Realizing the Value of Digitization in Enabling the Energy Transition for Utilities

Eugene Loke
Managing Director
Trilliant APAC

DISCOVER THE *Power Of Choice*

Trilliant®

Trilliant: 30+ years of providing mission-critical solutions to Energy Companies, Utilities and Cities that drive optimal outcomes

Proven, device-independent communications platform

- Multi-tiered network drives optimal outcomes: WAN, NAN, LPWAN, or Cellular
- End-point and device-independent, enabling customers to experience the Power of Choice

Advanced Smart Grid & Smart City Solutions

- Trilliant for Smart Grid solutions: AMI 2.0, Data & Analytics Services, Distribution Automation, Demand Response
- Trilliant for Smart Cities solutions: Smart Lighting, Suite Metering, IIoT Gateway and more

200+ customers drive smart initiatives

- Electric, gas and water clients worldwide across smart grid, smart cities and IIoT deployments
- Blue chip customers across APAC, EMEA, Canada and the Americas

Strategic Partner eco-system

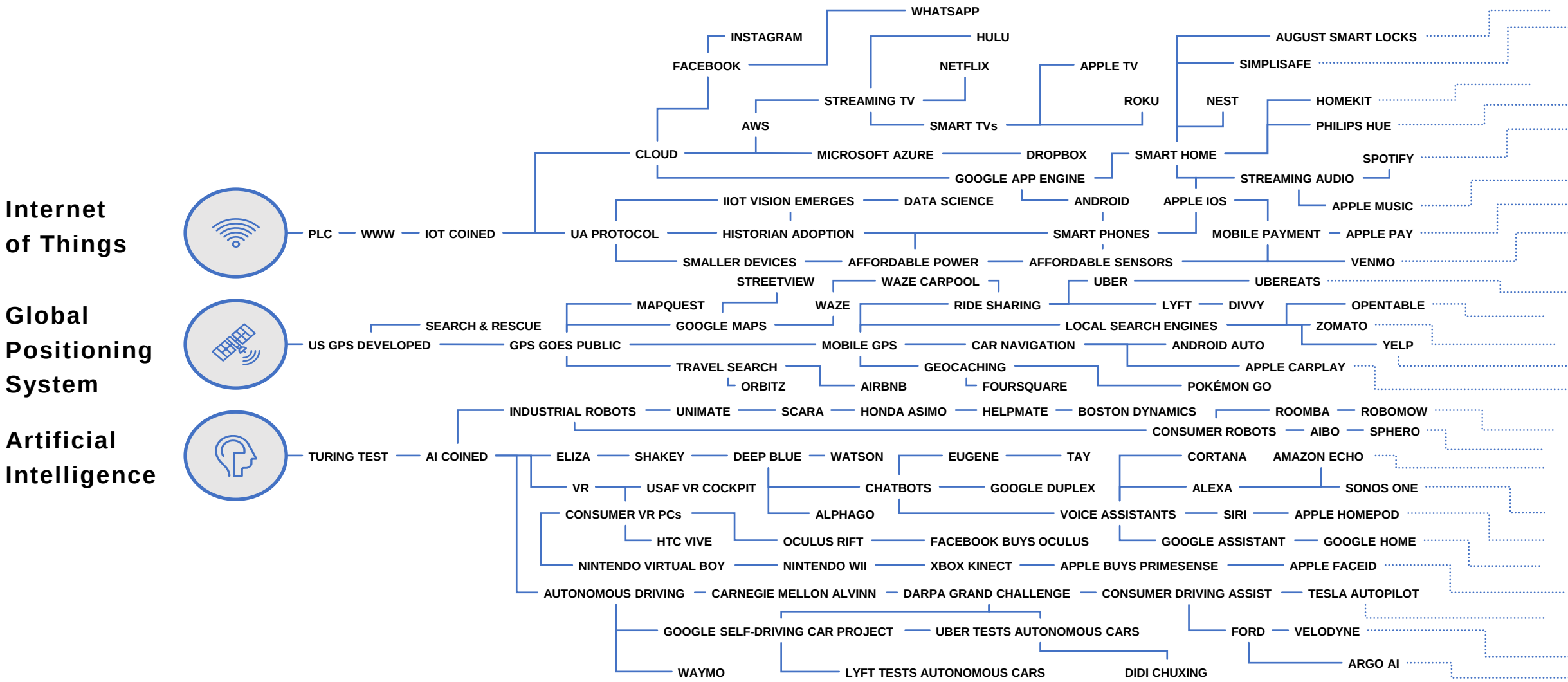
- Highly experienced, trusted partners include suppliers, SI's, technology providers
- Seamless, standards-based integrations

Committed to Sustainability

- Dedicated to delivering sustainable solutions to support the acceleration of the Energy Transition for our customers
- UN Global Compact Participating Member
- 2022 EcoVadis Silver Certification
- 2022 DEKRA Recertification for Environmental, Quality Compliance
- Certified Level One EcoResponsible
- ISO Certified 9001, 14001, 27001, 45001

Trilliant®

Foundational Technologies Have Enabled New Economies



Trilliant®


The rate of change in the
power & utility sector is accelerating
1 Decarbonization
2 Decentralization
3 Digitalization

Digital is transforming three main areas of the energy value chain*

	GENERATION	TRANSMISSION	DISTRIBUTION	CUSTOMER	VALUE UNLOCKED
ASSET LIFECYCLE MANAGEMENT	**Asset Performance Management:** Conditioning monitoring, predictive forecasting and reliability-center maintenance. **Digital Field Worker:** Improve performance and productivity with data and tools that drive operational efficiencies. **Smart Asset Planning:** Use of predictive analytics, machine learning and robotics to improve capital-project execution, including site and asset selection.				• Increased asset life • Improved productivity • Optimized site decisions
GRID OPTIMIZATION & AGGREGATION	**Energy Aggregation Platforms:** Bring small-scale distributed-energy sources (e.g., PV, CHP, biomass) onto a single platform to act as one large power plant (VPP).	**Real-Time Supply & Demand Platform:** Monitoring and communication of current load supply and demand, paired with a discriminatory pricing framework.		**Connected & Interoperable Devices:** Device-to-device connectivity and collection and display of consumption points – which can be linked to the distribution network.	• Real-time optimization • Demand aggregation • System flexibility • Reduction of loss
INTEGRATED CUSTOMER SERVICES			**Energy Storage Integration**	**Energy Solution Integration:** Optimize energy production and use for greater control and savings. **Digital Customer:** Interact through multiple channels and embedded customer analytics.	• Trust and transparency • Enhanced experience • Hyper-personalization

*SOURCE: WORLD ECONOMIC FORUM

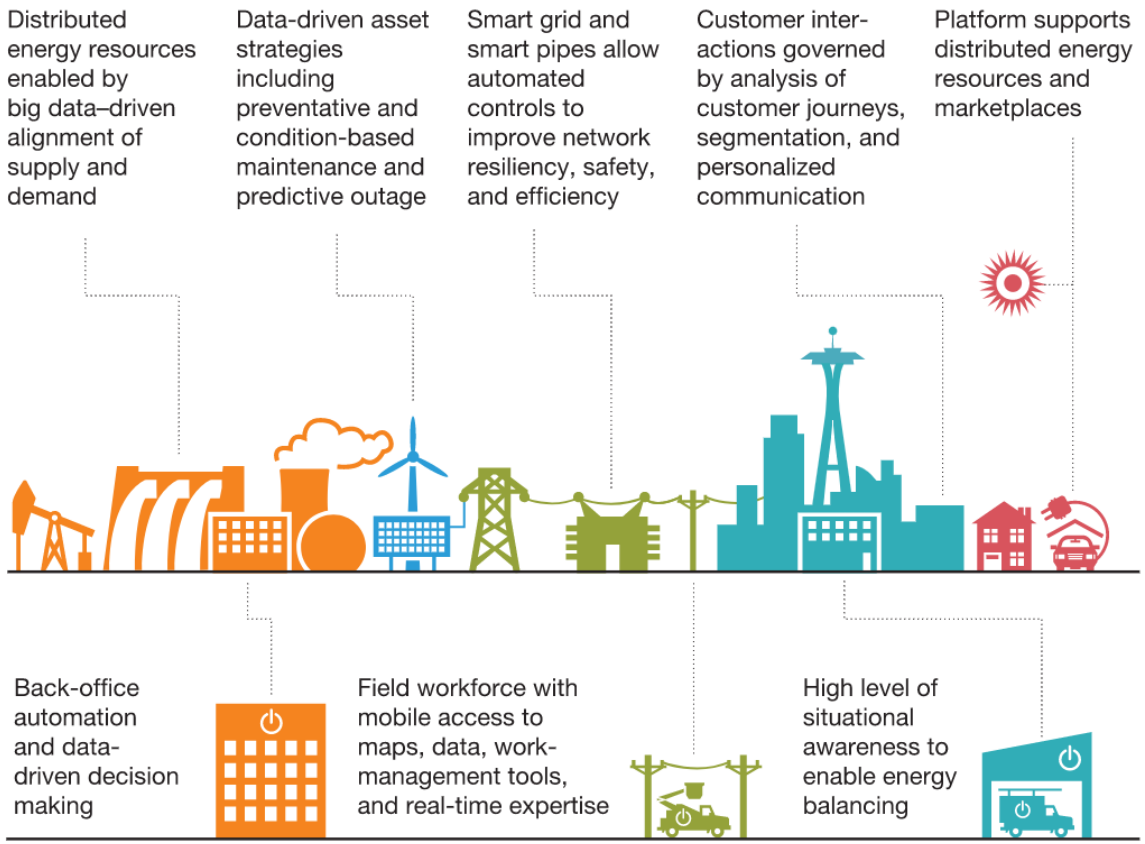
Trilliant®

Transformation of Distribution Network – Advanced Metering Infrastructure

	Utility		Consumer	
AMI 1.0	• Read Automation • Improved power quality intelligence (voltage, lightning, etc.)	• Performance improvement • Non-Technical Losses reduction	• Increased accuracy of billing • Faster connections and move-outs • Implementation of flexible billing programs such as time-of-use (TOU)	• Real–time access to electric consumption • Automated outage and predictive restoration notifications • Pre-payment for energy
NEXT-GEN AMI	• Operations performance (outage detection) • Communications network in place • Smart Grids, DER, EV Charging foundations • Smart City, Streetlight, Surveillance • DNO to DSO shift	• New business models. enablement, new tariffs • Data insights • Digital Operations • Enhanced Cybersecurity/ performance	• Next level distribution performance • Safety • Smart grid enablement, green energy, energy transition	• New business models (appliances, demand response, EV's, etc.) • Energy consumption reduction • Potential new tariffs • Seamless moving process

Trilliant®

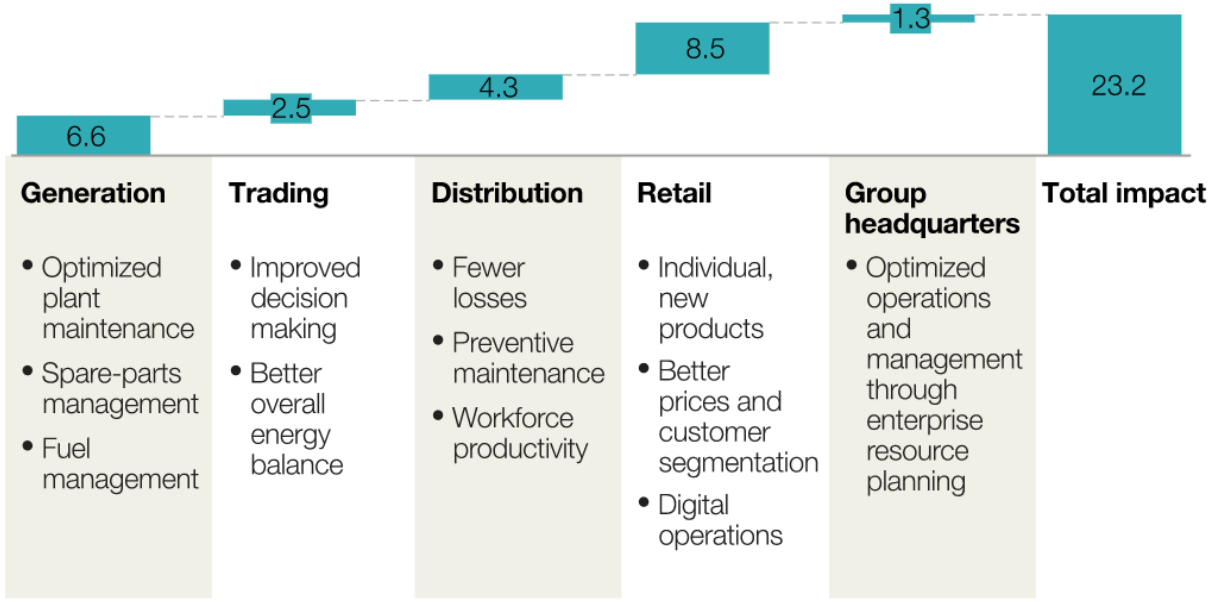
The Digital Utility of the Future capture opportunities all along the value chain*



Source: McKinsey & Company

Digitization has demonstrable impact on Utility Earnings

Improvement areas, case study, EBIT,[1] %



[1]Earnings before interest and taxes.

*SOURCE: MCKINSEY & COMPANY

Trilliant®

Digital Transformation is Focused on Key Action Areas

New Frontiers		
Emerging Themes	• Smart Grid • Smart Home • Connected Building • Distributed Generation	• Energy Services • Preventive Maintenance • Digital Billing • Digital Commerce
Core Transformation		
Customer Experience Design	• Digital frontend processes • Multichannel commerce • Digital marketing & social media	• Integrated digital & physical experience • Customer lifecycle management • Customer experience management
Digitize products and components	• Open innovation • Digital innovation	• Intelligent products and components
Value chain	• Automated back-end processes • Automated analytics and intelligence	• End-to-end digitization • Workforce productivity
Technical & organizational principles		
Technology	• System and data architecture (two-speed IT) • Mobile interactive devices	• Connectivity • Big data & advance analytics • Data security
Organization & culture	• Project culture • Cross functional cooperation • Flat hierarchies	• Digital talent • Agility

Trilliant®

The Power of Digitalization will Accelerate the Energy Transition

- Digital technology can play a key role in helping to accelerate the energy transition.
- Bringing digital technologies to scale could reduce emissions by up to 20% by 2050 in 3 highest-emitting sectors: energy, materials, mobility
- Better use of data
- The technology is important, but a large part of the challenge is about cultural transformation, too.

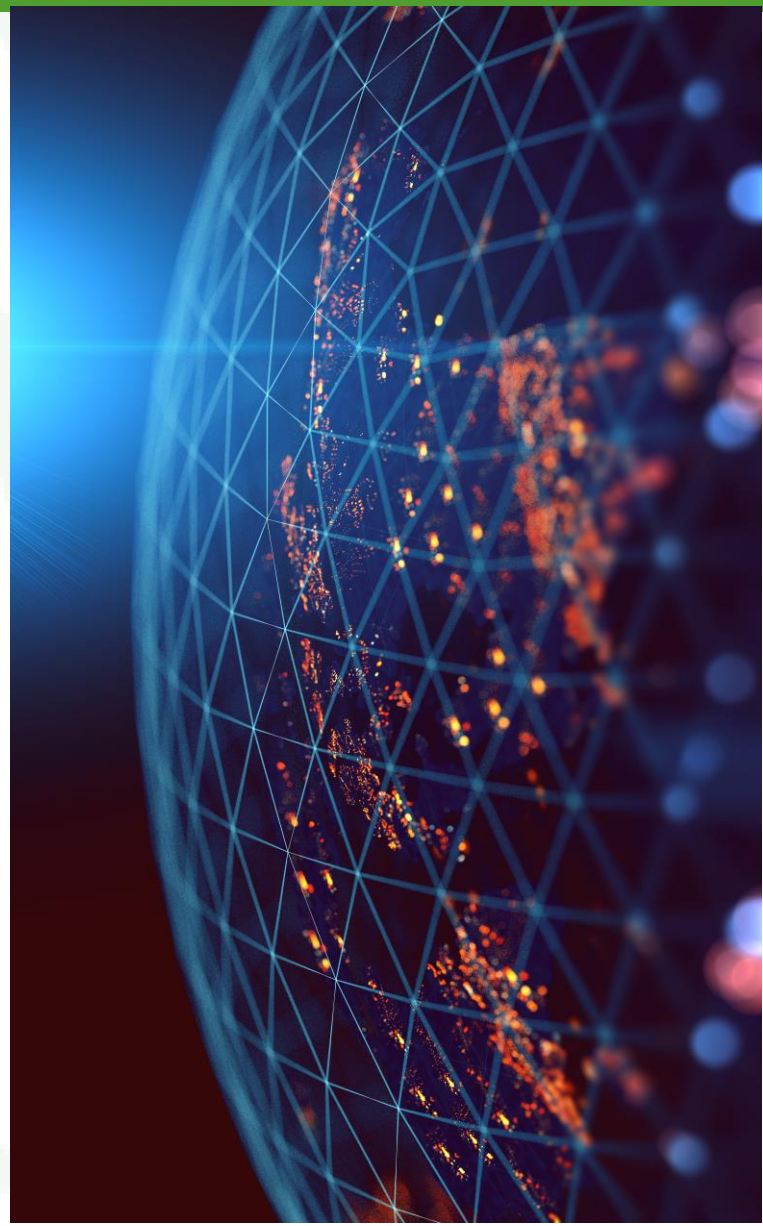
An analysis by Accenture, in collaboration with the World Economic Forum, states that ***"digital technologies, if scaled across industries, could deliver up to 20% of the 2050 reduction needed to hit the International Energy Agency net-zero trajectories in the energy, materials and mobility industries".***

Trilliant®

Thank you to all the attendees who have joined our session today!

We are a proud sponsor, and appreciate our collaboration with

Enlit Asia



For any enquiries, you can reach me at Eugene.Loke@trilliant.com or visit us at https://trilliant.com/

DISCOVER THE *Power Of Choice*

Trilliant®