



ΣΥΝΔΕΣΜΟΣ
ΕΤΑΙΡΙΩΝ
ΦΩΤΟΒΟΛΤΑΪΚΩΝ

Innovating Together to Win the Future

HUAWEI.COM



• Huawei as a Sustainable Company

Continuously Creating Values for Customers Achieving Sustainable Business Growth



170+

Countries and regions



194,000

Employees



61 in

Fortune Global 500



80,000+

R&D employees



14

Research institutes/
labs/centers



68 in

Interbrand's Top 100
Best Global Brands

Huawei Overview



Hundreds of millions of consumers

Consumer BG

Iconic global technology brand

206 Million Smartphone Shipped in 2018
14.6% Market Share, **Top 2** in Global
108 Million Smartphone Shipped in 2019 H1



SA/NSA 5G
HUAWEI Mate20 X
华为 | 全球 领先 品牌



Global carriers

Carrier BG

Best strategic partner for carriers

- ✓ 1~2 year's ahead on 5G performance roadmap
- ✓ 50 commercial 5G contract, 150K+ 5G station shipped
- ✓ 54% share of China Mobile 5G core network



vodafone



Global enterprises and industry

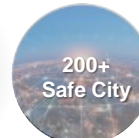
Enterprise BG

Enabler and preferred partner for digital transformation

Huawei works with **197** of the world's top 500
and **45** of the top 100
Serving **800 million** population worldwide



120+
Smart City



200+
Safe City



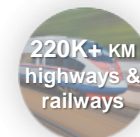
300+
Financial
institutes



170+
Power
companies

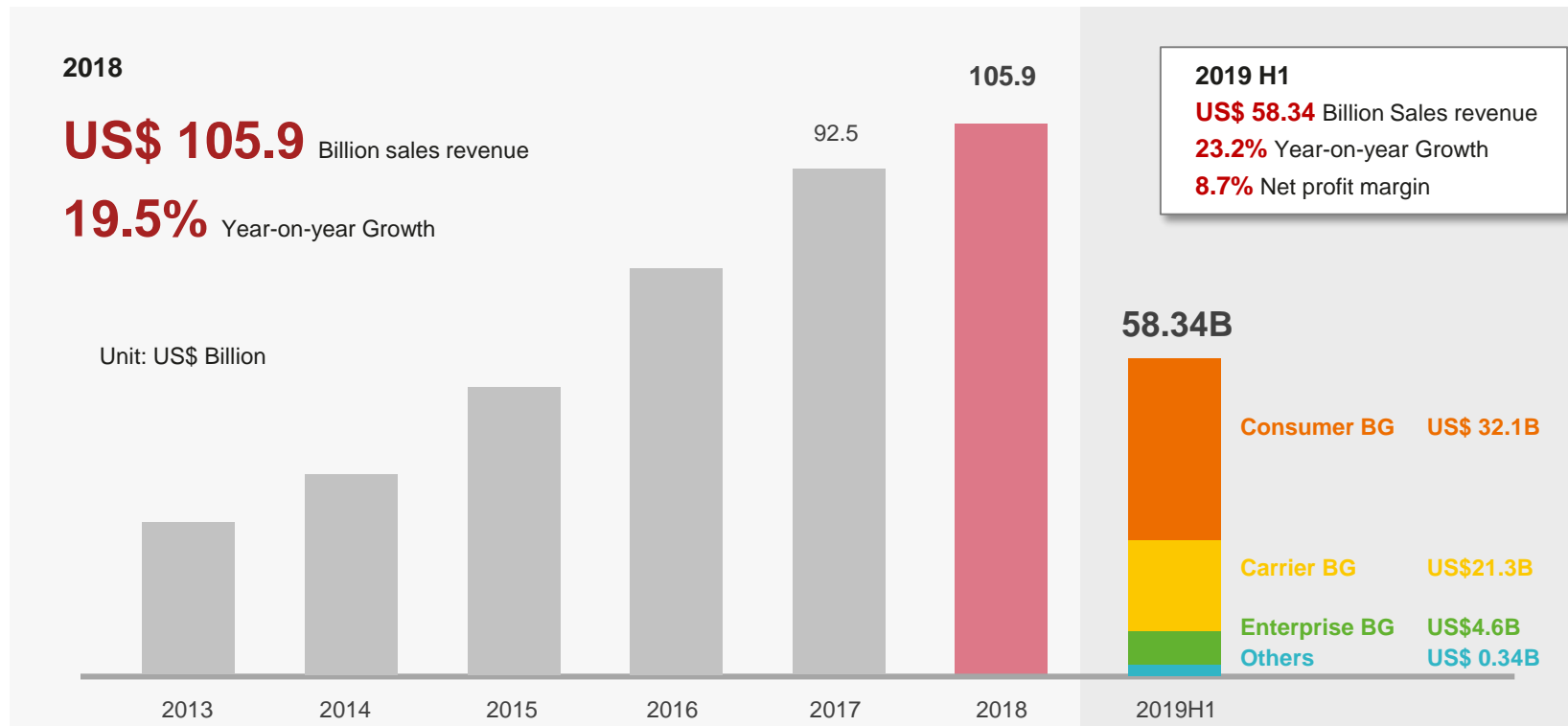


90GW+
Smart PV



220K+ KM
highways &
railways

Continuously Creating Value for Customers Achieving Sustainable Business Growth



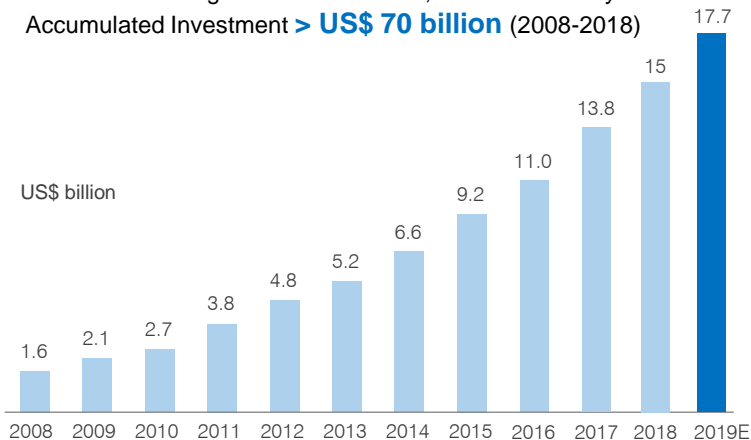
Sustained High Investment in R&D that Brings Technology Breakthroughs

Top 1 Patents Application in 2018

Source: WIPO Statistics Database, May 2019

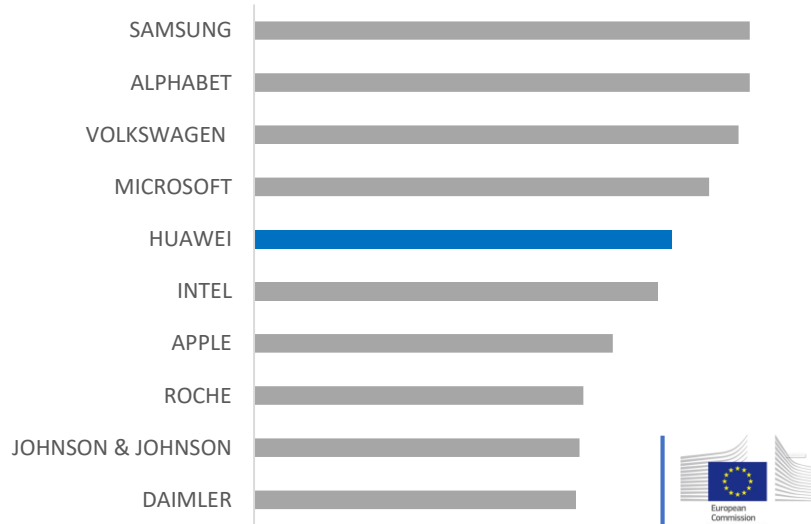


- A total of **87,805** Patents Applications have been granted
- **90%** were patents of innovation
- Continuous strong investment in R&D, **> 10%** annually
- Accumulated Investment **> US\$ 70 billion** (2008-2018)



#5 Global R&D Investment Ranking 2018

#6 in 2017



Source: The 2018 EU Industrial R&D Investment Scoreboard, European Commission, JRC/DG RTD.



Huawei in Greece – 15 Years Local Presence



2005, Huawei established its
local office in Greece

Headquarters at **Marousi**

120+ employees

80% are local
employees

50% technical staff
Created

thousands jobs
directly and indirectly



€125 million
(Carrier + Enterprise)

€75 million
(Consumer)

Revenue.

ICT leader in the Greek Market.
Y.2017

Providing Fixed Broadband for **1/2 Greek Families**

Providing wireless coverage **for 80% of the population**

Ranking **No.2** in Greece. Delivered more than 1M smart phones



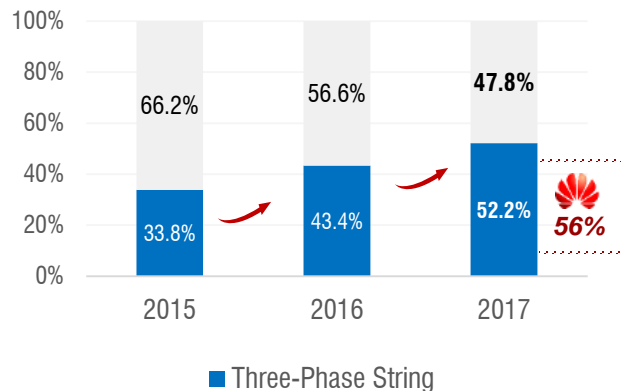
• Huawei Solar Achievements

Continuous Innovation, Leading Solar Industry Development

String Inverter, the Mainstream in Utility-Scale

"Three-phase string inverter shipments ... exceeded central inverter shipments by nearly 4GW. Decentralized system architectures in utility-scale solar continue to increase in popularity **gtrresearch**

Global Solar PV Inverter Market Shares and Shipment Trends 2018



Market share of three-phase string and central solution in utility-scale

NO.1

Global Shipment 2015~2018

Source: GTM

>100 GW

Global Application until now

Support Global Customers Success with Lower LCOE

Group Ortiz & Huawei



NEOEN&Huawei



BAYWA&Huawei



State Power & Huawei



Mexico

Vivorillas 125MW
Enel 220MW
X-Elio 300MW

Spain

X-Elio 500MW
Baywa 175MW
SolarCentury 400MW
Grupotec 168MW

Germany

Saudi Arabia

SAKAKA 300MW

China

>50% MKT Share, Top Runner

Japan

Ise Bay 38MW
Daiwa 20MW

Cambodia

60MW

Vietnam

PECC 100MW

Malaysia

TESB 50MW
Edra 50MW

Africa

Kenya 50MW
Zambia 54MW

India

Fortum 150MW
Adani 1500MW
Engie 350MW

Thailand

150MW

Brazil

Boa Hora 75MW

Argentina

Cauchari 315MW
Cordillera 90MW

Singapore

Sembcorp 120MW

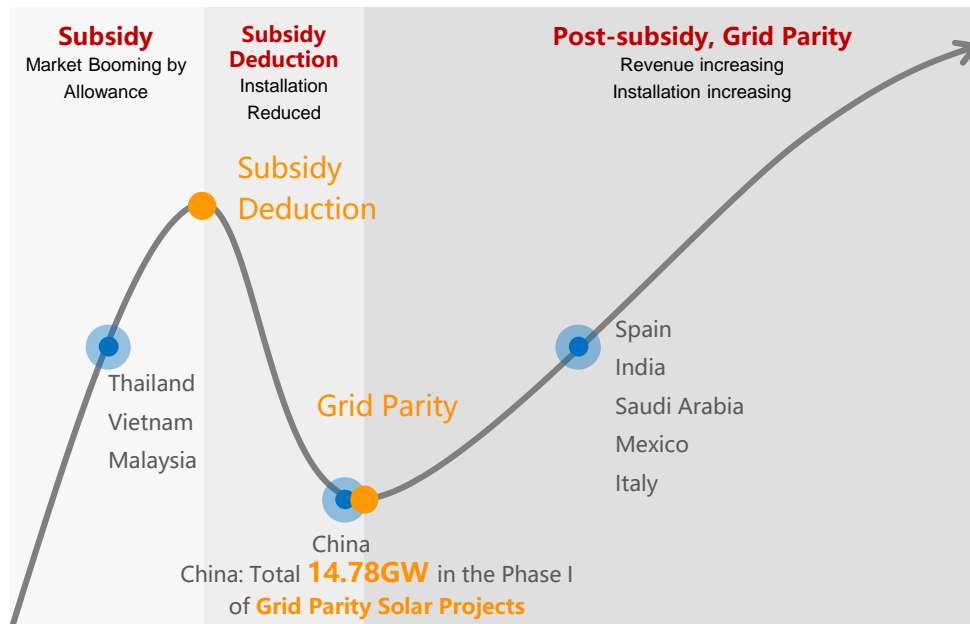
Customer	Project	Capacity	Business model	Electricity Price (USD)
ACWA	Dubai	900 MW	Auction	1.695 cents
Jinko	Jordan	100MW	PPA	2.45 cents
Hero	India	300 MW	PPA	3.4 cents

Trend of Solar Industry

Grid Parity and Rapid Development of Solar During Energy Transformation

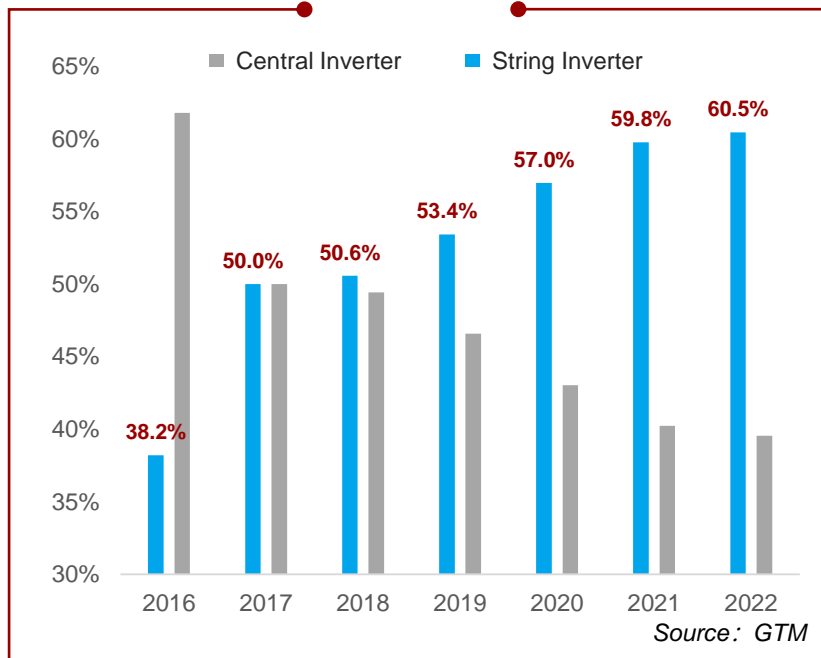
2018 Proportion of
**New Installed
Renewable Energy** **63%**

2018 Proportion of
New Installed Solar
among Renewable Energy **55%**

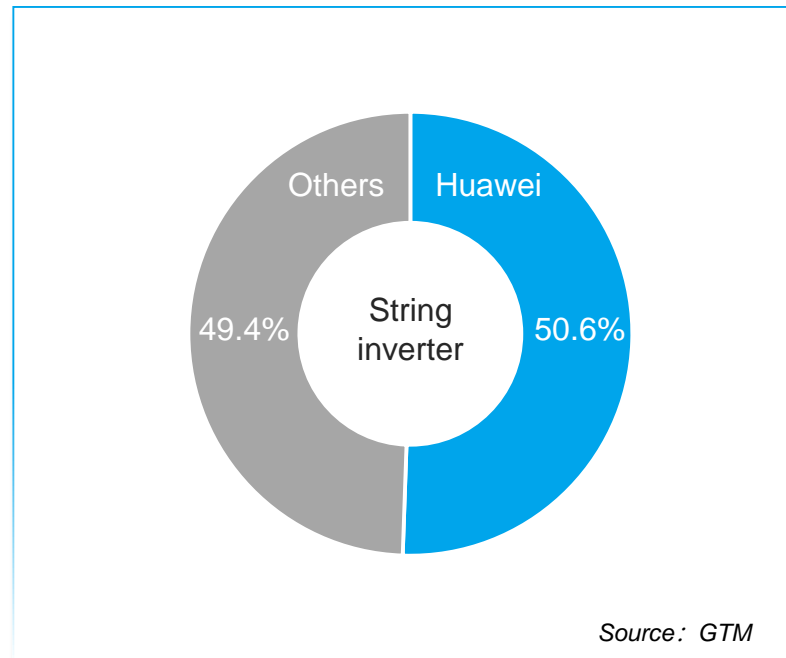


String Inverter is Mainstream in Utility Scenario, Huawei Takes >50% of String Inverter Market Share

String Inverter increasing rapidly in Utility scenario

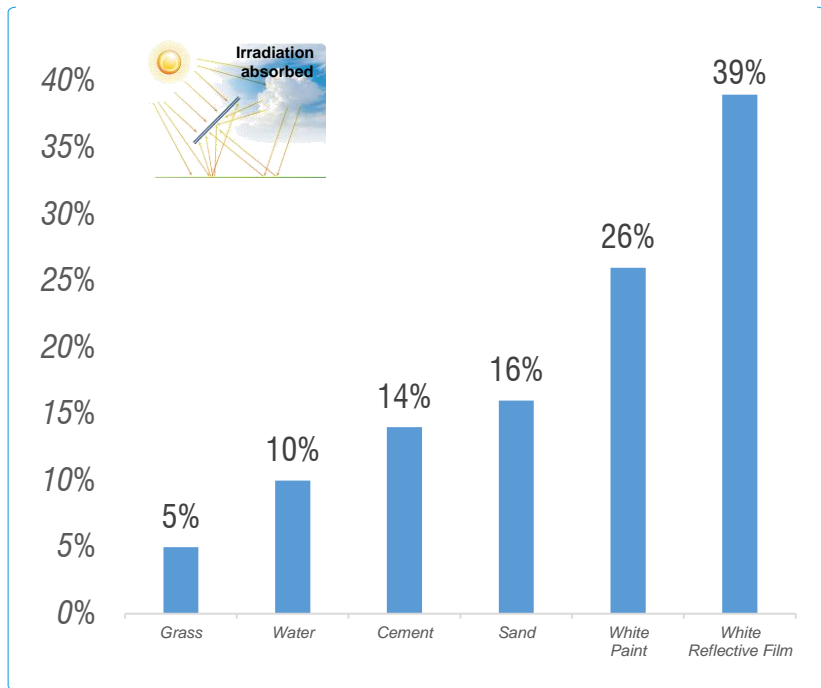


Huawei takes >50% of string inverter market share

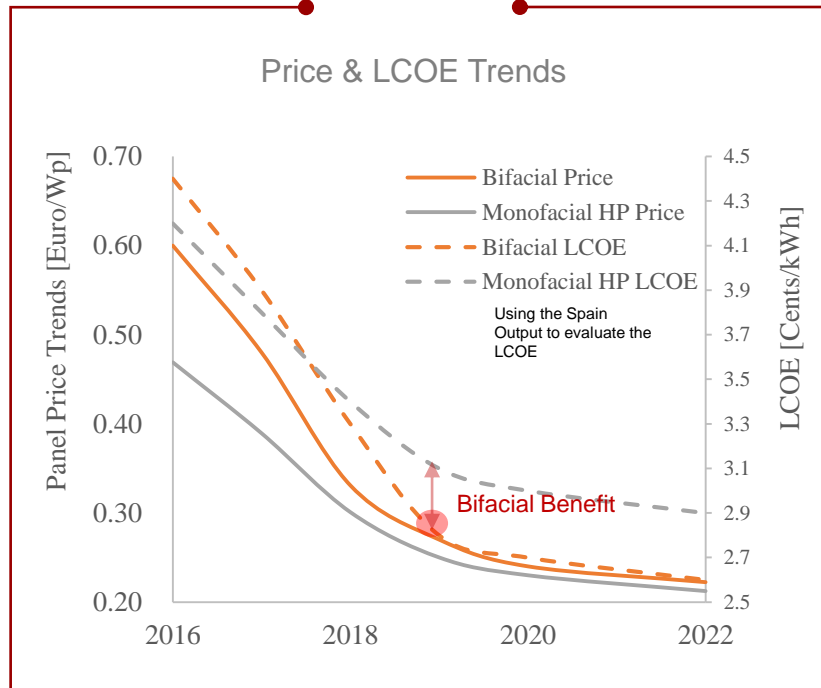


Bifacial Module is Becoming The Mainstream Because of Lower LCOE

Rearside Power Gain, Increased 5~16%



Bifacial module brings lower LCOE



Nation Wide Plants Call for Visible and Precise Controllability

e.g. 1GW PV Plants



> 3,000,000 PCs



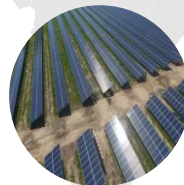
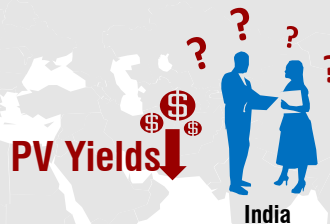
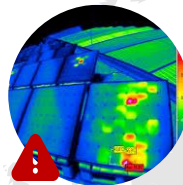
> 400 Units



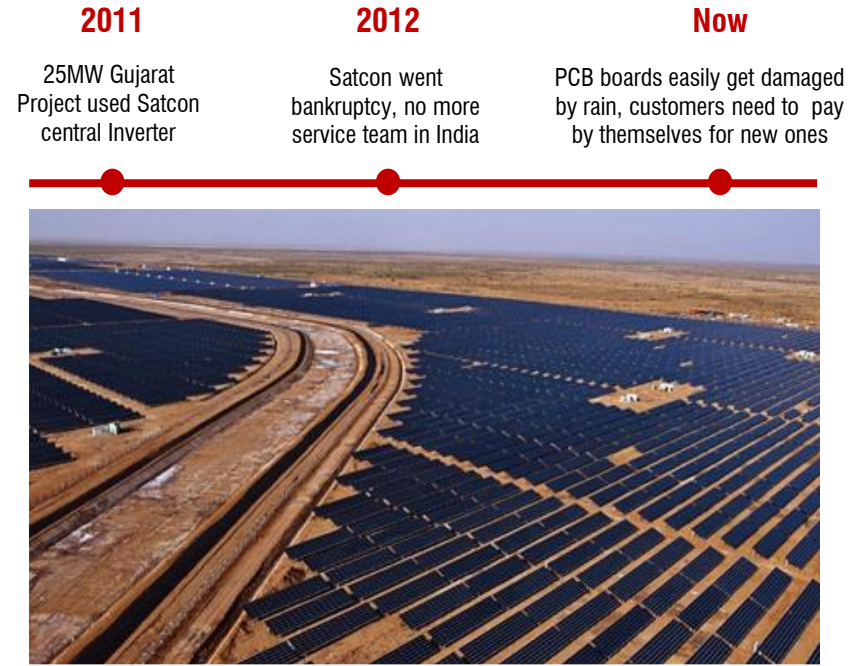
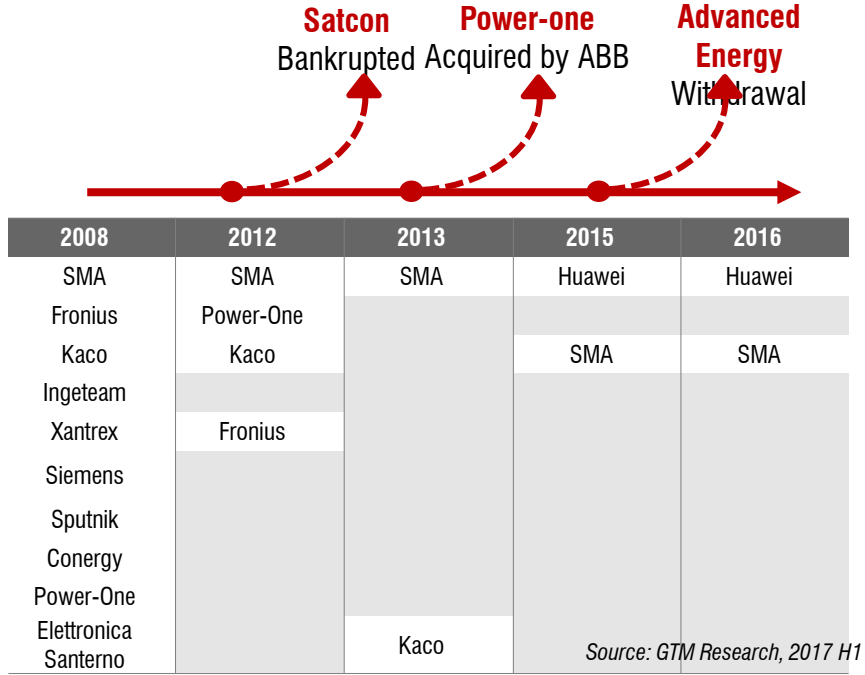
> 6,500 PCs



> 200,000 PCs



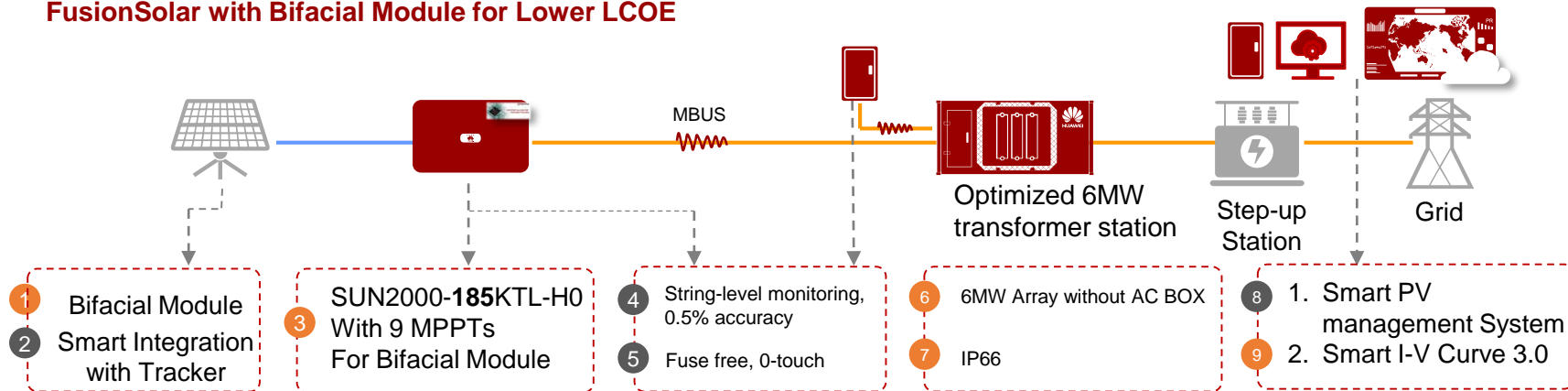
Partner: 25-year PV Plant O&M Calls for Reliable Inverter Supplier



• FusionSolar Smart PV Solution

Nine Unique Innovations to Support Lower LCOE

Next Generation Solution:
FusionSolar with Bifacial Module for Lower LCOE



Benefits

1. Best match for bifacial module, increase yields
2. 0-touch maintenance, Saving OPEX
3. Smart I-V curve 3.0, better match bifacial module and more efficient O&M
4. Optimized 6MVA standard array, No AC box, lower cost
5. MBUS suitable for large array

FusionSolar, Enabling a Lower LCOE for 25-year Lifespan



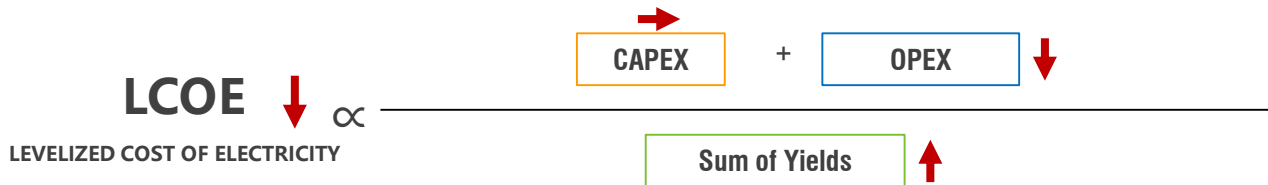
Higher Yields
>2% Higher



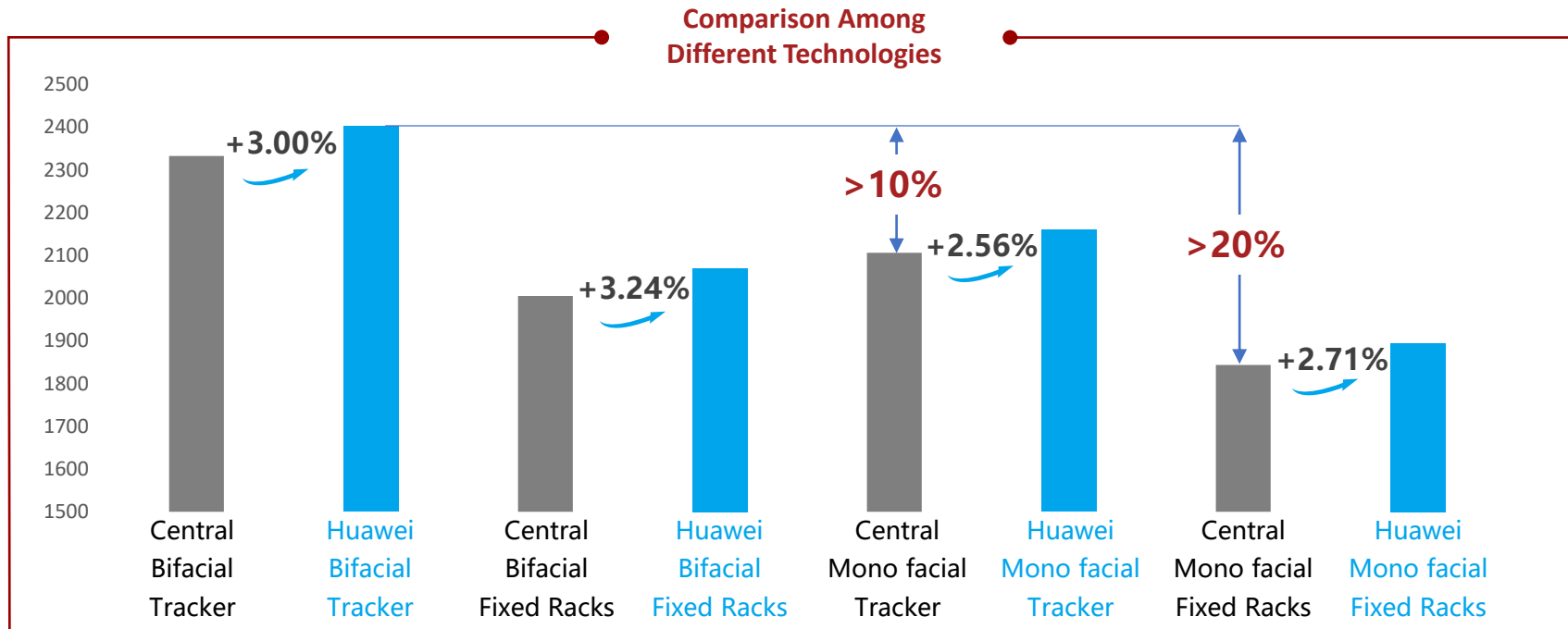
Smart O&M
Lower OPEX



Safe & Reliable
25 Years' Reliability



FusionSolar with Bifacial Module Increasing Yields 3%

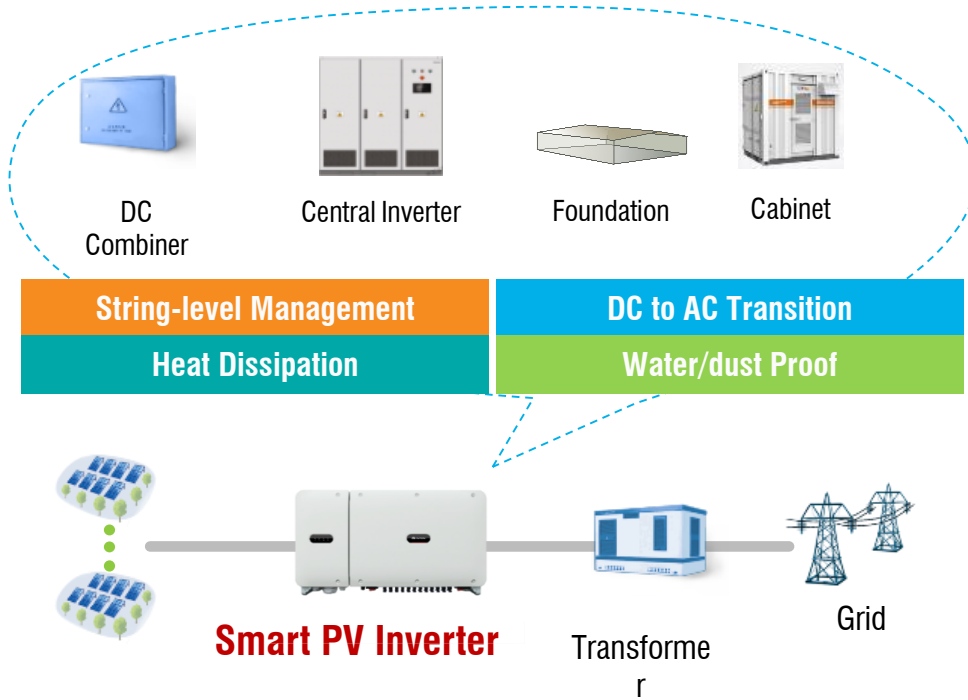


* The reference simulation at the place of Sevilla,Spain

Inverter: **Huawei SUN2000-185KTL vs Sxx Central inverter**

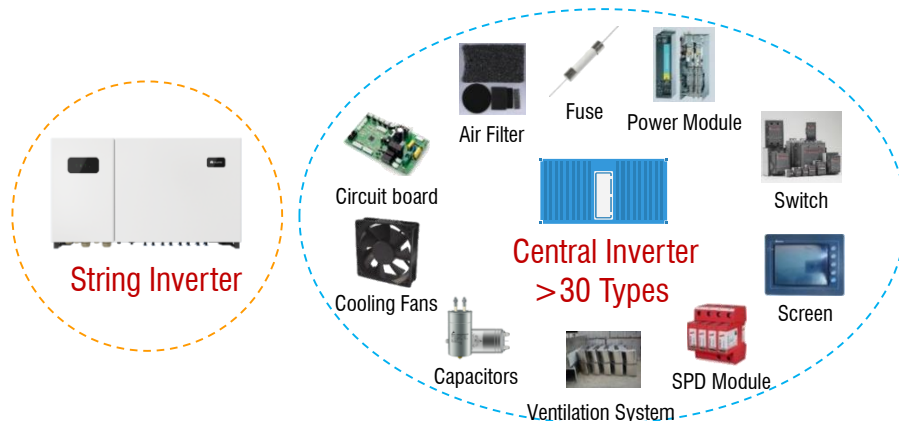
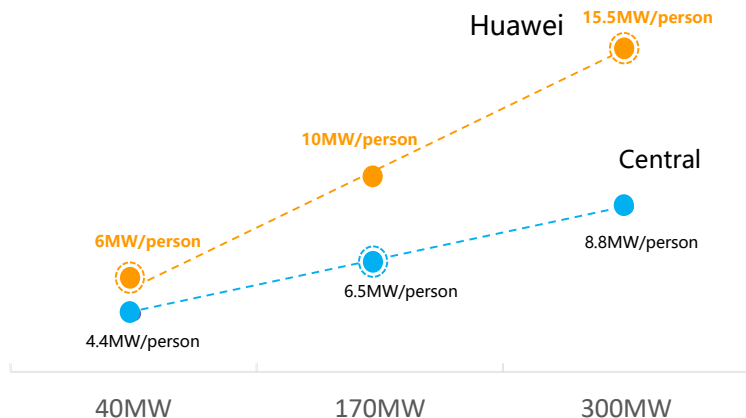
Module: **TXX 395W Bifacial vs TXX 335W Mono facial**

Simplified System with Easy Design & Quick Installation



Build & Forget, increase Yields

20%~50% OM labor saving



	FusionSolar Smart PV Solution	Central Inverter Solution
Reliability	<0.5% failure rate	80% of central solution O&M cost is inverter related
Maintenance	Free	Necessary for vulnerable components
On-site service	No need	Long waiting time for supplier service response
Diagnosis & repair	Easy replacement no fix	“Mainframe computer” Professional expertise, no guarantee of resolution time

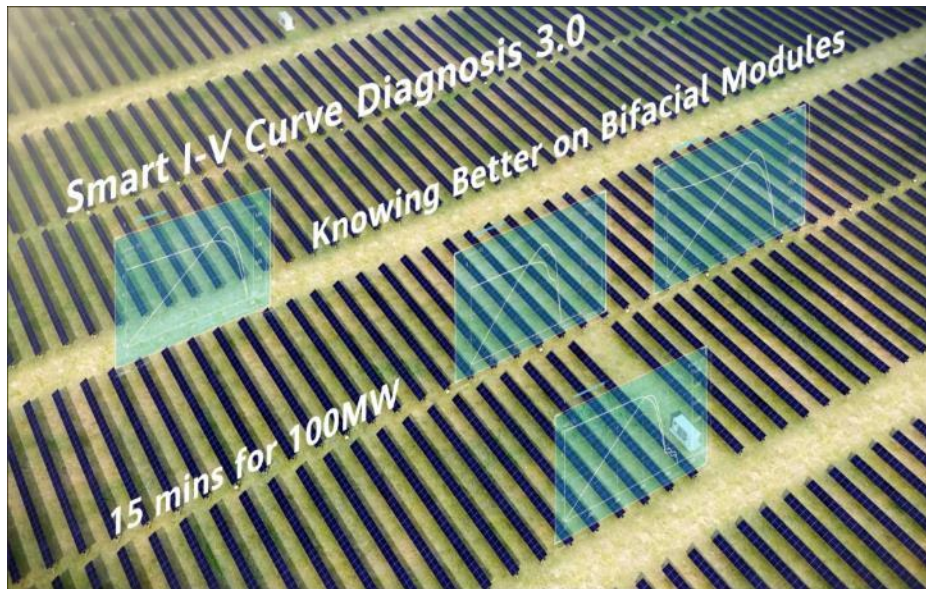
Smart I-V Curve 3.0

Optimized Algorithm, Faster Diagnosis

- Diagnosis reduced from 30min to 15min for 100MW

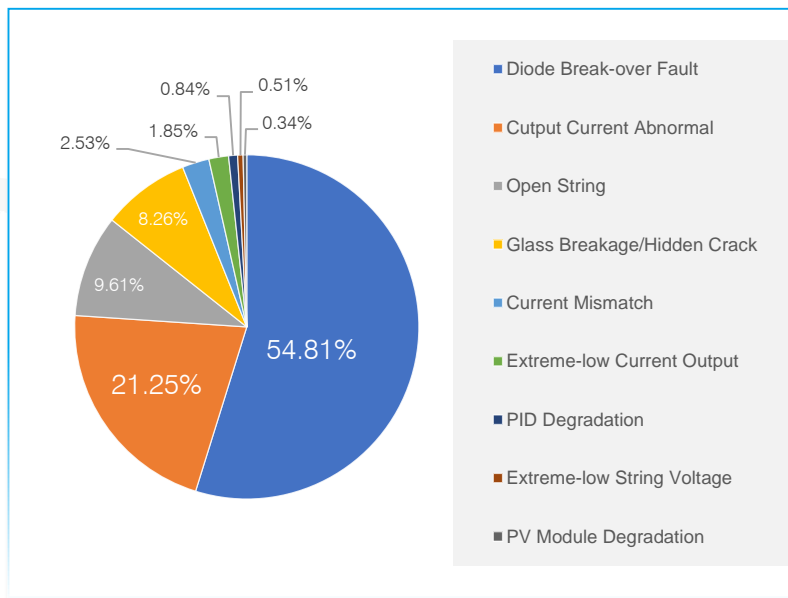
Matching More Scenarios

- Mono / Poly Module
- Bifacial Module
- Y Terminal



Smart I-V Curve Diagnosis Higher O&M Efficiency & More Benefits in 25 Years

3,000MW+ Global Application



50MW Desert Plant in Yulin, China, COD: Jan. 2017

100% Accuracy by Site Recheck

3102 Strings Diagnosed / 52 Failed Strings

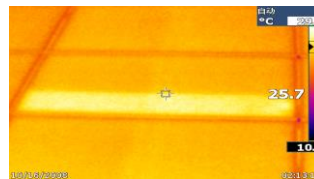
1.676% Failure Rate



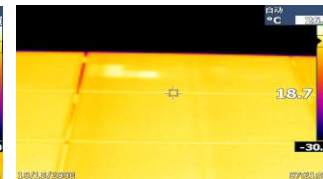
Glass Breakage



Shadows



Diode Break-over Fault



Hot Spot



愿景和使命

把数字世界带入每个人、每个家庭、每个组织，
构建万物互联的智能世界

Bring digital to every person, home and organization
for a fully connected, intelligent world