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# SolarEdge Analyst Day

November 25, 2019

solar**edge**



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# Welcome

Zivi Lando

CEO and VP Global Sales

solar**edge**

# Safe Harbor

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward looking statements include information, among other things, concerning: future solar installations, future revenue per installation, future products, our possible or assumed future results of operations; target and future revenue growth, gross margin, operating expenditures, operating income and net income, future product mix, future demands for solar energy solutions; future revenue opportunities, business strategies; technology developments; new products and services; financing and investment plans; dividend policy; competitive position; industry and regulatory environment; general economic conditions; potential growth opportunities; and the effects of competition. Forward-looking statements are only predictions based on our current expectations and are inherently subject to risks and uncertainties. They should not be considered guarantees of future results, which could differ materially from the results set forth in, contemplated by, or underlying this presentation.

Factors that could cause actual results to differ materially from our expectations are described in the reports filed by SolarEdge with the Securities and Exchange Commission and we encourage you to review our filings carefully, especially the sections entitled "Risk Factors" in our Annual Report Form 10K.

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# Agenda

- |              |  |              |  |
|--------------|--|--------------|--|
| <b>09:00</b> | <b>Welcome</b><br>Zivi Lando, CEO and VP Sales                                 | <b>12:00</b> | <b>Lunch with Management</b>   |
| <b>09:10</b> | <b>Opening Remarks</b><br>Nadav Zafir, Chairman of the board                   | <b>12:45</b> | <b>Innovation Showcase</b>   |
| <b>09:20</b> | <b>SolarEdge - Past, Present and Future</b><br>Zivi Lando, CEO and VP Sales    | <b>13:30</b> | <b>Our Technological Foundation</b><br>Yoav Galin, VP R&D, Founder<br>Meir Adest, Chief information Officer, Founder |
| <b>10:00</b> | <b>Our Product Roadmap</b><br>Lior Handelsman, VP Marketing & Product, Founder | <b>14:00</b> | <b>Financial Update</b><br>Ronen Faier, Chief Financial Officer  |
| <b>10:30</b> | <b>Operational Excellence</b><br>Uri Bechor, Chief Operating Officer           | <b>14:30</b> | <b>Q&amp;A</b>   |
| <b>11:00</b> | <b>Powering Our Future</b><br>Zivi Lando, CEO and VP Sales                     | <b>14:45</b> | <b>Summary</b><br>Zivi Lando, CEO and VP Sales   |
| <b>11:30</b> | <b>Q&amp;A</b>   | <b>15:00</b> | <b>Cocktails</b>   |



# Management Present Today



**Zivi Lando**  
CEO and VP  
Global Sales

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Joined 2009



**Ronen Faier**  
Chief Financial  
Officer

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Joined 2011



**Rachel Prishkolnik**  
VP General Counsel  
& Corporate  
Secretary

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Joined 2010



**Lior Handelsman**  
VP Marketing and  
Product Strategy

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Founder



**Peter Mathews**  
North America  
General Manager

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Joined 2012



**Meir Adest**  
Chief Information  
Officer

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Founder



**Uri Bechor**  
Chief Operating  
Officer

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Joined 2019



**Yoav Galin**  
VP Research &  
Development

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Founder

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# Opening Remarks

Nadav Zafrir

Chairman of the Board of Directors



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# SolarEdge – Past, Present and Future

Zivi Lando

CEO and VP Global Sales

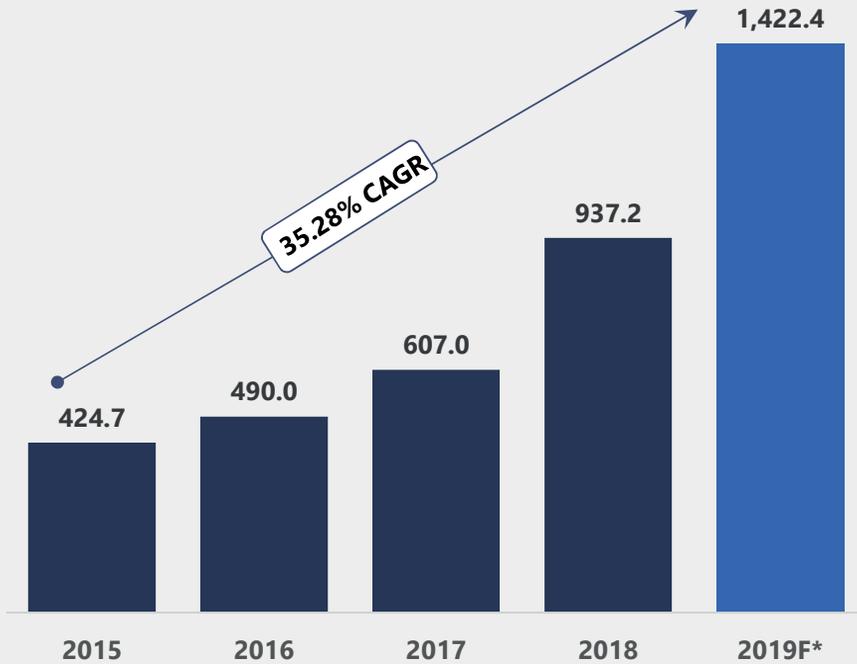
# Key Takeaways



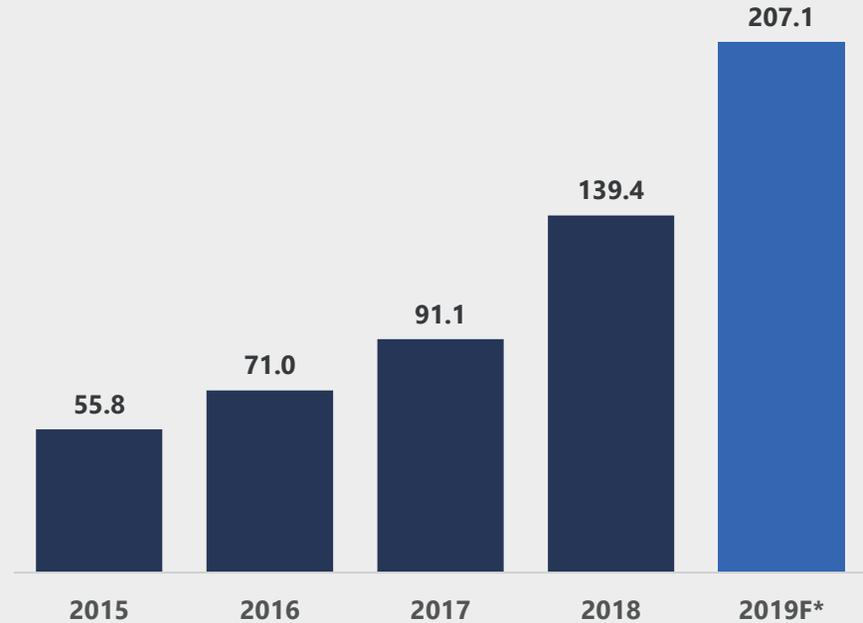
- SolarEdge has become the leading inverter company worldwide
- The solar market and more specifically the inverter market continues to grow
- SolarEdge is on a path to extend its leadership into new inverter segments and geographies
- We are expanding our offering with products aimed to increase average revenue per installation (ARPI)
- Our solar strategy and execution lays a strong foundation for success in the new markets we have entered

# Annual Growth

Revenues (\$M)



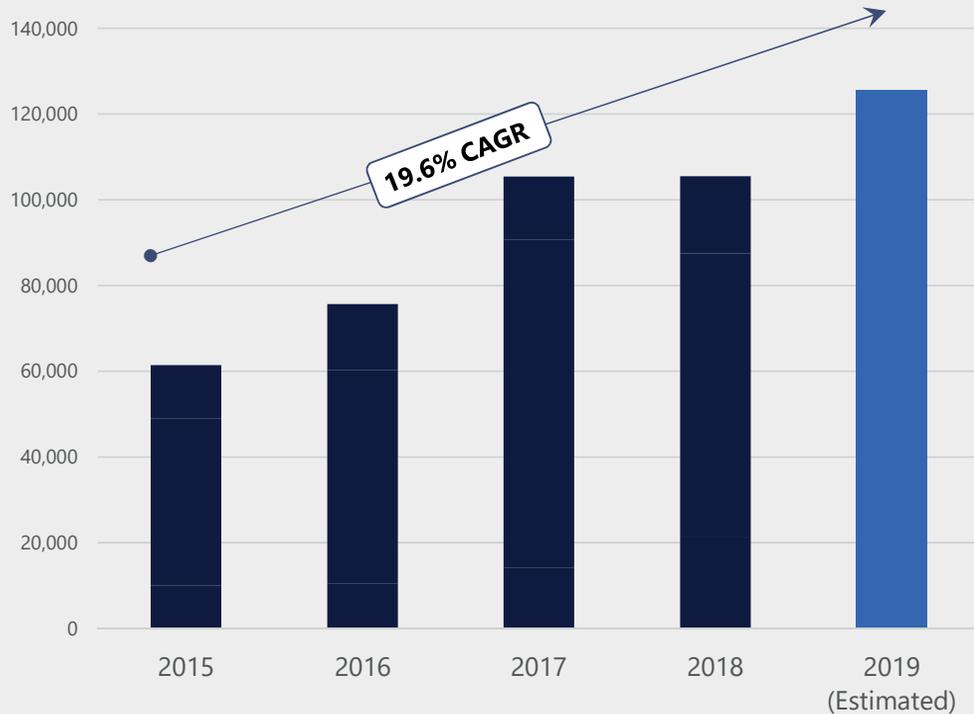
Operating profit (\$M)



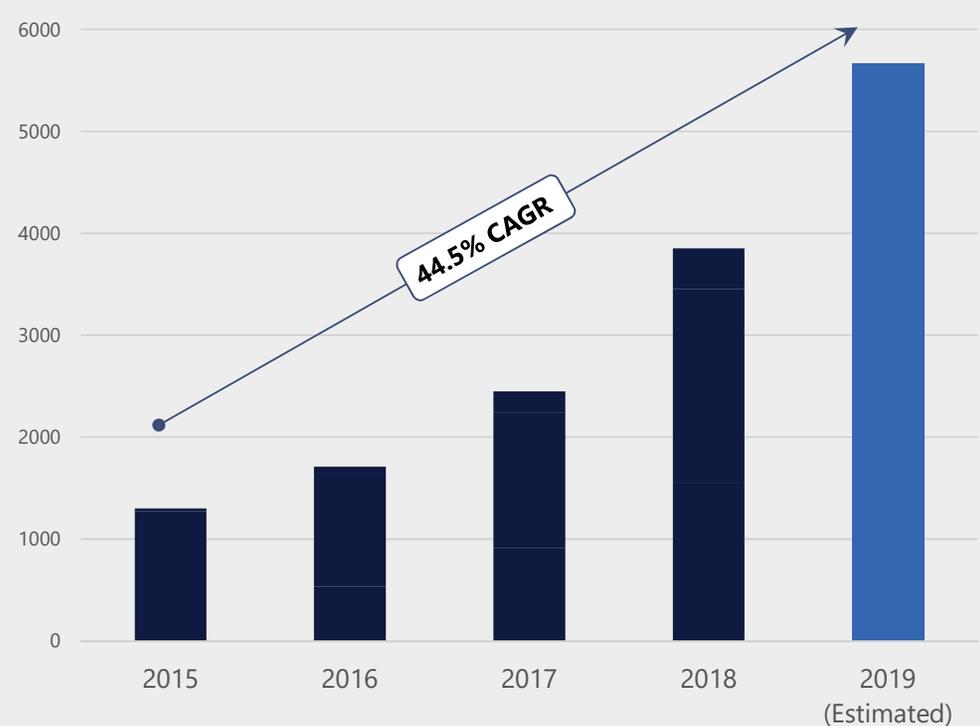
\* 2019 data is based on Q1-Q3 actual results and Q4 mid-range guidance

# SolarEdge Growth vs. Global Inverter Market

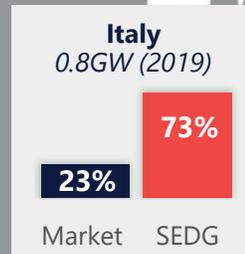
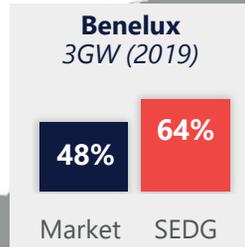
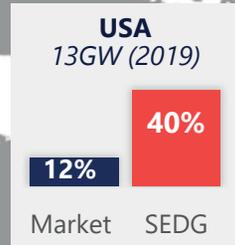
## Global Inverter Shipments (MW)



## SolarEdge Inverter Shipments (MW)



# SolarEdge vs Selected Markets Growth (MW 2015 – 2019)



# Global Inverter Market Leader

World PV Inverter Supplier  
Rankings (**\$ Revenues**)

RANK	COMPANY
1	SolarEdge
2	SMA
3	Huawei
4	Sungrow
5	Power Electronics
6	Fronius
7	Delta
8	Enphase Energy
9	ABB
10	Omron

World Single Phase PV Inverter  
Supplier Ranking (**MW**)

RANK	COMPANY
1	SolarEdge
2	SMA
3	Growatt
4	Omron
5	Ginlong
6	Goodwe
7	Enphase Energy
8	Fronius
9	Panasonic
10	Sungrow

Source: IHS PV Inverter Market tracker Q3, 2019

Helping the world advance with sustainable energy

**130+**  
countries

**#1**  
Solar  
Inverter  
company

**334**  
Patents granted

**28**  
Offices

**1.25M**  
Sites monitored

**>\$1.4B**  
2019 Sales (F)

**~2,500**  
employees



**14.6GW**  
Shipped

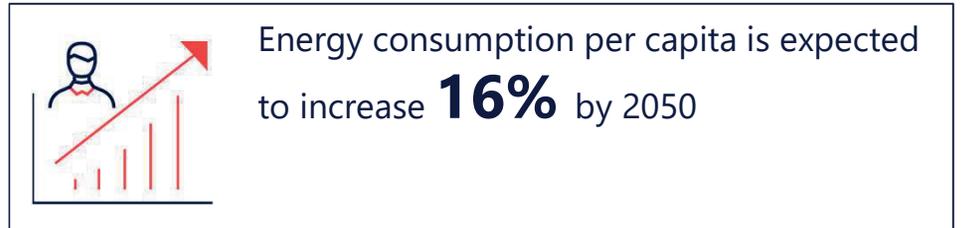
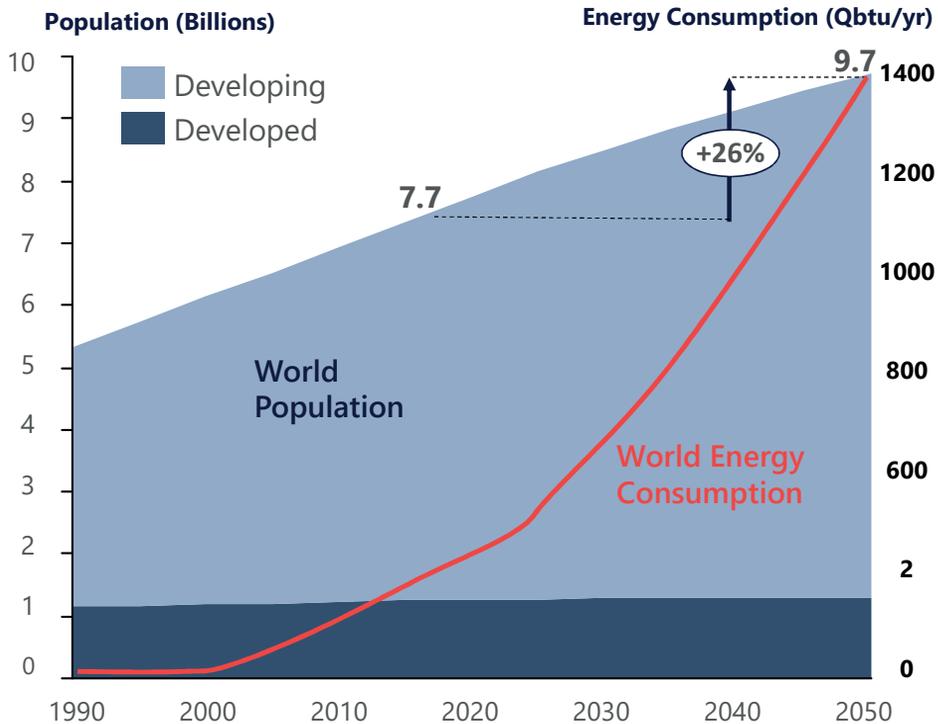
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# The Solar Market

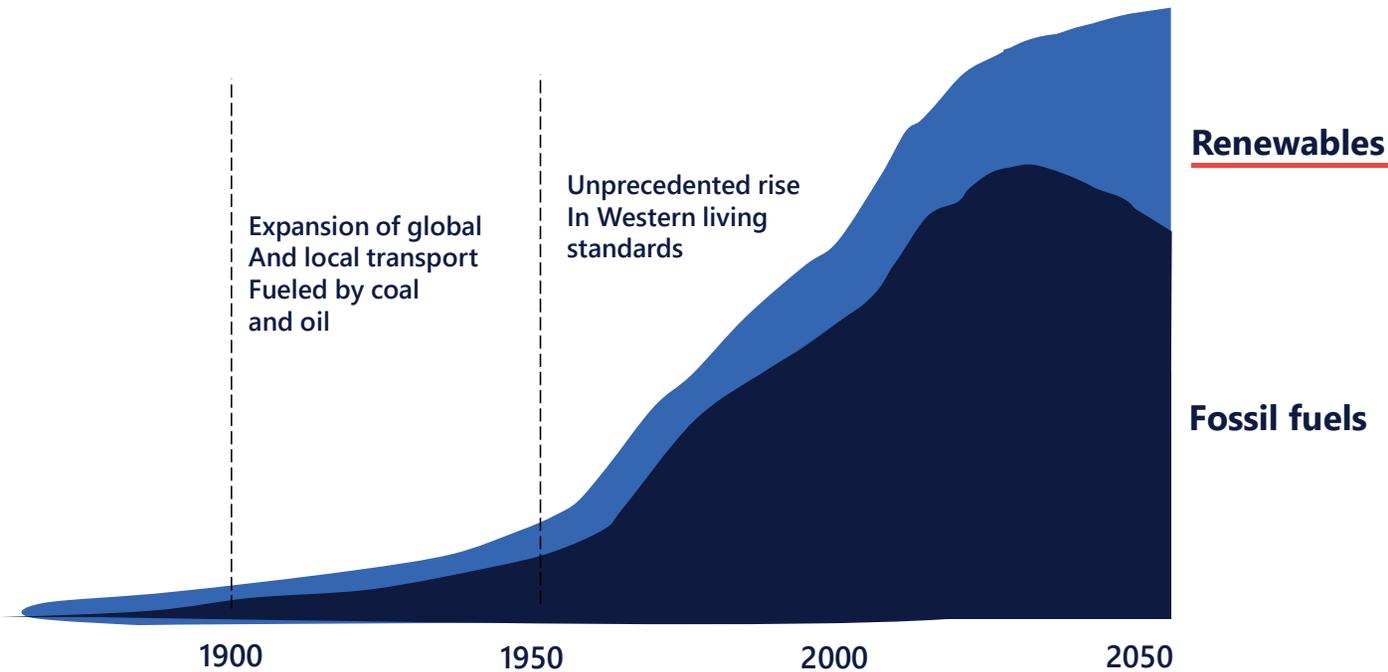
# Energy Demand is on the Rise

## Global population forecast 2050 (in B)



# Renewable Energy Supply is on the Rise

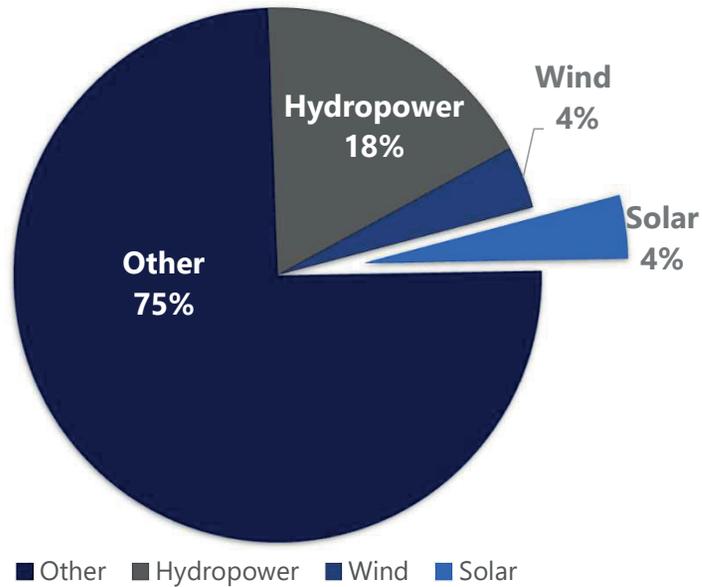
Global primary energy demand, millions of terajoules



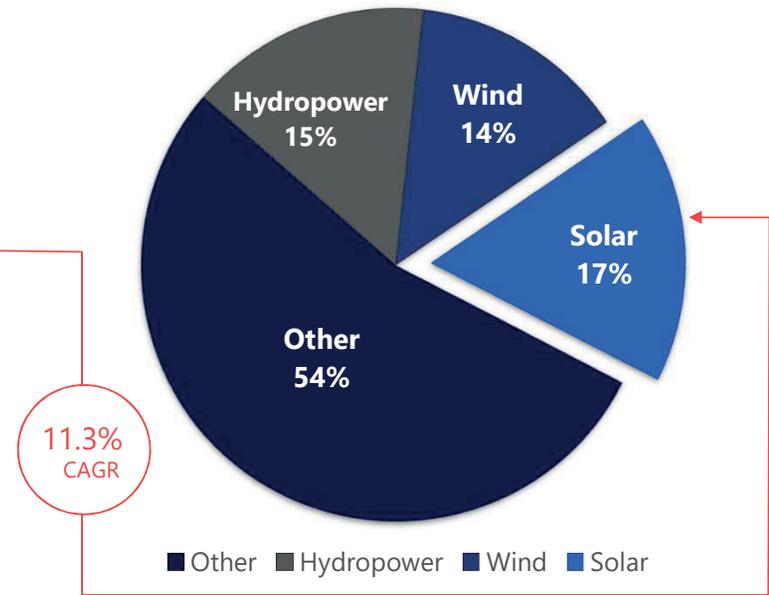
By 2050 almost  $\frac{1}{3}$ <sup>rd</sup> of the global electricity demand projected to be supplied by renewable energy sources

# Global Renewable Energy Market Mix

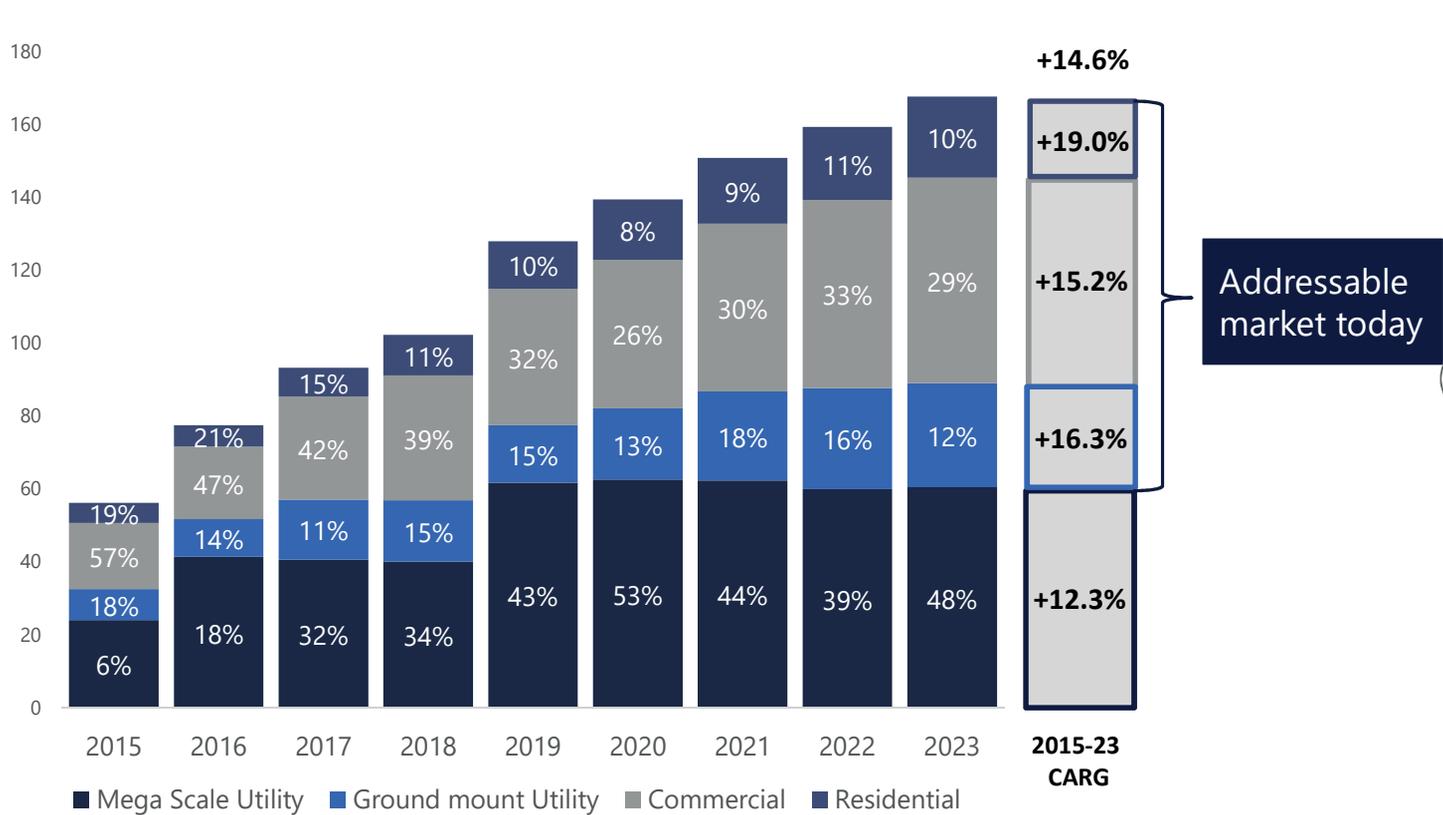
## 2016 Renewables



## 2030 Renewables



# Solar Energy Installations Growth by Segment



- PV installations expected to grow 34% from 2019 to 2023
- SolarEdge core segments are the fastest growing segments

Addressable market today



# Number of Markets with >1GW per year



- A steady increase in the number of large markets as more countries reach Grid Parity
- SolarEdge is present and active in practically all large markets (excluding China)





# Growth Strategy

# Strategic Growth Engines



Geographic  
Expansion



Segment  
Development



Market  
Share Growth



ARPI Increase

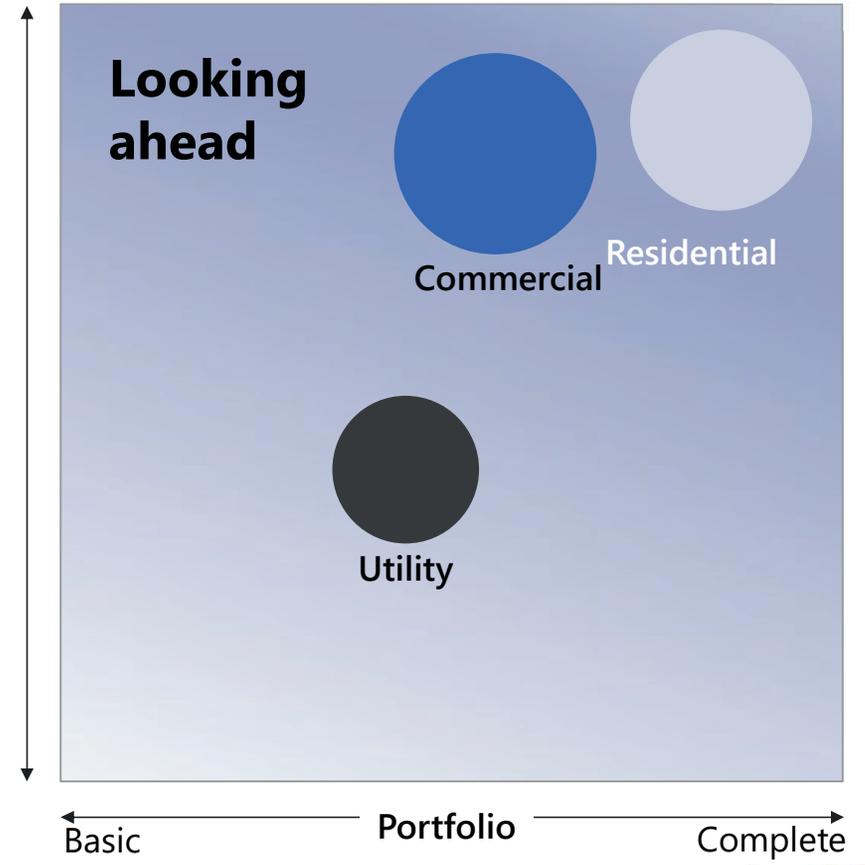
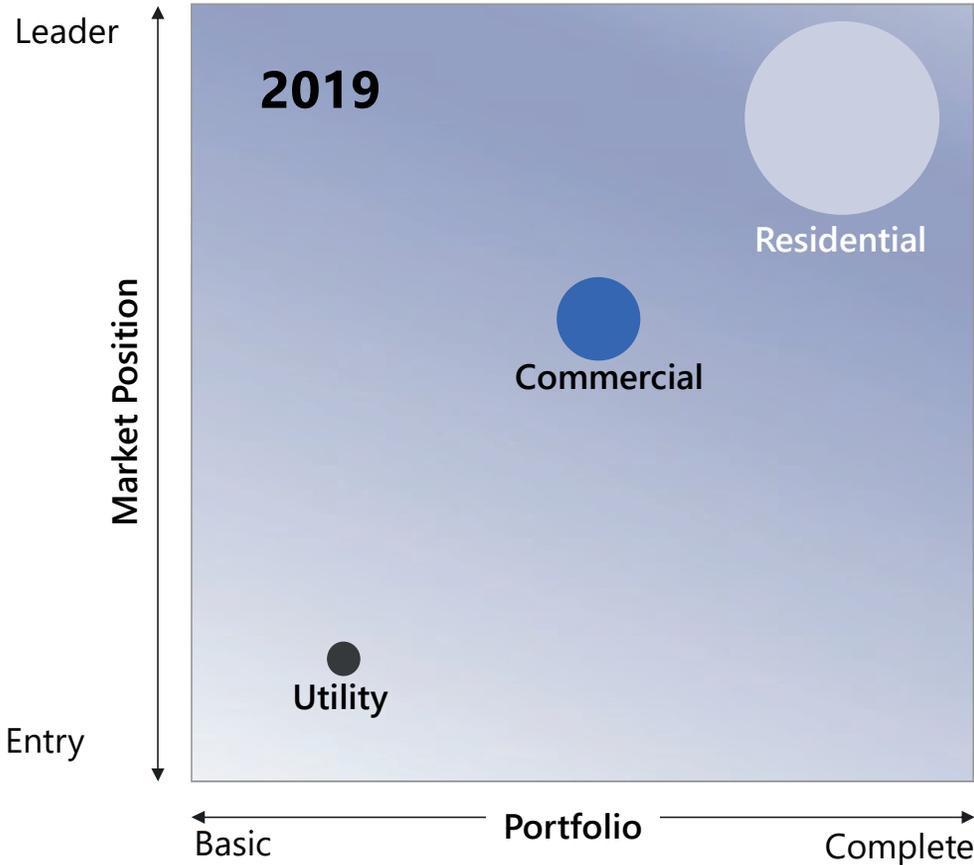
# Geographic Expansion



- Systems installed in > 130 countries with feet on the ground in the large sustainable ones
- 2020 special focus on Australia, Brazil and India



# SolarEdge Segment Development



# Market Share Growth

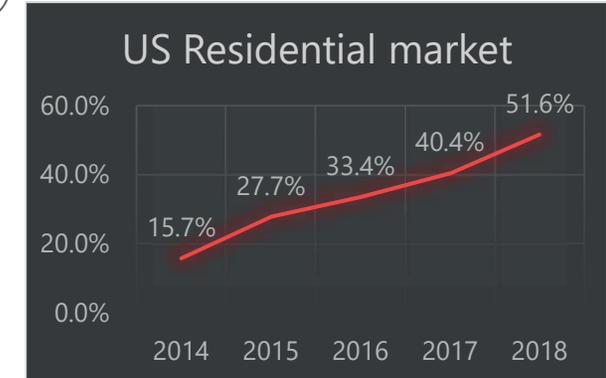


## World PV Inverter Supplier Rankings (\$ Revenues)

2014		2017		2019YTD	
RANK	COMPANY	RANK	COMPANY	RANK	COMPANY
1	SMA	1	Huawei	①	<b>SolarEdge</b>
2	ABB	2	SMA	2	SMA
3	Omron	3	Sungrow	3	Huawei
4	TEMIC	④	<b>SolarEdge</b>	4	Power Electronics
5	Kaco	5	Enphase Energy	5	Sungrow
6	Schneider Electric	6	ABB	6	Fronius
7	Enphase Energy	7	Schneider Electric	7	Enphase Energy
8	Sungrow	8	Omron	8	Omron
9	Huawei	9	Fronius	9	ABB
⑩	<b>SolarEdge</b>	10	Goodwe	10	TMEIC

## Our Winning Method

- Strong product offering that answers customers needs
- Sales force focused on demand creation with installers
- Backed by marketing and service



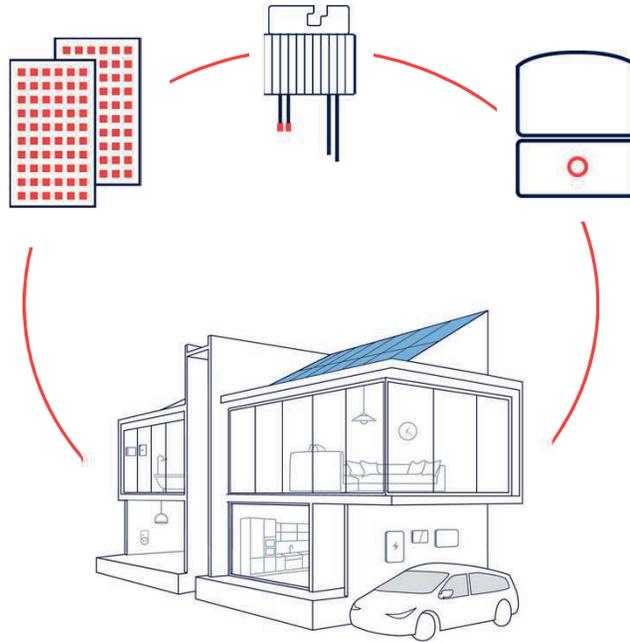
Source: IHS PV Inverter Market tracker 2019 and IHS Revenue Rank and shipments MS Q1, 2019



# Increasing ARPI



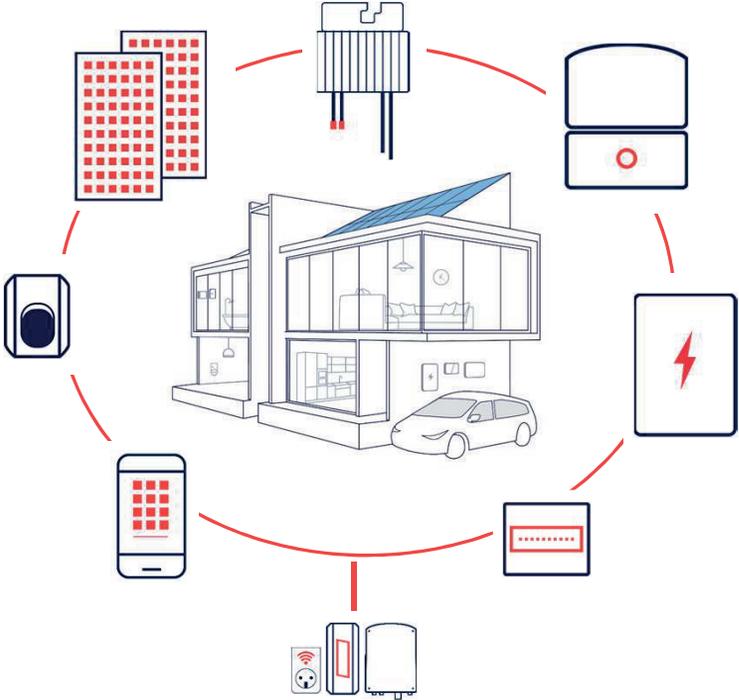
In the past, systems consisted of inverters and modules...



# Increasing ARPI



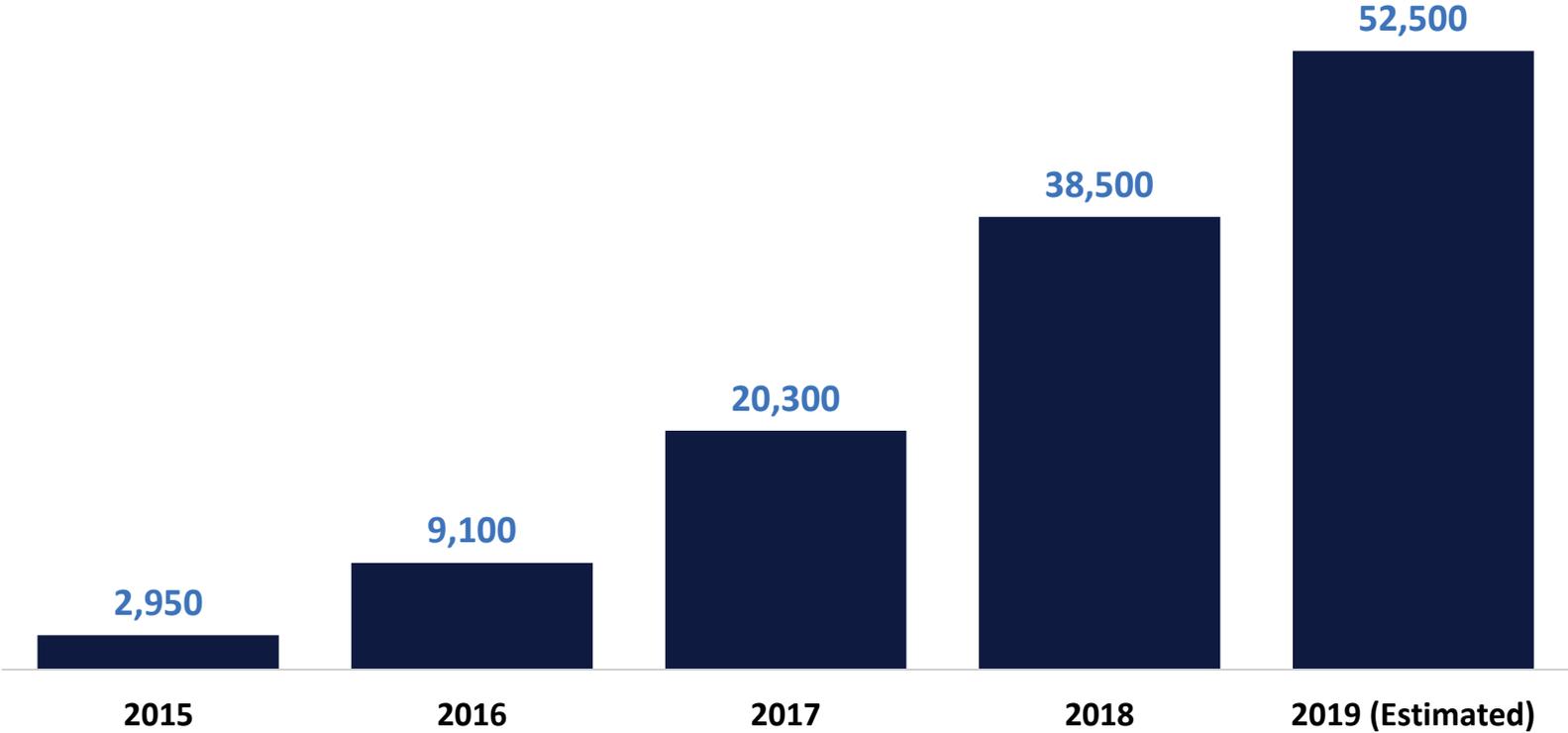
Today systems are more advanced and include an expanded offering



# From Simple to Advanced Systems



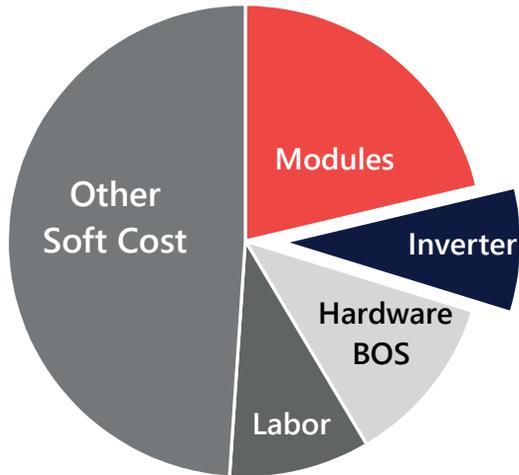
Number of systems sold by SolarEdge with energy management or storage products



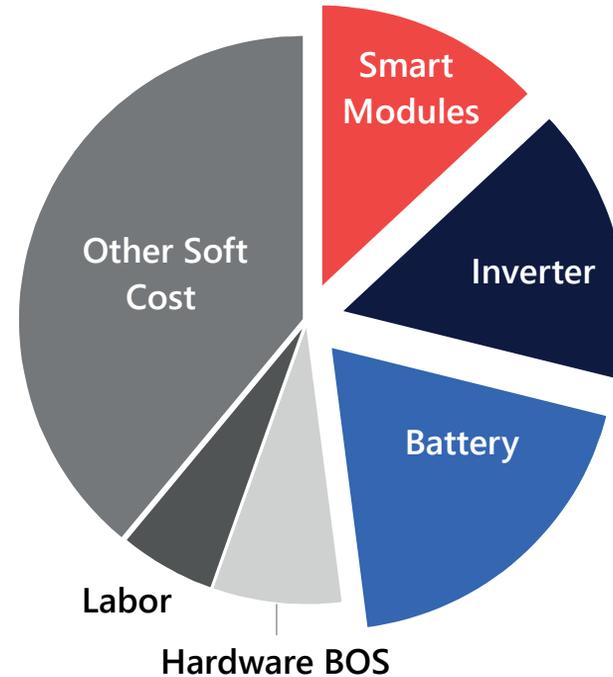
# Increasing SolarEdge ARPI – Average Revenue Per Installation



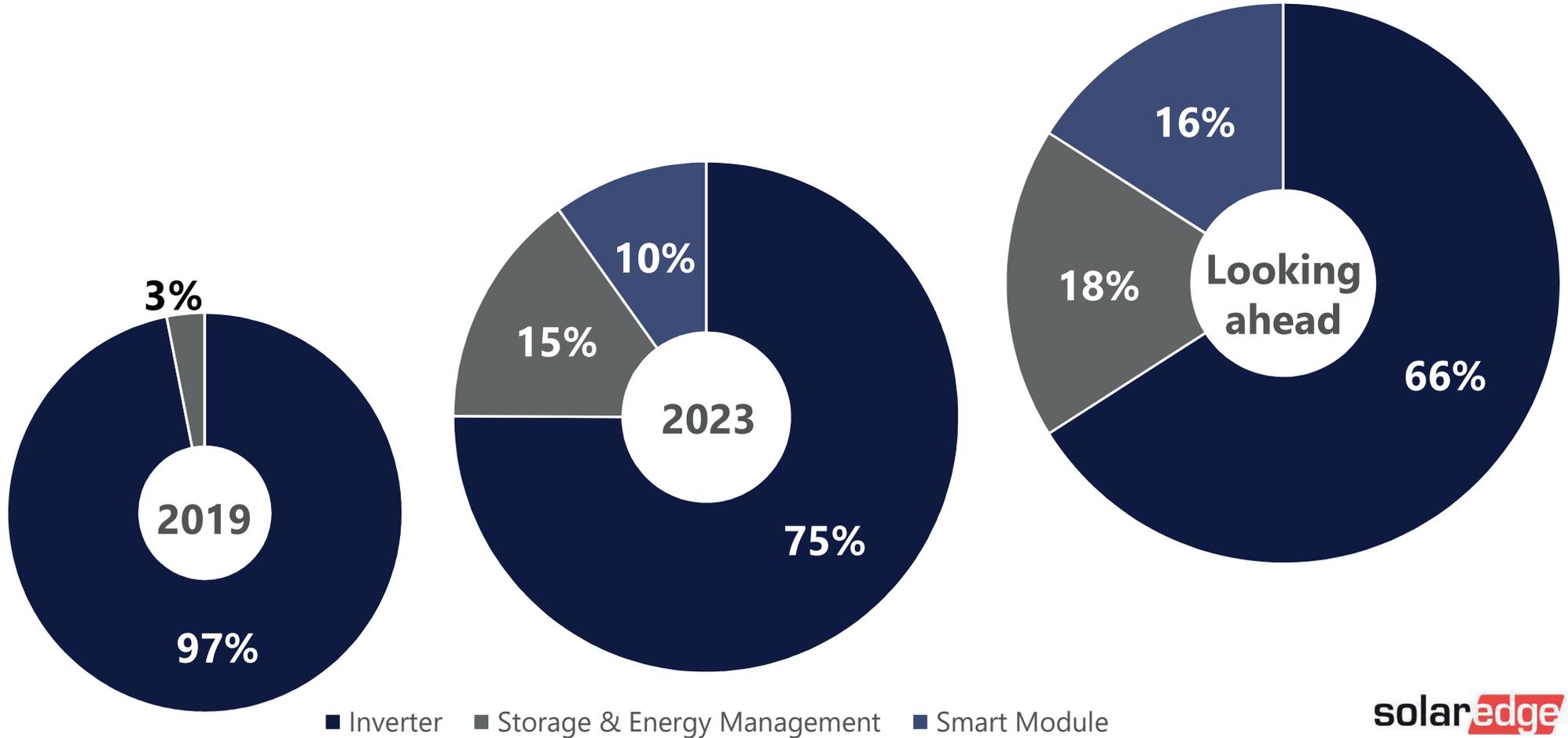
**PV System (2014)**



**Advanced PV System (2020)**



# SolarEdge Expected Future Revenue Mix



# Key Takeaways

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- The solar market and more specifically the inverter market continue to grow
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Version #: V.1.0





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# Our Product Roadmap

Lior Handelsman

VP Marketing and Product Strategy, Founder

November 25<sup>th</sup>, 2019

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# Key Takeaways

- Strong product pipeline based on innovation
- Roadmap to maintain market leadership in residential and increase ARPI
- Growing commercial footprint with planned product roll out for commercial leadership
- Penetrating utility market with early adopters and pathway to grow
- Evolving software and grid services offering



# Energy Trends

# Energy Market Transition

## Phase 1:

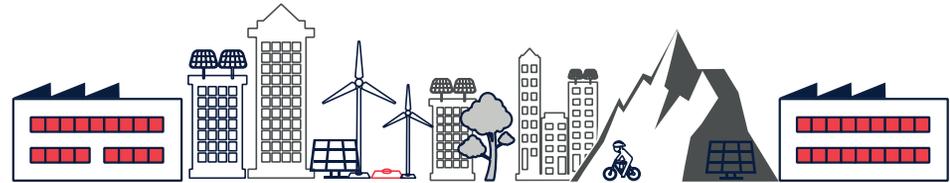
Decarbonization

Renewable electricity

Non-renewable electricity

## Phase 2:

Decentralization



## Phase 3:

Digitization



# SolarEdge Leading The Transition

## Phase 1:

Decarbonization

Offering cost-effective, innovative PV solutions making solar energy accessible to more people

## Phase 2:

Decentralization

Deploying hardware and software solutions to enable the transition to a prosumer energy market

## Phase 3:

Digitization

Expanding energy solutions to support smart energy management

# Serving All Solar Sectors



Full product suite with inverter as energy manager and virtual power plant capability



Expanded product suite with expected smart energy solutions and future virtual power plant capability



Cost-effective and scalable inverter, power optimizer, and storage solution

# Complete Residential Smart Energy Solution

- ▀ Module-level optimization
- ▀ Design flexibility
- ▀ Market-leading safety solutions
- ▀ System monitoring
- ▀ Industry-leading warranty



## All-in-One Inverter

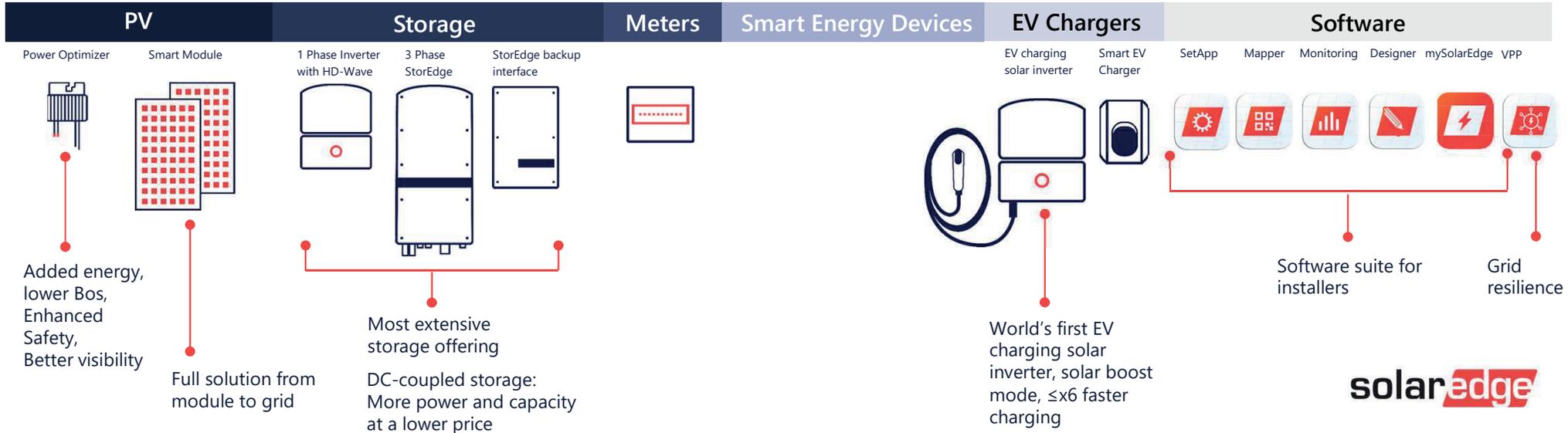
Optimize, manage, and monitor energy production, storage, and consumption

- ▀ Modular and flexible
- ▀ Easy to use
- ▀ Future-proofed

# Complete Residential Smart Energy Solution



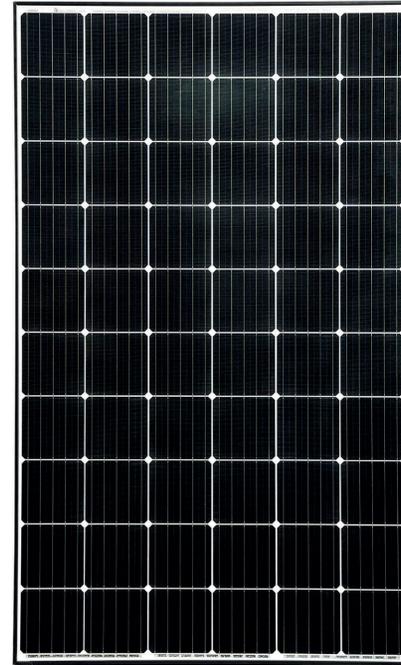
All-in-One Inverter



# SolarEdge Smart Modules

- Full residential solution from module to grid
- Smart module with integrated power optimizer
- All the SolarEdge benefits with faster installation
- A single provider for PV, warranty, and service
- Simplified logistics and ordering
- Superior quality and reliability
- Long product and performance warranties
- Tier 1 bankable produced

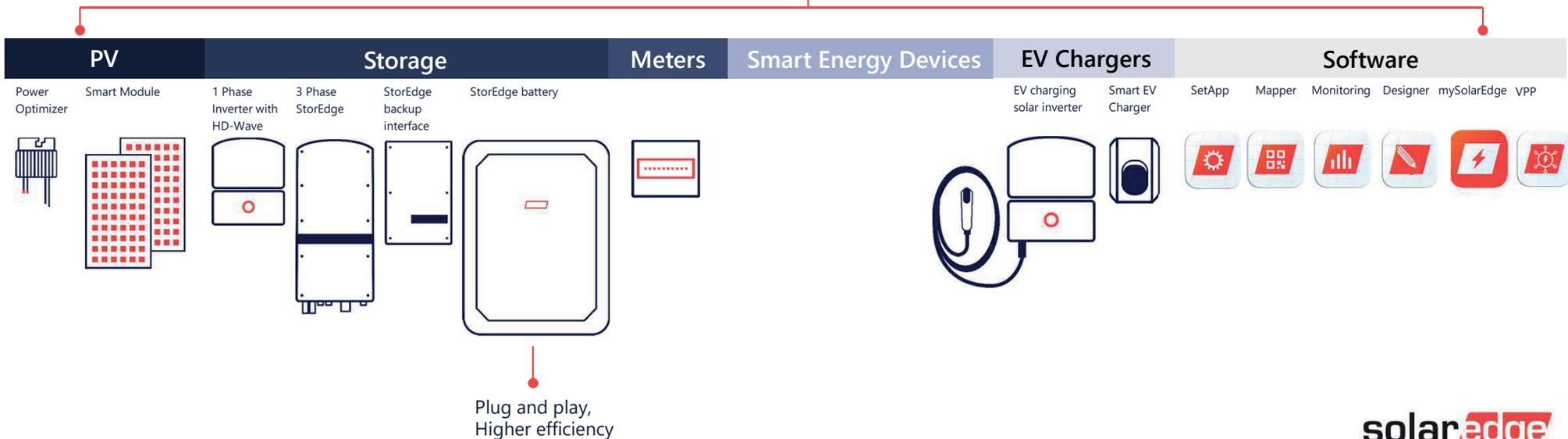
Module with integrated power optimizer



# Complete Residential Smart Energy Solution



All-in-One Inverter



# StorEdge Residential Battery

- Comprehensive residential storage solution
- End-to-end, compatible storage solution that fully synchronizes PV, battery, and site-level energy management
- Available in 2020

10kWh/5kW  
Li-Ion NMC



- Seamless integration with SolarEdge ecosystem
- DC coupled
- Plug & play installation
- More Power & Higher efficiency
- Enhanced safety

# Complete Residential Smart Energy Solution



All-in-One Inverter

**PV**      **Storage**      **Meters**      **Smart Energy Devices**      **EV Chargers**      **Software**

Power Optimizer    Smart Module    1 Phase Inverter with HD-Wave    3 Phase StorEdge    StorEdge backup interface    StorEdge battery    Hot water    Relay    Socket    EV charging solar inverter    Smart EV Charger    SetApp    Mapper    Monitoring    Designer    mySolarEdge    vpp

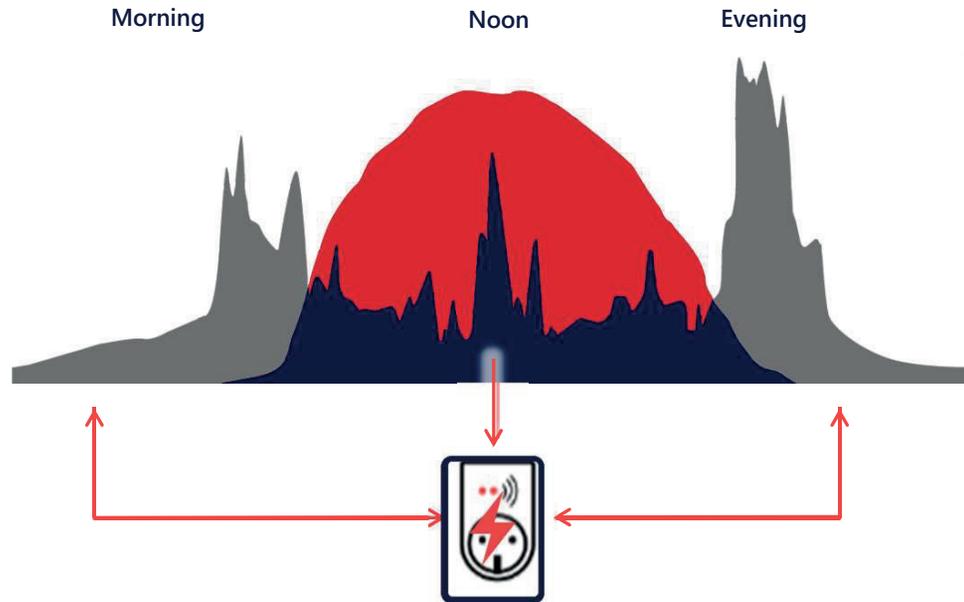


Synchronized cost-effective energy shifting



# Smart Energy Suite

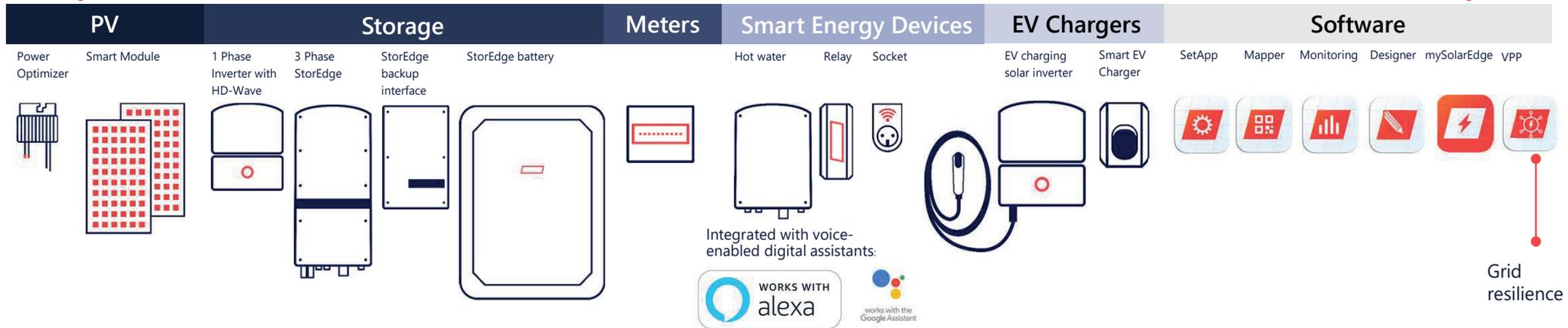
- One inverter with one app to control all energy
- Integration with home automation platforms
- SolarEdge is becoming a full vertical solution provider allowing consumers to be grid resilient and smartly manage their energy



# Complete Residential Smart Energy Solution

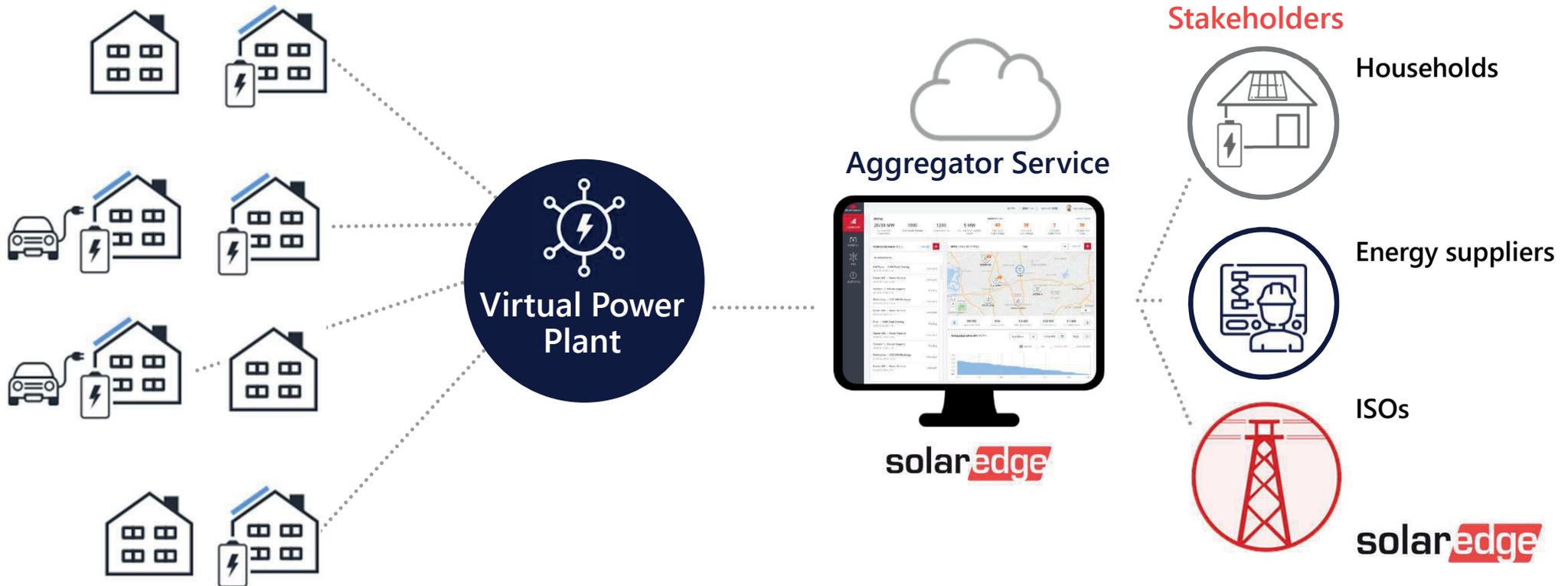


All-in-One Inverter

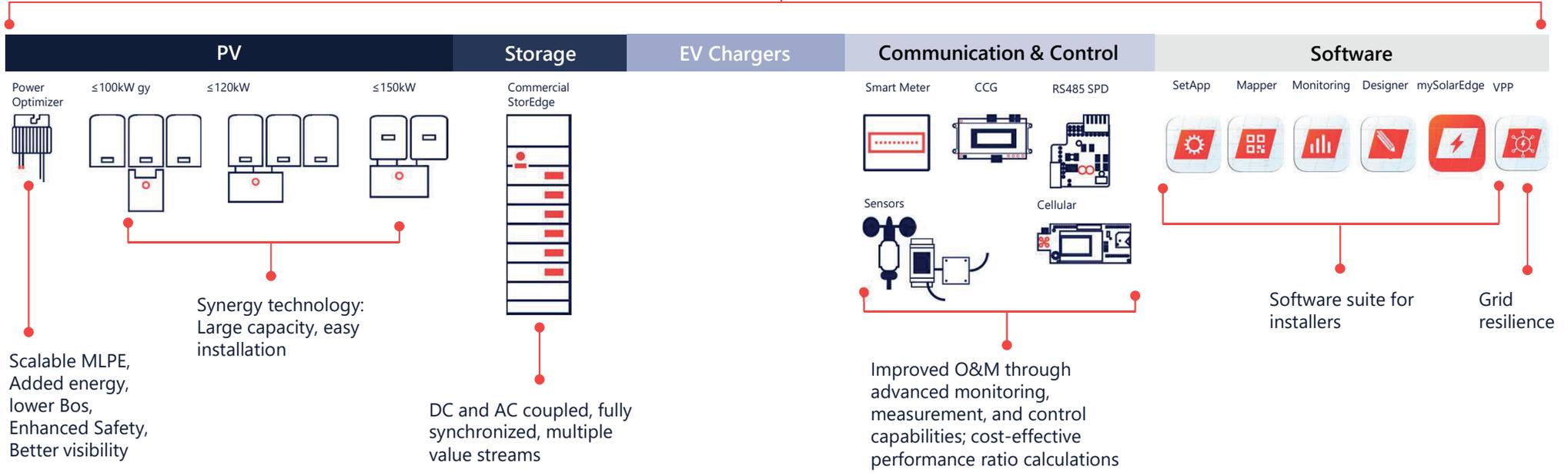


# Virtual Power Plant

- Aggregating PV, storage and EV in the cloud enables new grid services & revenue streams for all involved stakeholders
- > 10 agreements with utility players



# Expanded Commercial & Industrial Product Suite

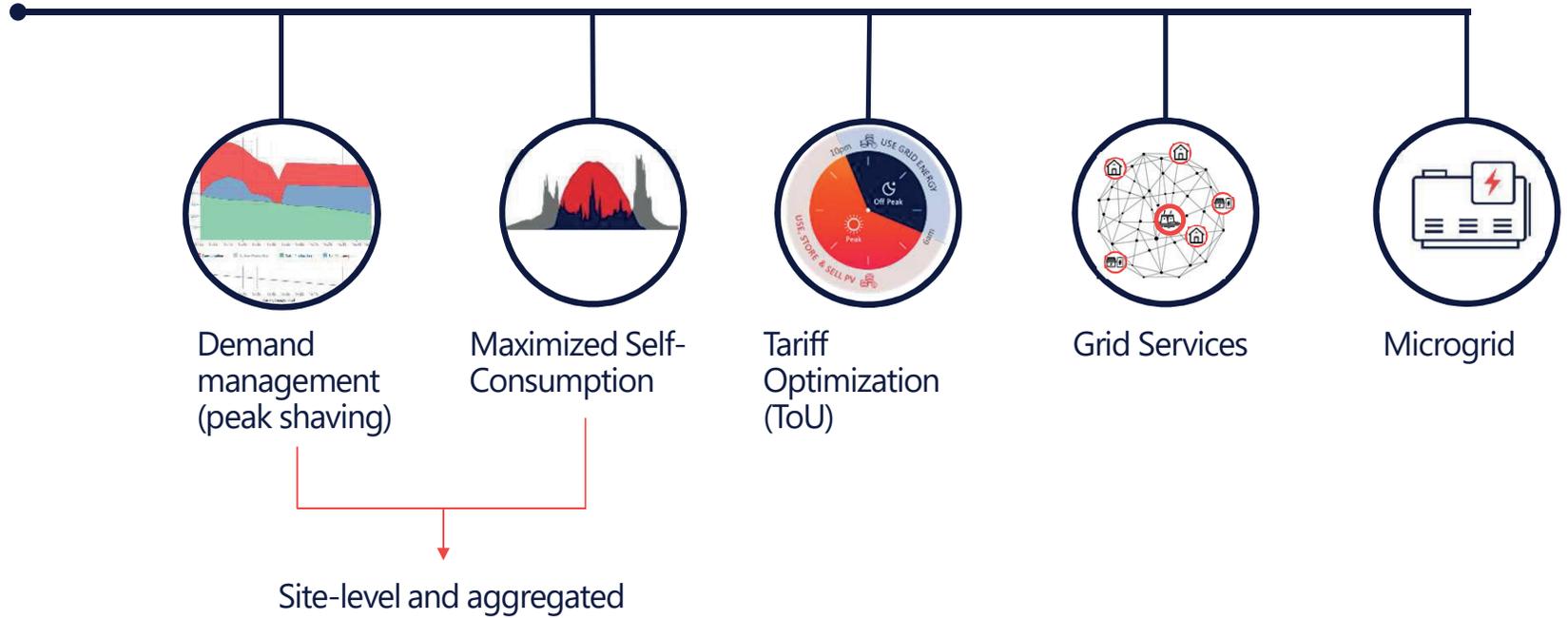


# Stacked Value Energy Management

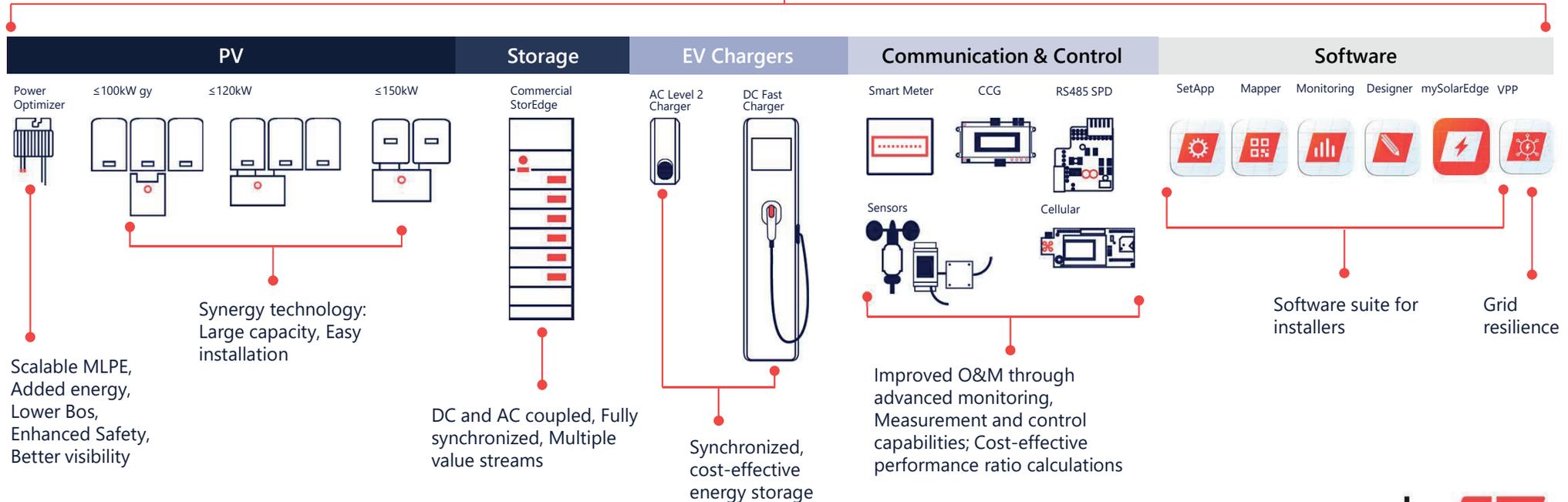
Improving the economics of distributed energy resources



Commercial StorEdge (2020)



# Expanded Commercial & Industrial Product Suite





# Utility-Scale Solution



## PV

Power Optimizer

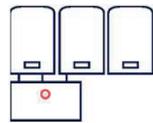


Improved scalability of MLPE

Power Optimizer 4:1 configuration

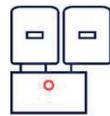


≤120kW synergy manager



Synergy technology: Large capacity, easy installation

≤150kW



Pre-commissioning, early-stage configuration and validation of installation

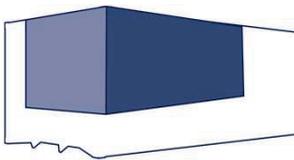
250/380kW



High power string inverter, improved \$/W scalability (2020)

## Storage

Utility Storage ESS



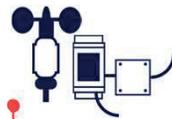
Long cycle life and high power performance battery

## Communication & Control

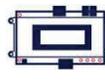
Smart Meter



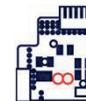
Sensors



CCG



RS485 SPD



Cellular



Improved O&M through advanced monitoring, measurement, and control capabilities; cost-effective performance ratio calculations

## Software

SetApp



Mapper



Monitoring



Designer



mySolarEdge vpp



Software suite for installers

Grid resilience

# Key Takeaways

- Strong product pipeline based on innovation
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A low-angle photograph of several modern skyscrapers with glass facades, reflecting the sky and each other. The buildings are arranged in a way that creates a sense of depth and height. The sky is a clear, light blue.

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# Operational Excellence

Uri Bechor  
Chief Operating Officer

November 25<sup>th</sup>, 2019

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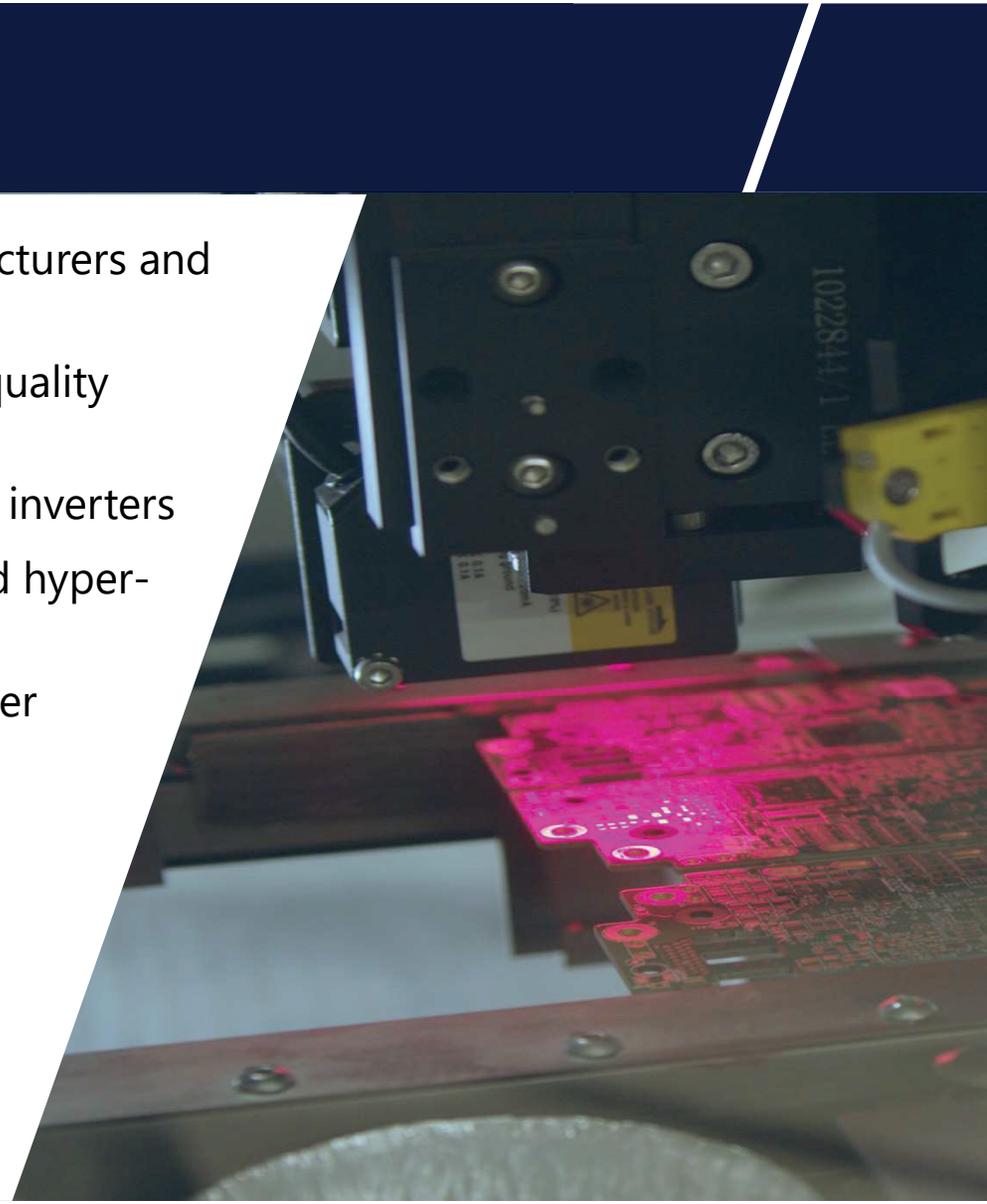
# Key Takeaways



- ▀ Our success is enabled by consistent ramp up of high-quality manufacturing
- ▀ Evolving our capabilities to manage geographic diversification and support new businesses
- ▀ Consistently increasing level of automation across production lines
- ▀ Leveraging economies of scale for competitive manufacturing costs
- ▀ Building Li-ion supply to secure technology development independence

# Core Capabilities

- Experience in managing multiple contract manufacturers and facilities
- Full SolarEdge Manufacturing System (SEMS) for quality and control across multiple sites
- High-volume production of power optimizers and inverters
- Proven ability to manage demand fluctuations and hyper-growth
- Cost-competitive mass production of reliable power electronics
- Experienced, global team with deep operational knowledge

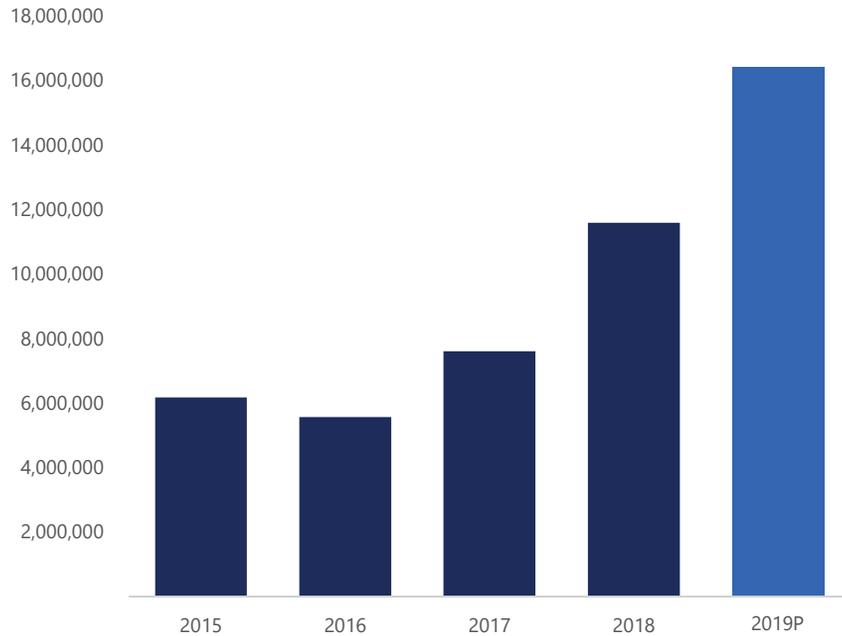




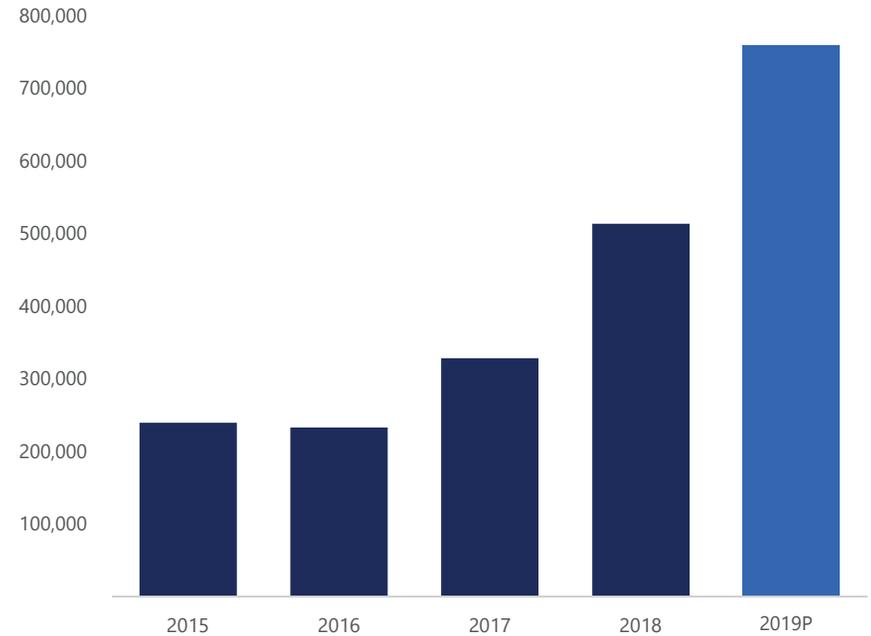
# Operational Track Record

# Production by Product Type

## Power Optimizers



## Inverters



# Global Operation Footprint

Flex, Zala, Hungary



Kokam, Nonsan, South Korea



Jabil, Ho Chi Minh, Vietnam

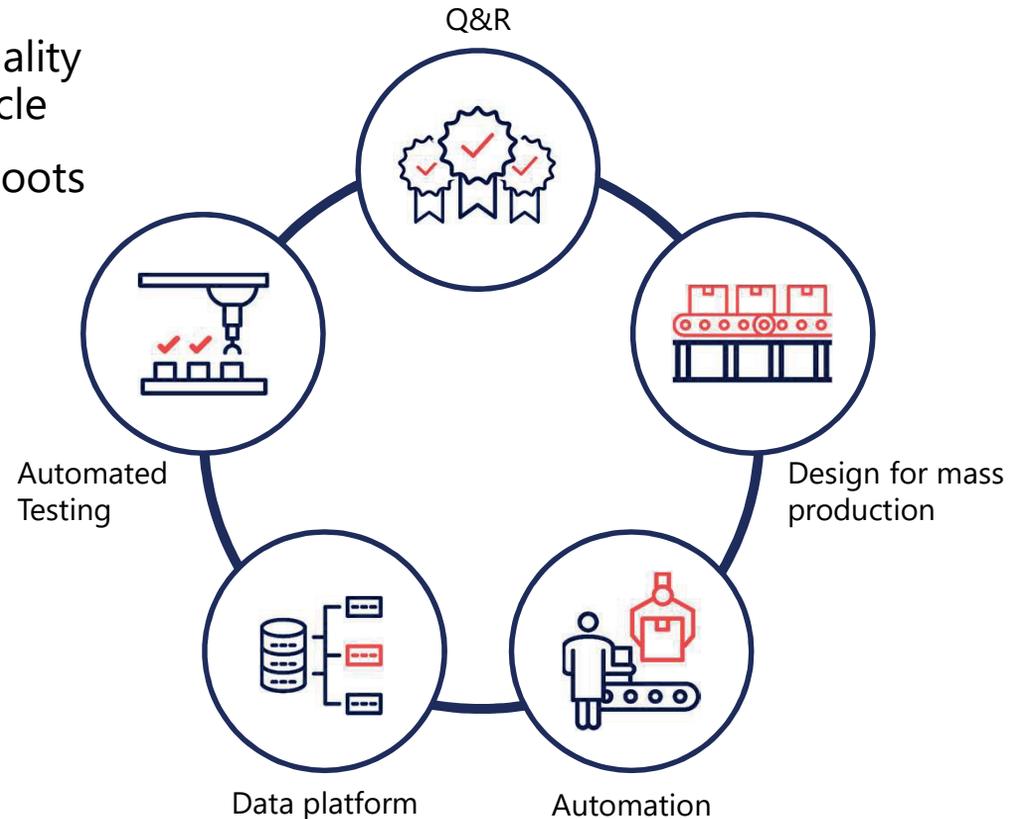


Jabil, Huangpu, China

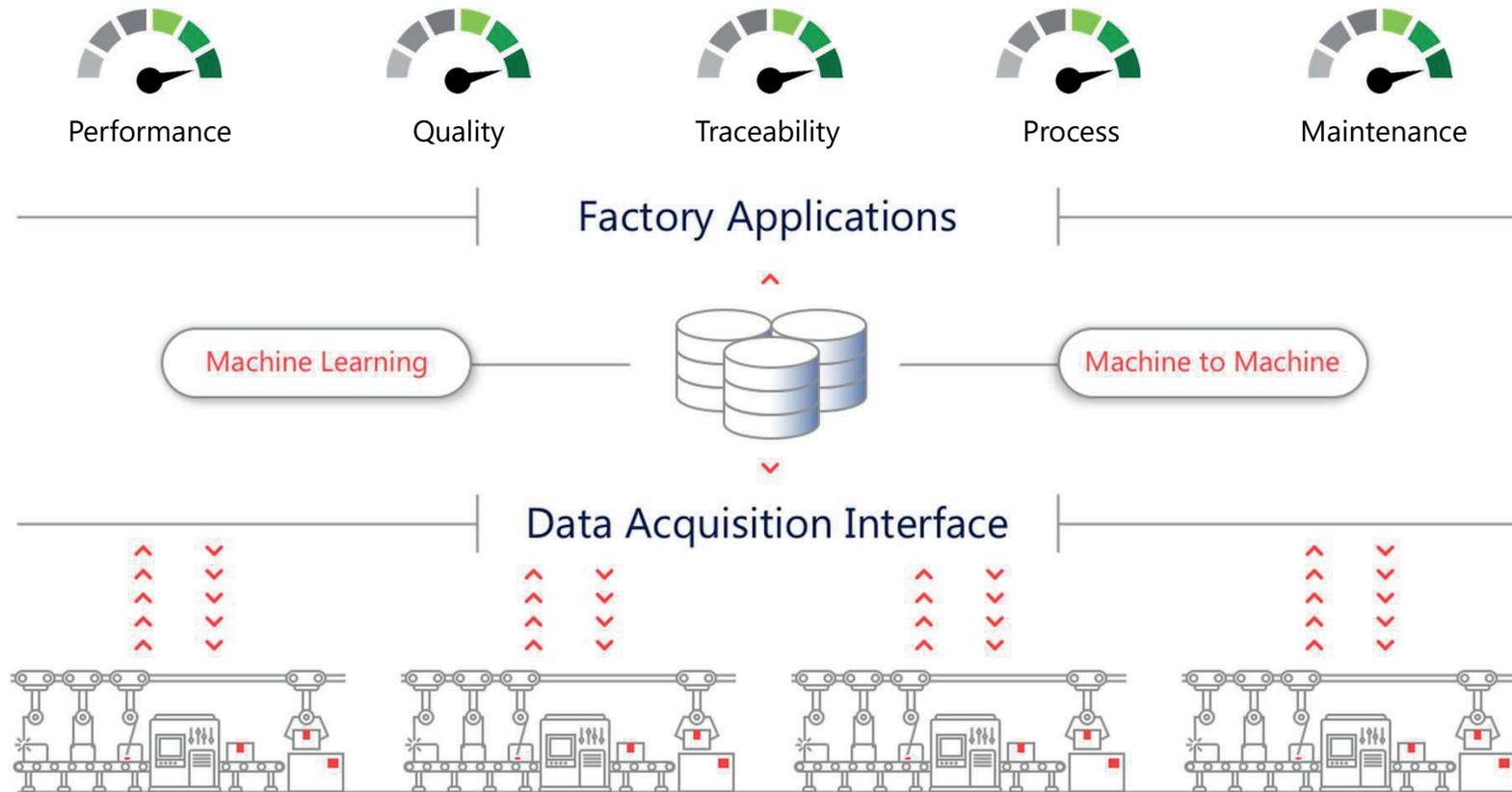
- Manufacturing Facility
- Distribution and Logistics Hub

# SEMS: SolarEdge Manufacturing System

- Real-time and comprehensive ecosystem for quality and testing throughout entire production lifecycle
- Holistic approach with R&D and engineering “boots on the ground”
- Products designed for automation
- Digitization of manufacturing for continuous improvement
- Vertical integration of critical components
- Excellence in operations to drive cost reduction

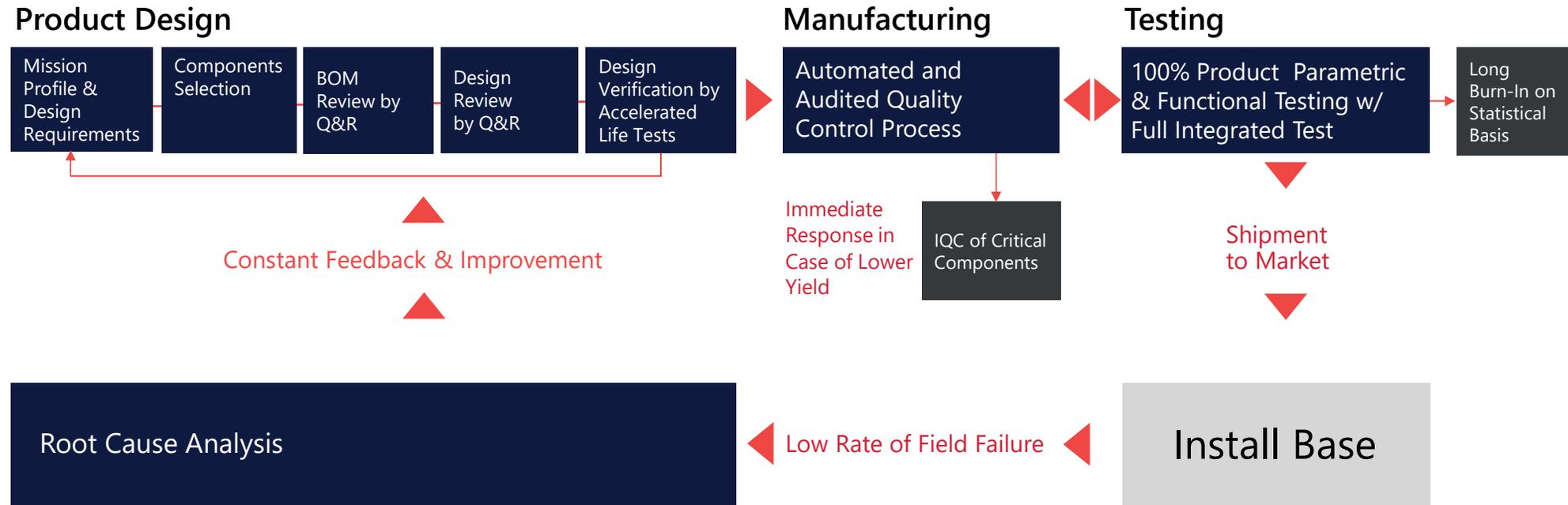


# SEMS Data Platform



# Products Reliability Life Cycle

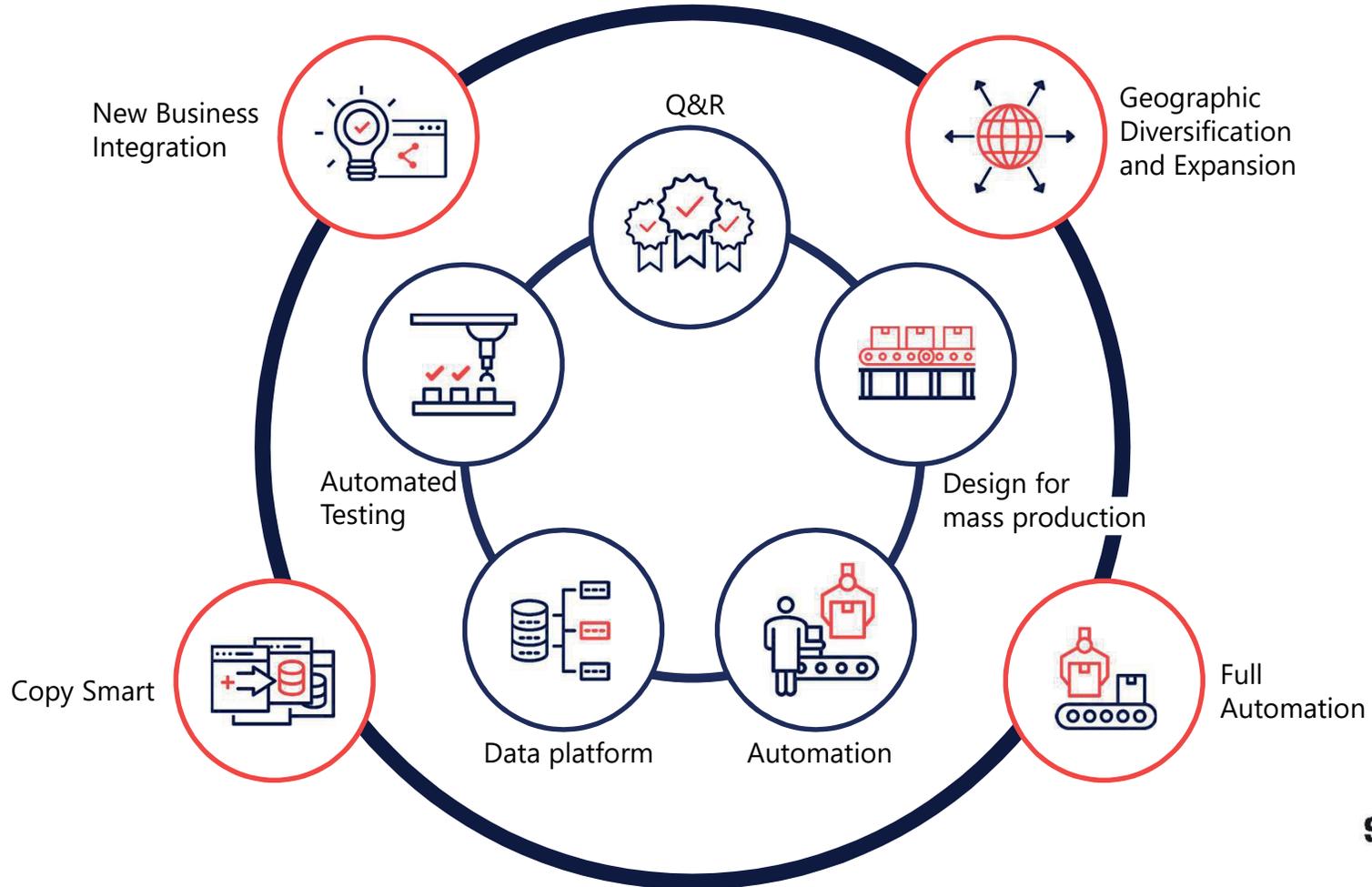
Reliability process is embedded into all stages of design & production





# Our Manufacturing Future

# Future of Manufacturing



# Geographic Diversification & Expansion Plan

- Flex site in Zala, Hungary
  - Plan to increase by 200% in 2020
- Jabil site in Huang Pu, China
  - Plan to increase by 20% in Q1/2020
- Expansion to Jabil, Vietnam
  - Stage 1: Factory ramp up in Q4/2019
  - Stage 2: Factory expansion completion planned for Q2/2020



# Vietnam Manufacturing Facility



# Moving to Full Automation

- R&D concept of “design for automation”
- Reduce risk of human error/dependency, expand geographic flexibility
- Continuous improvement via online data platform and M2M capabilities
- Fast ROI and reduced cost
- 100% power optimizers manufactured with full automation planned for Q4/2020



# Copy Smart

- SolarEdge factory: "Sella 1"

- Nazareth, Israel

- Fully SolarEdge owned

- Factory fit up Q4/2019

- Production planned for Q2/2020



- Pilot for SEMS 2.0 that can be smoothly deployed and scaled worldwide

- Source for workflow process recipes, automation development, and scalability

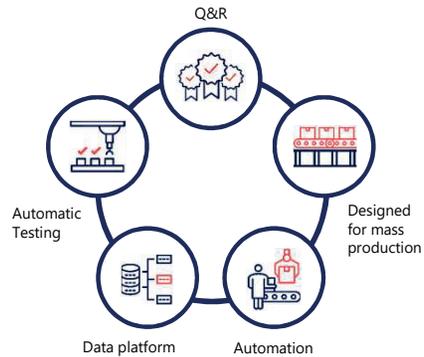
- Automation hub and global training center

- Close proximity to R&D; testbed for innovation in manufacturing

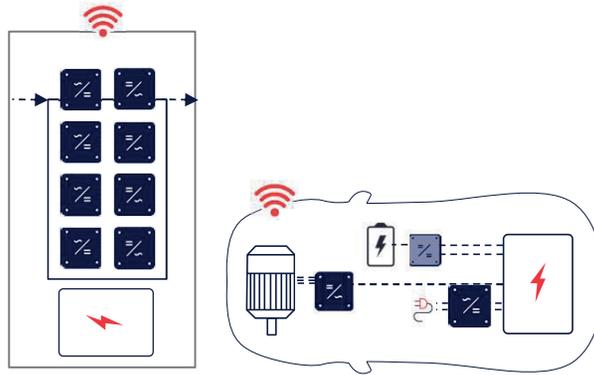


# New Business Integration

Leverage SEMS to prepare for business growth and integration of new businesses



UPS and EV drive train systems to be integrated into existing power electronics manufacturing and operational activities, and utilize existing SolarEdge platform



On the basis of Kokam acquisition, expand know-how and capacity of Li-ion cell and battery manufacturing

- 200 MWh maximum manufacturing capacity
- Adding 2GWh manufacturing facility in early 2022





Kokam

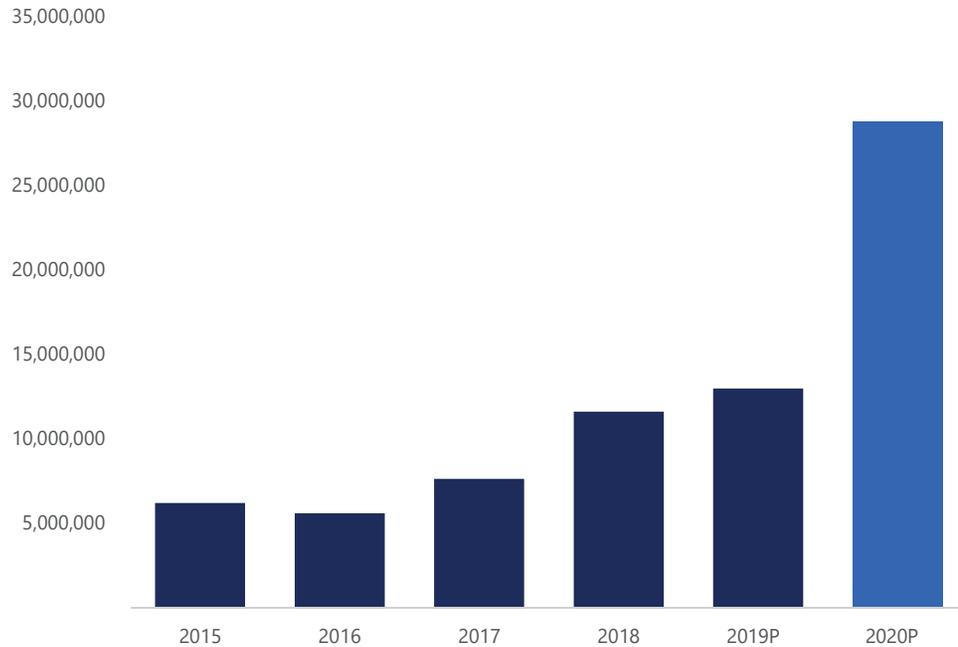
Kokam

Kokam

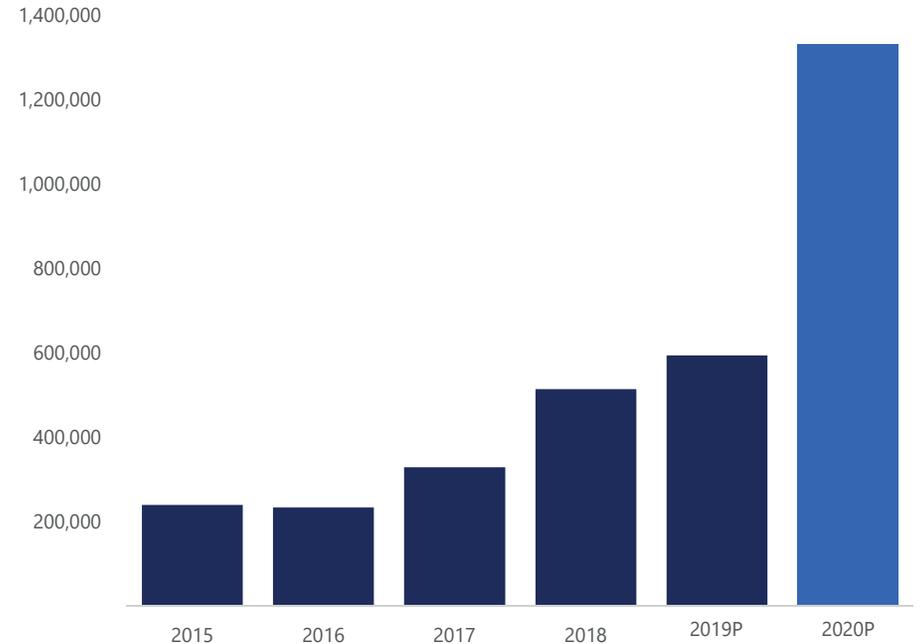
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# 2020 Capacity Plan

## Power Optimizers



## Inverters



# Key Takeaways



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- ▀ Evolving our capabilities to manage geographic diversification and support new businesses
- ▀ Consistently increasing level of automation across production lines
- ▀ Leveraging economies of scale for competitive manufacturing costs
- ▀ Building Li-ion supply to secure technology development independence

# Thank You!

## Cautionary Note Regarding Market Data & Industry Forecasts

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Version #: V.1.0

solar**edge**



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# Powering Our Future

Zivi Lando  
CEO and VP of Sales

November 25<sup>th</sup>, 2019

# Safe Harbor

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward looking statements include information, among other things, concerning: our possible or assumed future results of operations; future demands for solar energy solutions; business strategies; technology developments; new products and services; financing and investment plans; dividend policy; competitive position; industry and regulatory environment; general economic conditions; potential growth opportunities; and the effects of competition. Forward-looking statements are only predictions based on our current expectations and are inherently subject to risks and uncertainties. They should not be considered guarantees of future results, which could differ materially from the results set forth in, contemplated by, or underlying this presentation.

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# Future Energy Vision



- We believe that the way we consume and produce energy will look very different in the future
- SolarEdge has a strategy to be a leader in this transition from centralized, polluting energy, to clean, distributed, renewable energy

# Smart Energy Trends

- Grid facing extreme conditions more frequently, requiring new solutions for resiliency
- Energy storage becoming an integral aspect of solar
- E-mobility altering electricity consumption patterns
- Increased connectivity of devices creates demand-side flexibility
- Industries require more energy and better power quality



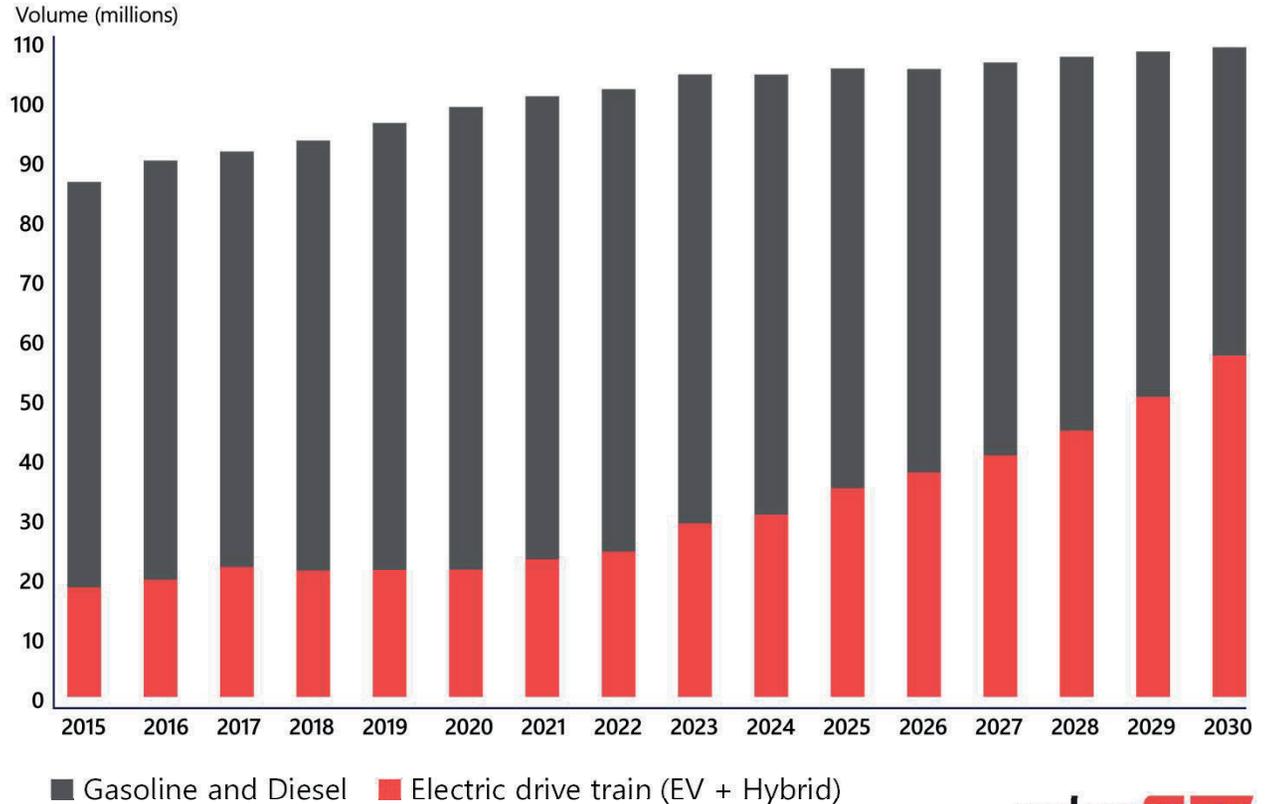


# EV Market Growth and Opportunity

# Electric Vehicle Market Boom

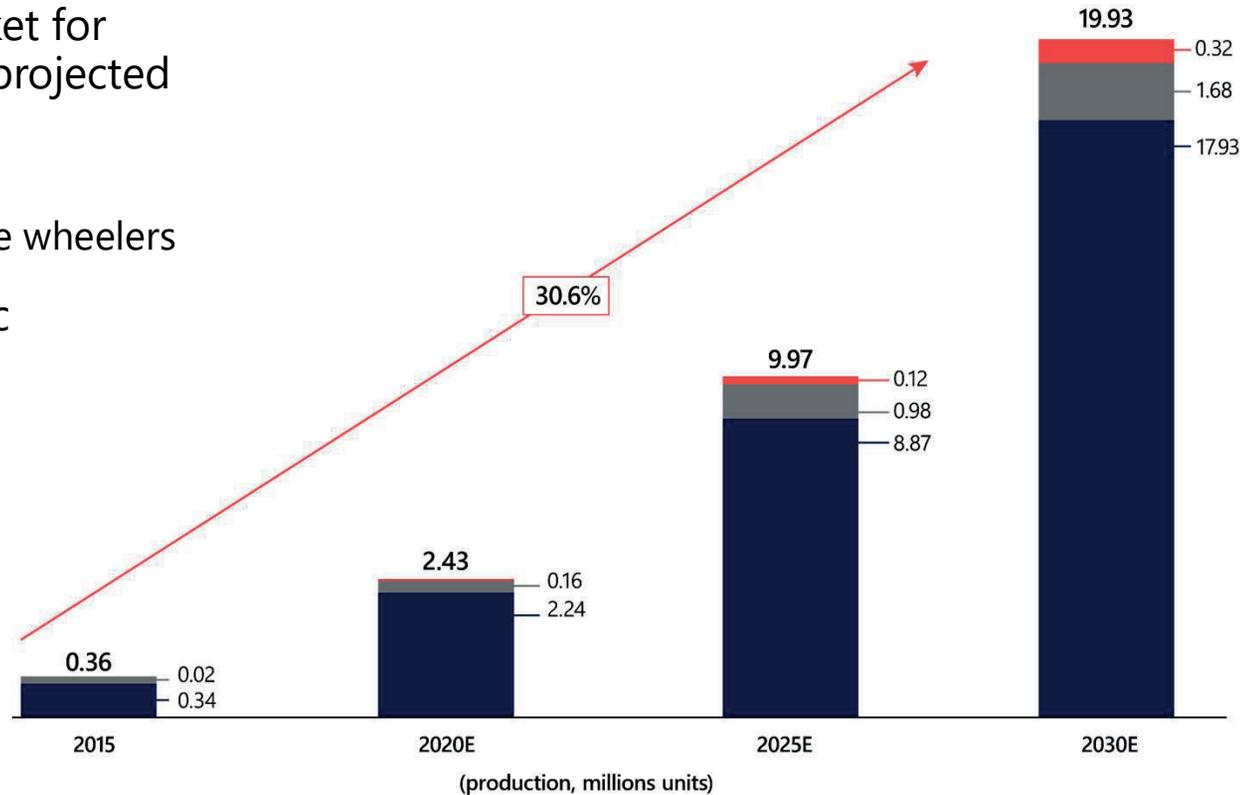
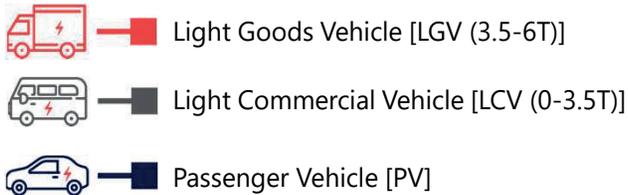
- Global commitment towards electrifying transportation
- The shift from internal-combustion engines to electric technology creates an opportunity for new entrants

Global Vehicle Sales by Fuel Source Through 2030



# Electric Vehicle Market Boom

- Large and developing global market for electric vehicles (EV) with growth projected in all vehicle types
  - Passenger, light, mid, and heavy commercial, buses, two and three wheelers
- All vehicle types require an electric powertrain



# Core Technology Synergy

■ PV and EV share core technologies

DC/DC Converter



DC/AC Inverter



Battery Pack



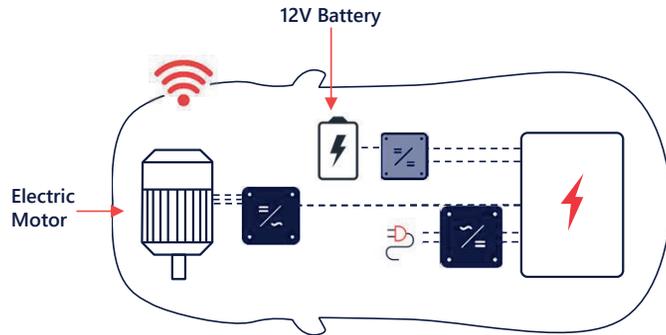
Charger



Communication and Monitoring

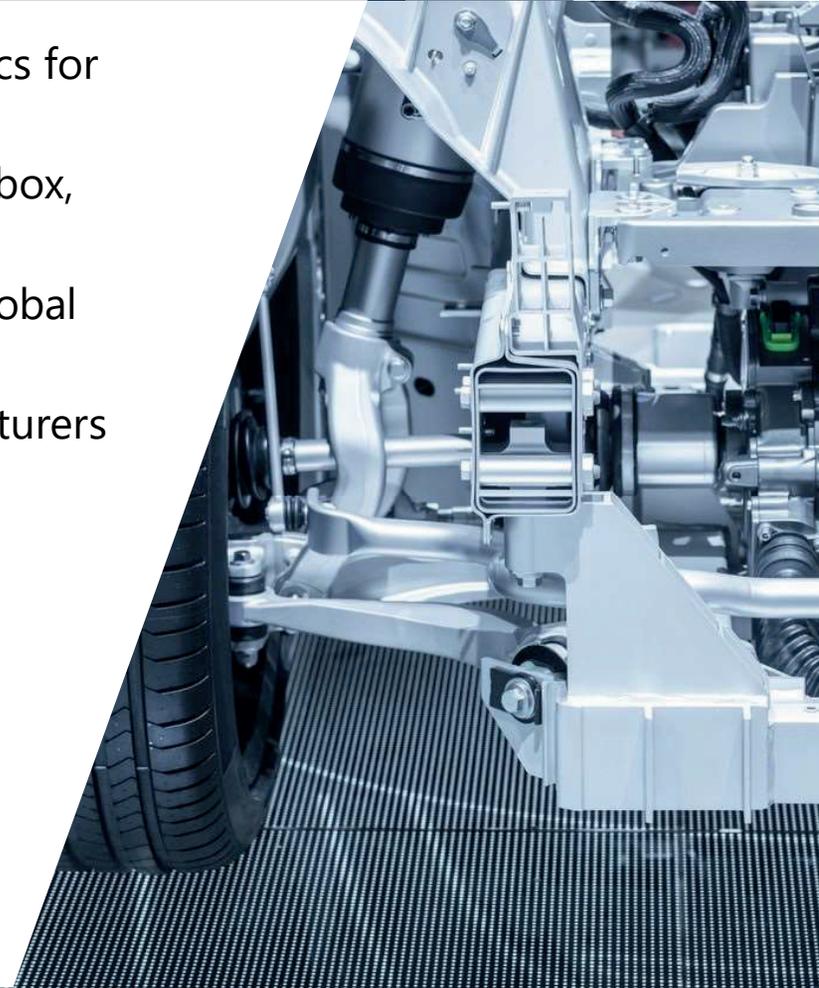


Management Software



# SolarEdge E-Mobility Division

- Innovative integrated powertrain technology and electronics for LCVs, LGVs, e-motorcycles
- Innovative and high-performing powertrains with the gearbox, engine, battery, BMS, software, and accessories
- Provides SolarEdge fast-track access to the high-growth global EV market
- In pre-production phase with leading automotive manufacturers





# Business Opportunity

- SolarEdge's e-mobility division offers a powertrain solution for the LCV and LGV market
- The LCV and LGV market is expected to represent annual sales of 2 million vehicles in 2030\*
- Each vehicle requires a powertrain with 40kWh - 80kWh of Li-ion batteries
- We estimate that this represents:
  - \$15K - \$20K per vehicle; and
  - \$30B - \$40B potential market by 2030

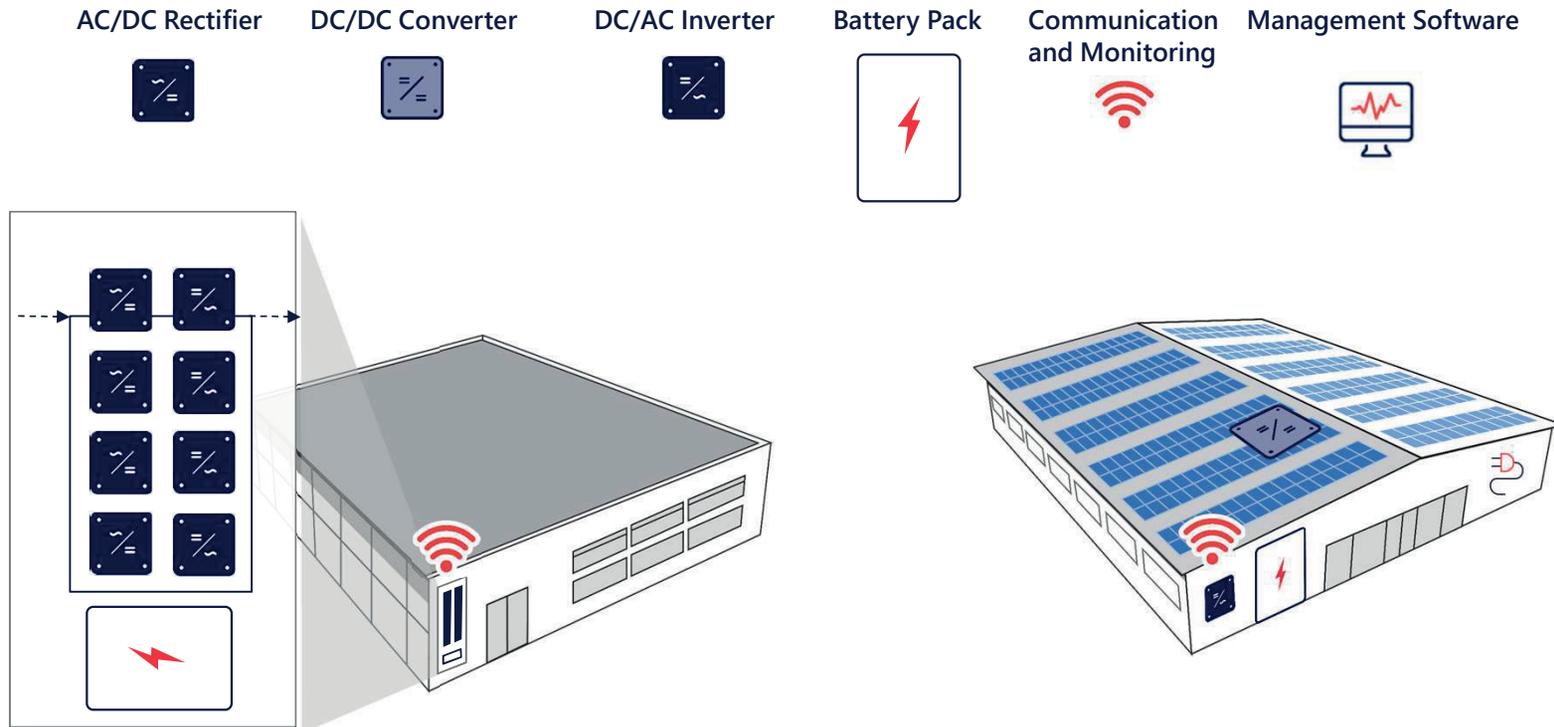




# UPS Market Opportunity

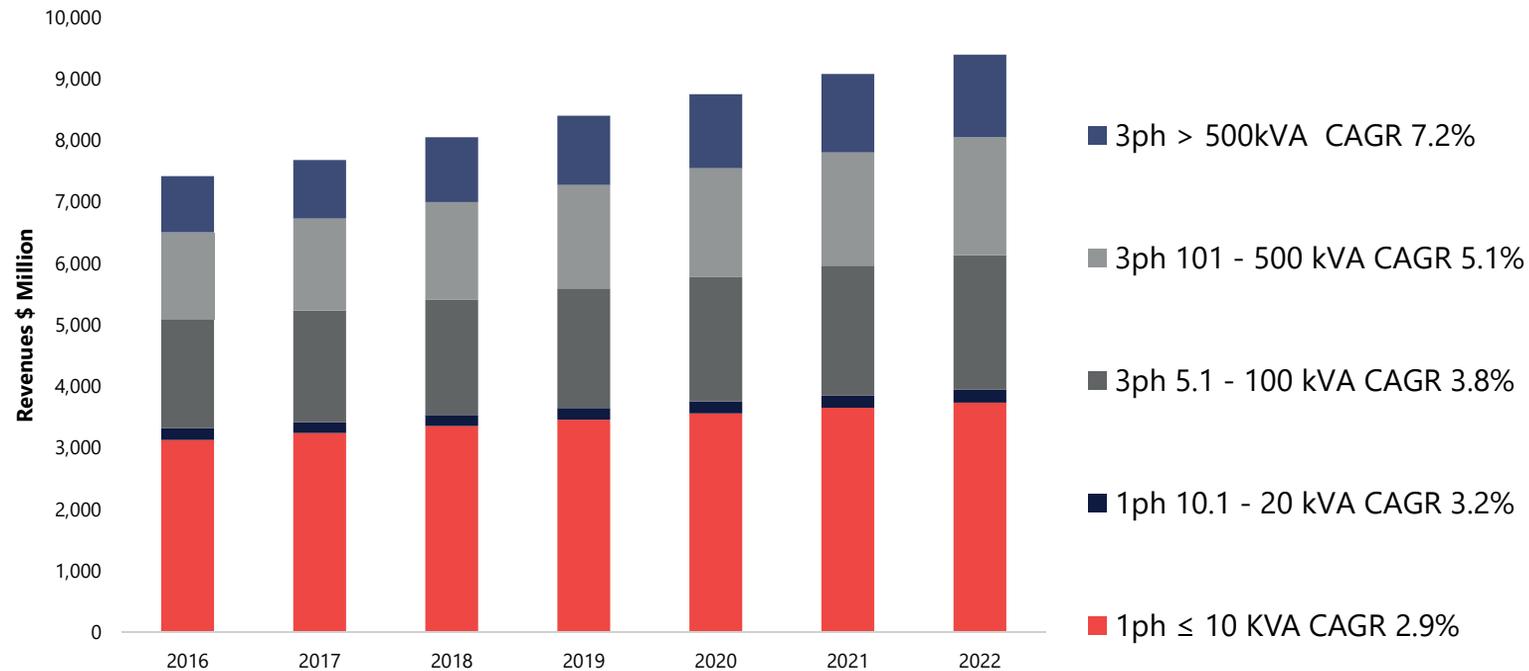
# Core Technology Synergy

■ PV and UPS share core technologies



# Global Market size by kVA Range

Market momentum is driven primarily by cloud, data center co-location trends and industrial applications



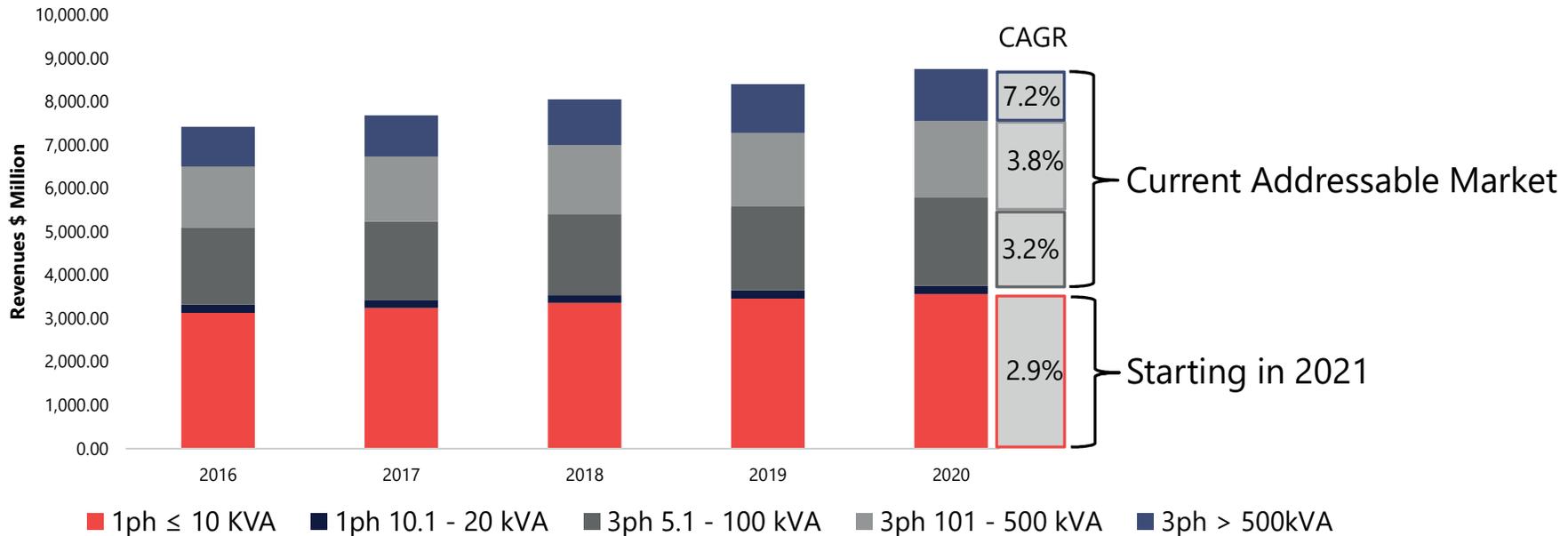
# Strengths of SolarEdge UPS Division

- Decades of experience designing and manufacturing UPS solutions for various applications
- Competitive product offering for the 3 phase 10 – 500 KW segment
- Significant synergy with SolarEdge R&D, manufacturing and global business infrastructure
- Opportunity for combined backup/UPS energy storage solution



# UPS Business Opportunity

- Expand the product portfolio to cover all segment of the UPS market by 2021
- Utilize SolarEdge sales, marketing, operational infrastructure and methodologies to grow market share globally – repeat the solar story



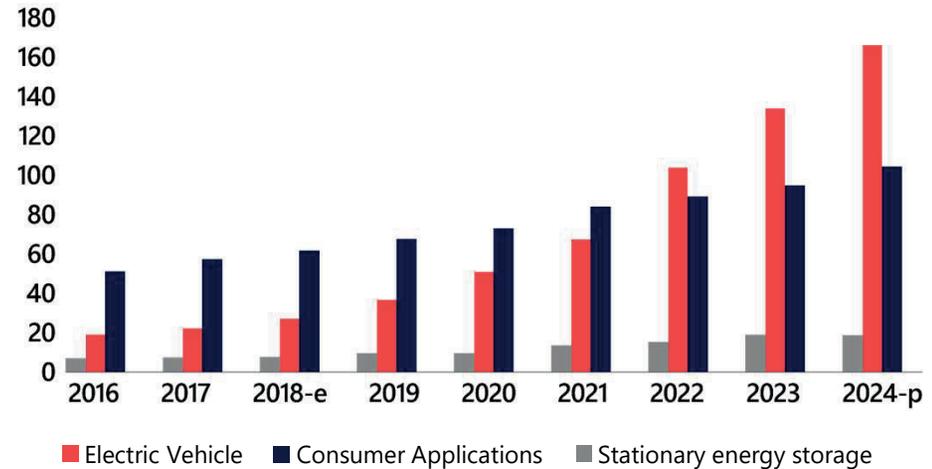


# Kokam and the Li-ion Opportunity

# Li-ion Batteries Market Growth

- Large and developing market with growth in all sectors
- Li-ion battery market estimated to reach \$69B by 2022 (2016-2022; 16.6% CAGR)
- Battery capacity lags demand:
  - Lithium-ion battery consumption grew 73% (2010-2014); production increased 28% in the same period

Global Lithium-ion Battery Demand by Application  
(2016-2024, GWh)

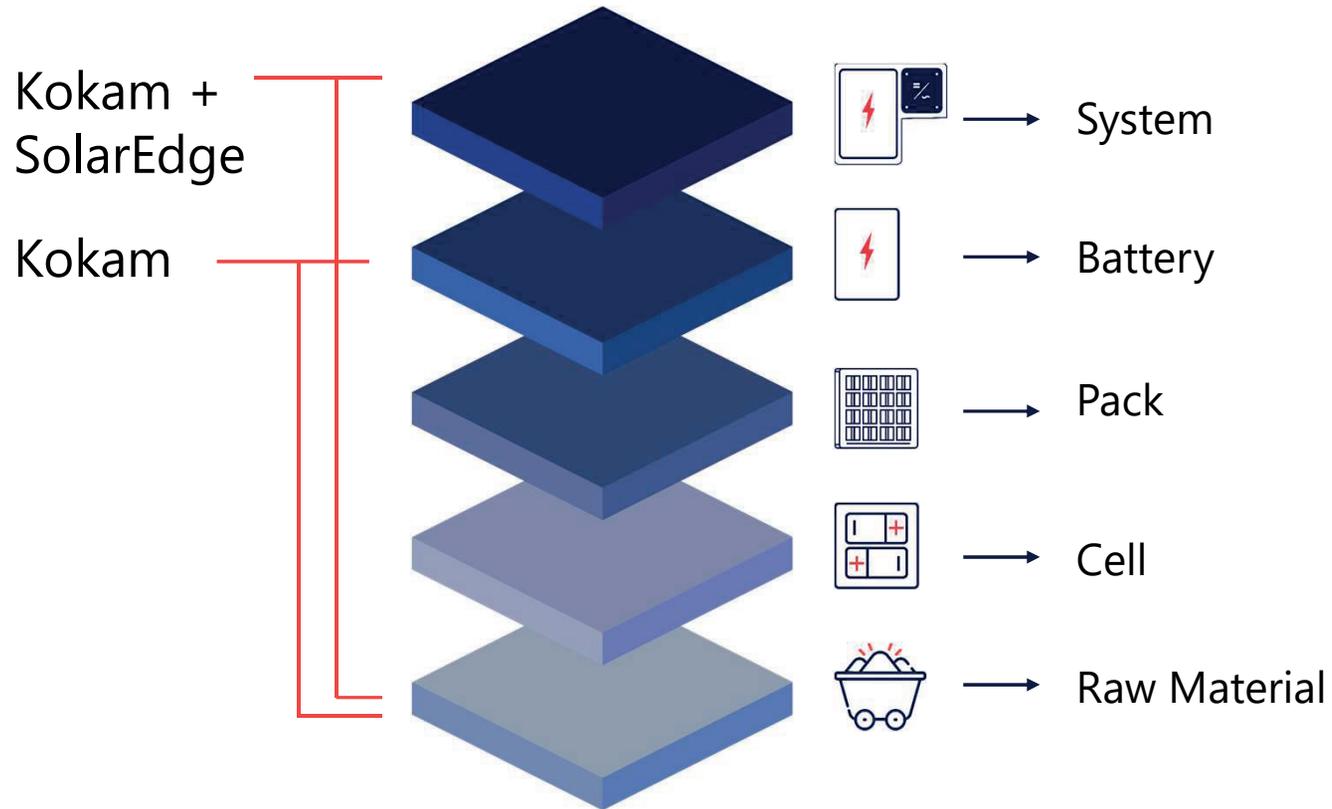


# Strengths of Kokam within SolarEdge

- A global Tier 1 provider of innovative battery solutions
- Battery provider for utility-scale ESS, UPS, EV, and more
- Proven technology with more than 600MWh deployed
  - Over 162MWh of utility-scale ESS installed globally
- Access to thousands of installers and EPCs as sales channel
- Innovative cell chemistry technology with long cycle life and high power Li-ion battery

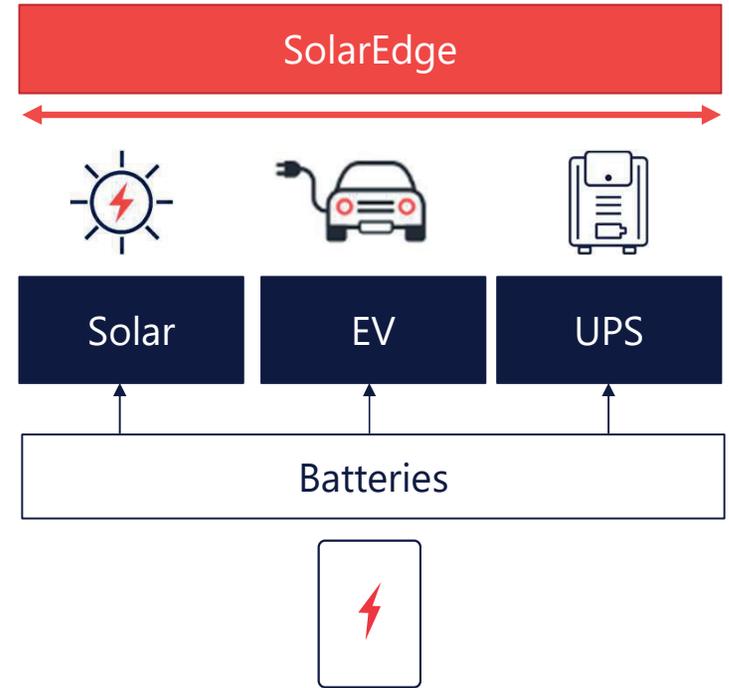


# Differentiated Product



# Li-ion Batteries in SolarEdge

- Li-ion battery manufacturing will position SolarEdge in the high-growth global battery market
- Will allow SolarEdge to access and control steady supply chain of batteries for PV, EV, and UPS markets
- Will allow development of custom, application- and segment-specific cell and battery technology



# Business Opportunity

- New Kokam factory planned to provide 2GWh of capacity
- Assuming a blended ASP of \$250/kWh for residential and commercial PV ESS, this represents a potential revenue opportunity of \$500M in 2022
- Ability to accelerate development of Li-ion battery products for new applications
- Over time, possibility to increase capacity of Li-ion manufacturing facilities or outsource to 3<sup>rd</sup> parties





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# Our Technological Foundation

Yoav Galin  
VP Research &  
Development, Founder

Meir Adest  
Chief Information  
Officer, Founder

November 25<sup>th</sup>, 2019

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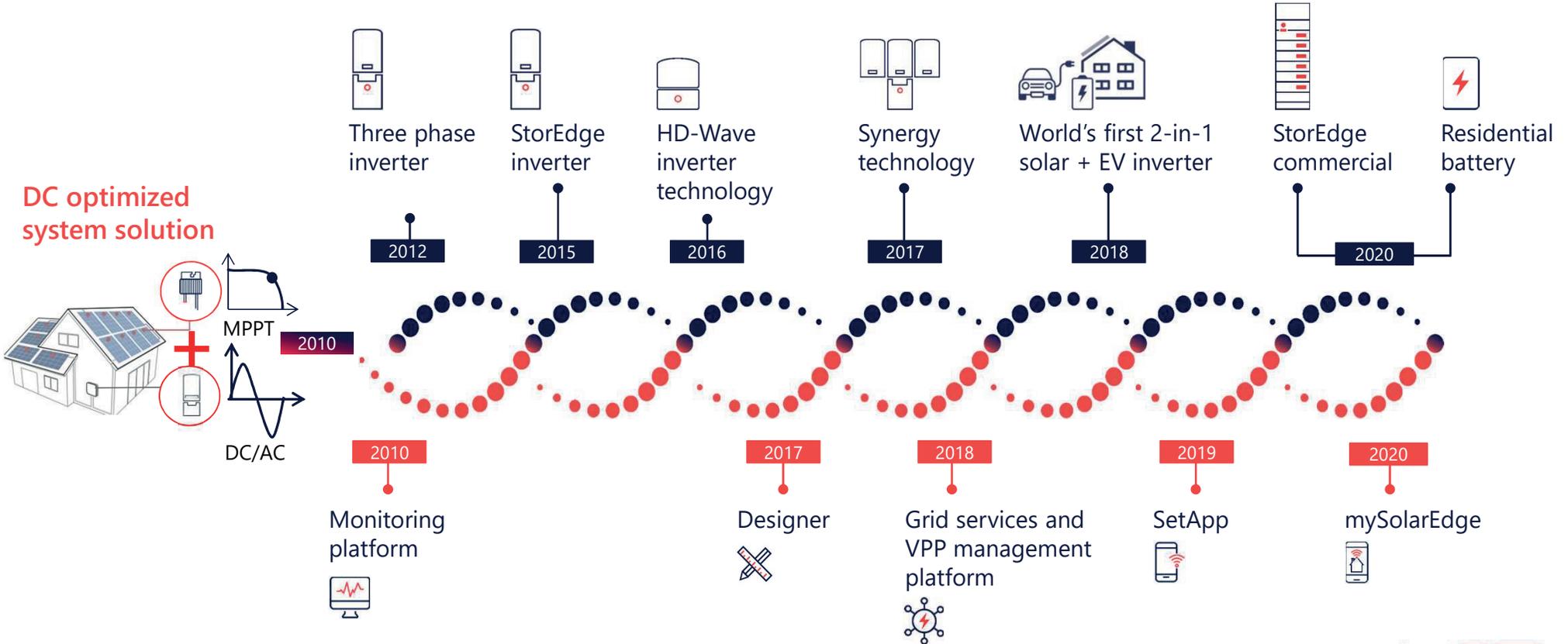
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# Key Takeaways

- ▀ Technological innovation is the foundation of our success
- ▀ Novel system architecture provides the basis for high performance, rich functionality, scalability and reliability, at low cost
- ▀ Control of all system aspects achieved through in-house multidisciplinary development
- ▀ Value-added services made possible by the information collected from the systems

# DNA of Innovation



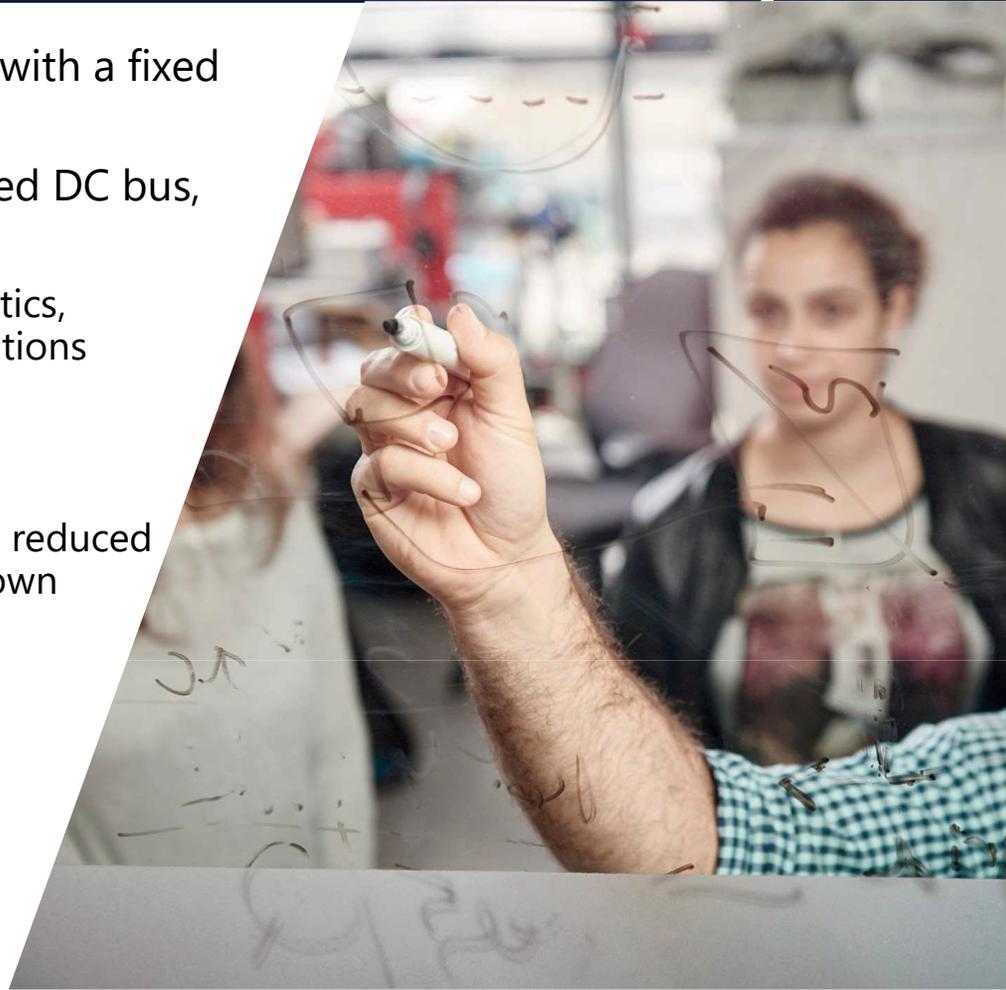
# It All Starts with Holistic System Architecture

- Why is the system so important?
  - Enables breaking the mold of traditional performance and provides new and enhanced capabilities
  - During system design, the components, their function and interaction is decided
  - A good system balances the stress on the components and increases reliability, all while maintaining low cost
  - Enables easy expansion and addition of new components



# The Building Blocks of Our System

- SolarEdge selected a novel concept of operation with a fixed string voltage system
- Enables connection of DC components on a shared DC bus, with multiple benefits:
  - High performance regardless of string characteristics, temperature constraints and environmental conditions
  - High inverter efficiency and reliability due to less operational stress
  - Improved safety – output voltage of each panel is reduced to a touch-safe voltage upon grid/inverter shutdown
  - Design flexibility, longer strings and lower BOS element count
- Inverters are the grid connection gateway of the system

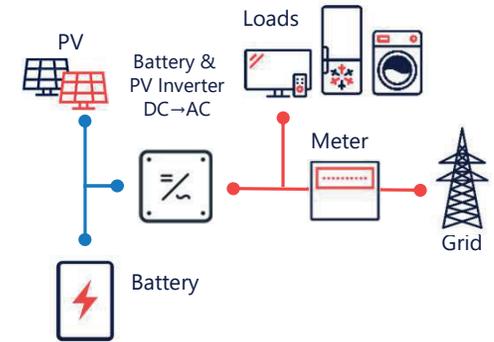


# What We Gain from Our System

- Expandable DC architecture – additional elements can be seamlessly added
- System elements can be producers or consumers of power
- Proprietary direct communication protocol
- Maximized energy production and utilization
- Simpler and reliable components
- Robust fault-tolerant system behavior
- Single grid connection point allowing adaptation to changing grid codes and requirements

## DC-Coupled

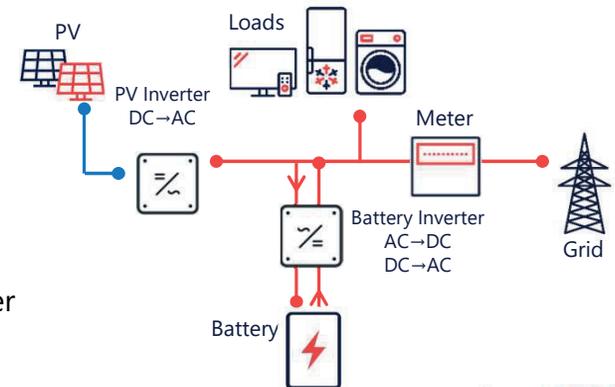
Energy goes directly to the battery without needing to go through an inverter



VS.

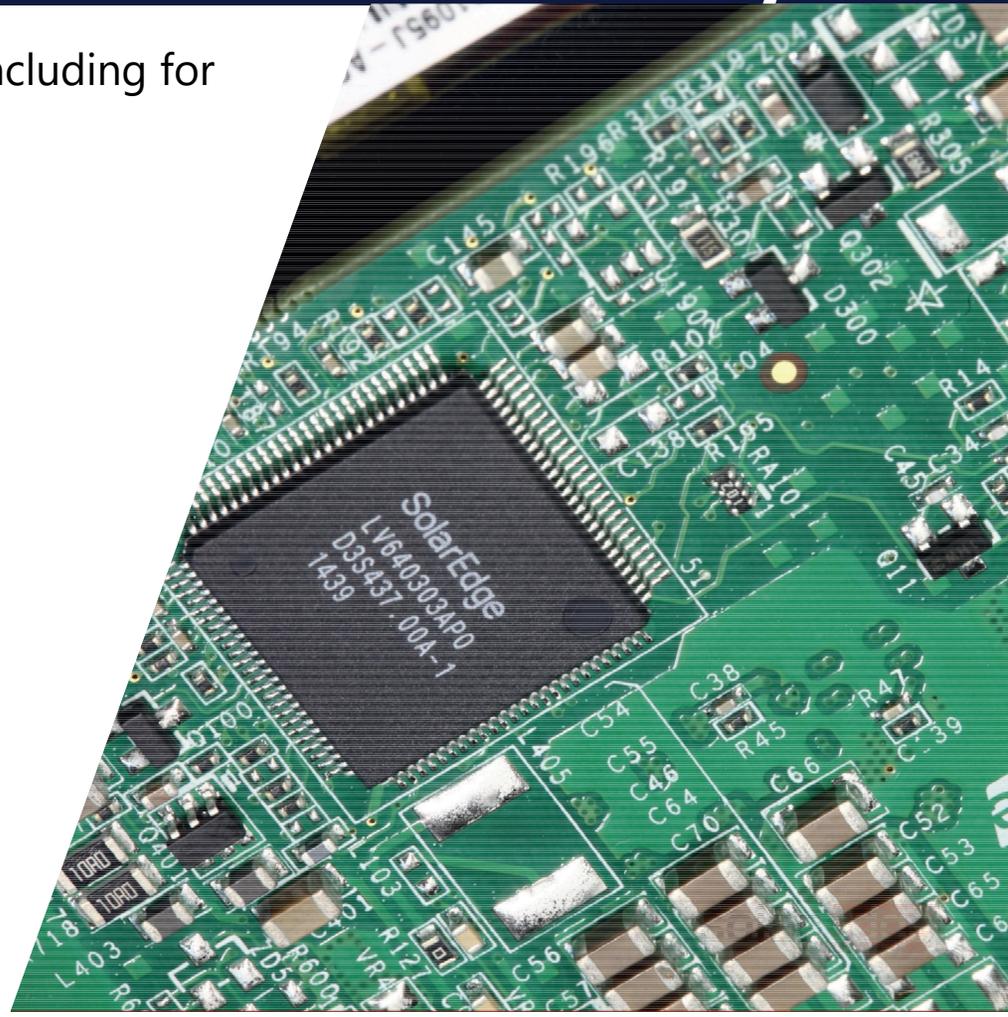
## AC-Coupled

Excess PV power beyond the inverter rating is lost

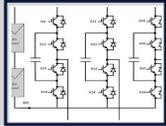


# Software Controllable System

- Allows simple implementation of new features, including for an existing fleet
- Rapid compliance with new standards
- Fleet-level management and upgrade
- Remote assistance for installers

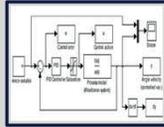


# Enabling Capabilities



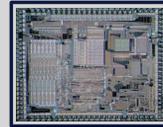
## Power circuits

- /// The physical layer of any power conversion device
- /// Power topologies



## Control loops

- /// Operates power circuits to achieve optimal power conversion



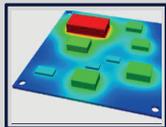
## Mixed signal ASICs

- /// On our 4<sup>th</sup> ASIC generation
- /// Miniaturization
- /// Reduces component count
- /// Cost control



## Real-time software

- /// Digital control loops implementation
- /// Controls system performance
- /// Adds system flexibility



## Mechanics & thermal design

- /// Long-life outdoor units
- /// Thermal management and dissipation



## Cloud software

- /// Architecture for big data and cloud
- /// Platform for data analysis (alerts, prediction, etc.)
- /// Customer-facing interface
- /// Mobile applications



## Chemistry & materials

- /// Develop cell chemistries specific to our requirements (storage, UPS, EVs)

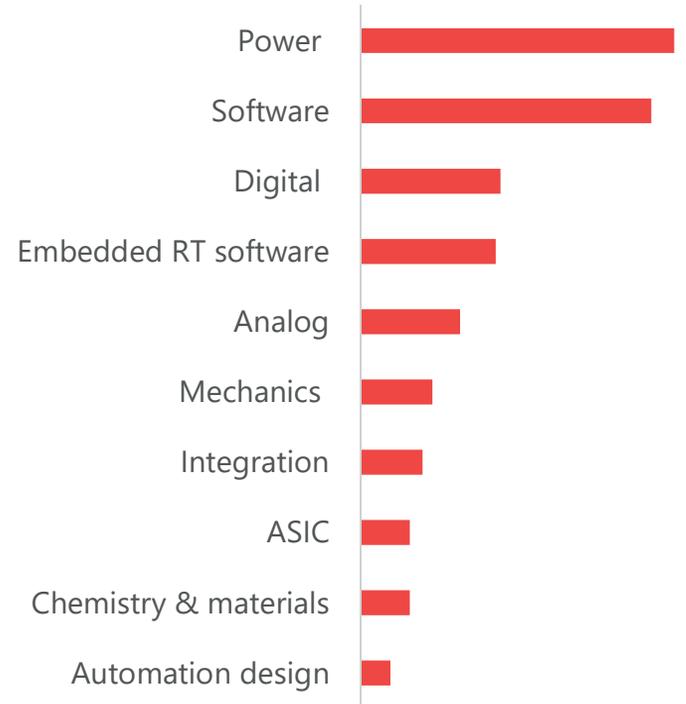
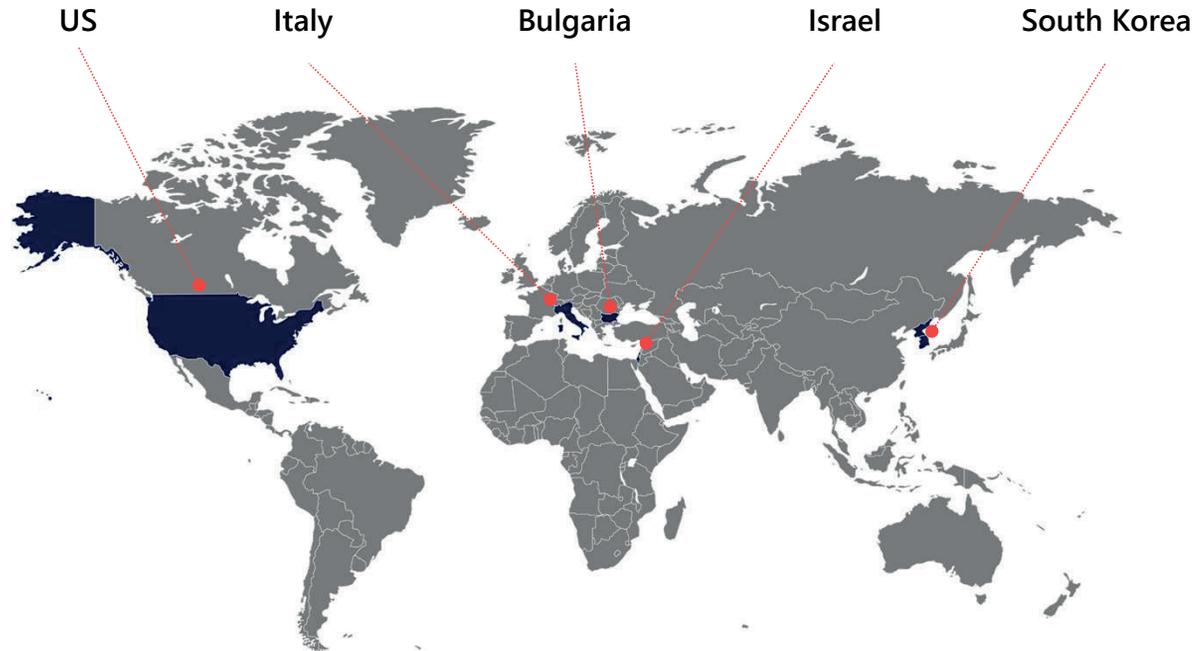


## Electric motor design

- /// High efficiency motor design for EVs

# Multidisciplinary R&D Capabilities

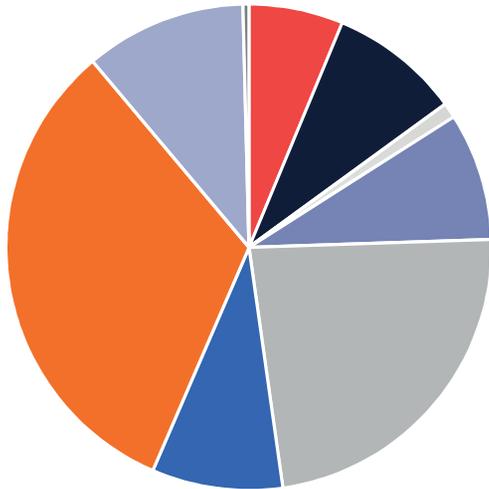
Geographical R&D presence:



# Rich Multidisciplinary Patent Portfolio

## Total 334

Granted patents and 229 pending



- Circuit
- E-mobility
- Power topologies
- Magnetic
- Mechanical
- Distributed power
- Safety
- Storage
- SW/Monitoring
- UPS

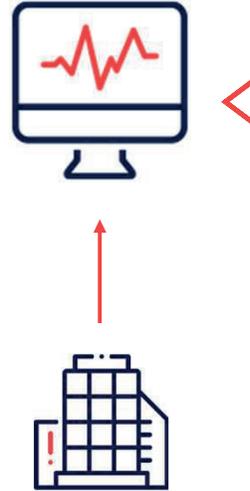




# Data-Driven Value

# Site-Level Energy Management

- On-premise smart-information based algorithms
- Continuous operation
- Energy optimization per user's preferences
- Real-time encrypted telemetries and commands



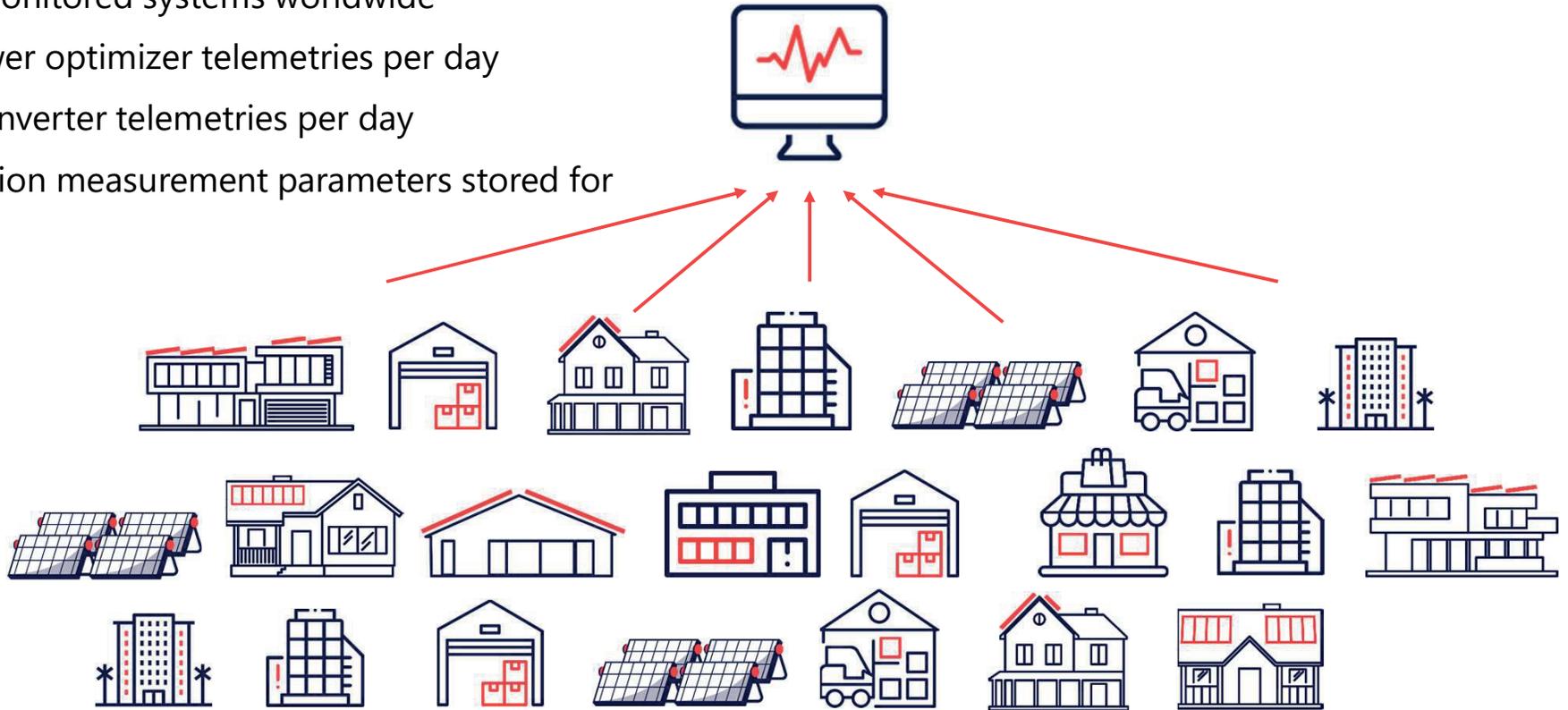
# Utility-Grade Security

- Tested and accepted in utility-scale sites across the globe
- Strict authenticated and encrypted connection
- System security validated by:
  - Periodic validation by security experts
  - Public bug bounty program
- Automatic intrusion detection
- Monitored data on a secured private cloud



# Aggregating Multi-Site Intelligence

- 1.25M monitored systems worldwide
- >3B power optimizer telemetries per day
- >150M inverter telemetries per day
- >2.7 Trillion measurement parameters stored for analysis



# Providing Value to All Stakeholders



## System Owners

- System performance
- Energy automation
  - Remote device operation
  - Policy-driven energy optimization



## Installer / EPC

- Installation faults
- Preventive maintenance
- Remote operation
  - Remote system activation
  - Remote troubleshooting and repair
  - Remote firmware upgrade

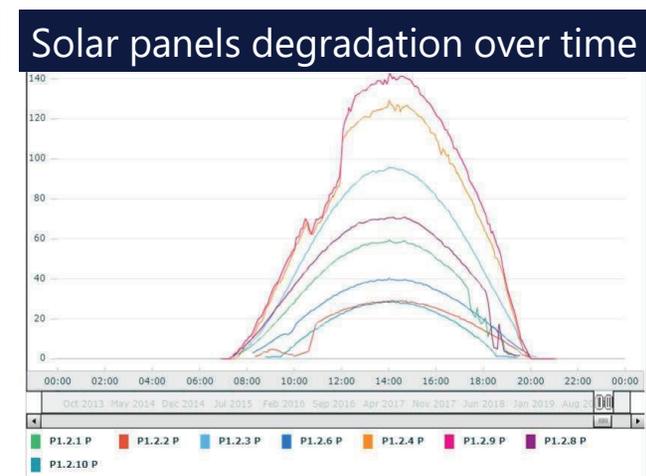
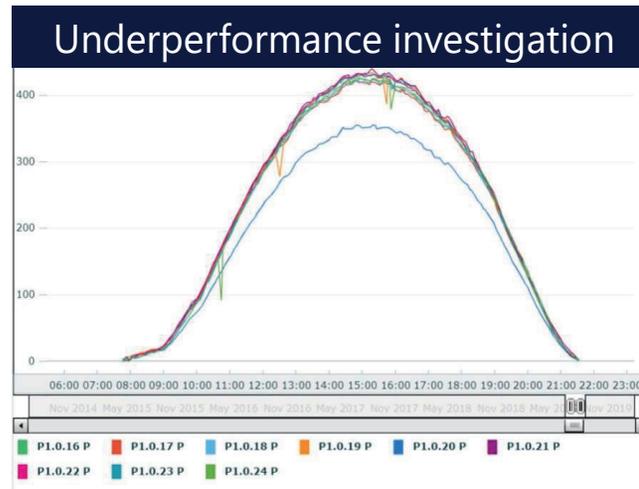


## Grid Operator

- Distributed Energy Resources visibility
- Grid services
  - Grid stability support
  - Power generation forecasting

# Identify Performance Issues

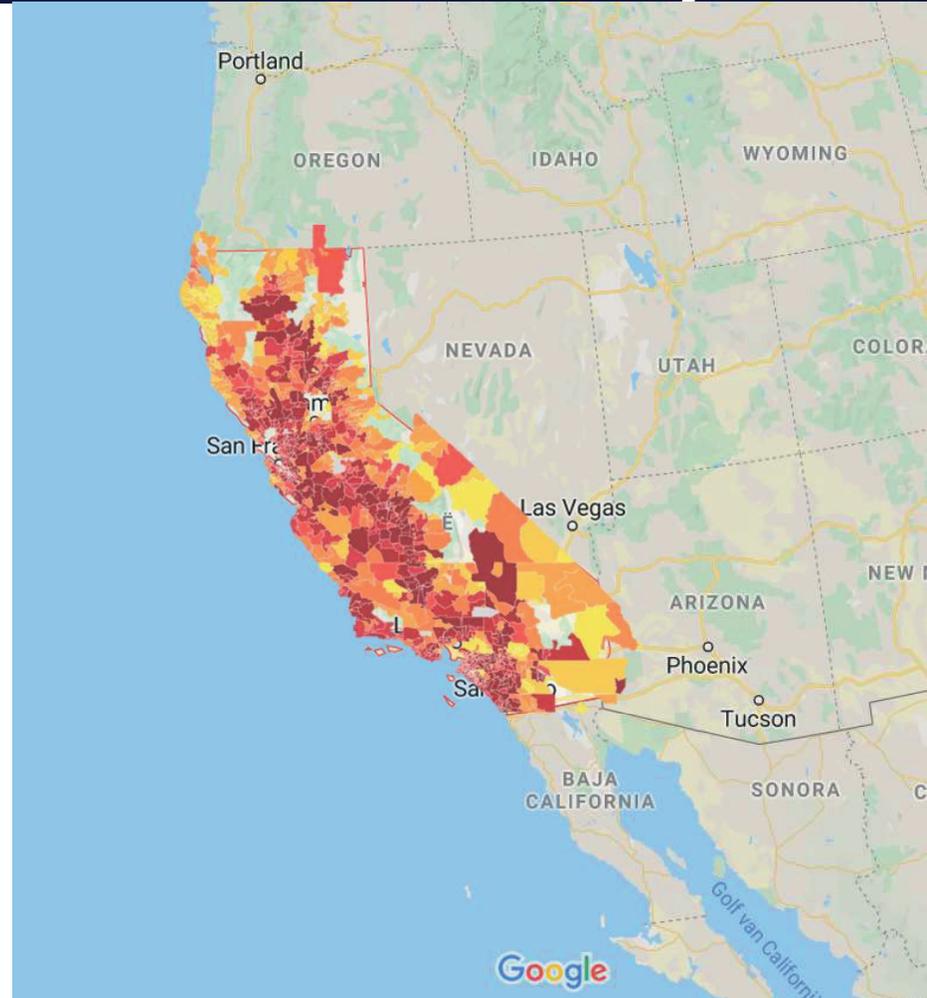
- Tracking PV production throughout the day
- Detecting faulty components which reduce the energy production
- Enabling higher system up-time



Source: SolarEdge monitoring platform

# Feeder-Level Grid Sensing

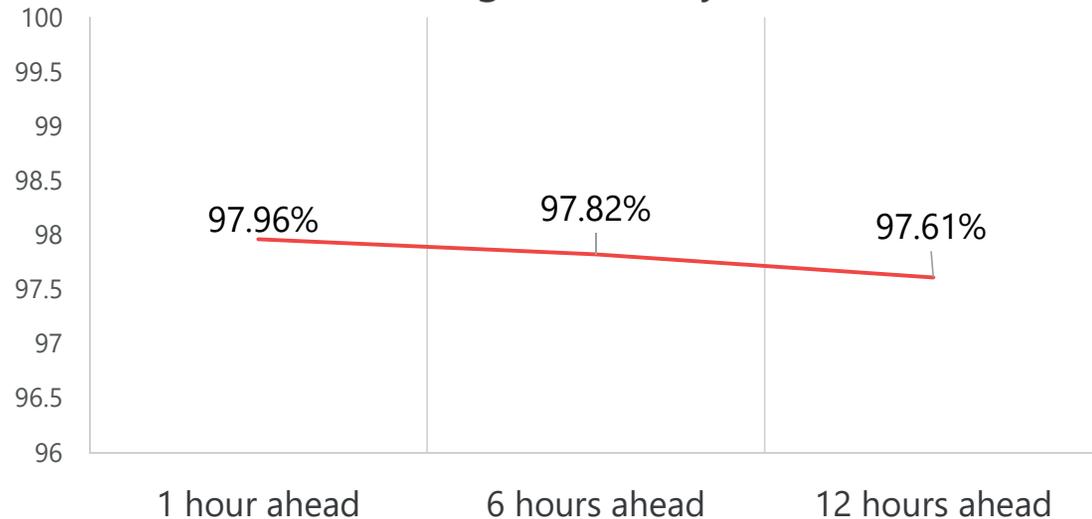
- Monitoring of different grid parameters such as power, voltage and frequency
- Provide utilities with a better understanding of grid behavior and the ability to address issues



# Accurate PV Production Forecasting

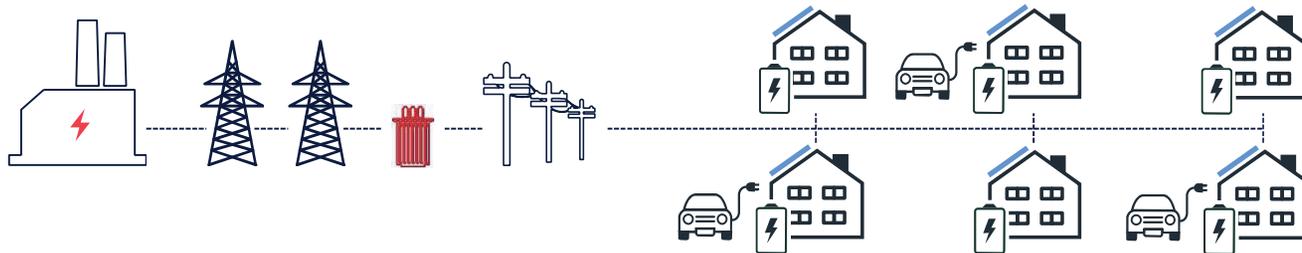
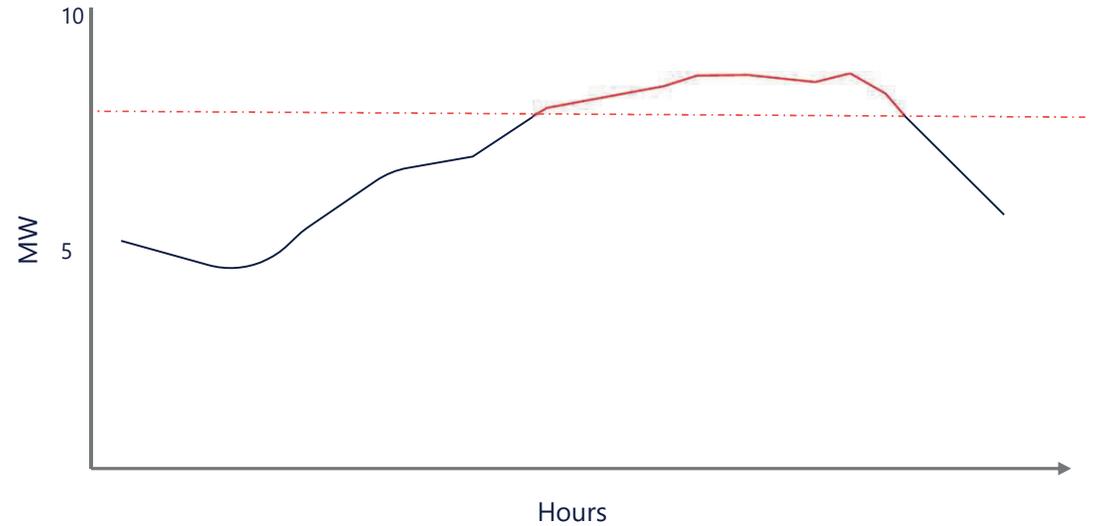
- Using machine-learning methods based on real-time data, as well as historical data combined with weather forecasting
- Allowing utilities to ensure energy availability matches the demand

Predicted Average Accuracy Over Time [%]

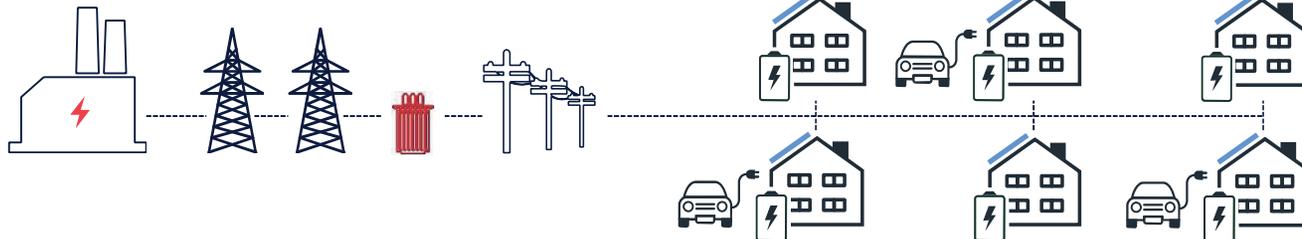
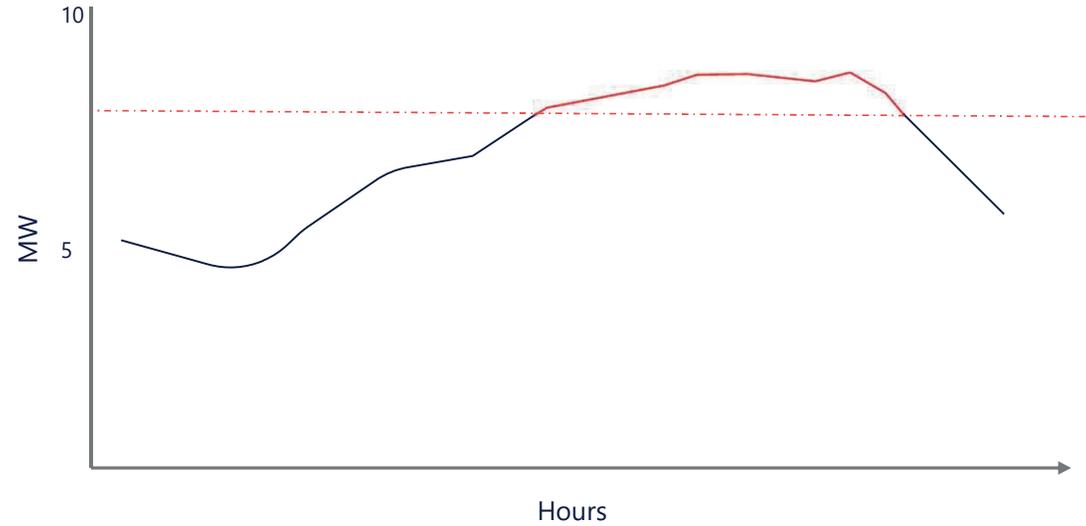
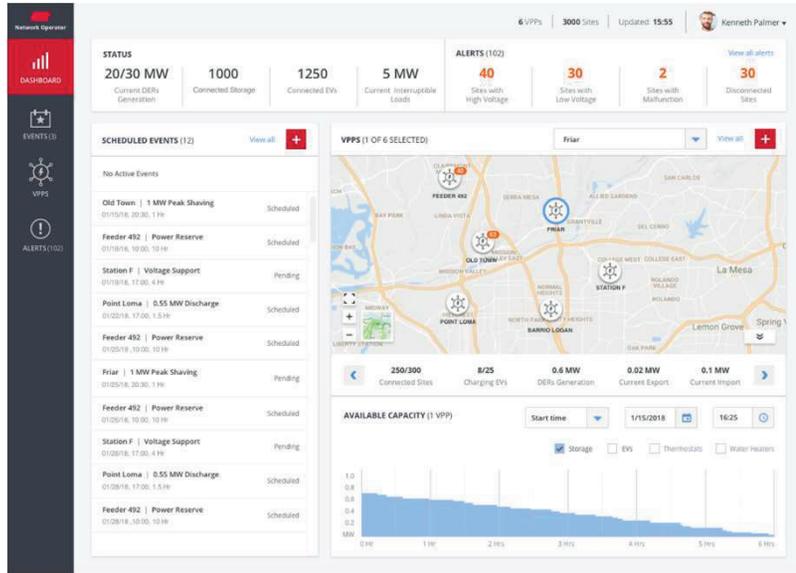


Source: SolarEdge internal analysis, October 2019

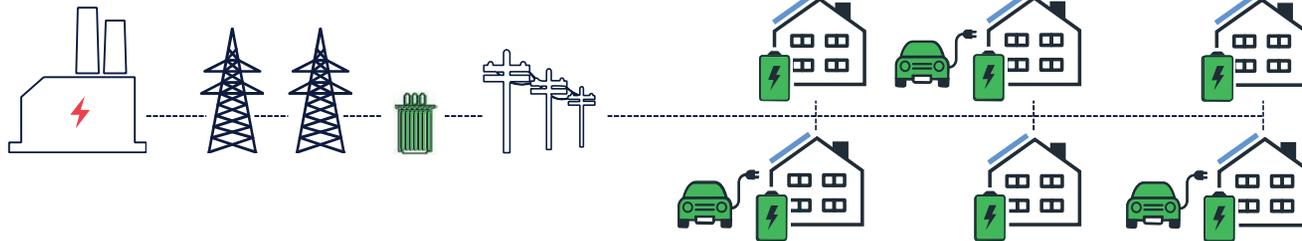
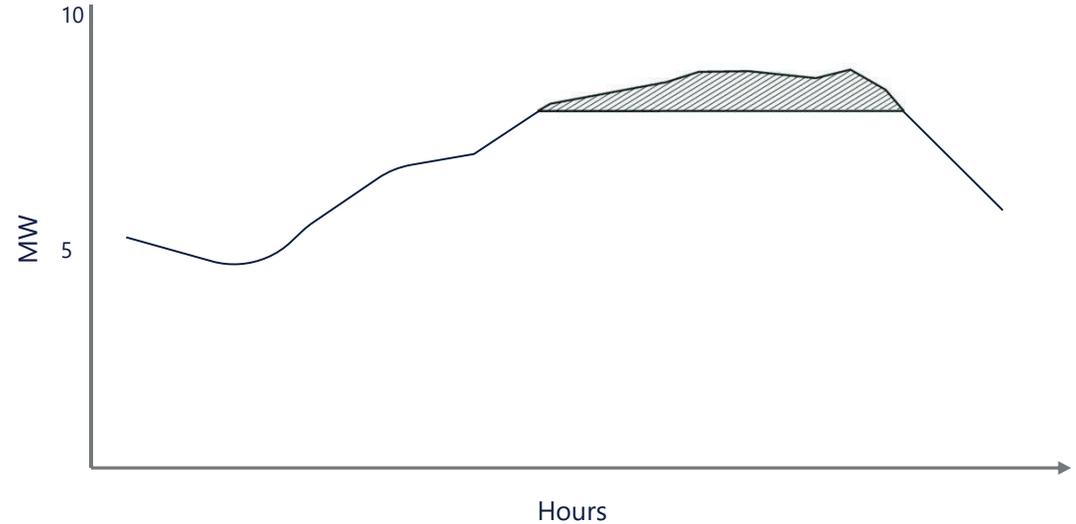
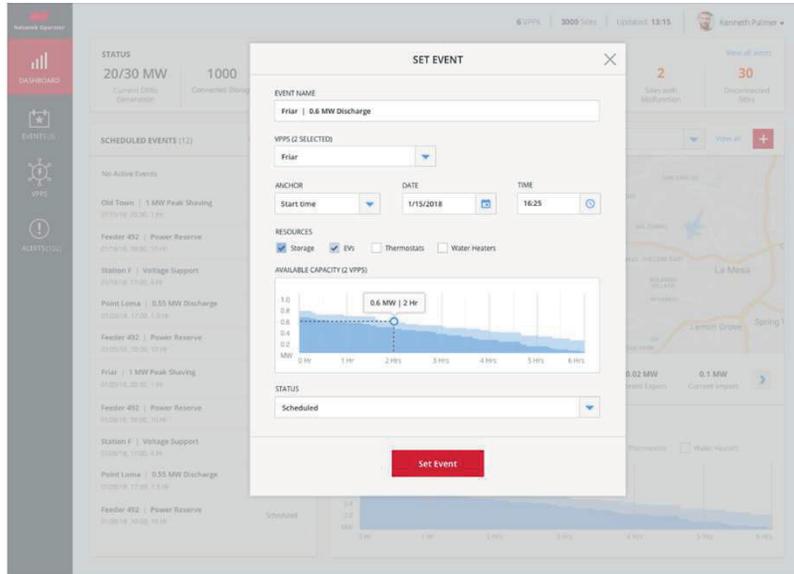
# Grid Services – Energy Supply Shortage



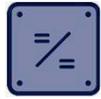
# Grid Services – Energy Supply Shortage



# Grid Services – Energy Supply to Overcome Shortage



# Core Competencies Synergy



DC/DC  
Converter



DC/AC  
Inverter



AC/DC  
Rectifier



Charger



Battery Pack

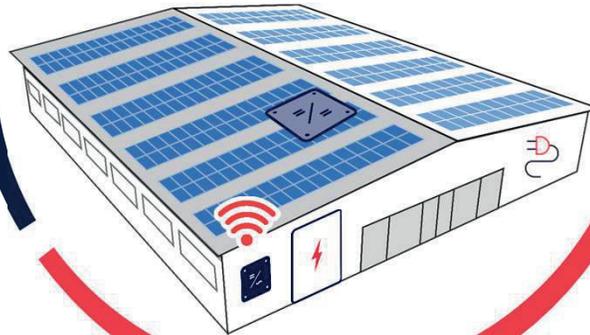


Management  
Software

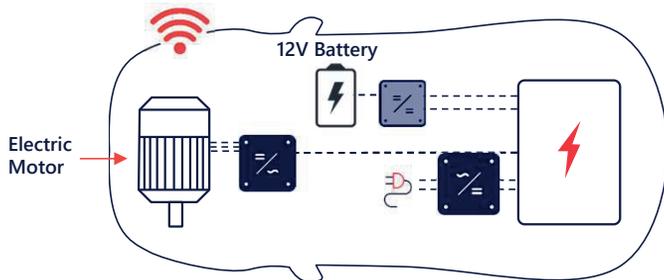


Communication  
and Monitoring

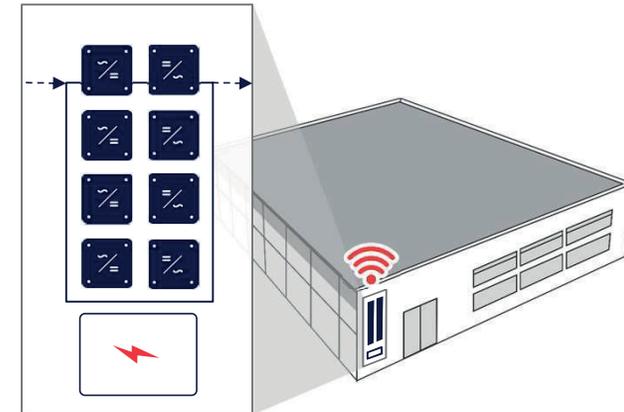
PV



EV Powertrains



Modular AC Online UPS



# Key Takeaways

- Technological innovation is the foundation of our success
- Novel system architecture provides the basis for high performance, rich functionality, scalability and reliability, at low cost
- Control of all system aspects achieved through in-house multidisciplinary development
- Value-added services made possible by the information collected from the systems

# Thank You!

## Cautionary Note Regarding Market Data & Industry Forecasts

This power point presentation contains market data and industry forecasts from certain third-party sources. This information is based on industry surveys and the preparer's expertise in the industry and there can be no assurance that any such market data is accurate or that any such industry forecasts will be achieved. Although we have not independently verified the accuracy of such market data and industry forecasts, we believe that the market data is reliable and that the industry forecasts are reasonable.

Version #: V.1.0  
Revision # 11/2019/ENG ROW



50%

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# Financial Update

Ronen Faier  
CFO

Nov 25, 2019



# Safe Harbor

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward looking statements include information, among other things, concerning: our possible or assumed future results of operations; future demands for solar energy solutions; business strategies; technology developments; new products and services; financing and investment plans; dividend policy; competitive position; industry and regulatory environment; general economic conditions; potential growth opportunities; and the effects of competition. Forward-looking statements are only predictions based on our current expectations and are inherently subject to risks and uncertainties. They should not be considered guarantees of future results, which could differ materially from the results set forth in, contemplated by, or underlying this presentation.

Factors that could cause actual results to differ materially from our expectations are described in the reports filed by SolarEdge with the Securities and Exchange Commission and we encourage you to review our filings carefully, especially the sections entitled "Risk Factors" in our Annual Report Form 10K.

SolarEdge undertakes no duty or obligation to update any forward-looking statements contained in this presentation as a result of new information, future events or changes in its expectations.

This presentation also describes non-GAAP revenues, gross margin, operating expenses, operating income, net income and non-GAAP net diluted earnings per share, which are not measures prepared in accordance with U.S. GAAP (i.e. "Non-GAAP" measures). The Non-GAAP measures are presented in this presentation as we believe that they provide investors with a means of evaluating and understanding how SolarEdge's management evaluates the company's operating performance. These Non-GAAP measures should not be considered in isolation from, as substitutes for, or superior to financial measures prepared in accordance with U.S. GAAP.

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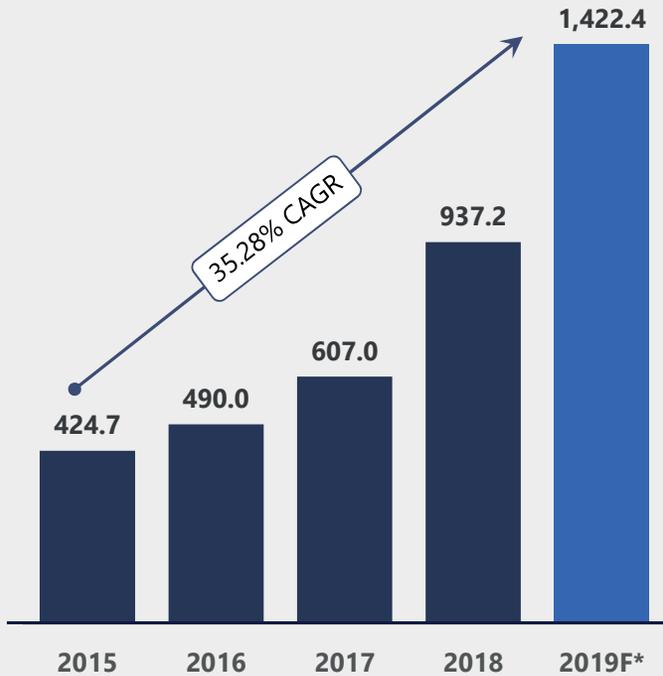
# Key Takeaways



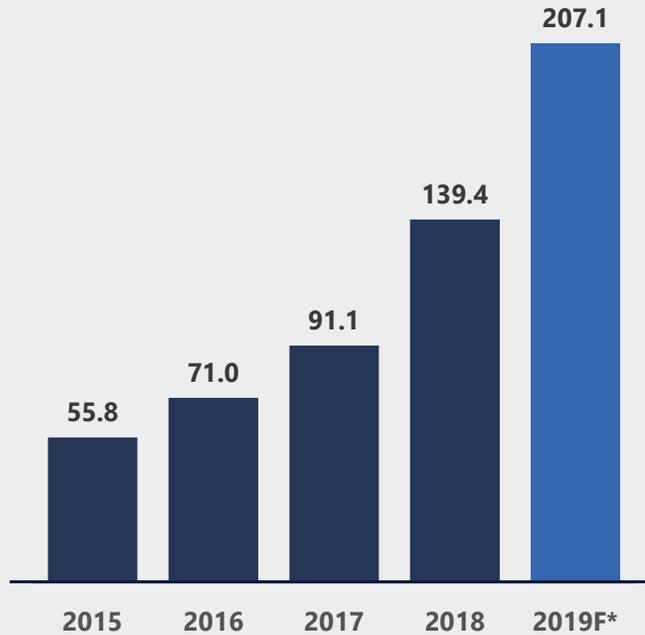
- Inverter market leader with large available TAM to capture
- Sequential fast revenue growth
- Highly profitable and cash flow generation superior to all comparable industry players
- Proven execution track record double digit growth
- Solid balance sheet and financial ratios
- New businesses provide continued growth opportunities

# Annual Growth Summary (\$M)

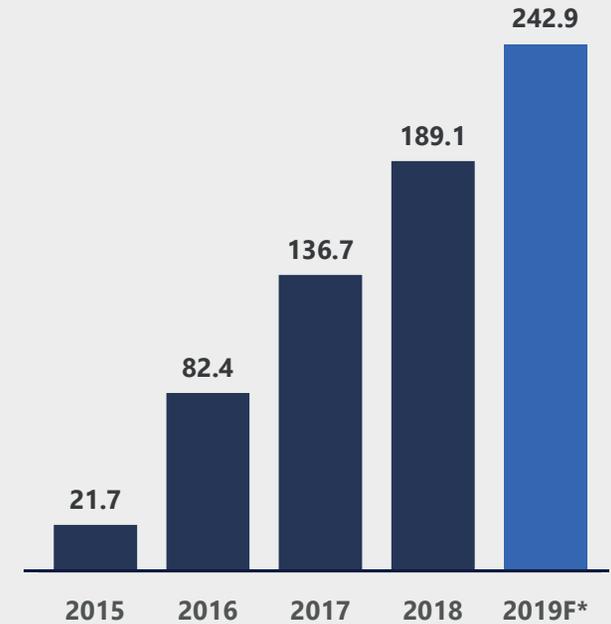
## Revenues



## Operating Profit



## Cash Flow Generation



\* 2019 data is based on Q1-Q3 actual results and Q4 mid-range guidance



# Solar Business

# IPO Target Model

## SolarEdge IPO presentation

FY Ending June 30 <sup>th</sup>	2012	2013	2014	H1 2015	Long Term Target (1)
March 2015					
Gross Margin	-0.9%	5.6%	16.5%	21.3%	32-37%
OPEX (% of Revenues)	35.5%	40.3%	30.3%	16.6%	15-17%
Net Income (Loss) (% of Revenues)	-36.9%	-35.7%	-16.0%	4.2%	15-18%

\* Taken from IPO presentation dated March 2015

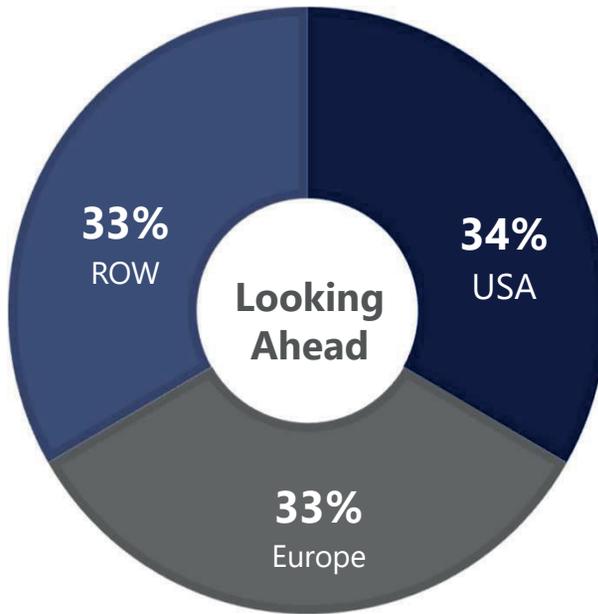
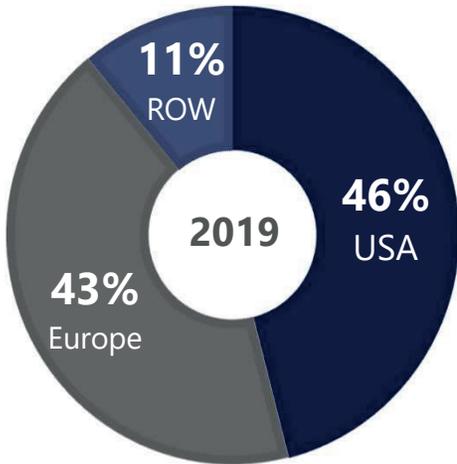
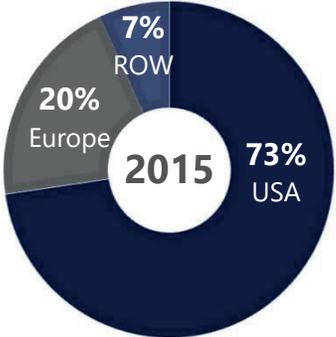
# Actual Performance

	IPO Target Model	2015	2016	2017	2018	2019*
Revenues (\$M)		424.7	490.0	607.0	914.3	1,340.6
YoY revenue growth	15% - 25%	97%	15%	24%	51%	47%
GM%	32% - 35%	29.2%	32.8%	35.4%	35.0%	34.8%
OPEX (% of revenues)	15% - 17%	16.1%	18.3%	20.4%	18.7%	17.0%
Net income (GAAP)%		12.7%	13.0%	13.9%	14.9%	13.4%
Net Income (NON GAAP) %	15% - 18%	13.8%	16.1%	18.9%	17.7%	17%

\* 2019 data is based on Q1-Q3 actual results and Q4 mid-range guidance



# Revenues Growth by Geography

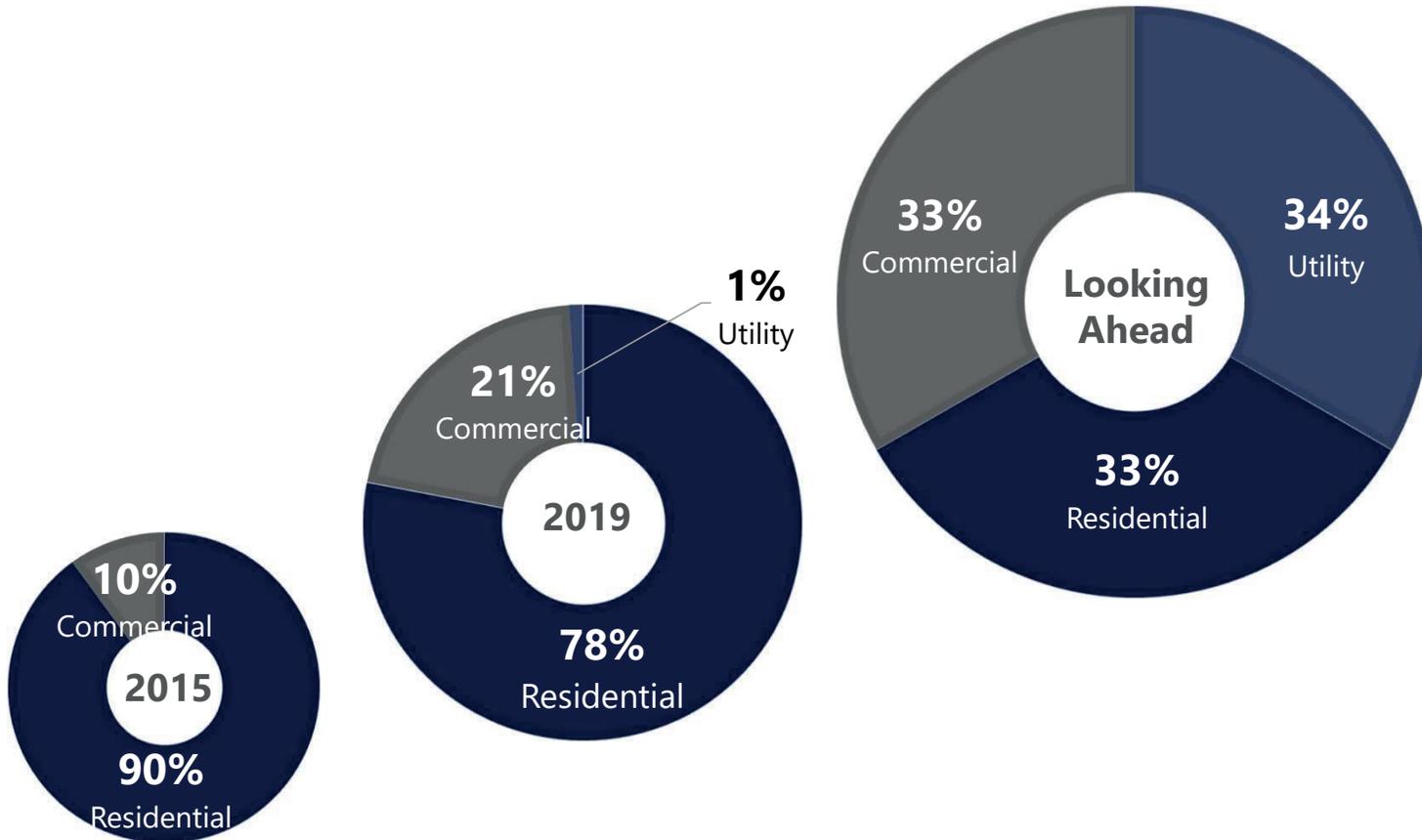


## Growth Drivers

- New geographies
- Growth in existing markets
- Grow market share in Commercial & Utility
- End to end smart energy solutions
- Accelerate advance systems sales
- Dedicated solutions for commercial and utilities



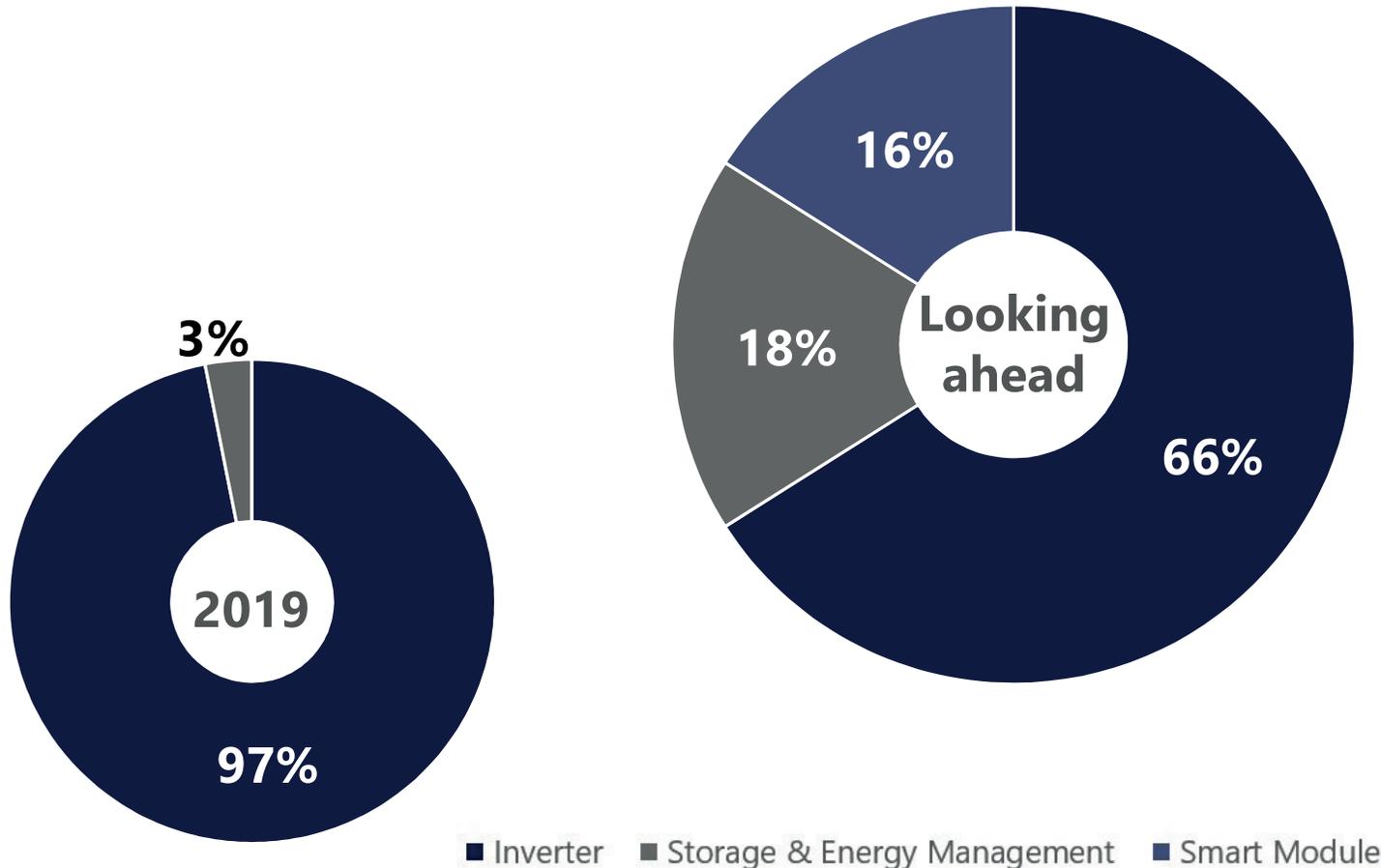
# Revenues Growth by Segment



## Growth Drivers

- New geographies
- Growth in existing markets
- Grow market share in Commercial & Utility
- End to end smart energy solutions
- Accelerate advance systems sales
- Dedicated solutions for commercial and utilities

# Revenues Growth by Product Category

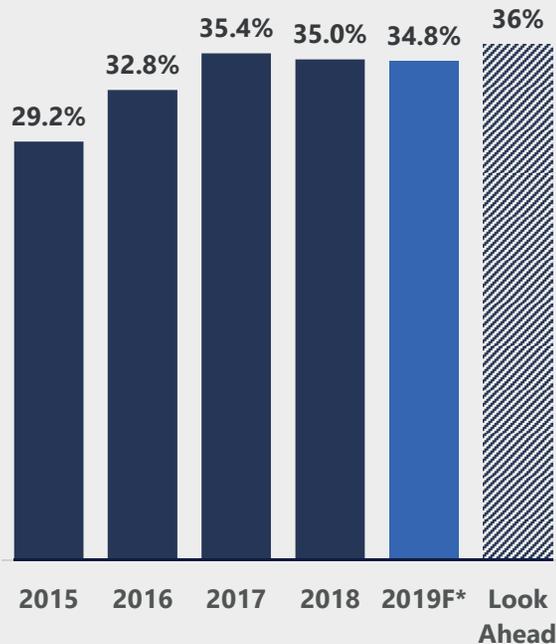


## Growth Drivers

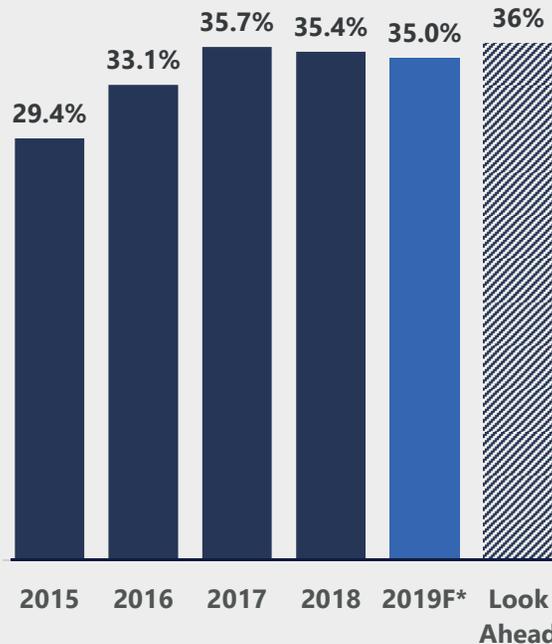
- New geographies
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- Grow market share in Commercial & Utility
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# Reaffirming the IPO model - Gross Margin

## Gross Margin % GAAP



## Gross Margin % Non-GAAP



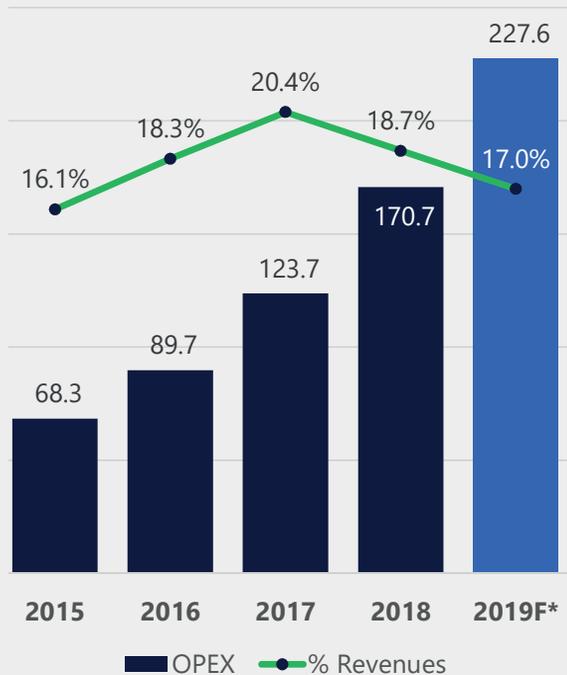
## Growth Drivers

- Continued cost reduction
- Shipping cost decrease due to increased capacity
- Move to tariff free
- Economies of scale
- New high margin products

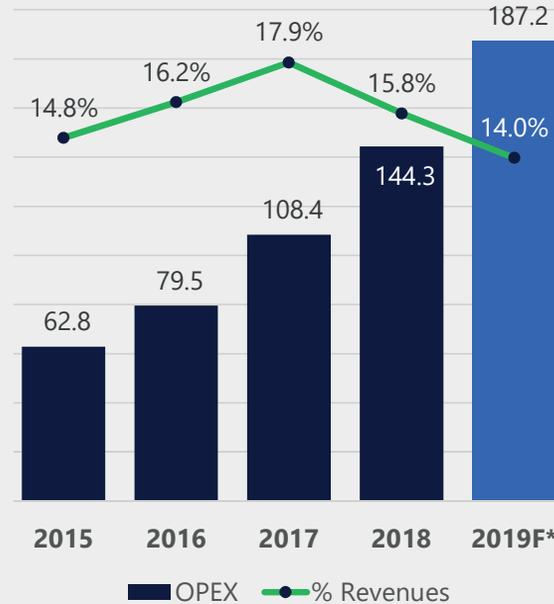
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# Reaffirming the IPO Model - OPEX

**OPEX (\$M) % Revenues GAAP**



**OPEX (\$M) % Revenues Non-GAAP**



## OPEX Growth assumptions

- ▮ 25% annual R&D growth YoY
- ▮ YoY S&M lower growth than Revenue growth
- ▮ YoY G&A growth of up to 10% \*



\* excluding litigation

\* 2019 data is based on Q1-Q3 actual results and Q4 mid-range guidance

# Updated Solar Financial Targets

**YoY revenue growth**



**15% - 25%**

**GM%**



**36% ± 1%**

**OPEX (% of revenues)**



**13% - 15%**

**Operating Income %**



**20% - 23%**

# New Businesses Financial Targets

- Revenue from new businesses (including Kokam batteries for Solar applications) is targeted to exceed 10% of total revenues by 2022 and experience double digit growth annually thereafter
- Kokam revenues expected to exceed \$300M in 2022 and \$500M in 2023 upon the completion of new factory
- Target Gross Margin:
  - UPS 30% by 2021
  - Kokam 25% by 2022
  - E-mobility 20% by 2023
- Target to profitability:
  - Kokam 2020
  - UPS 2022
  - E-mobility 2022

# Balance Sheet Strength

Ratio	2015	2016	2017	2018	Q3 2019
Net cash (\$M)	\$106.1	\$104.7	\$163.2	\$187.8	\$247.3
Quick Ratio	1.9	3.5	2.7	2.1	1.9
Current Ratio	2.2	3.9	3.7	3.0	2.5
Debt to Equity	-	-	-	0.04	0.03

- Proven cash flow generation based on profitability
- Strong balance sheet allowing future organic and non-organic expansion

# CAPEX Plan

- Purchase of specific manufacturing and automated testing equipment ~\$40M annually
- Kokam factory expansion – \$80-90M for 2GWh, to be paid over 2020 and 2021
- Sella 1 factory – \$45-50M to be paid in late Q4 and early 2020
- Ongoing needs of \$5-6M annually



# Key Takeaways



- Inverter market leader with large available TAM to capture
- Sequential fast revenue growth
- Highly profitable and cash flow generation superior to all comparable industry players
- Proven execution track record double digit growth
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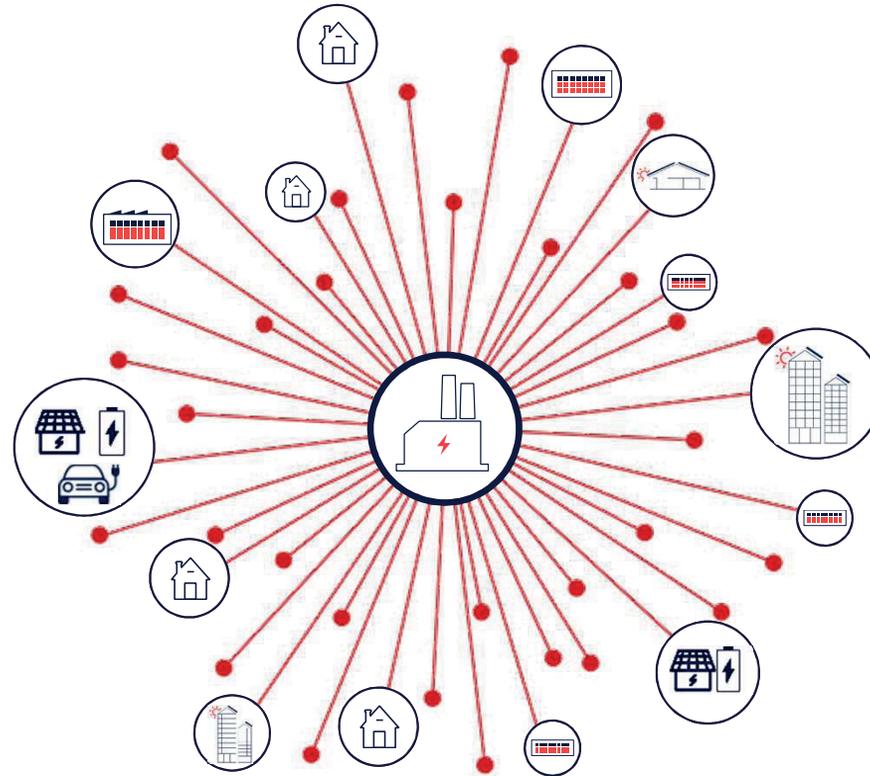
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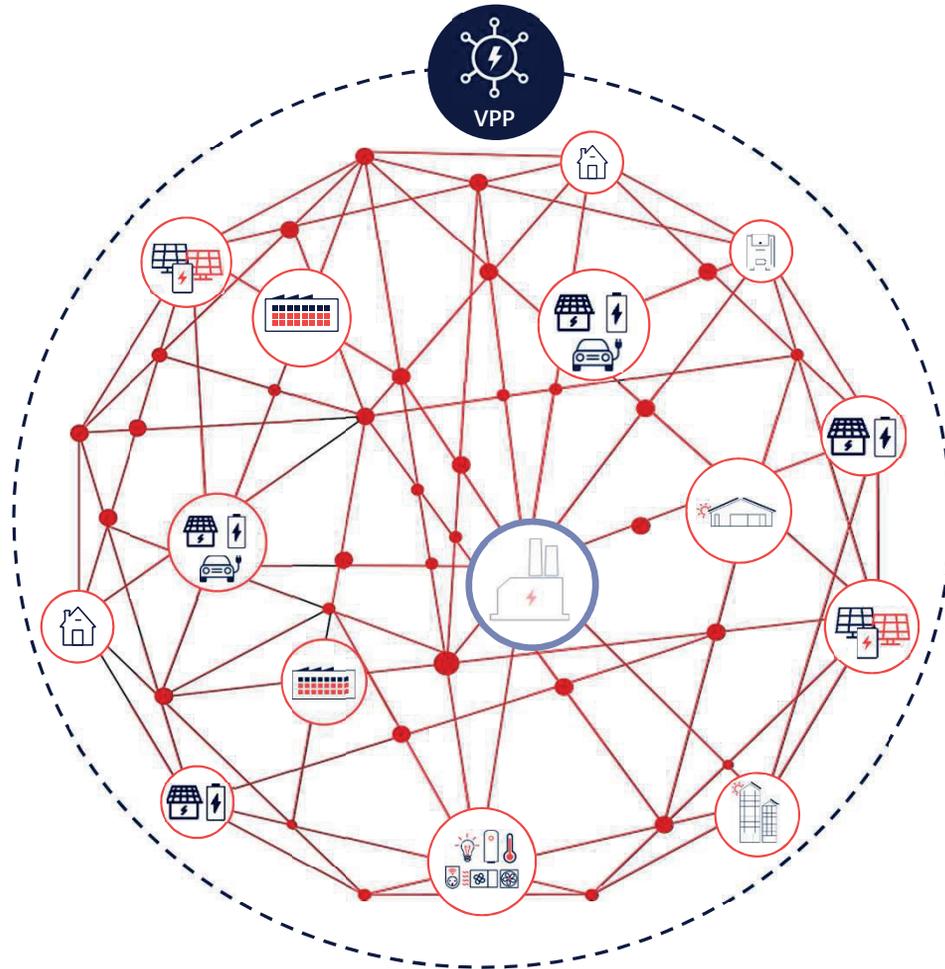


# The New Electricity Grid

# Moving From a Centralized Grid ...



# ...To a Distributed Grid of the Future



# Future Energy Vision



- ▮ We believe that the way we consume and produce energy will look very different in the future
- ▮ SolarEdge has a strategy to be a leader in this transition from centralized, polluting energy, to clean, distributed, renewable energy

# Thank You!

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