WHAT WILL 5G REALLY DO?

Transformative Infrastructures to Support Digital Transformation

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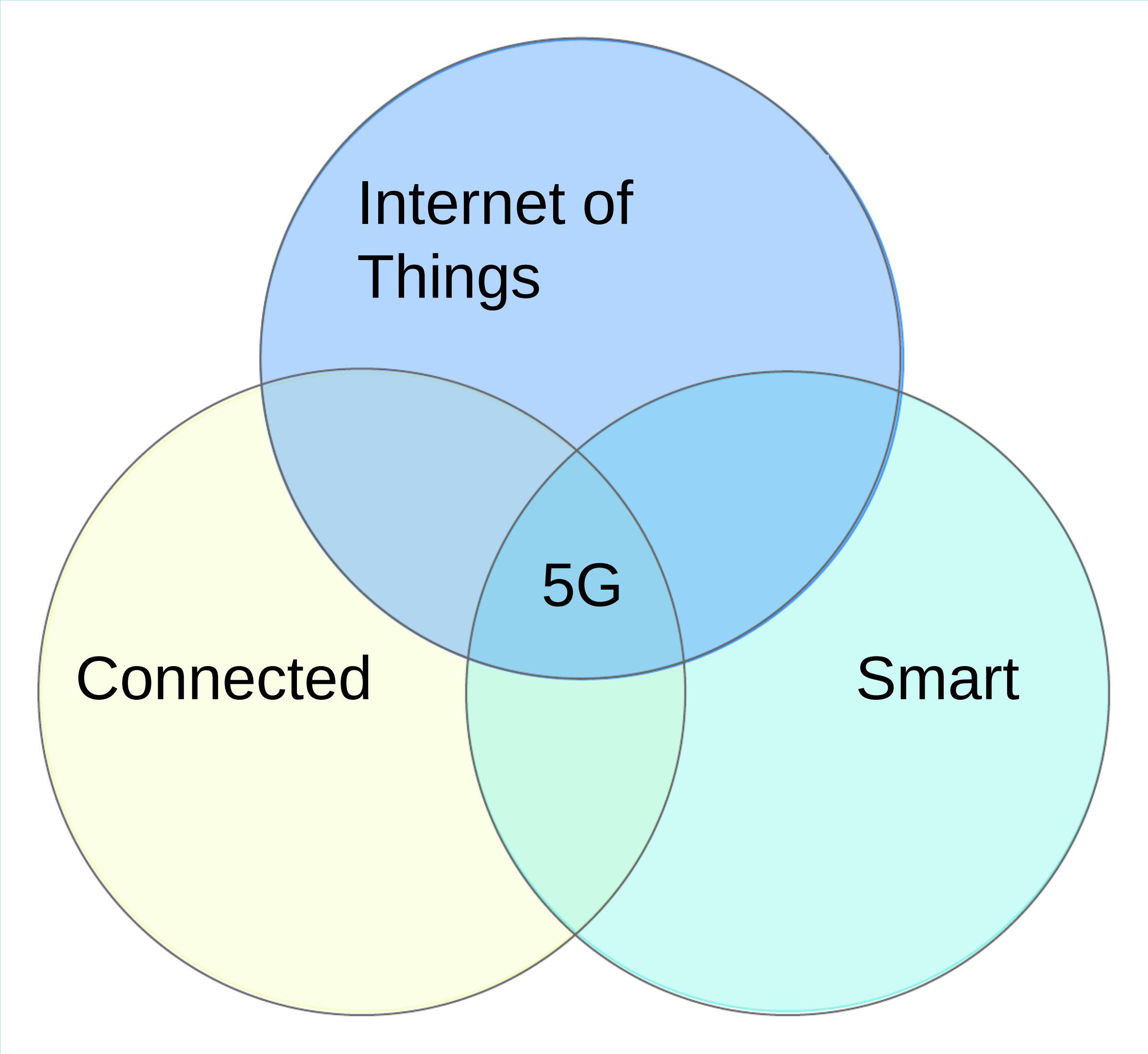
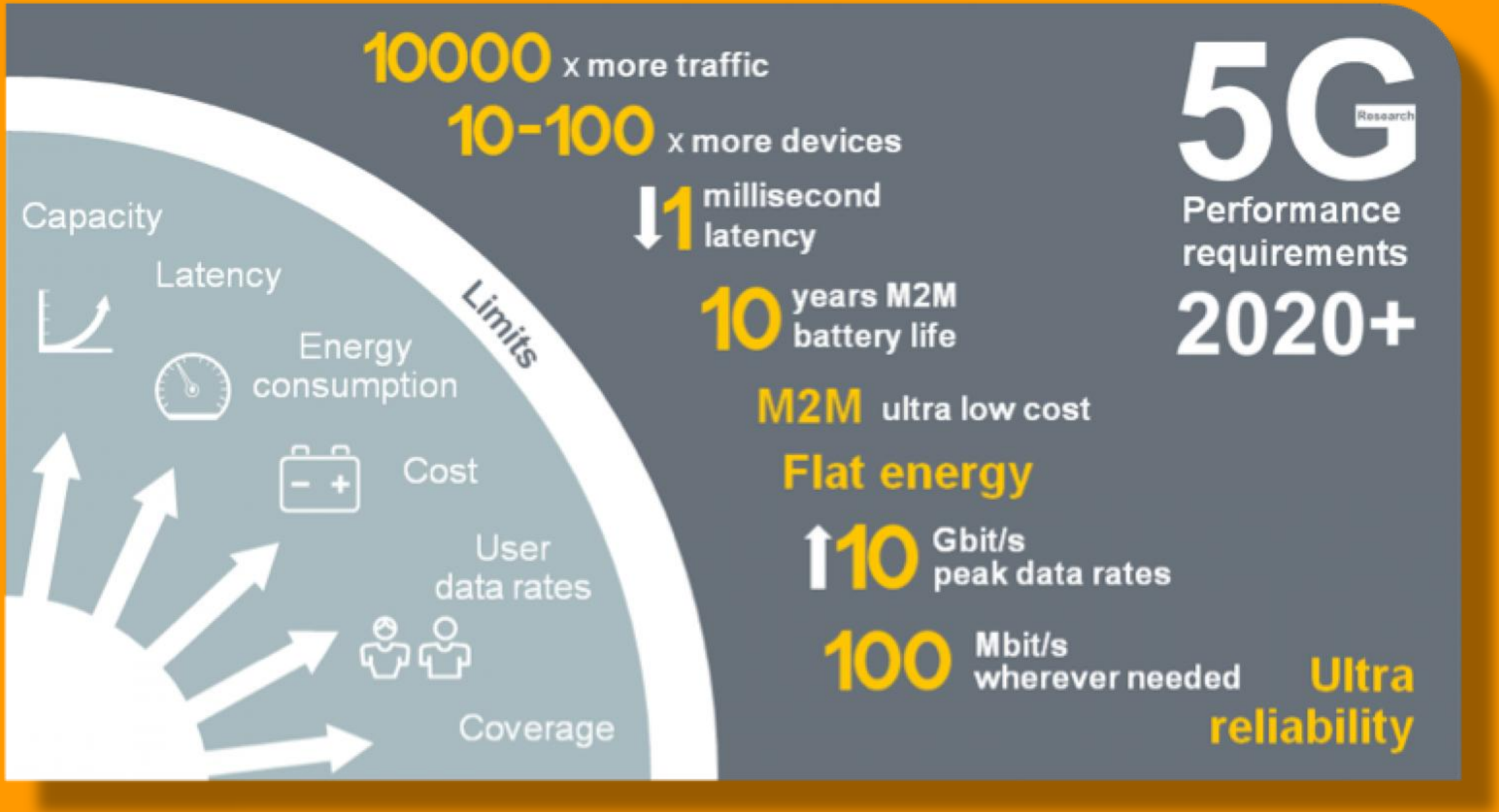
5G IS A MARKETING TERM



5G IS NOT A MARKETING TERM

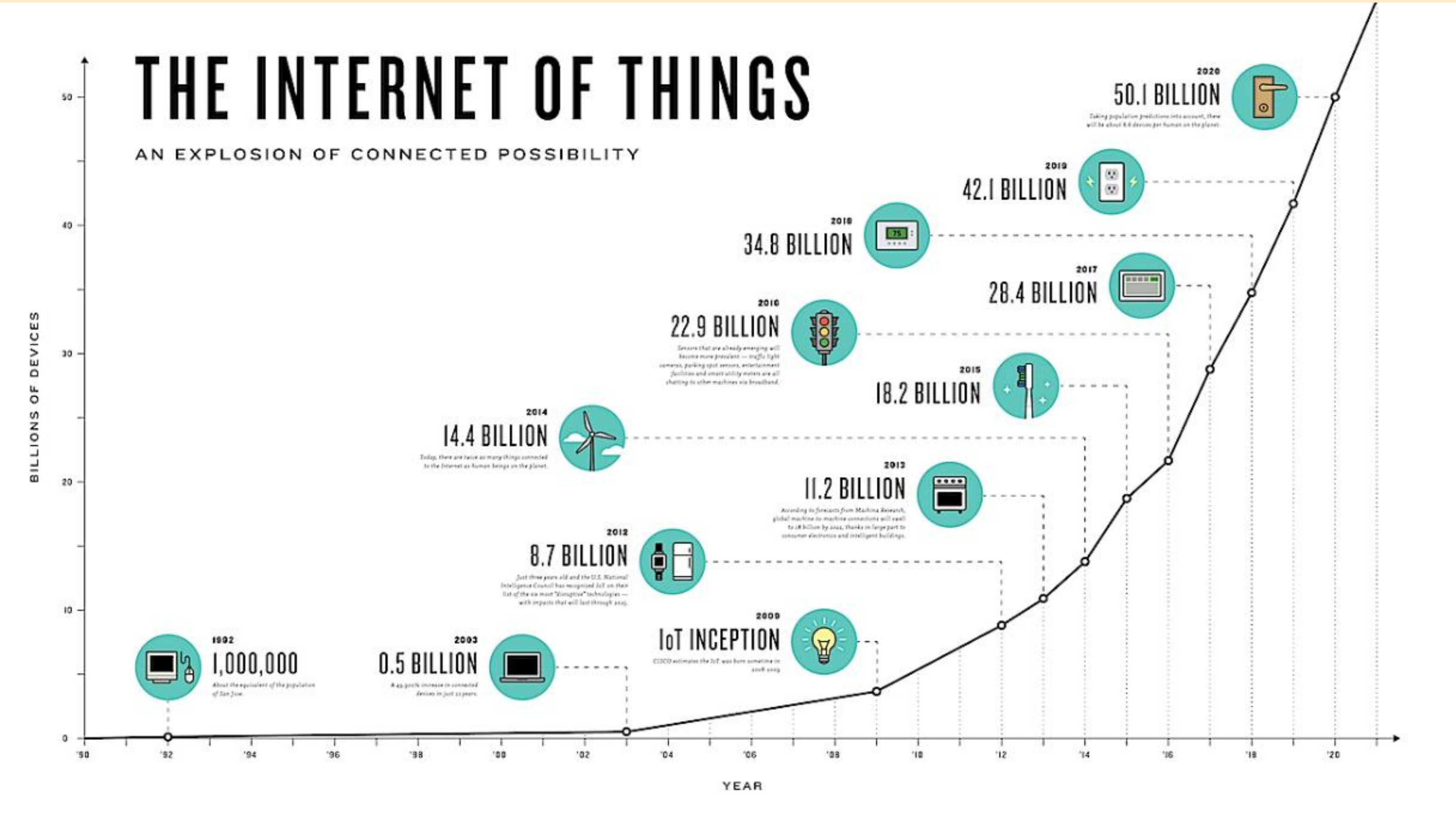
- Software defined networks/network function virtualization
- Network slicing
- Massive MIMO/densification/beamforming
- Large channels/MM wave bands
- Dual connectivity with LTE
- Ultra reliable low latency
- Multi-access edge computing
- Carrier aggregation
- Frequency-hopping “smart” antennae

NOT AN UPGRADE

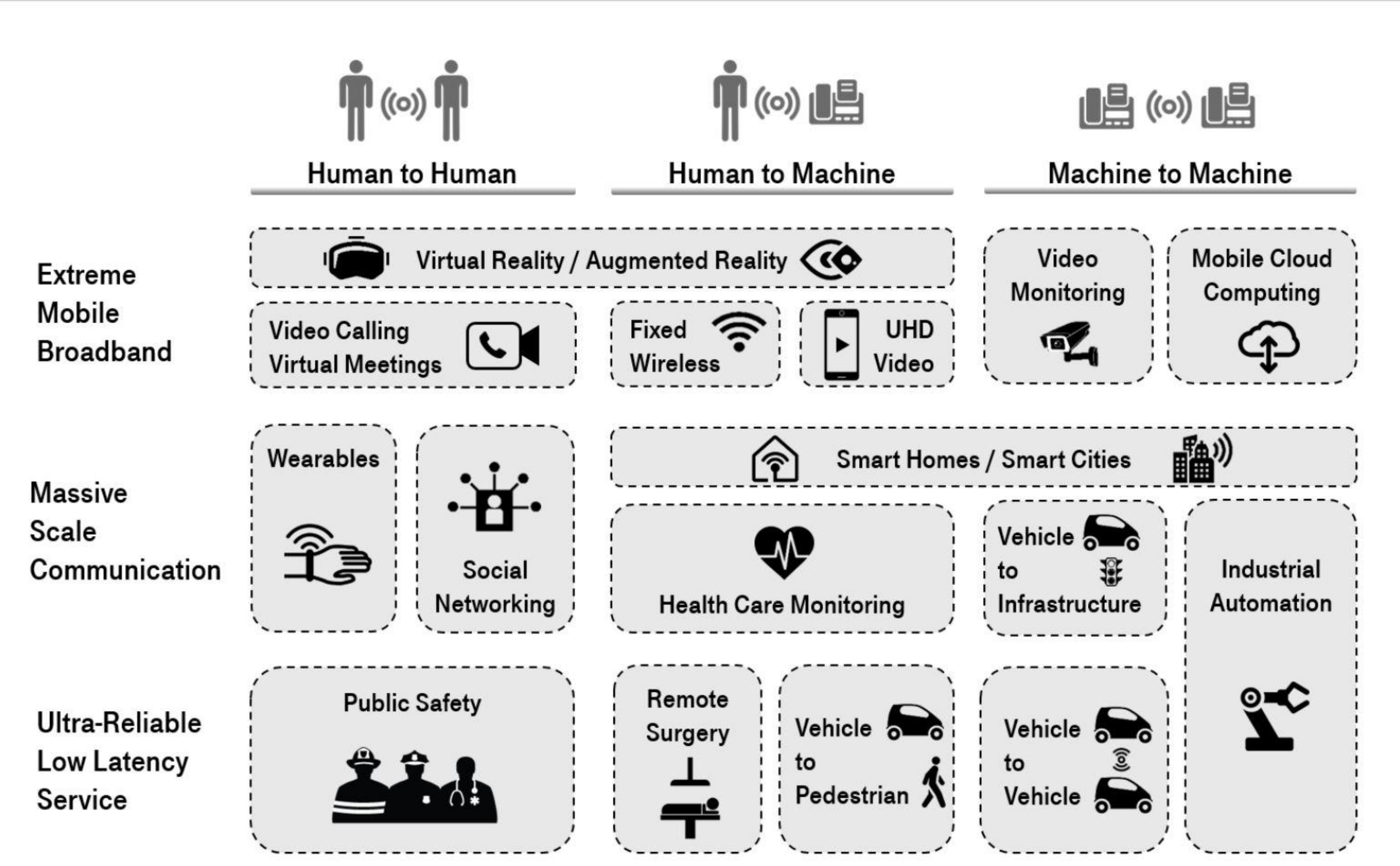


Source: Nokia

5G IS THE ENGINE OF NEXT-GENERATION CONNECTIVITY

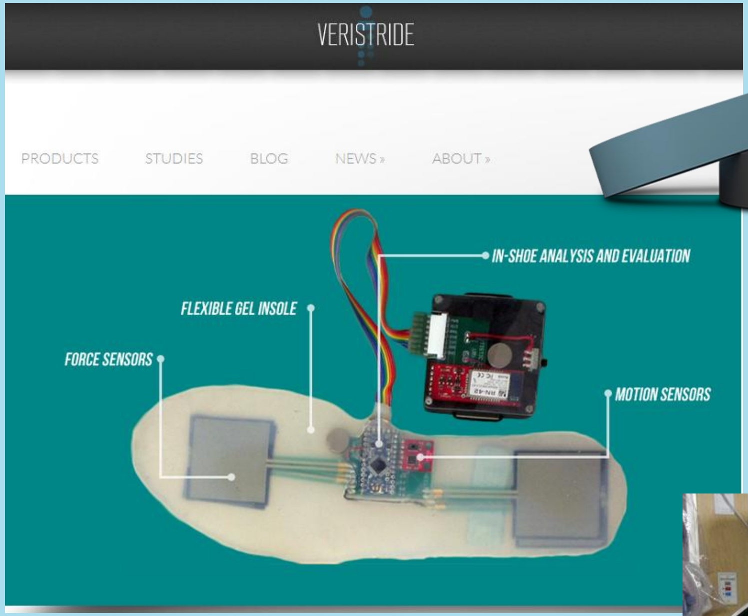


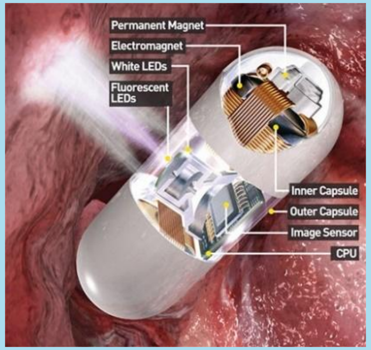
A TAXONOMY OF USE CASES



Source: 5G America's, "5G Services and Use Cases" (2017)

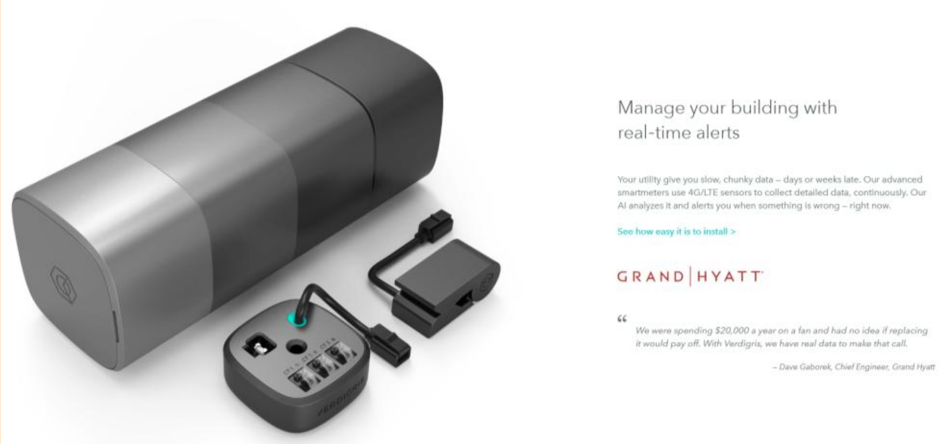
SMART BODIES





SMART HOMES


nest
70
Thermostat
Nest
74°
Off
Heat
Cool
Auto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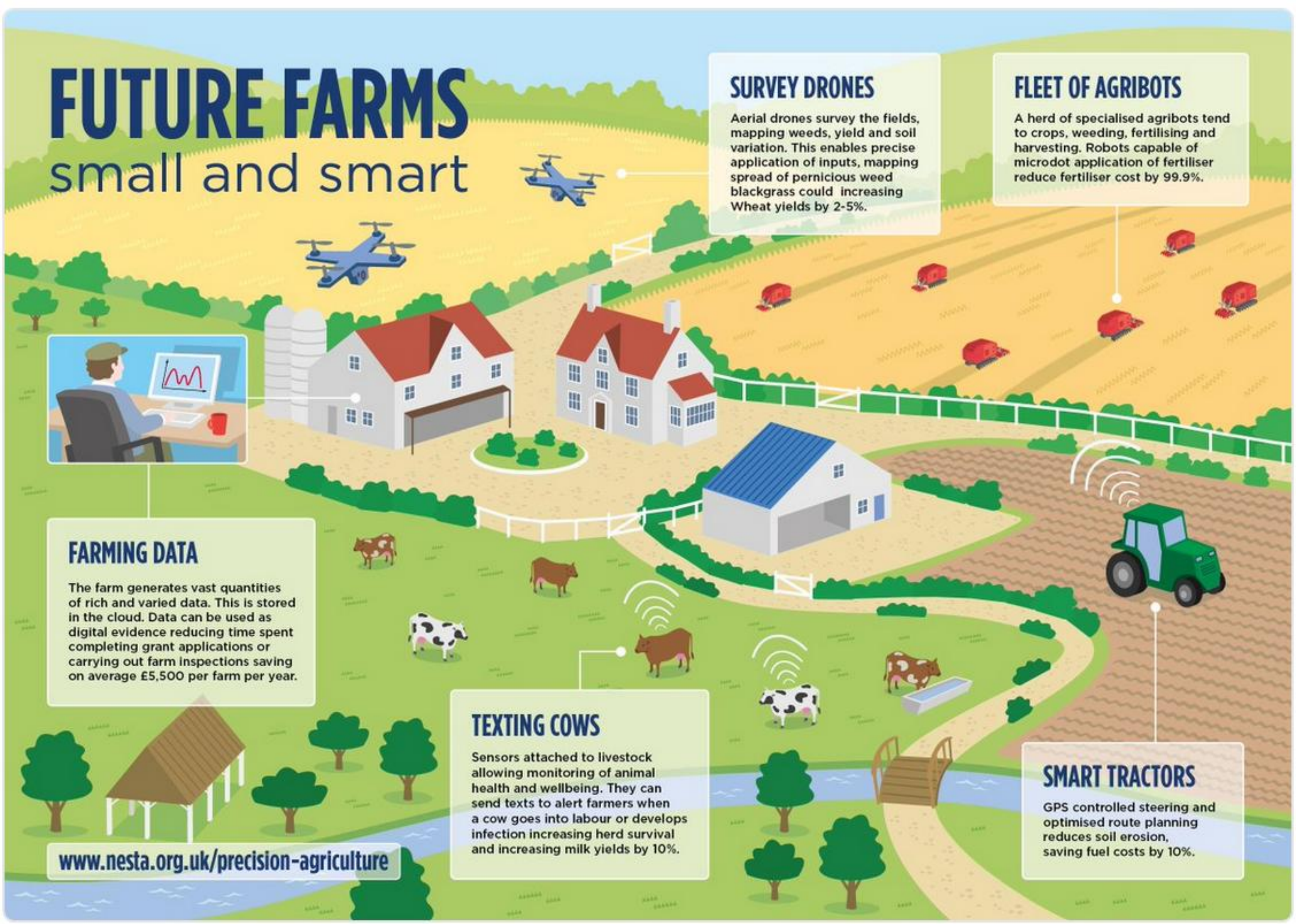
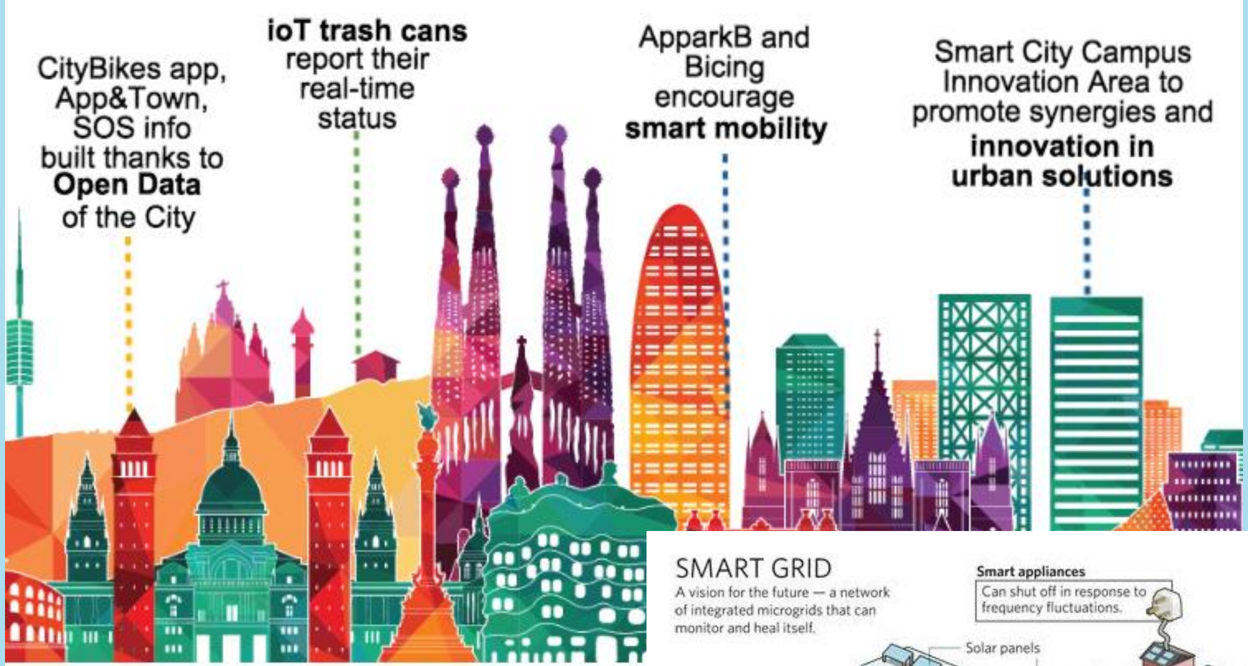
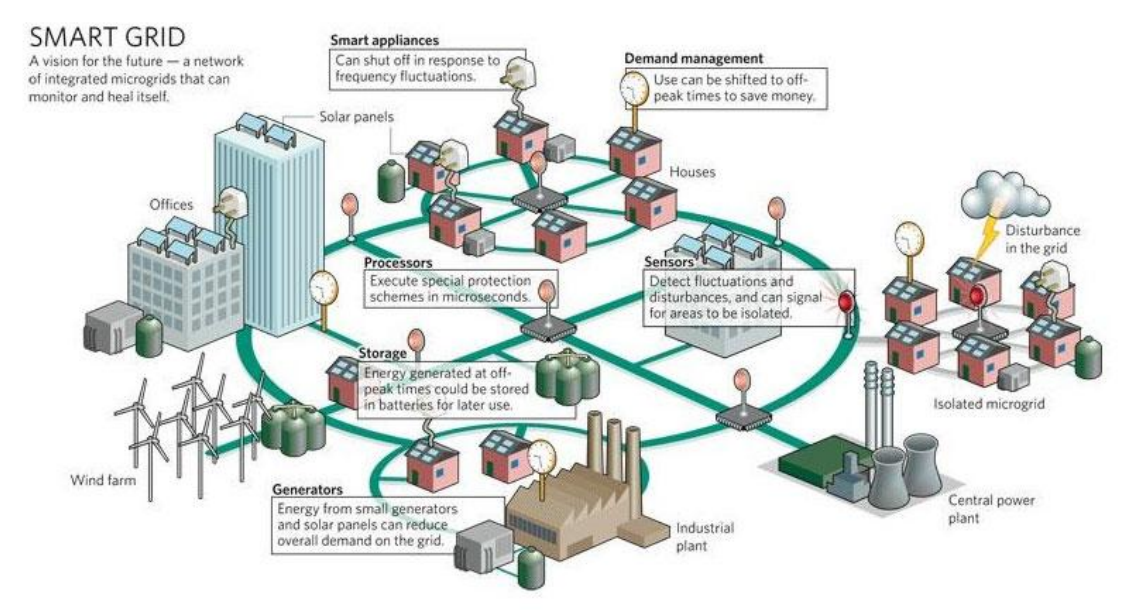
SMART FARMS



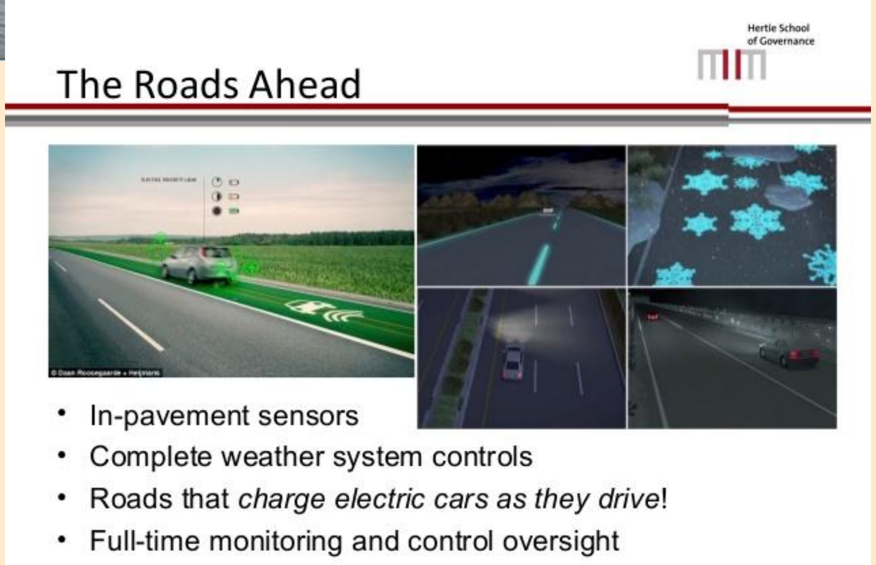
Source: Nesta

SMART GRIDS AND SMART CITIES





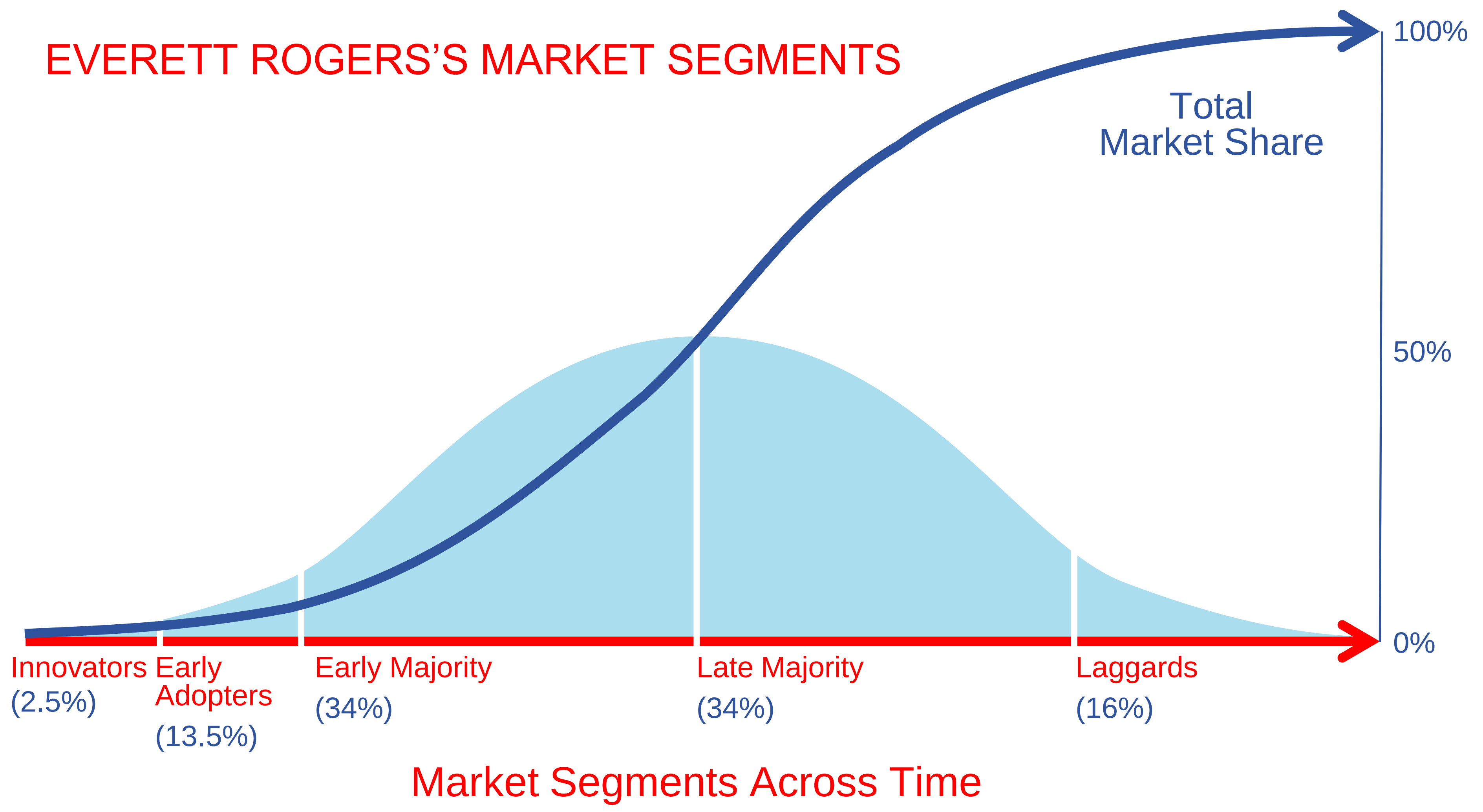
SMART CARS AND SMART INFRASTRUCTURE



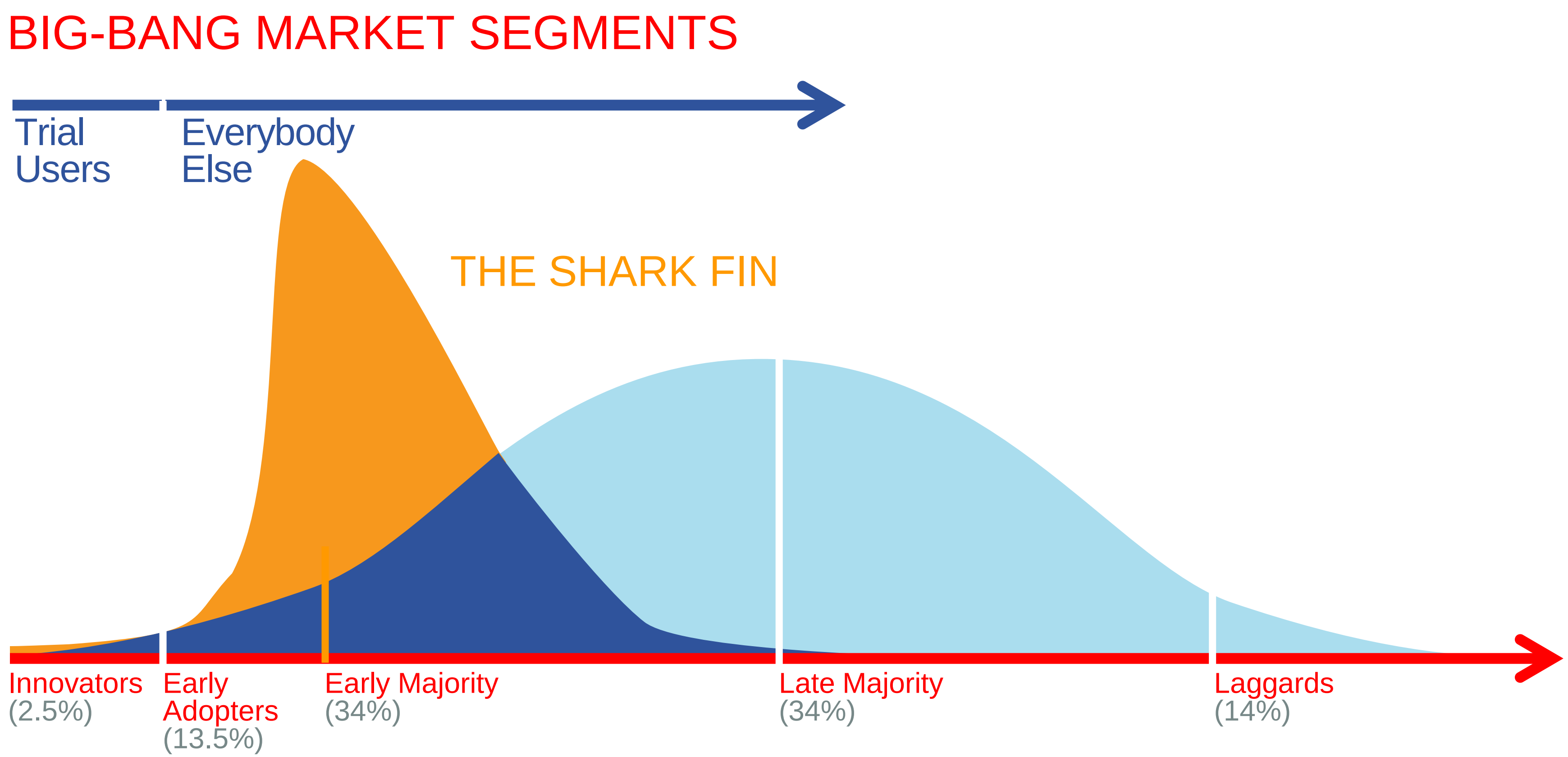
WHY IT MATTERS, BEYOND THE OBVIOUS

- Senior population aging in place
- Tech industries leading source of U.S. competitiveness
- Revolutionizing outcomes for individuals with disabilities, injuries – stroke, diabetes, wounded warriors
- Traffic deaths from human error kill 50,000 annually
- Lost productivity, wasted fossil fuels, safety material
- Education, health care, manufacturing, energy, entertainment, agriculture and other industries remade
- Existential nature of work, equity, and the human condition are all being transformed, for better or worse or both

WALL STREET’S HESITATION



NEW CURVE OF MARKET ADOPTION OF INNOVATION



POLICY LEVERS TO OVERCOME BIG BANG INERTIA

- Spectrum “abundance”
- Appropriate zoning, permitting, pole attachments, fees
- Dig once/climb once
- Financial incentives for high-cost/rural build-out
- Public/private partnerships
- Target applications that build/rebuild local industries