



# Capital Markets Day

Global e-Solutions

Francesco Venturini



# Capital Markets Day – Global e-Solutions

New brand



Our vision

Create the new  
power economy

Our name

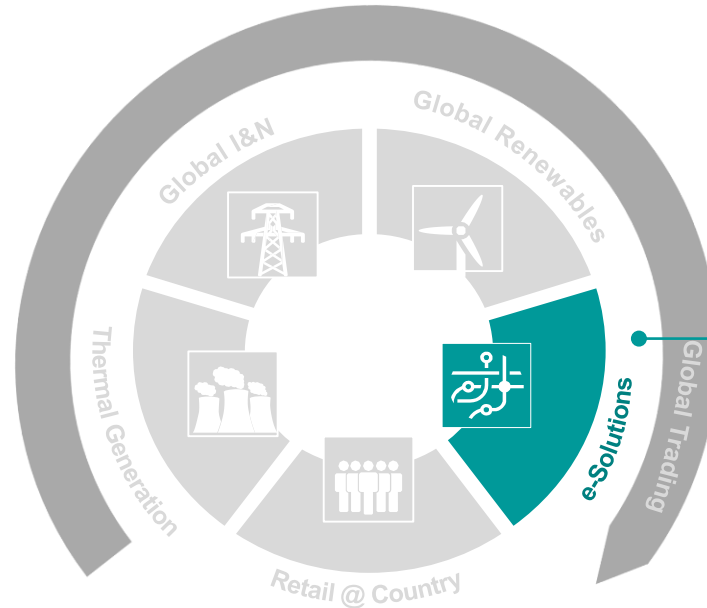
A name that builds on the trust  
and scale of Enel and signals  
distinctiveness and a new vision

enel x

A new brand for a distinctive positioning on the market

# Capital Markets Day – Global e-Solutions

Integrated model fit for digitalized, low carbon world



Leadership in energy transition  
Digital platform proposition  
Customer empowerment

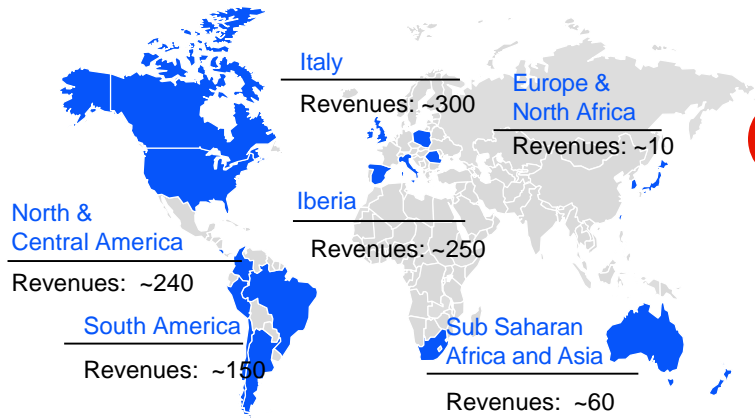
Focusing on new customers' needs through an asset light approach

# Capital Markets Day – Global e-Solutions

## Positioning and key figures



### Positioning<sup>1</sup> (€mn)



### Financials (€bn)

2017<sup>1</sup>

Revenues	1.0
Gross margin	0.4

### Key figures

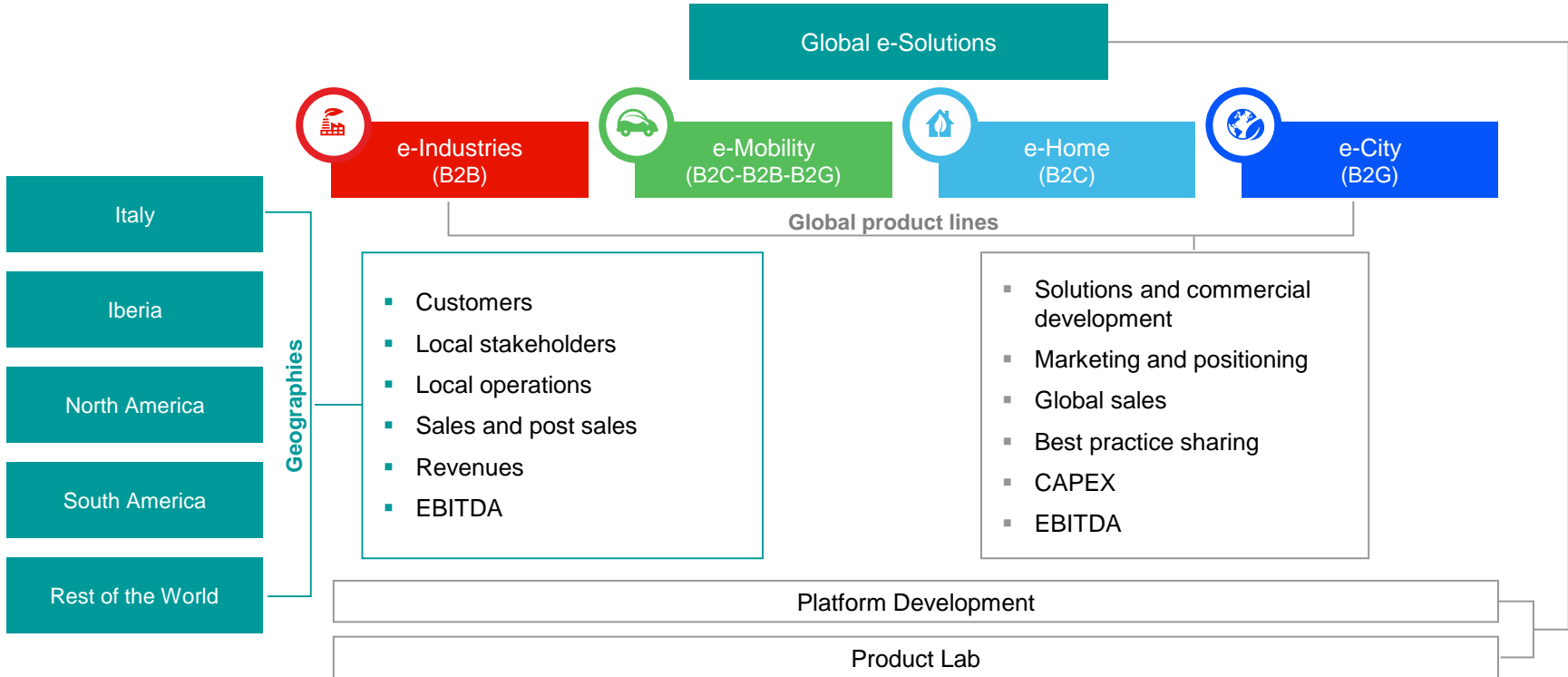
		2017				2017	
	Demand Response	GW sold	5.7		Maintenance and repair <sup>4</sup>	Customer base (#mn)	1.1
	Demand Side Management <sup>2</sup>	MW installed/year	3		Repair <sup>5</sup>	Customer base (#mn)	1.3
	Co-generation	MW managed	13		Credit cards	Credit cards (#mn)	0.9
	Public infrastructure <sup>3</sup>	Public charging installations (#k)	1.1		Smart Lighting	Light points (mn)	2.7
	Private Charging	Installed wallboxes (#k)	26		Fiber deployment <sup>6</sup>	Households passed (mn)	2.4

1. Preclosing 2017 figures include EnerNOC and eMotorWerks full year  
 2. Storage behind the meter  
 3. Including both owned and managed charging stations

4. Maintenance contracts (scheduled boiler maintenance) mainly on gas / electrical system  
 5. Repair contracts (urgency) through external partners  
 6. Italy, only A & B areas

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Customer driven organization



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Our portfolio of solutions in the 4 Global Product Lines



## *e-Industries*

Consulting and auditing service

Distributed generation on/off site

Energy efficiency

Demand response and demand side management



## *e-Mobility*

Public charging network

Private charging wall-box

Maintenance and other services

Vehicle 1 Grid  
Vehicle 2 Grid



## *e-Home*

Installation, maintenance and repair services

Automated home management

Financial services

Home 2 Grid



## *e-City*

Smart lighting

Fiber optic wholesale network

Distributed generation & energy services

Demand response and demand side management

Flexibility

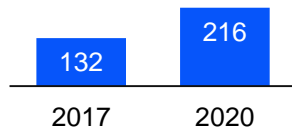
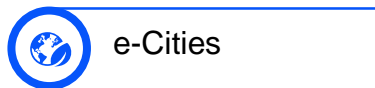
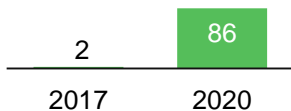
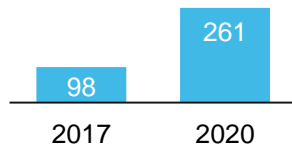
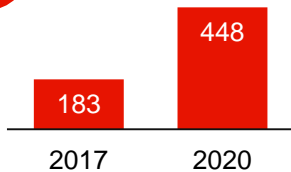
Addressing new customer needs with innovative technologies

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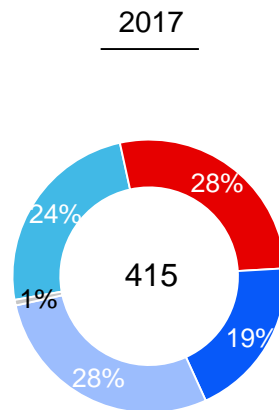


## Gross margin

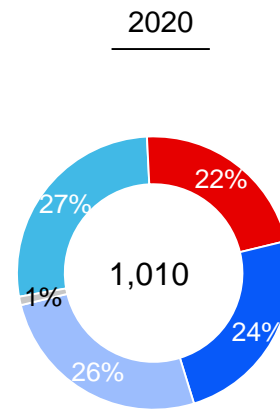
Gross margin by technology (€mn)



Gross margin by geography (€mn)



■ Italy ■ Iberia ■ US<sup>1,2</sup>  
■ South America ■ RoW



■ Italy ■ Iberia ■ US<sup>1</sup>  
■ South America ■ RoW

**2.5x growth in gross margin in 3 years**

1. Including EnerNOC activities in Asia and Australia  
2. Including EnerNOC and eMotorWerks FY Preclosing

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## KPI figures



		2017			2020					2017			2020		
	<b>Demand Response</b>	GW sold	5.7	10.7	1.9x		<b>Maintenance and repair<sup>1</sup></b>	Customer base (#mn)	1.1	2,1	1.9x				
	<b>Demand Side Management</b>	MW installed/year	3	224	75x		<b>Repair<sup>2</sup></b>	Customer base (#mn)	1.3	2.4	1.9x				
							<b>Credit cards</b>	Credit cards (#mn)	0.9	1.9	2.1x				
	<b>Public infrastructure</b>	Public charging installations (#k)	1.1	9.1	8x		<b>Smart Lighting</b>	Lighting points (mn)	2.7	3.2	1.2x				
	<b>Private Charging</b>	Wallboxes installed and managed (#k)	26	304	12x		<b>Fiber deployment</b>	Households passed (mn) <sup>3</sup>	2.4	7.5	3.1x				

1. Maintenance contracts (scheduled boiler maintenance) mainly on gas / electrical system
2. Repair contracts (urgency) through external partners
3. Italy, only A and B areas



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e-Industries business model focused on flexibility services



## Revenue streams

Energy as a service

Demand response

Demand response + storage

Demand side management / capacity  
peak shaving

Resiliency and micro-grids

Flexibility

## Enabled by 2 platforms

EnerNOC

Demand Energy

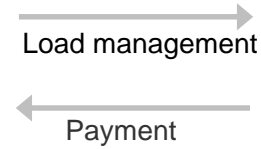
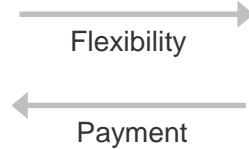
Four types of flexibility services enabled by advanced software solutions

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Focus on the Demand response business<sup>1</sup>



Commercial & industrial  
clients



Grid operator / utility  
customers



14,000 C&I sites

5,700 MW sold

Gross margin: 80 €mn

10 countries (~80% in US)

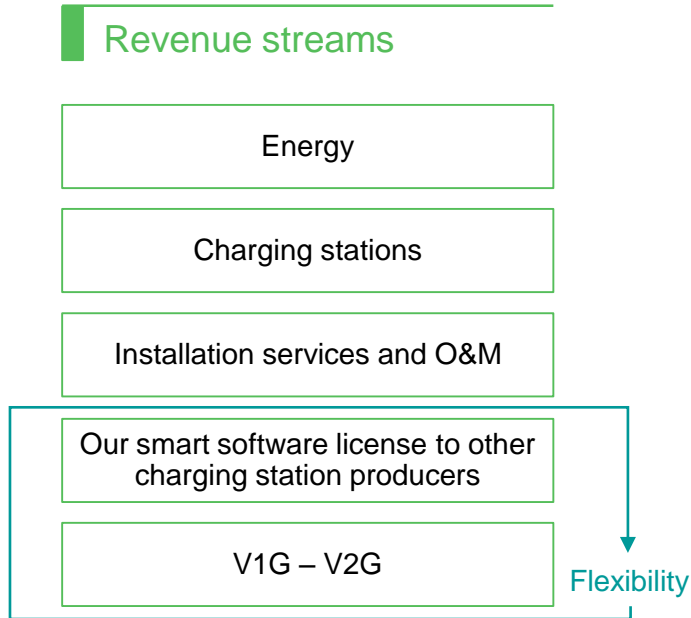
**Global leader operator in the Demand response business thanks to EnerNOC acquisition**

# Capital Markets Day – Global e-Solutions

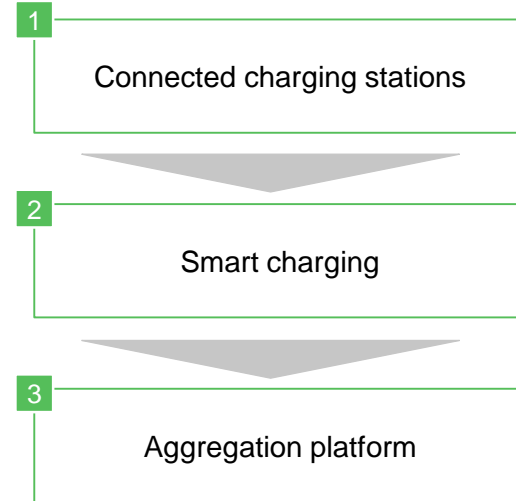
e-Mobility business model



## Revenue streams



## Enabled by 3 technological layers



Technological leader thanks to a consolidated expertise and the acquisition of eMotorWerks

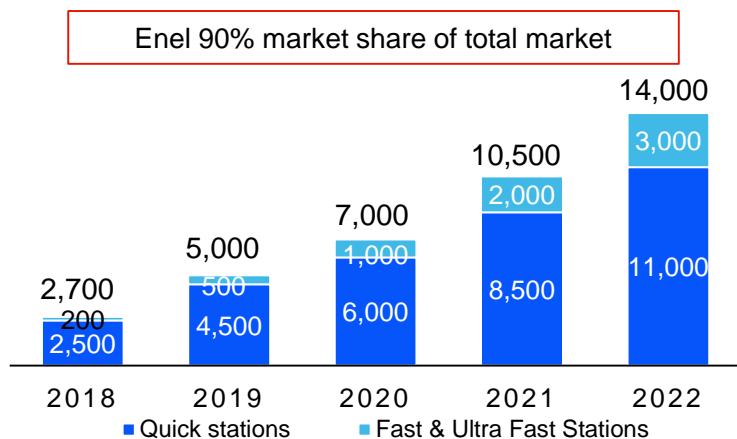
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Italy: public charging installations plan



e-Mobility

Enel public charging installation plan (# cumulated)



Up to 300 €mn capex by 2022

Enel products portfolio



Quick



Fast



Ultra fast

Enabling mobility take off in Italy

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e-Home business model



e-Home

## Revenue streams

Distributed generation  
(PV, storage, etc)

Maintenance and repair

Home 2 Grid

Flexibility

Financial services

## Enabled by 3 factors

Enel customer base

Network of partners

Aggregation platform

Create a new home ecosystem leveraging on our brand recognition

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Iberia and Colombia: business cases<sup>1</sup>



e-Home

## Enel home services in Iberia

Maintenance and repair of appliances  
Typically periodic interventions

On-demand interventions to fix emergencies or failures in  
electrical installations and other appliances

Bundle of equipment sales with additional services

Over 2 mn customers &  
Network of 290 partners

Gross Margin: 66 €mn

## Enel business in Colombia: Credito Facil Codensa

Partnership with Colpatria bank providing credit cards to  
our commodity customers with no easy access to credit

Credit collection through our energy bills

Usually used for purchase of appliances / education  
services and for house renovation

Colpatria credit card is n.1 in Colombia

>800K credit cards

Gross margin: 9.6 €mn

**Financing access to low income customers**

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e-City business model



## Revenue streams

Energy as a service

Public lighting

Demand response

Demand side management

Wholesale fiber optic network

Flexibility

## Enabled by 3 competitive levers

Enel capillarity presence in cities

Enel distribution networks

Enel digital platform

Integrated range of services to become a trusted partner for municipalities and public administration

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Italy: Open Fiber plan



open fiber

FTTH future proof technology

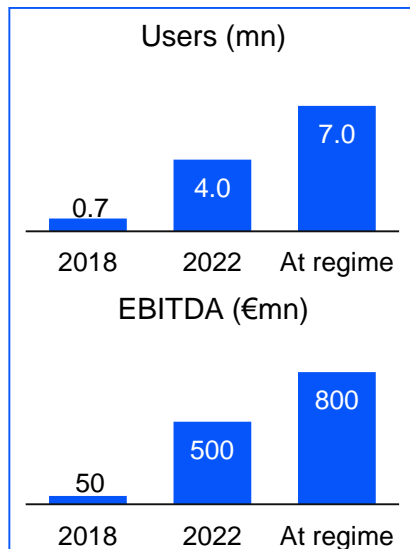
5-6 years time to complete Italy convergence

150k fiber km to be deployed

1 Gbps network speed

~6,500 municipalities connected

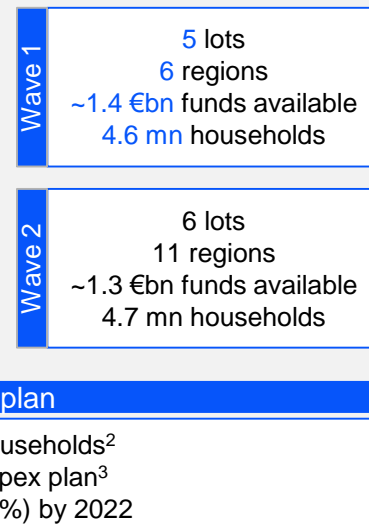
Total plan



A&B clusters roadmap



C&D clusters plan



Player leading the digitalization of Italy

1. Italy, only A & B areas  
2. Including households from tender 1 and 2 for clusters C and D  
3. 6.5 €bn gross of Infratel contribution

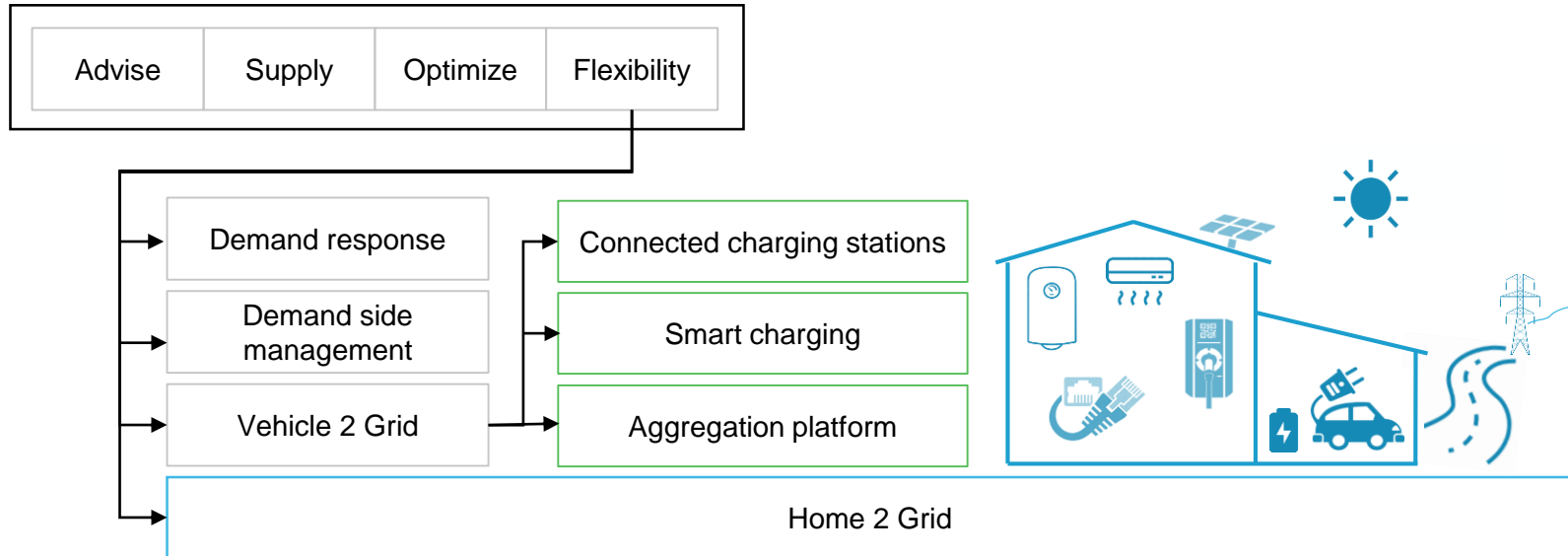


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Flexible distributed energy system



Energy as a service value chain



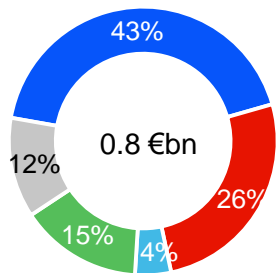
Best positioned to serve new customers' needs

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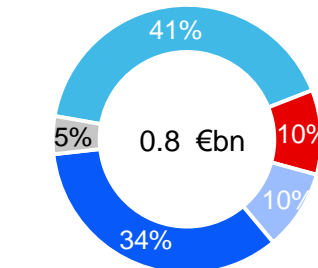
## Industrial growth 2018-20



2018-20 growth capex by product line and by geography



- e-City
- e-Industries
- e-Home
- e-Mobility
- ICT



- Italy
- South America
- Iberia
- US<sup>1</sup>
- RoW/Global

Key growth capex figures



Energy efficiency and distributed generation projects and flexibility services platform development



Public charging infrastructure development mainly in Italy

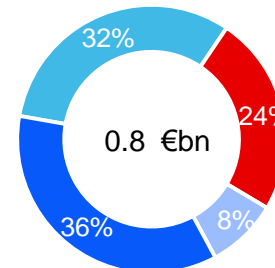


Business asset light



Investment mainly focused in Italy (50% of total) to increase efficiency in public lighting concession areas

2018-20 EBITDA by geography



- Italy
- South America
- Iberia
- US<sup>1</sup>

**EBITDA 2018-20 fully cover capex effort**

1. Including EnerNOC activities in Asia and Australia