



WeEn
WeEn Semiconductors

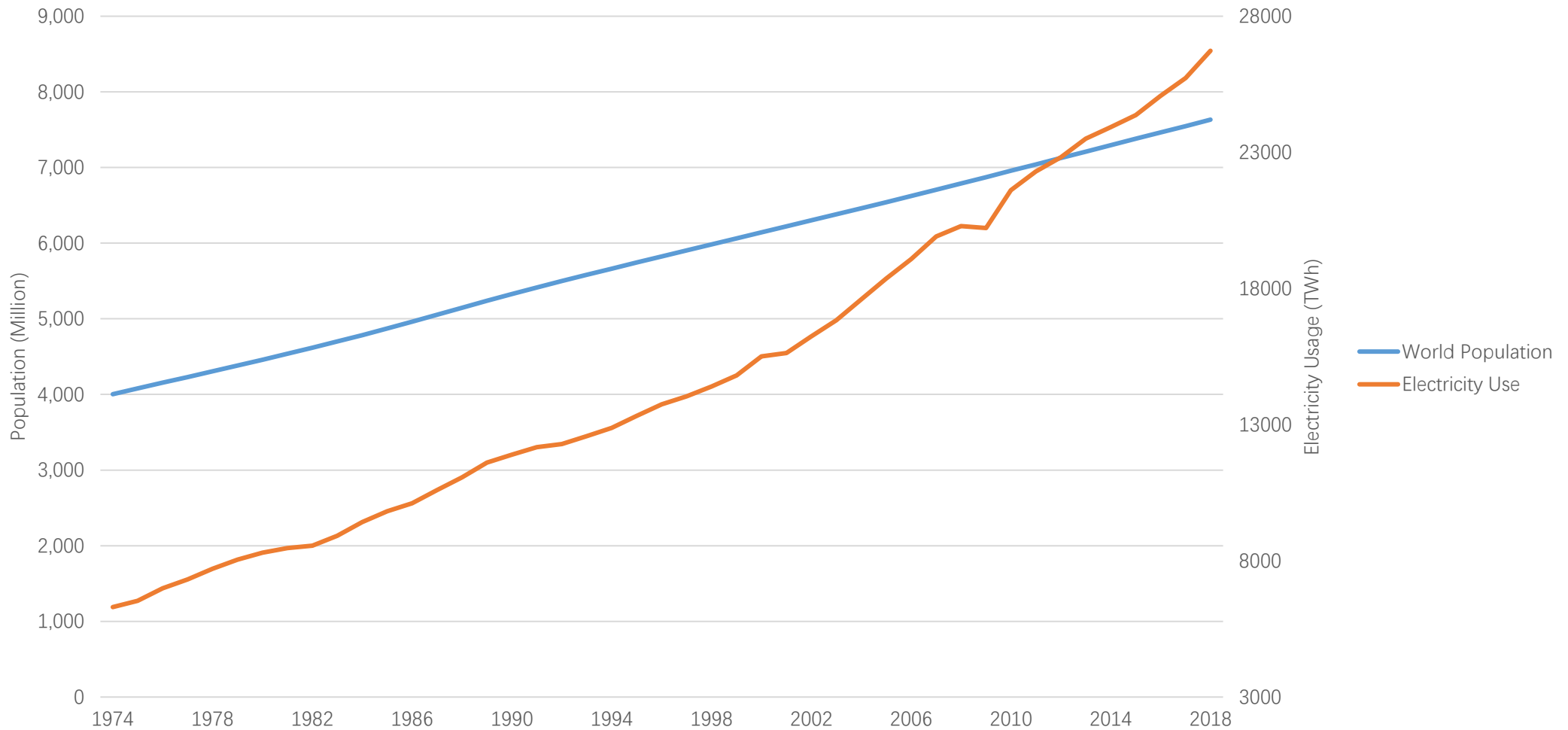
EMBRACING THE NEW OPPORTUNITIES DRIVEN BY **WIDE BANDGAP** SEMICONDUCTORS

By Kevin Shen



Global electricity usage is growing faster than population...

World Population versus Electricity Use, 1974-2018



...which is driven by electrification and digitization

Transportation



Communication

Computation



Battery Size:

1400mAh @ 135g

IPHONE 1



IPHONE 11



Battery Size:

3100mAh @ 194g

Source: Apple

...with the increasing density of batteries

Battery-cell energy densities have almost tripled since 2010



Source: BNEF, company reports

BloombergNEF



These all require better power semiconductors

Wide Bandgap Semiconductors

Higher thermal conductivity

Higher breakdown field

Benefits to electronic systems

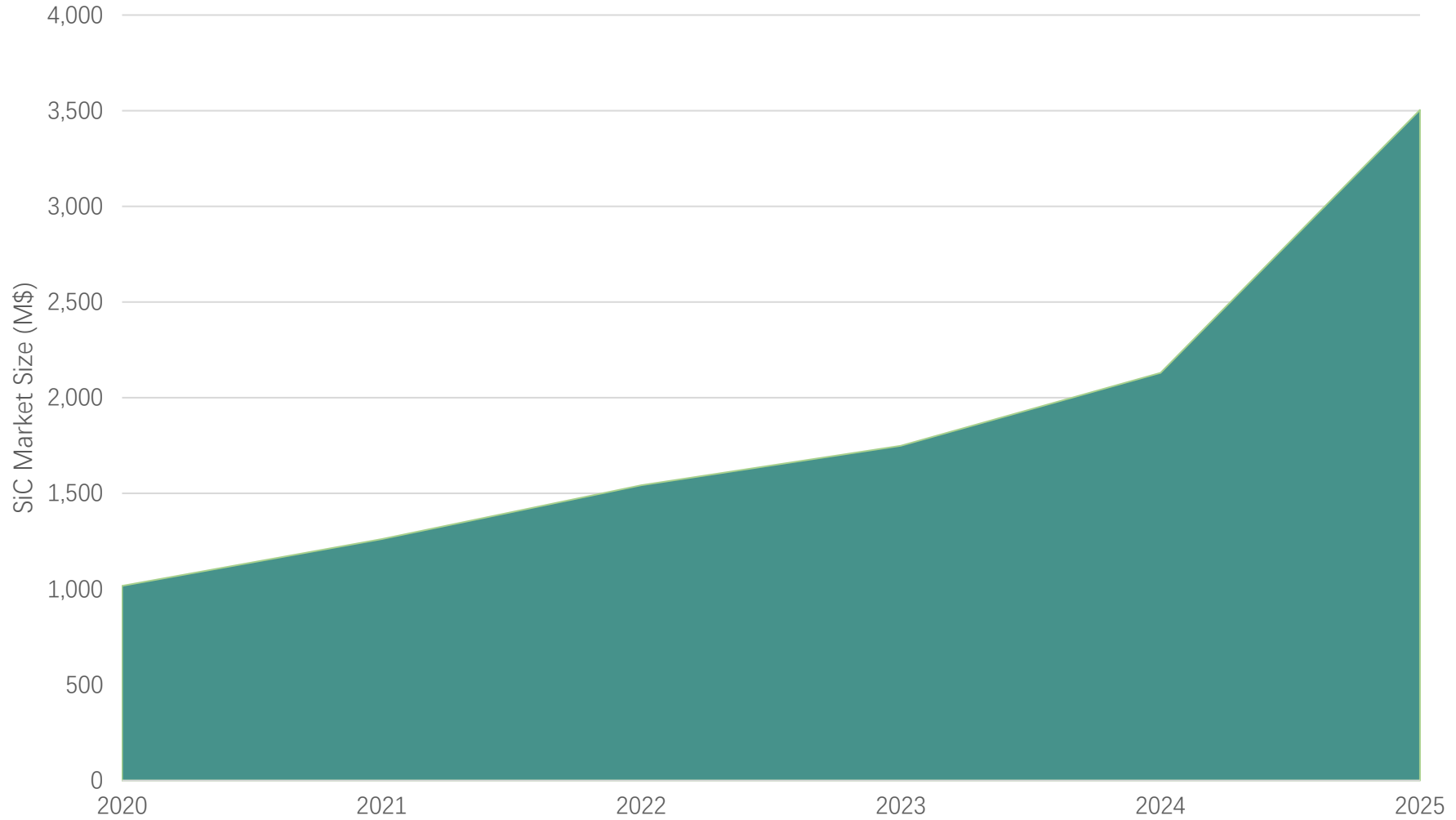
Increased efficiency

Reduced cooling system size

Weight reduction

WBG semiconductors help power electronics to increase efficiency and power density

WBG semiconductors market is booming as a result



And is supported by industry development

Defect density decreasing

Wafer size increasing

Design improving



Higher Yield

More stable supply

Reduced cost

Enhanced performance



Electric Vehicles

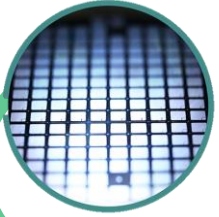


Clean Energy

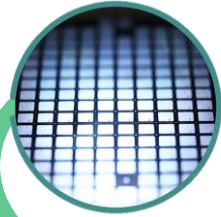


Power Supplies

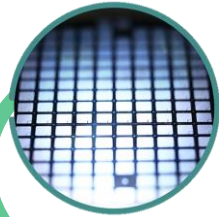
While there are still challenges for WBG semiconductors opportunities remain and the future is bright



Cost “Parity” with Si-based counterparts



Maturity in supply chain with current glocalization trend



More focus on system-level improvements

While there are still challenges for WBG semiconductors opportunities remain and the future is bright

01

Favorable policies to accelerate WBG adoption

02

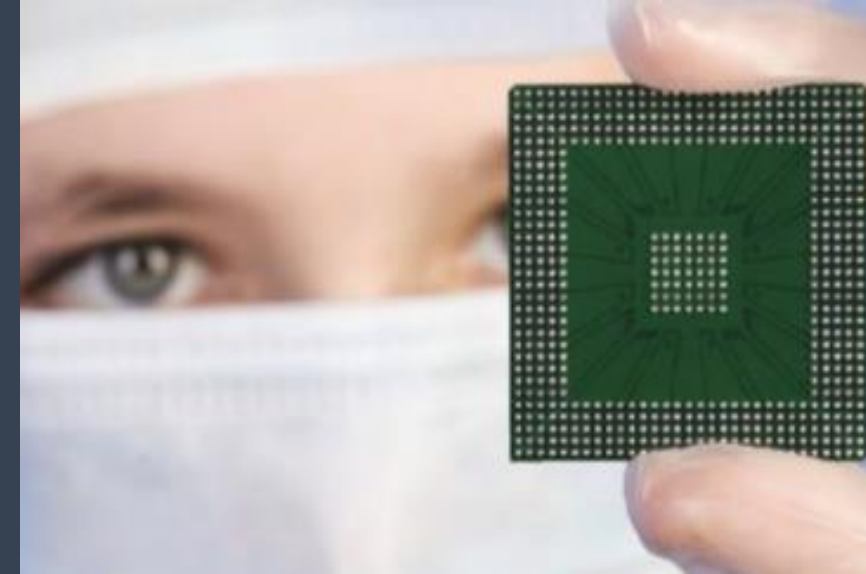
More innovation to harness full potential of WBG semiconductors

03

Industry alliance and supply chain partnership to have better economy

04

Endless endeavor to improve product quality





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THANK YOU !

