Data Centers Infrastructure
Worldwide trends and development

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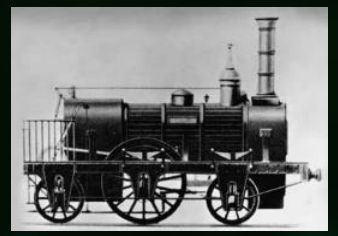
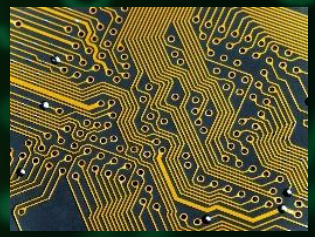
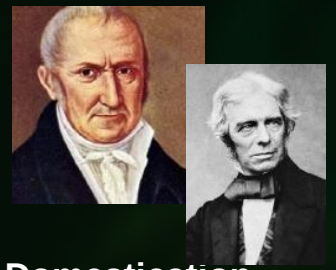
Over the last 200 years the world has gone through four **technology-driven** revolutions

	1750	1870	1950	Today
	The rise of technology	**Mass deployment**	**Silicon**	**Digital**
Industry	**Industry 1.0**	**Industry 2.0**	**Industry 3.0**	**Industry 4.0**
				
	Mechanization	**Mass production**	**Automation**	**Industrial IoT**
Electricity	**Electricity 1.0**	**Electricity 2.0**	**Electricity 3.0**	**Electricity 4.0**
				
	Domestication of electricity	**Mass deployment of electrification**	**Rise of green power & decentralization**	**Electrical IoT** Electricity & Digital

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Digital disrupts Efficiency & Sustainability

3x IoT

IoT connections 2018-2025 *(*GSMA)*

>5x Big Data

generated data from 33 ZBs today to 175 ZBsby 2025 *(*IDC, 2018)*

6x AI

worldwide spending on cognitive and AI systems btw 2017 & 2022 *(International data corporation)*

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Digital builds a smart future

Home
Building
Industry
Infrastructure
Cities

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Data Centers *are the Heart of the Digital World*

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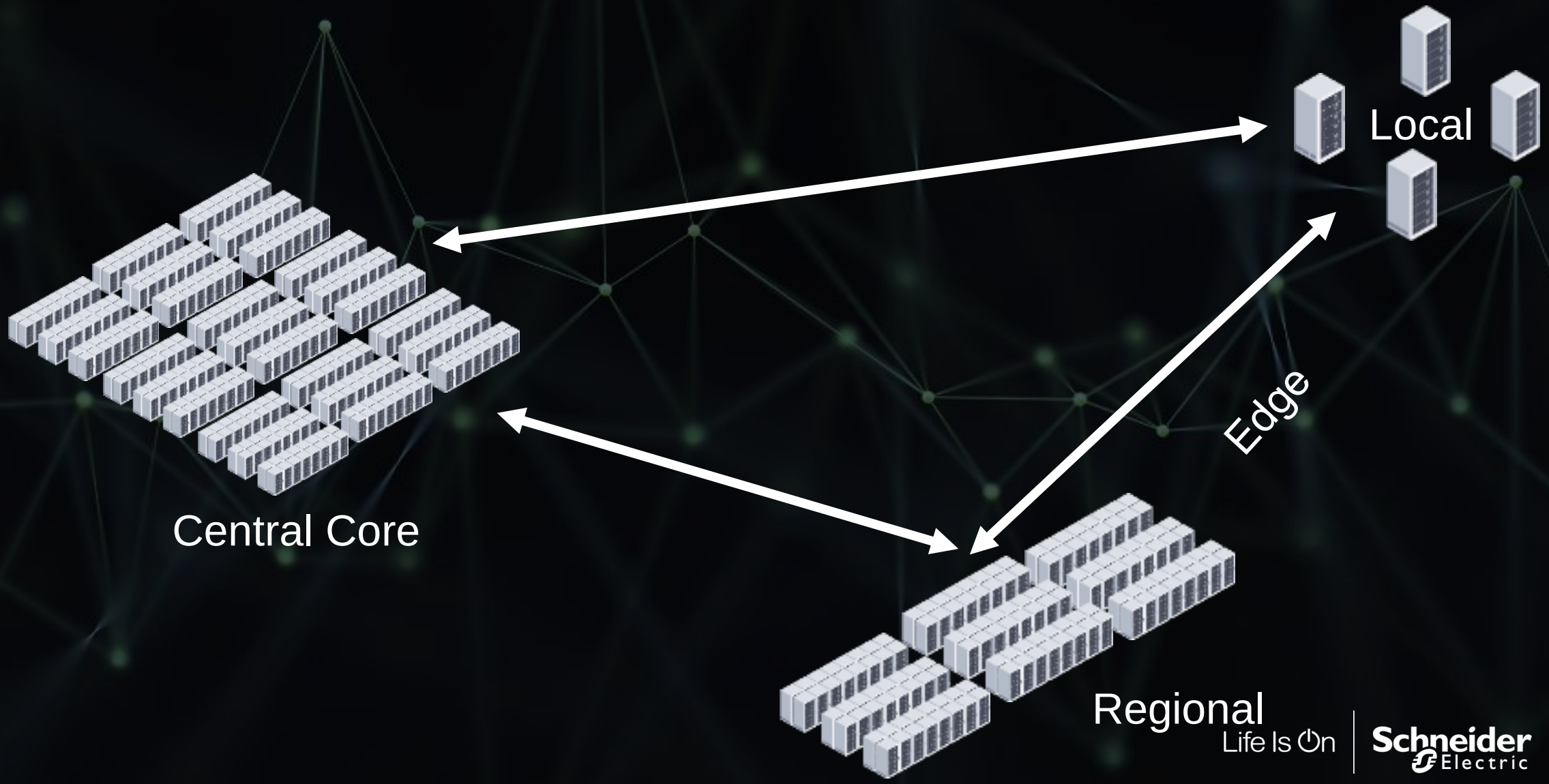
To support this digital transformation, the data center architecture is becoming increasingly hybrid



Data Centers need to evolve to meet the needs of this digital transformation

500%

Growth in global data generated by 2025[2]

50%

Increase in electrical footprint of all data centers by 2025[1]

75%

of data will be processed at Edge by 2025[4]

24%

of executive's report that over 50% or more of their data centers will be self-configuring by 2025[3]

Schneider analysis[1], IDC 2019[2], Forbes Insights 2020[3], Gartner 2018[4]

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Digital world Datacenters infrastructure:

- IT Decentralization
  - Hybrid
  - IT service is more important than node
- Unified strategy for the development of the computing environment
  - Centralization of decision making
  - Implementation optimization
- Monitoring and control
  - Remote control
  - Maintenance service redundancy

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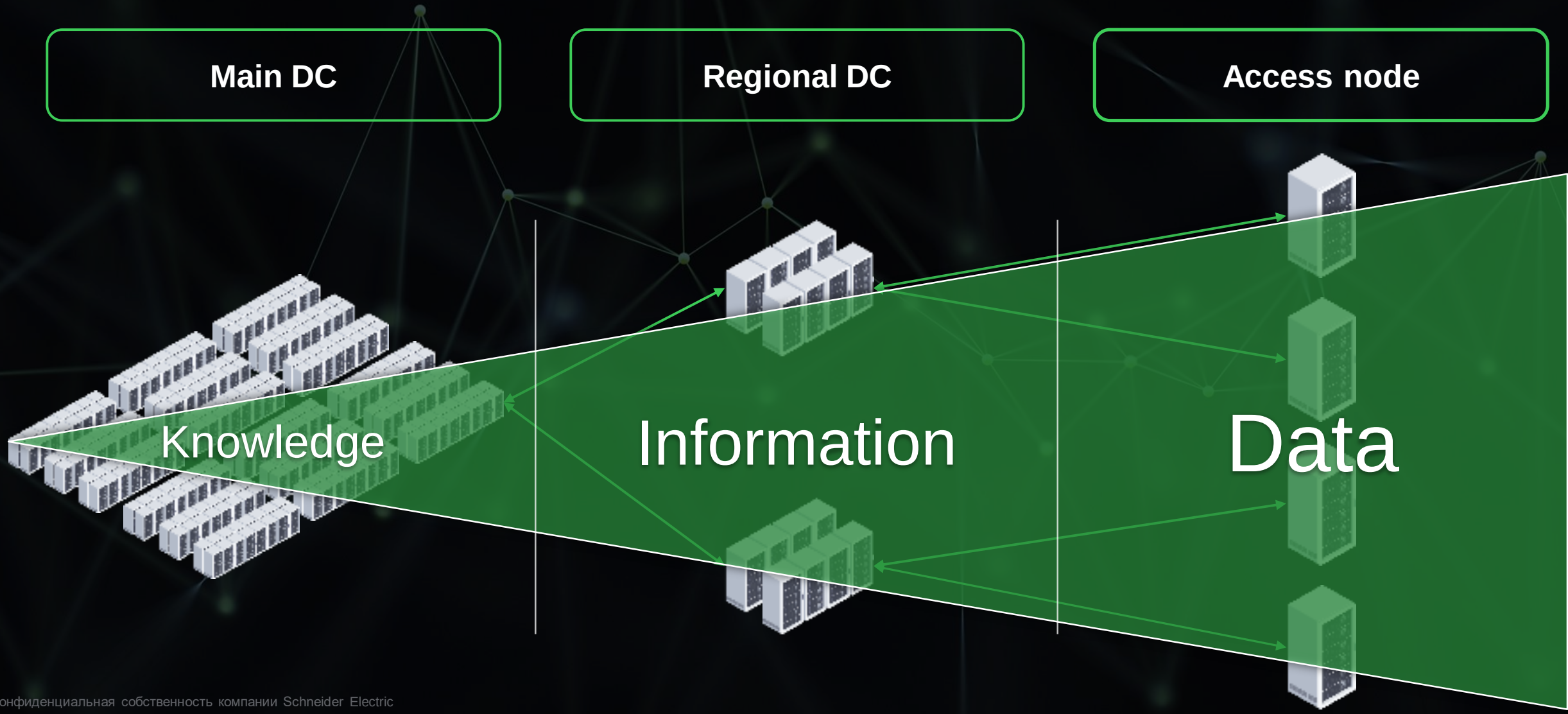
Hybrid architecture for Computing



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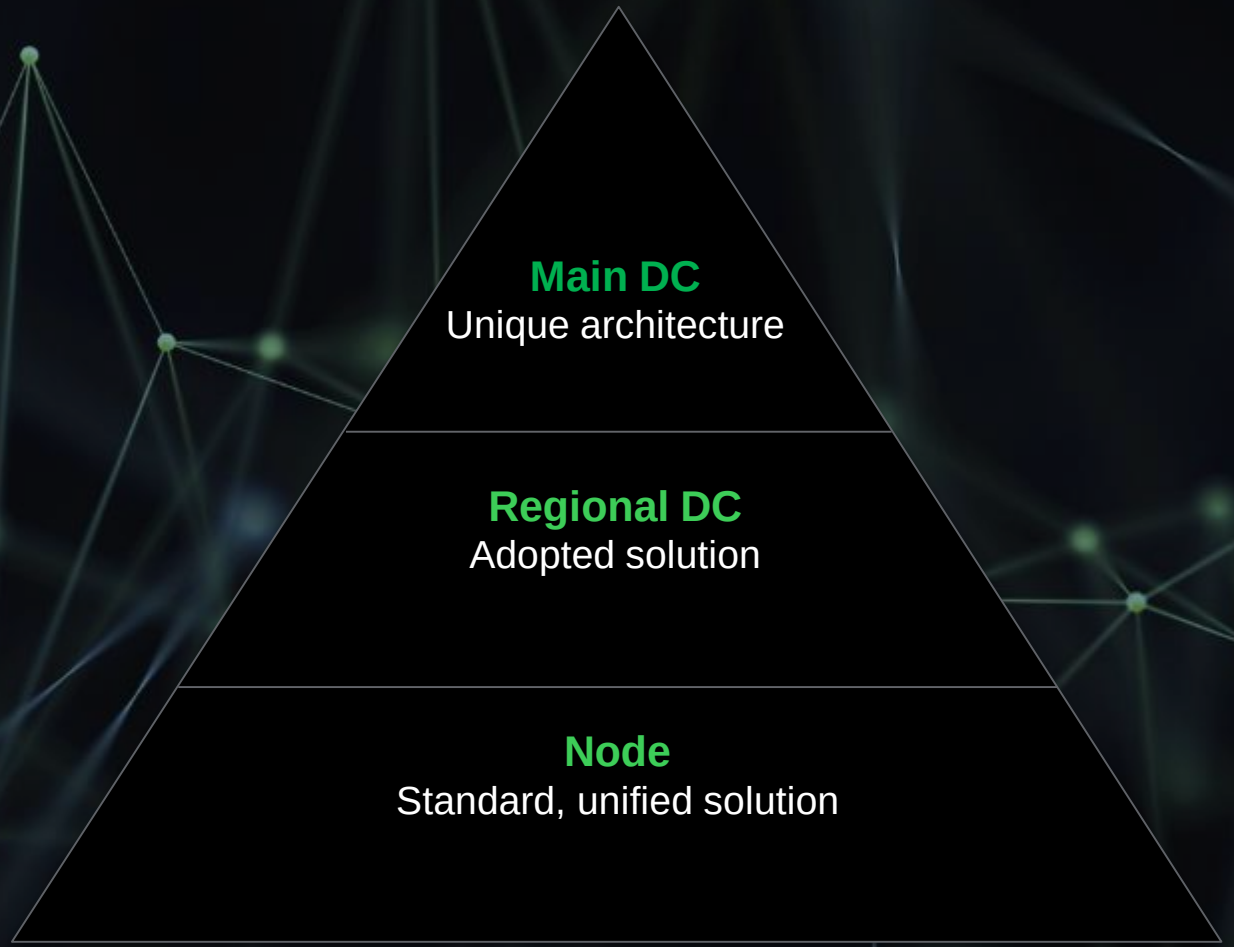
Unified strategy for the development of the computing environment



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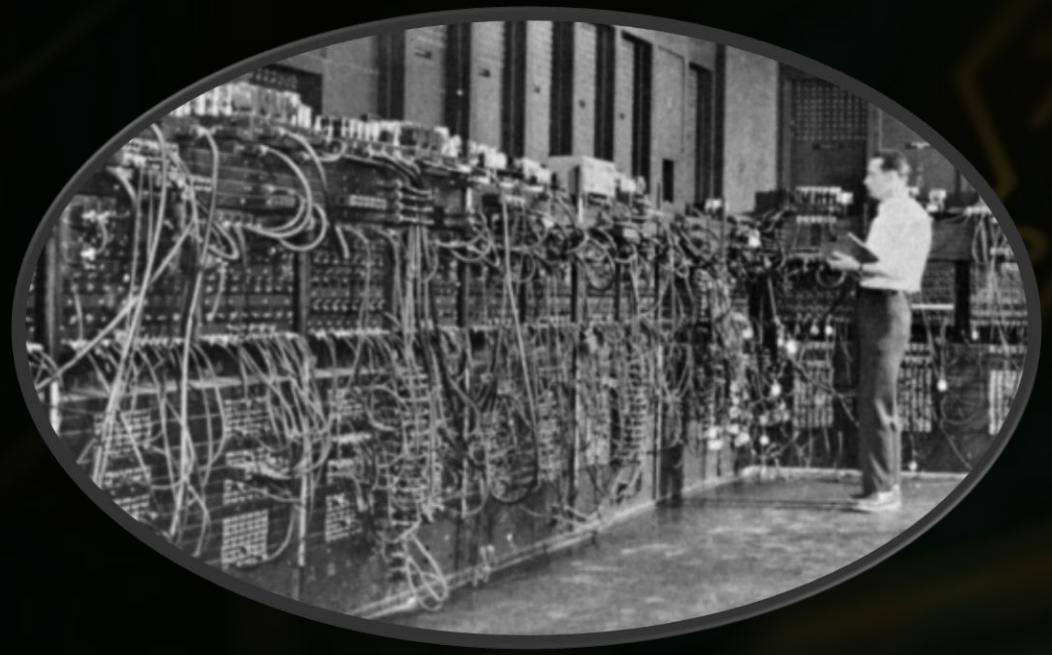
We have evolved the original transistor-based Data Centers of the past that were very inefficient, unmetered, static, and unreliable



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Data Centers of the future Is our **VISION** *where:*

- Sustainability ↑
- Efficiency ↑
- Adaptability ↑
- Resiliency ↑

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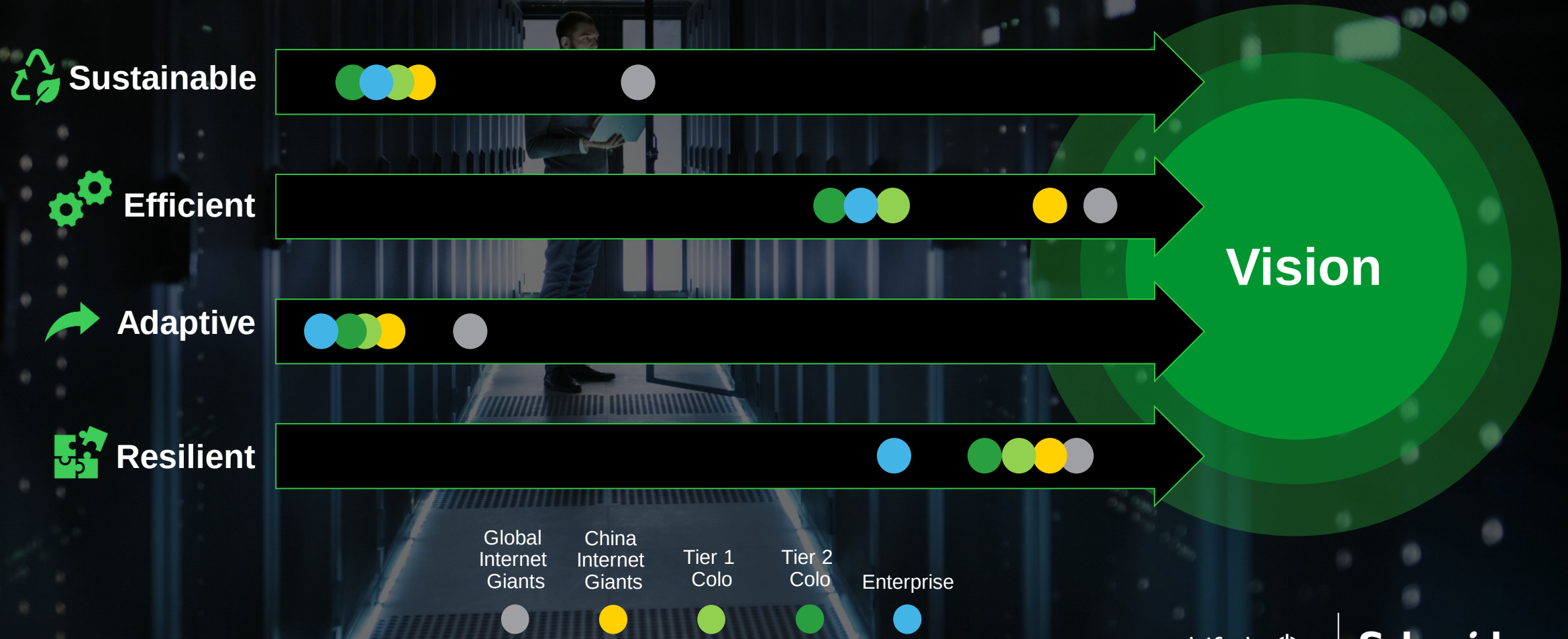
Data center owner/operators are at different levels of maturity across the four vectors



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Sustainable

Meet the business needs responsibly, without compromising the future

- Carbon strategy consulting
- Renewable energy sourcing
- Resource-efficient designs
- Resource management
- Circular materials inc. batteries
- Carbon efficient supply chain consulting

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Efficient

Optimize cost, speed, space and capital to increase return on investment

- High Density IT
- Maximum Structural Efficiency
- Individual capital and cash flow
- Optimized processes
- Digital Services

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Adaptive

Designed to adapt to new technologies

- Flexibility in design, deploy, and service
- Compatible with next generation IT
- Software defined - workload and application portability
- Active energy management

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Resilient

Reduced vulnerability to unplanned downtime

- Reliability through redundant power and cooling
- Remote control
- Enhanced Cyber Security
- Comprehensive predictive analytics
- Relationship between data analysis and service

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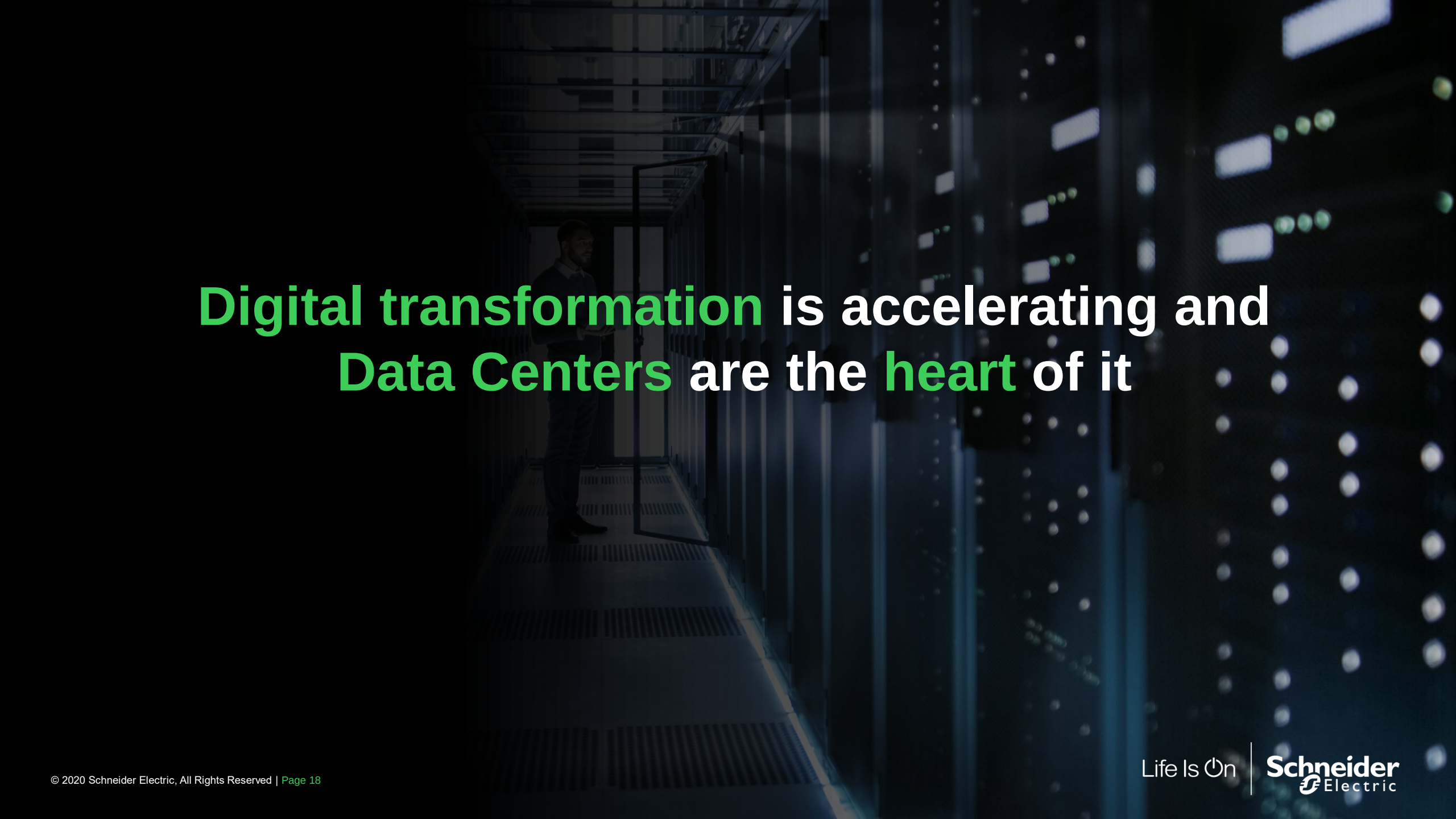

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We will help you establish a vision and build your data center of the future

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