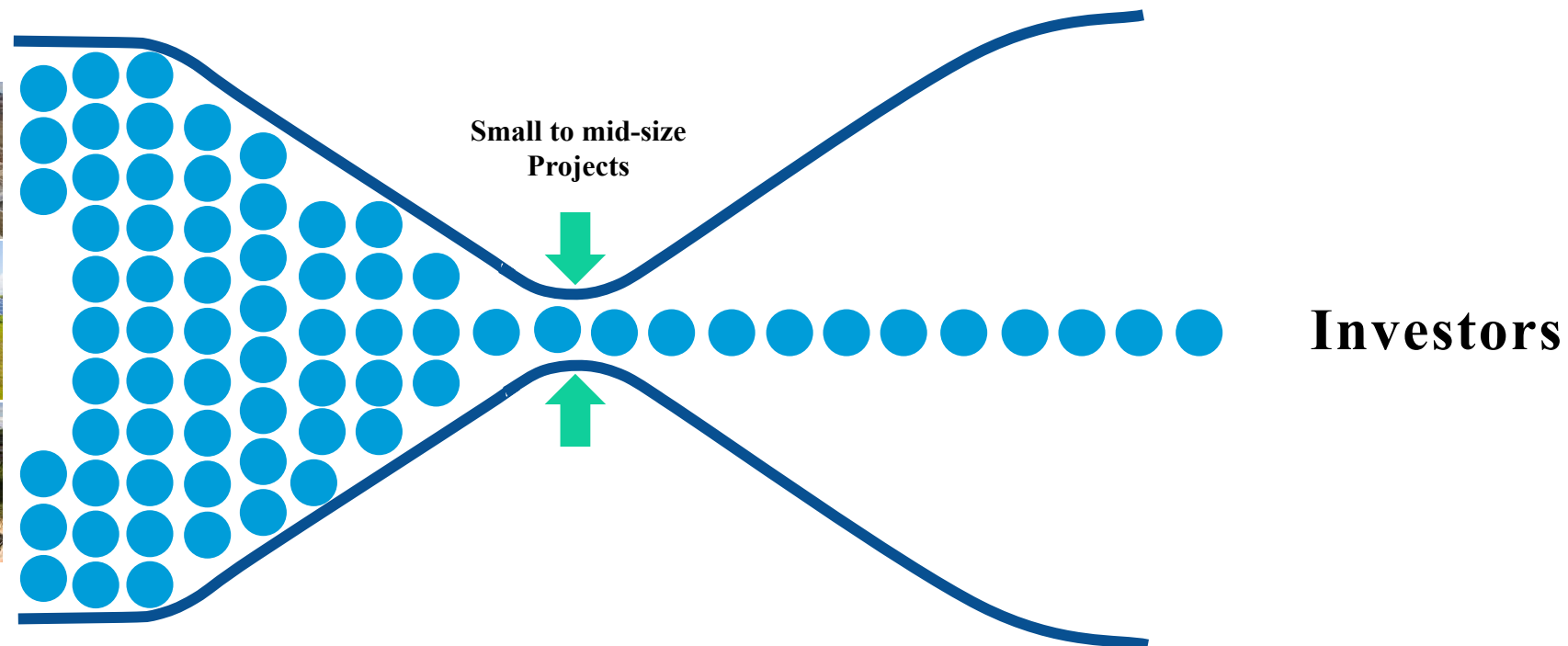


Source: IRENA Renewable Cost Database and Auctions Database.



Current funding system has created a **bottleneck**

**Project
Developers**



High transaction costs



Slow Time to finance



Complex due diligence



**High entry ticket &
lock up period**

**DUE
DILIGENCE**

AML

COMPLIANCE

**COST OF
CAPITAL**

**ASSET
MANAGEMENT**

RISKS

VALUATION

REPORTING⁵



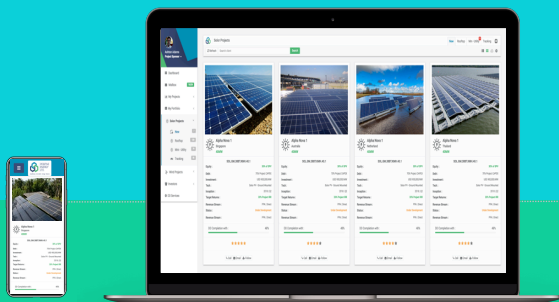


Our Digital platform

Simplification of the investment process for small to mid-size REN projects

DEAL DISCOVERY TOOL

Match-making
Community of investors



DUE DILIGENCE COLLABORATION TOOL

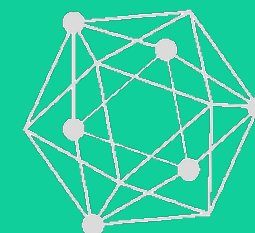
Standardized Due Diligence
Virtual Data Room
Financial model

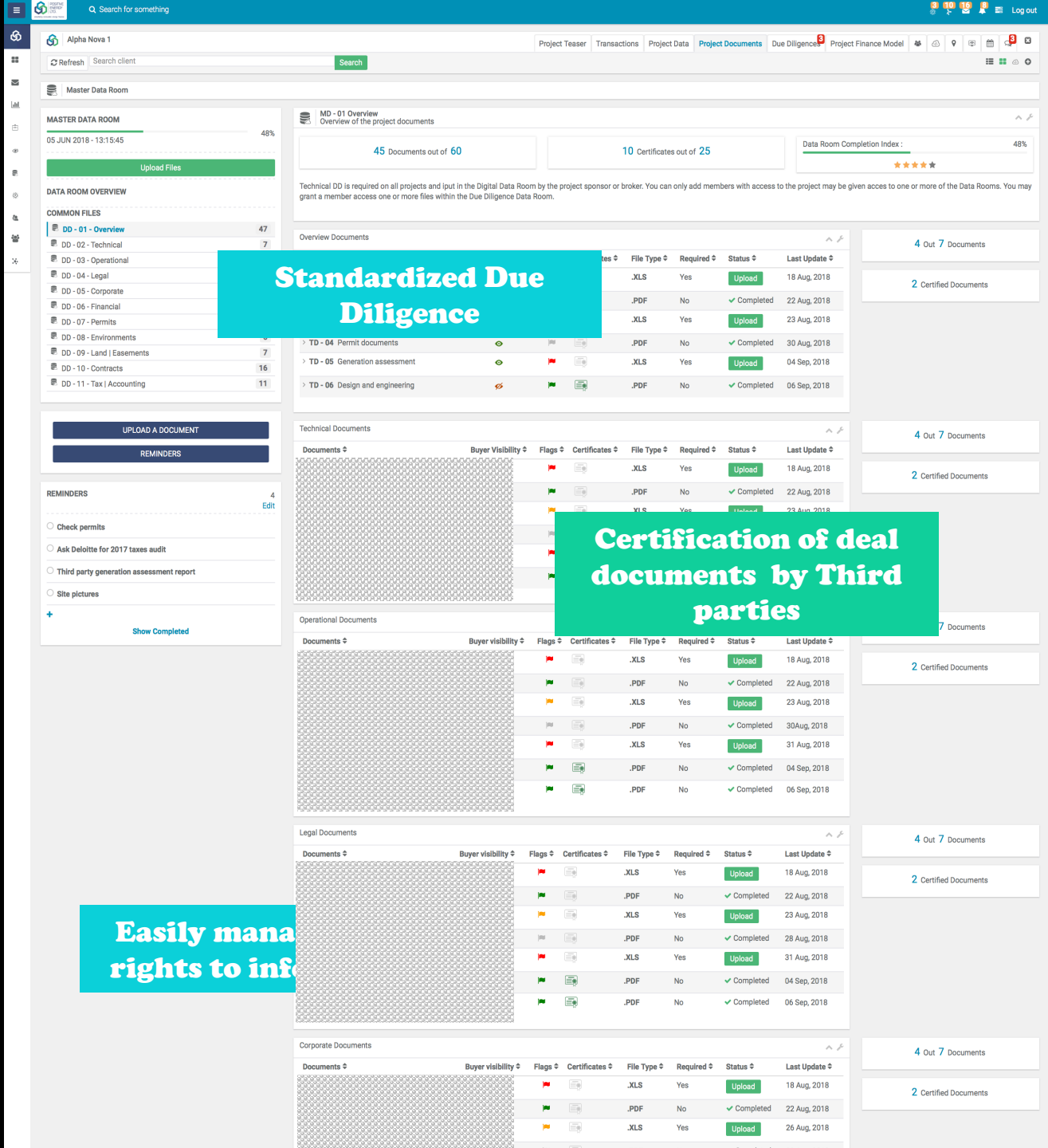
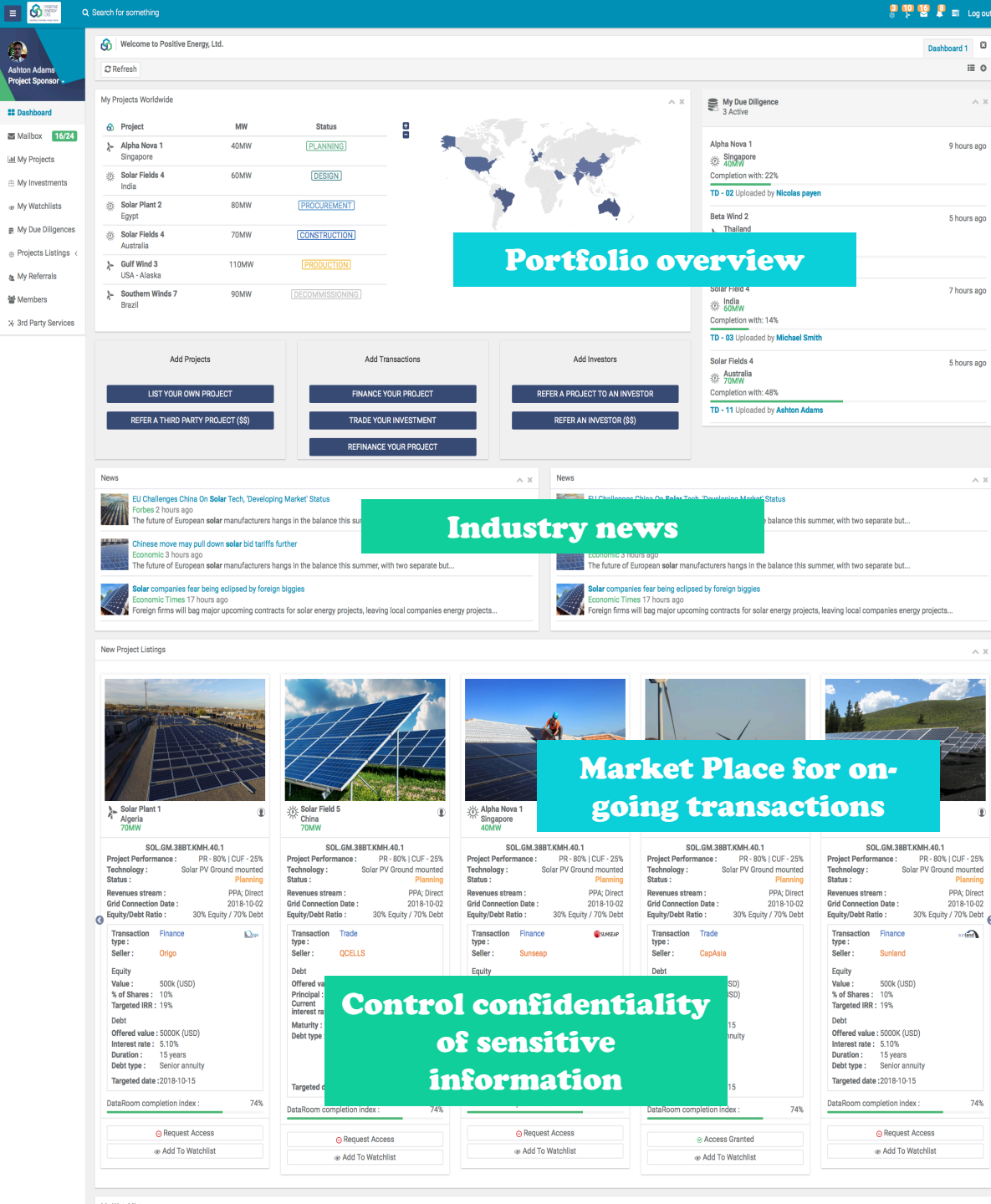
360° ASSET MANAGEMENT TOOL

One repository for Technical,
Operation,
Legal, Financial & Taxes documents
Asset monitoring

TRUSTED INVESTMENT PROCESS

KYC / AML
Traceability and Audit trail
Blockchain enabled
Third parties audit companies management







Simplifying investments in renewable energy drives **environmental, social and community** benefits

Accelerate deployment of renewable energy

Reducing CO₂ emissions and enabling access to electricity



Distributing Investments

Smaller, local investors can participate in renewable projects



Democratising Industry

Access to financing enables local SME or national champion to compete

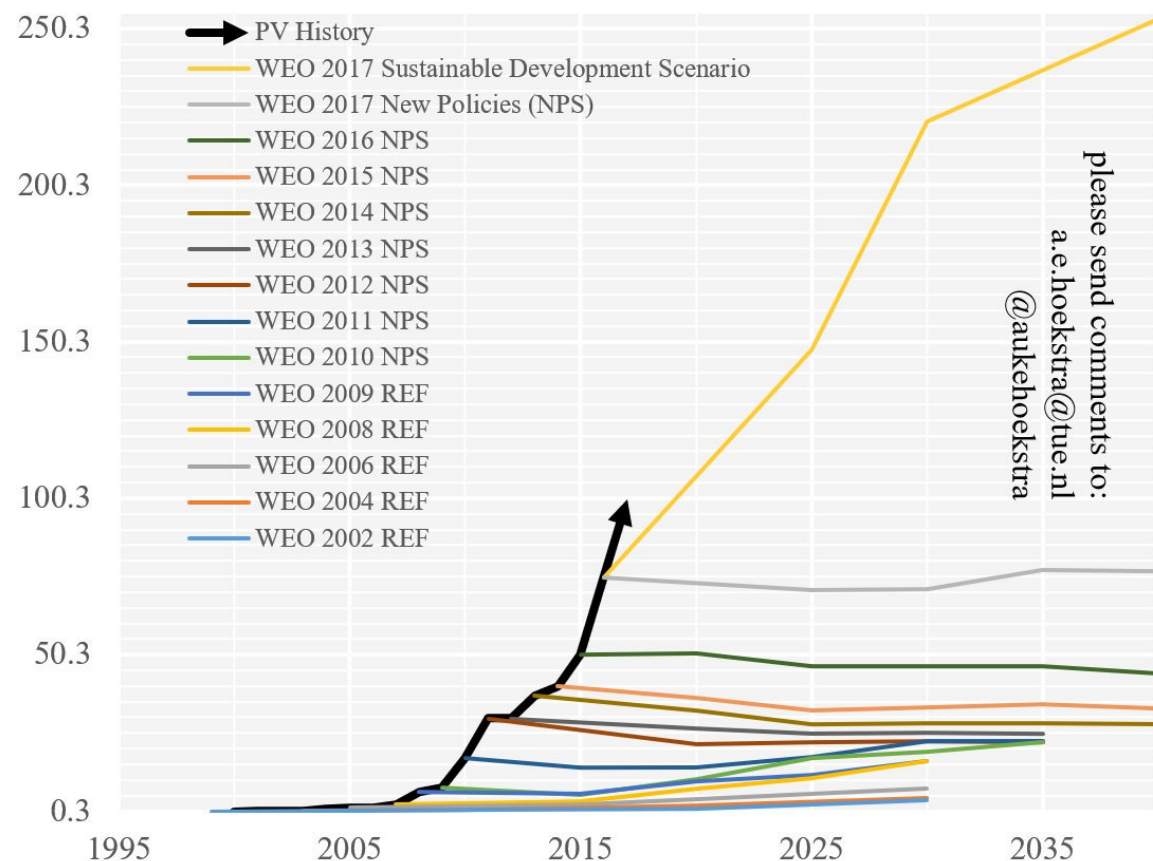


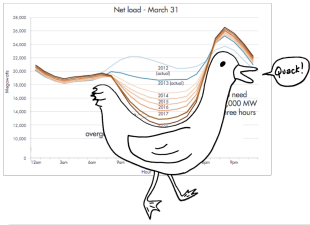


Planning for a future scenario where Solar is the go-to generation technology

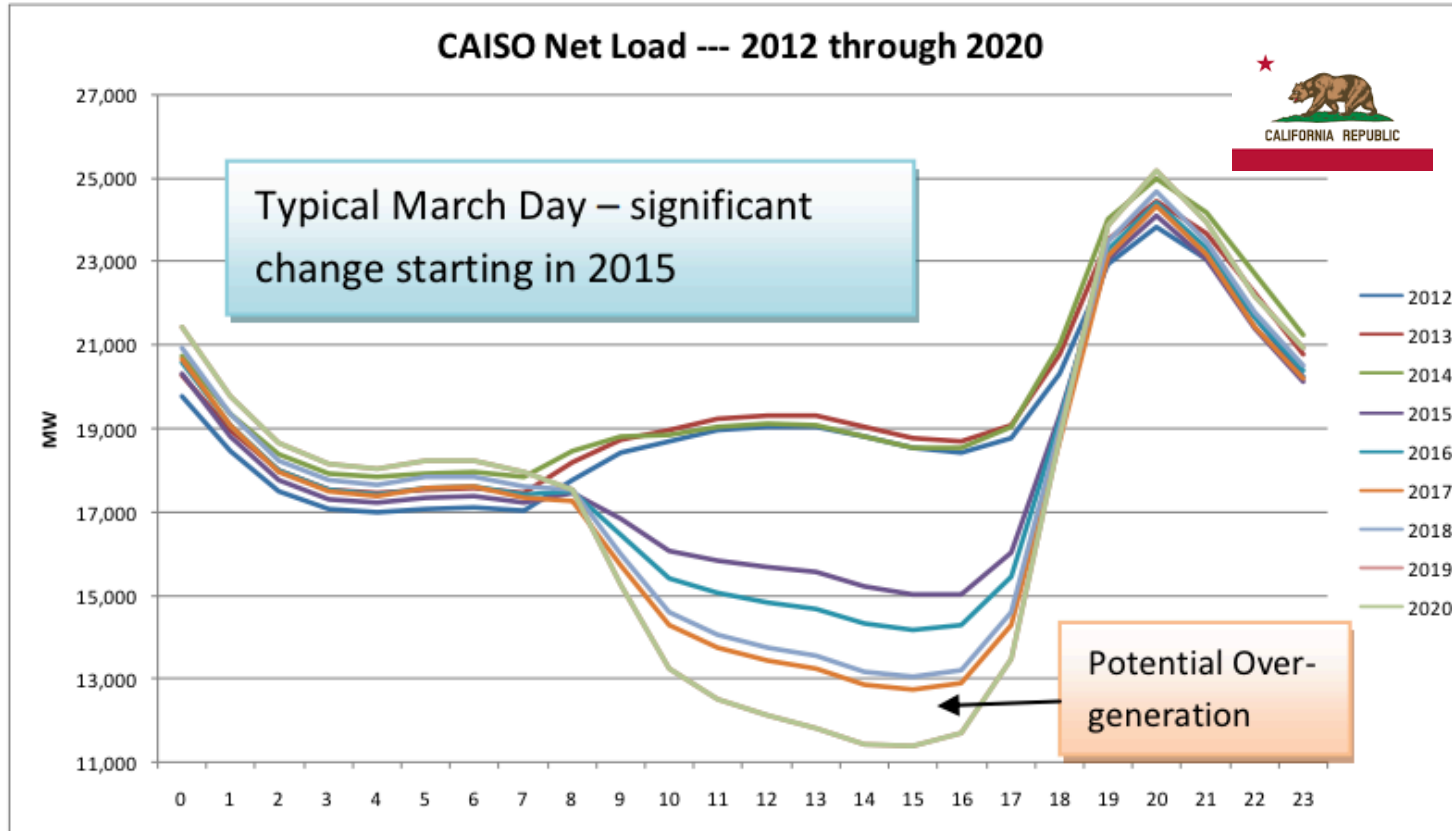
Annual PV additions: historic data vs IEA WEO predictions

In GW of added capacity per year - source International Energy Agency - World Energy Outlook



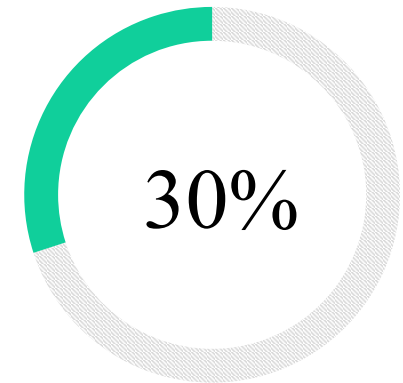
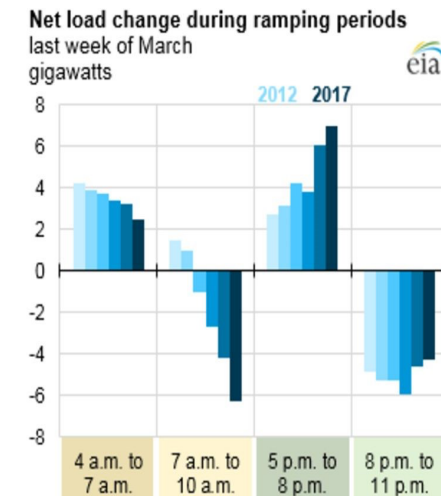


What are the impacts of a booming solar market?



<https://www.youtube.com/watch?v=KwA44fr7apw>

- **AMBONDANCE OF ENERGY**
- **GRID STABILITY**



% of renewable energy in CA (US)



What are the impacts of a booming solar market?

AMBONDANCE OF ENERGY

1. INCREASE CONSUMPTION DURING GENERATION PEAK
2. ENERGY STORAGE
3. CURTAILEMENT OF GENERATION

GRID STABILITY

1. GRID FLEXIBILITY / DEMAND RESPONSE PROGRAM
2. ENERGY STORAGE
3. SMARTER LOAD

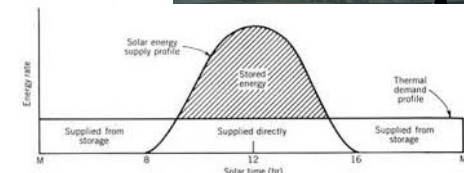


EV

charging during day time

TES

Thermal Energy Storage (TES)
Store extra energy during day time





What are the **IDEAL ASSETs COMBINATIONS** ?

SOLAR, STORAGE, MICROGRID



EV CHARGING



THERMAL ENERGY STORAGE



NEW DIGITAL SYSTEM – NEW BUSINESS MODELS



PV GENERATION

PV to EV

PV to AC

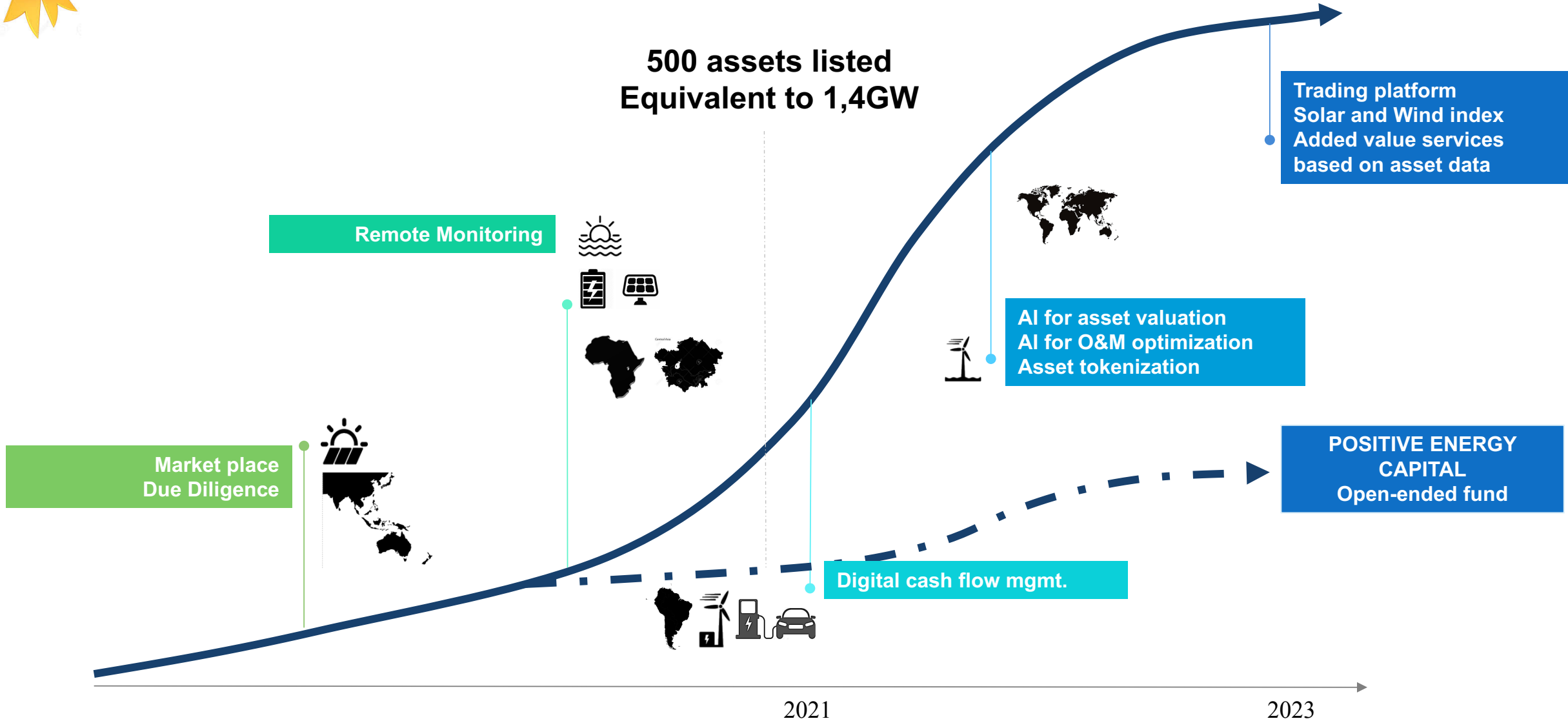


**Leading platform
for sustainable infrastructure
financing and trading**



Our vision

**500 assets listed
Equivalent to 1,4GW**





THANK YOU

GET IN TOUCH WITH US

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