The Hyperconnected Digital Fabric

Multiplying Value Creation Through Digital Businesses and Digital Ecosystems

Linus Lai
VP Digital Business, Trust, Services and Chief Analyst ANZ

Navigating the Storms of Disruption

Changing Environmental Targets/Regulations

Inflationary Pressure

Supply Chain Disruptions

Cybersecurity Threats

Global Health and Pandemic Concerns

Talent Skills Gap

Political Risks/Government Interventions

> "My view is that the CIO's role is to create and orchestrate an environment that enables the technology team to shine and to bring the transformative power of digital technologies to life in the organization. When they shine, they have the confidence and competence to deliver more projects and initiatives – so the rate of innovation increases."

Dr Steve Hodgkinson
CDO, Victoria Police

The Big Tech Flip

Learn from the Past to Analyze the Future

Comms Flip

Content Flip

Data Flip

PAST

CURRENT

FUTURE

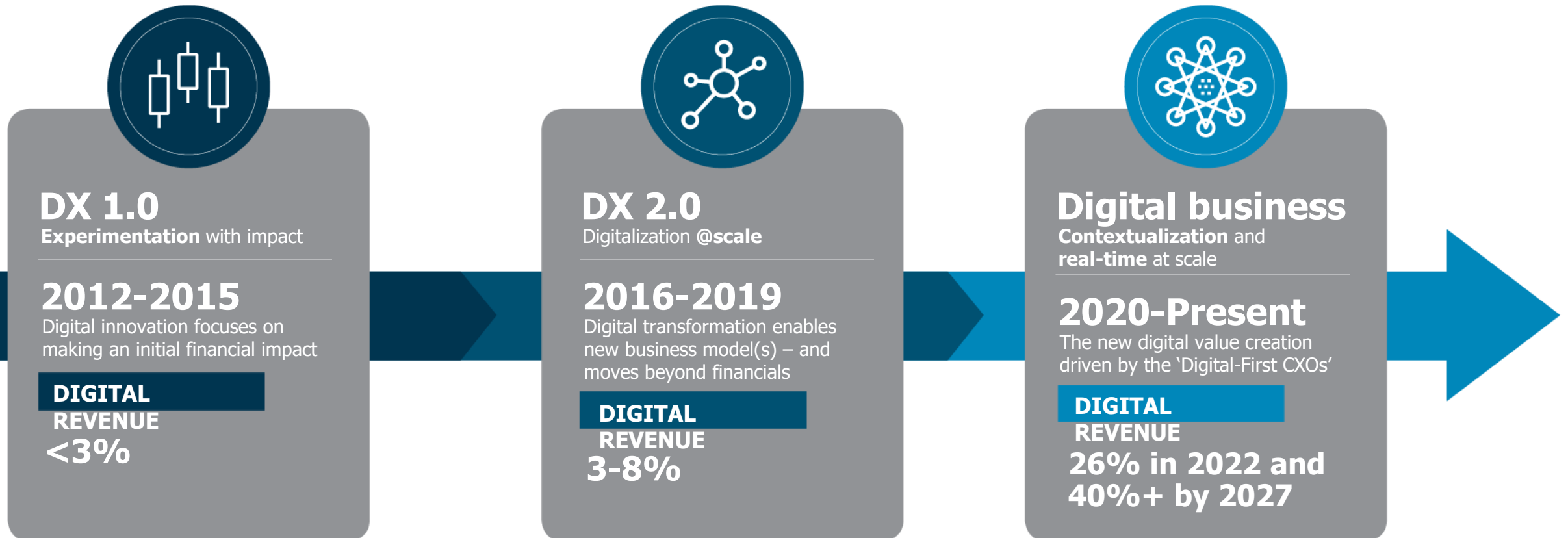**30 Years**

5 Years

2022 and beyond

Fungible to Non-Fungible:
• Zero data trust
• Real-time reconciliation
• Persistent experiences

Tech for Business to Tech to Compete:
• Tech dependent supply chain
• Autonomic control systems
• As-a-service business models

Network Flip

Engagement Flip

Industry Flip

A New Digital Era: From Digital Transformation (DX) to Digital Business

DX 1.0
Experimentation with impact

2012-2015
Digital innovation focuses on making an initial financial impact

DIGITAL
REVENUE
<3%

DX 2.0
Digitalization @scale

2016-2019
Digital transformation enables new business model(s) – and moves beyond financials

DIGITAL
REVENUE
3-8%

Digital business
Contextualization and real-time at scale

2020-Present
The new digital value creation driven by the 'Digital-First CXOs'

DIGITAL
REVENUE
26% in 2022 and 40%+ by 2027

Value Creation Within the Digital Business Fabric

Business Model

CEO Priority #3

Actively seek growth opportunities with a focus on innovation and disruption

DATA

ECOSYSTEM

Digital Business Platform

CEO Priority #1

Optimize organization's business processes and workflows

Operating model

Organization model

CEO Priority #3

Creating a culture of innovation and agility

Source: IDC European DX Practice, 2021

Industry Strategic Priorities

Connected Banking
- Connected corporate banking
- Digital lending
- Digital trust and stewardship
- Efficiency and agility
- External ecosystem
- Next-gen payments
- Omni customer engagement

Contextual and Value-Centric Insurance
- Cognitive Competencies
- Frictionless insurance
- Omni-Experience Engagement
- Usage- and value-oriented offerings

Value-Based Health
- Convenient access to care
- Customer centricity
- Financial and clinical risk mgmt.
- Operationalizing data and information

Transformative Academia
- Campus of the Future
- Faculty empowerment
- Funding and partnership enhancement
- Lifelong student engagement
- Next-gen administration
- Optimized student health

Effective National Government
- Data-driven services
- Economic dev., int'l relationships and civic engagement
- Intelligent transportation
- Modernized security/justice
- Revenue/monetary mgmt.
- Sustainable energy/resources

Agile Mining Ops
- Agile integrated ops
- Connected assets
- Digital exploration
- Next-gen safety/sustainability

Agile Energy
- Connected assets
- Digital refining
- Digital upstream
- Next-gen safety

Experiential Retail
- Curated merchandise life-cycle mgmt.
- Digital supply-chain optimization
- Omni-channel commerce
- Omni customer engagement
- Operational scale and agility

Experiential Hospitality, Dining and Travel
- Connected journey/experience
- Digital customer engagement
- Digital supply-chain optimization
- Omni-channel ordering/distribution
- Operational scale/agility

Manufacturing
- Digital supply chain
- Smart manufacturing
- Omni consumer engagement
- Connected customer engagement
- Innovation acceleration
- Product-as-a-platform
- Digital channels

Source: IDC DX Use Cases 2023

Example: Digital Retail

Operational execution
- Mobile inventory information management
- Mobile task management
- Mobile customer engagement
- Mobile commerce

Connected Workforce
- Digitized workforce management
- Empowered worker
- Augmented knowledge worker
- Robotic workforce
- Digital sales training and execution

Profitability Optimization
- Sustainable environment management
- Asset management
- Physical safety and risk management
- Venue portfolio
- Revenue/margin optimization audit and exception analytics
- management

Touchless IT Operations
- Process optimization
- Connectivity infrastructure
- Digital transformation and modernization
- services

Experiential Commerce
- Commerce services
- Digital content management
- Cashierless checkout
- Headless commerce
- Next-generation payments
- Buy now pay later

Intelligent Order Fulfillment and Returns
- Omni-channel order orchestration and fulfillment
- Real-time inventory management

Augmented and Virtual Experience
- Virtual and augmented engagement
- Digitally connected product experiences
- Augmented and virtual product discovery
- Live streaming product discovery and purchase

Operational execution
- Dynamic supply network management
- Supply forecasting and planning
- Collaborative product design and duty forecast
- On–demand supply chain/PCaaS
- simulation

Optimized Fulfillment Operations
- Predictive network inventory orchestration
- Advanced tech augmented work
- Optimized operations
- Advanced enterprise reverse logistics execution

Intelligent Product Design
- 3D product design and review
- Crowdsourced ideation and innovation
- Sustainable product
- life-cycle design

Curated Product Assortment and Positioning
- Assortment optimization
- Sentiment analysis
- Life-cycle pricing optimization
- Collaborative analytics for merchandising and marketing

Product Innovation
- B2B networks/ marketplaces
- Digital product life-cycle management
- Global product requirements compliance fulfillment as a product management

Supply Chain Accountability
- Traceability
- Smart financial supply chain
- Supply chain safety and compliance
- Sustainability reporting / marketing

Last-Mile Operations Execution
- Click-and-collect optimization
- Last-mile same-day delivery optimization
- Fulfill-from-store space and packaging optimization
- Inventory locating

Operational Scale and Agility

Omni-Channel Commerce

Digital Supply Chain Optimization

Curated Merchandise Life-Cycle Management

Omni-Experience Customer Engagement

Next-Generation Customer Care
- Optimized customer relationship/loyalty programs
- Omnichannel customer support
- Social marketing

Customer Experience Analytics
- 360-degree connected customer data management
- Customer experience and behavior analytics
- Digital content optimization
- Customer experience process management

Contextualized Experience
- Contextualized marketing
- Optimized promotion development and distribution
- Omni-channel marketing and advertising
- Intelligent mktg. analytics for measurement and insight

Source: IDC DX Use Cases 2023

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Digital-First CEOs Looking to Exploit Digital Ecosystem Opportunities

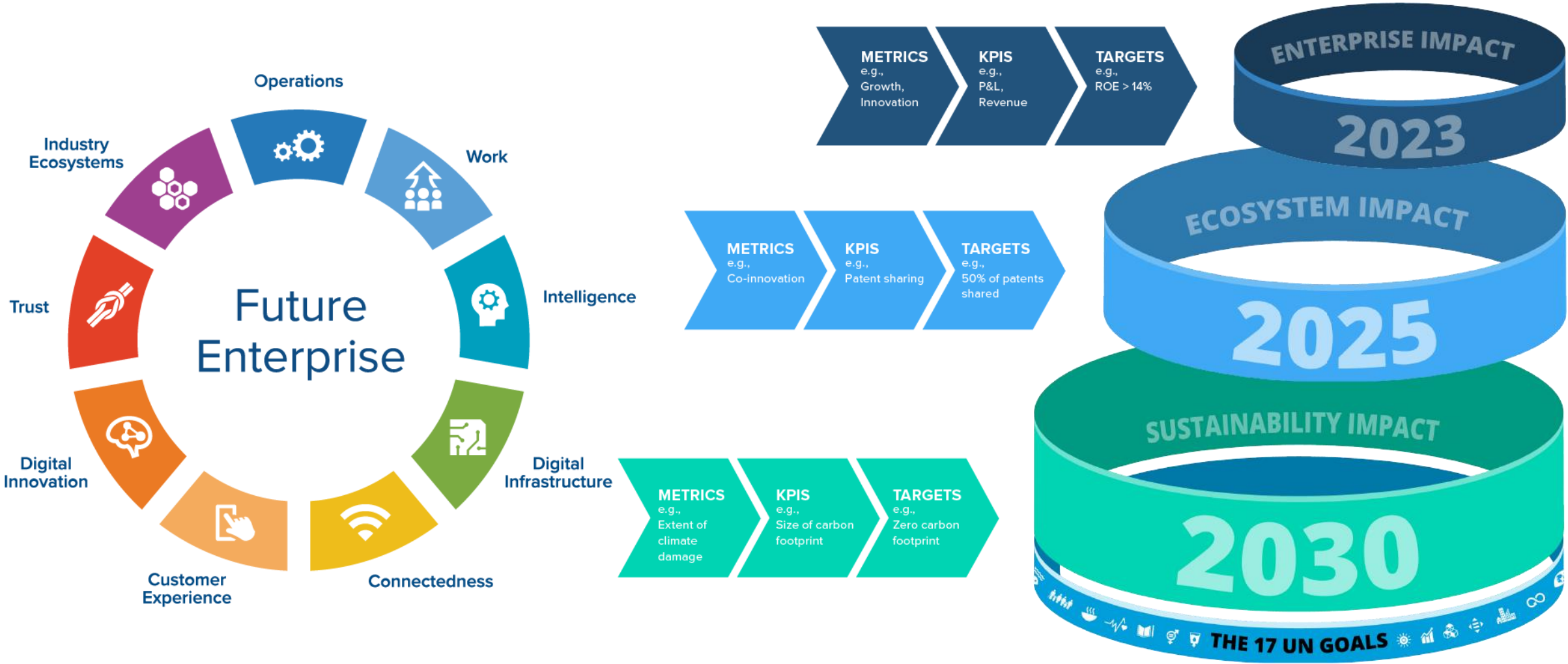|	
Active participation in digital ecosystems	**97%**
Tap into pent-up consumer & customer demands	**94%**
Access to government stimulus	**91%**
New digital innovation investments	**91%**

By the end of 2023, organizations that engage with their ecosystem partners will increase profitability by
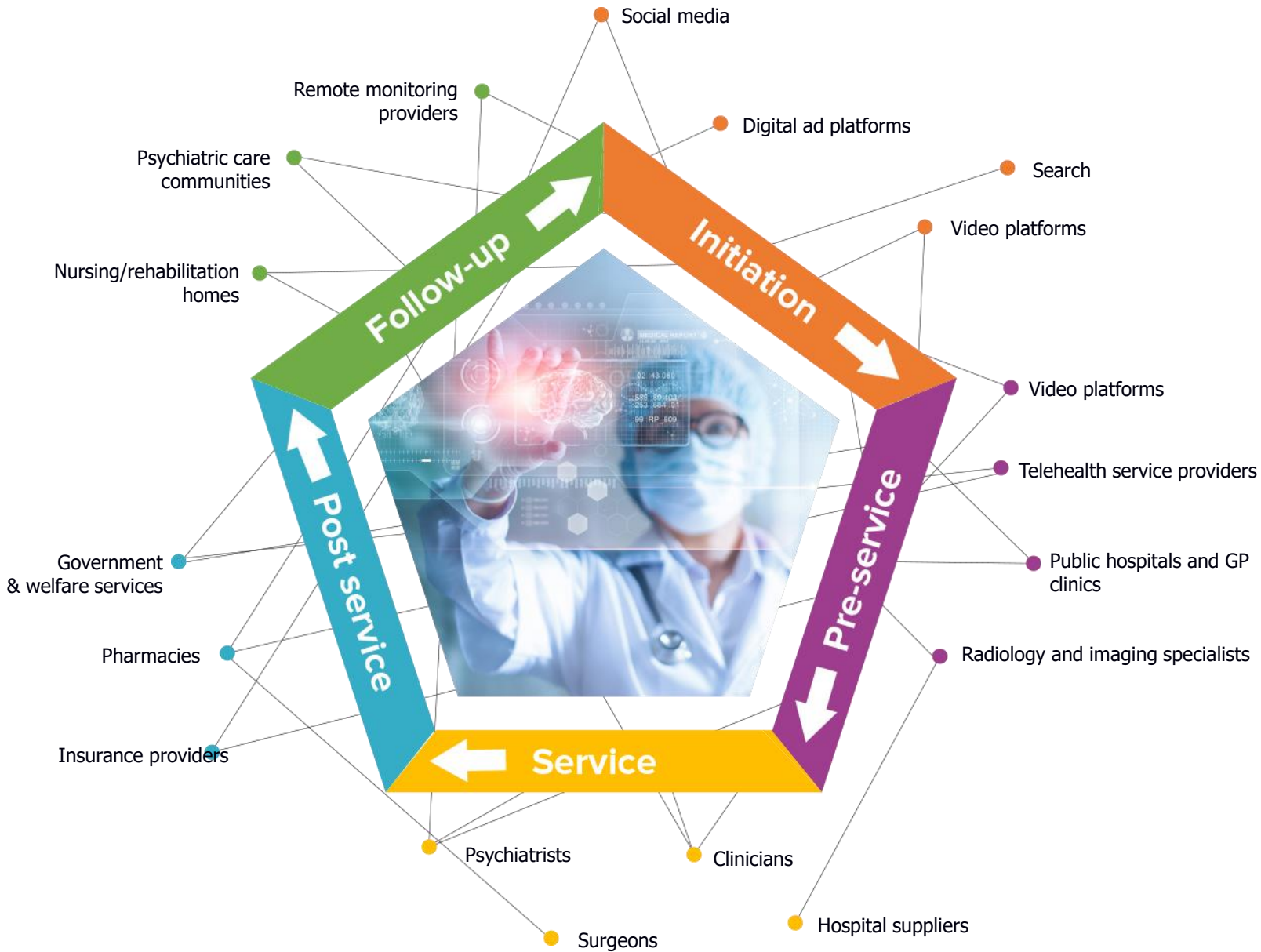
5 percentage points

Redefining Business Value for the Digital-First Era

Introducing the IDC Future Enterprise Business Value Framework

Social media

Remote monitoring providers

Digital ad platforms

Psychiatric care communities

Search

Nursing/rehabilitation homes

Video platforms

Follow-up

Initiation

Video platforms

Telehealth service providers

Post service

Pre-service

Government & welfare services

Public hospitals and GP clinics

Pharmacies

Radiology and imaging specialists

Insurance providers

Service

Psychiatrists

Clinicians
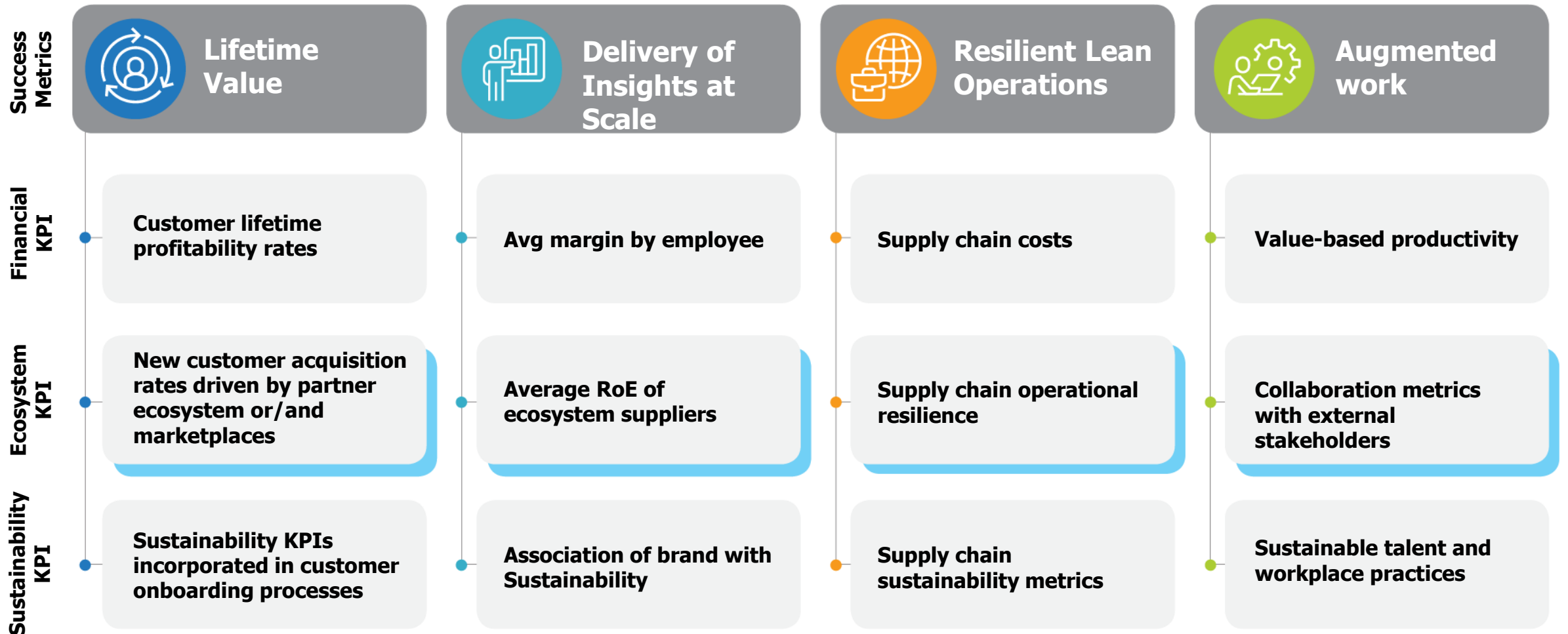
Surgeons

Hospital suppliers

> "The platform is now configurable by organization, geographies, localization, regulatory jurisdictions and any health service specialization, anywhere in the world, effectively delivering a highly secure, compliant next-gen EMR that is fully scalable and can be augmented with the consumption of external services, such as radiology, pathology, AI, machine learning, mental well-being, counselling, financial, reporting, third-party products and services, and much more through the DCE's partner certification program soon to become DC2Vue's marketplace

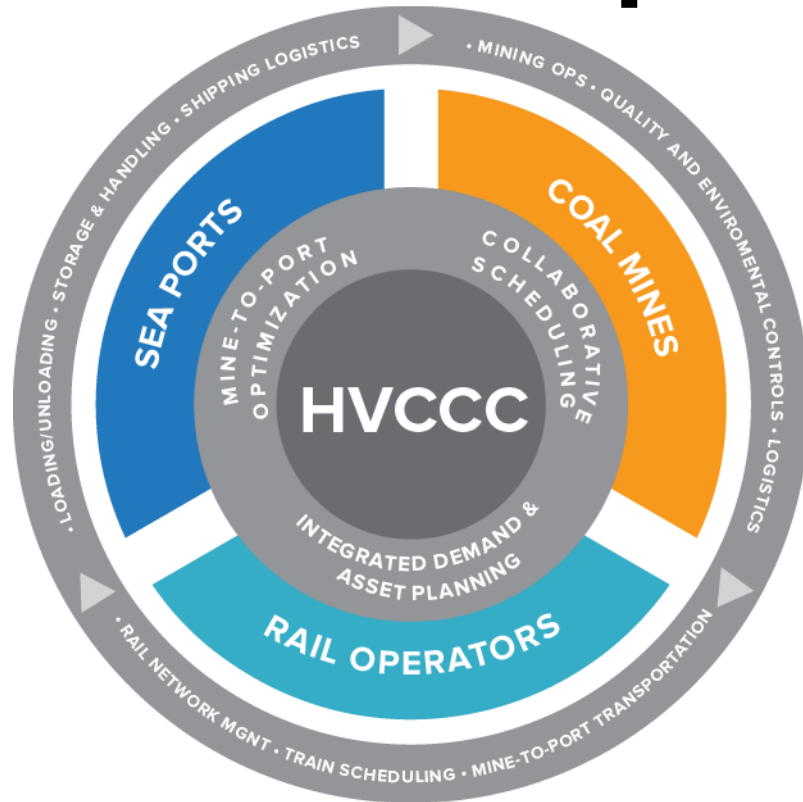**Jorge Silveira**
Chief Digital Health Officer
Virtus Health

Leading Metrics for a Business Value Scorecard - Success Metrics & KPIs

Success Metrics	Lifetime Value	Delivery of Insights at Scale	Resilient Lean Operations	Augmented work
Financial KPI	Customer lifetime profitability rates	Avg margin by employee	Supply chain costs	Value-based productivity
Ecosystem KPI	New customer acquisition rates driven by partner ecosystem or/and marketplaces	Average RoE of ecosystem suppliers	Supply chain operational resilience	Collaboration metrics with external stakeholders
Sustainability KPI	Sustainability KPIs incorporated in customer onboarding processes	Association of brand with Sustainability	Supply chain sustainability metrics	Sustainable talent and workplace practices

Source: Introducing the IDC Future Enterprise Value Framework, 2022

E2E Mine-to-Port Operations

The Hunter Valley Coal Chain Ecosystem

Over 24,000 square km
> 40 active mines
3 rail operators
3 sea ports

> HVCCC is now in the unique position of storing data in a logical model that not only captures the physical performance of assets, but also every single decision and change made in the planning and execution process. This allows HVCCC to closely track every aspect of the supply chain from the moment an order is placed, to a loaded vessel leaving the harbor, and everything in between.

Chris Seysener, CIO,
Hunter Valley Coal Chain Coordinator

The Case for Hyperconnectivity

Multiple Clouds

01   **Workload Control Plane**

Multiple Clouds

- Optimize performance
- Provide flexibility
- IT resilience

From Outsourcing to FinOps:
- Cloud economics
- Sourcing
- Industry clouds

Multiple Applications

02   **Enterprise Control Plane**

Business operations resilience

- Economies of Intelligence
- Knowledge productivity
- Business operations resilience

From Integration to Automation
- Data semantics
- Process autonomy
- Decision efficacy

Multiple Ecosystems

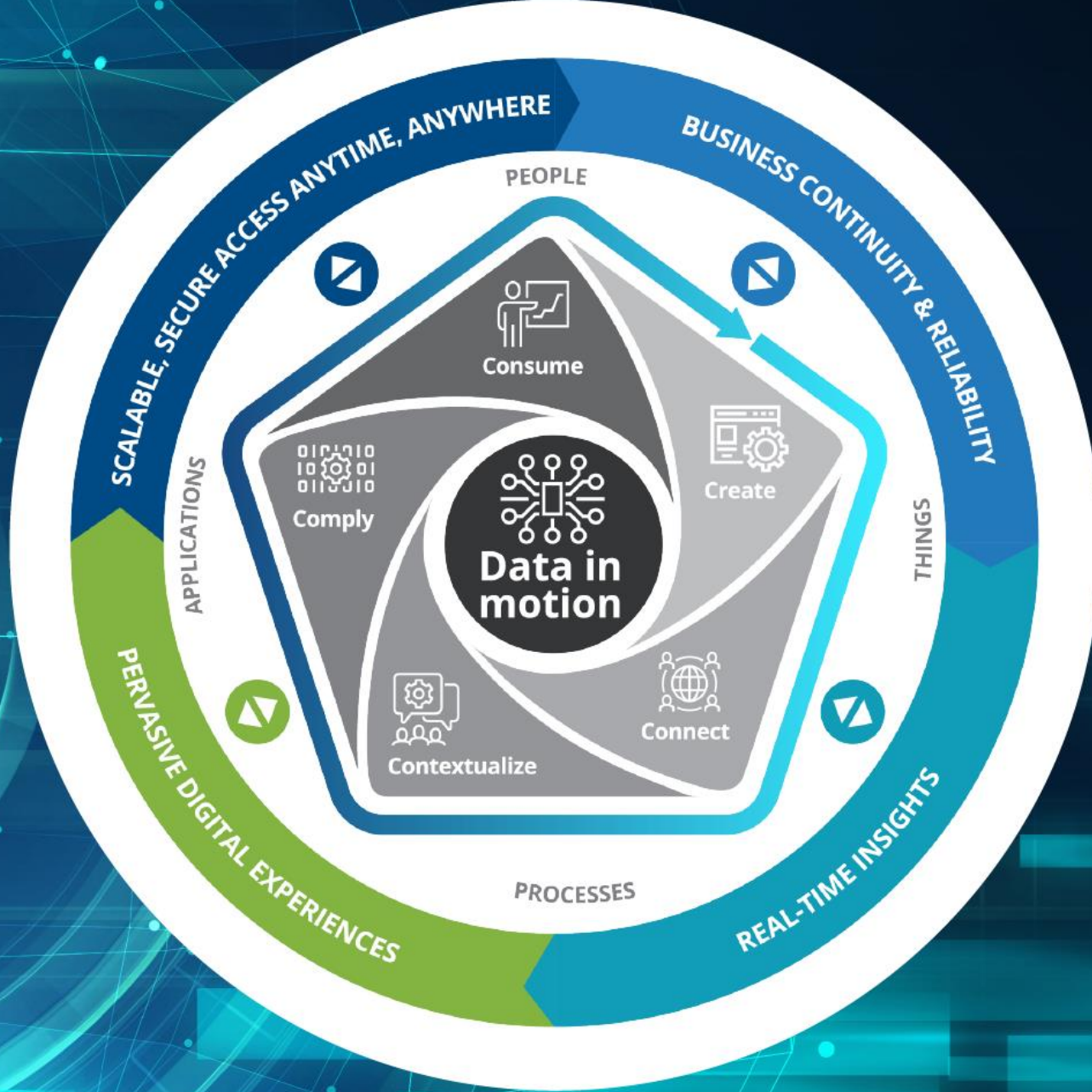**03**   **Ecosystem Control Plane**

Industry value stream resilience

- Visibility for social responsibility
- Trusted virtual joint ventures
- Industry value stream resilience

From App Dev to Digital Engineering
- Software-base product innovation
- New business models
- Blockchain

The Future of Connectedness

Connecting People, Processes, Applications, and Things with Data in Motion

Conclusion

Every digital business is inherently connected and must develop **hyperconnectivity**

Organizations must develop capabilities in the *Future of Connectedness*

Organizations that exploit *digital ecosystems* will increase profitability ahead of peers

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