By Martin Creaner, Author of *Delivering the Digital Economy*

Telco digital transformation

THE CONDITIONS, JOURNEYS, AND DESTINATIONS

Three things telcos must do

Digital transformation must provide a range of benefits to telcos that help address the key challenges facing the industry today.

First, transformation must significantly improve the B2B and B2C customer experience if telcos wish to compete with OTT players. Second, transformation needs to meaningfully boost a telco's efficiency and agility. And third, it must enable them to maximize revenue from both traditional and new digital services. If telcos can achieve all three, research from Huawei, the World Economic Forum, and other sources estimate that digital transformation could generate US$1.5 trillion in profits over the next ten years.

Transforming everything

The biggest hurdle to overcome with digital transformation is to understand that it isn't just a simple technology challenge – it covers every part of the telco business.

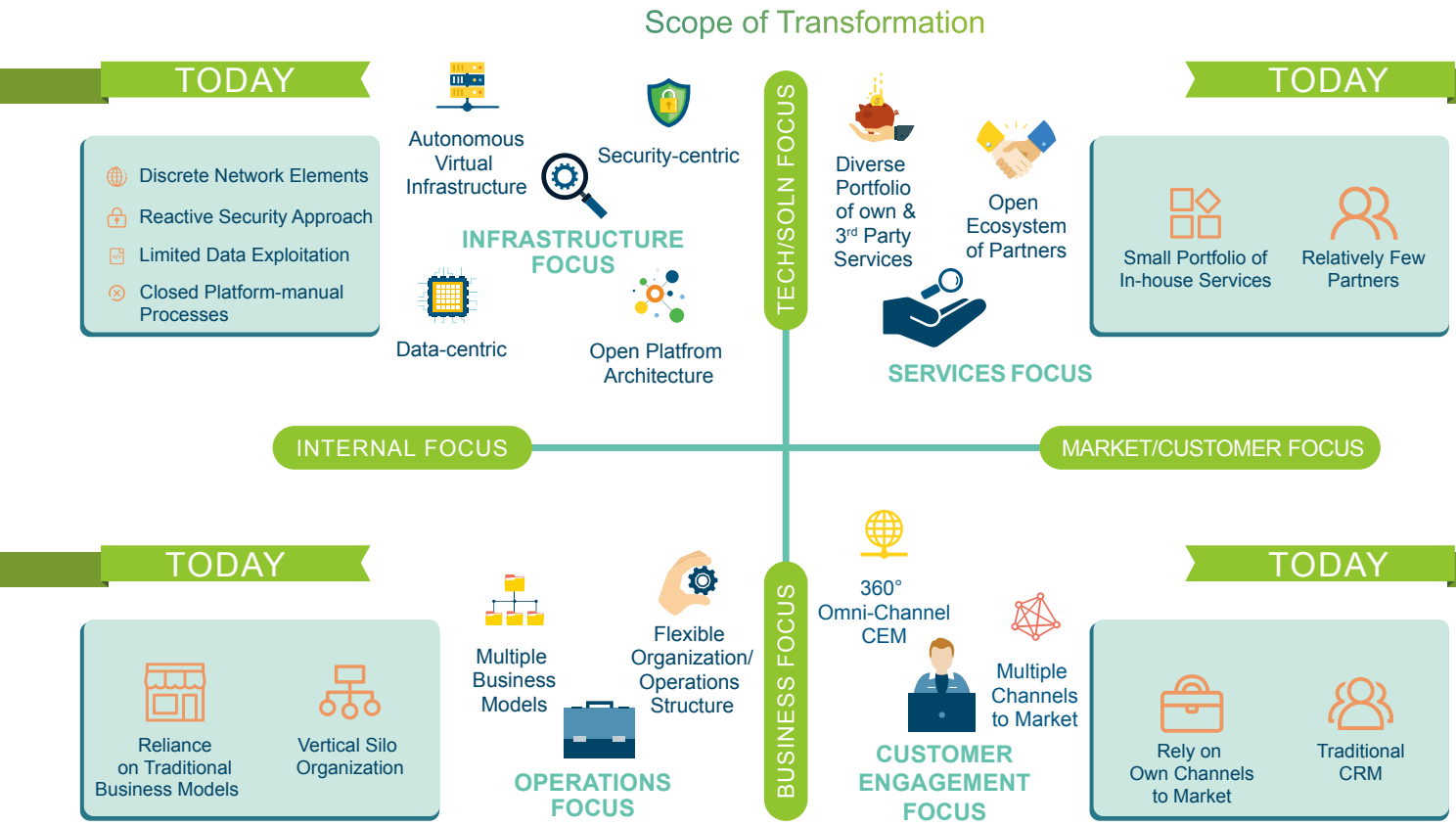
In the "Scope of Transformation" diagram, the vertical axis recognizes the range of transformation, from core technologies to how telcos do business. The horizontal axis shows that transformation needs both an inward focus that changes how the telco operates and an outward focus covering how it engages with the market.

This results in what I consider to be the ten major journeys that a telco can travel on the path to true transformation.

Ten journeys to the top

Journey 1: From discrete network elements to an autonomous virtualized communications and cloud infrastructure. The telco's infrastructure will evolve from discrete network elements to a highly autonomous set of communications and cloud infrastructure, which can be managed at extremely low cost. NFV/SDN next-gen networks are making this first journey a reality for many telcos, but the cost,

Back in the 90s, MIT's Nicholas Negroponte said, "Anything that can be digital will be digital." That's finally coming true. Digital services are extending way beyond movies and books to embrace every possible service in every major global vertical industry. But for telcos to take advantage of the opportunities offered by the digital economy, digital transformation is a must.



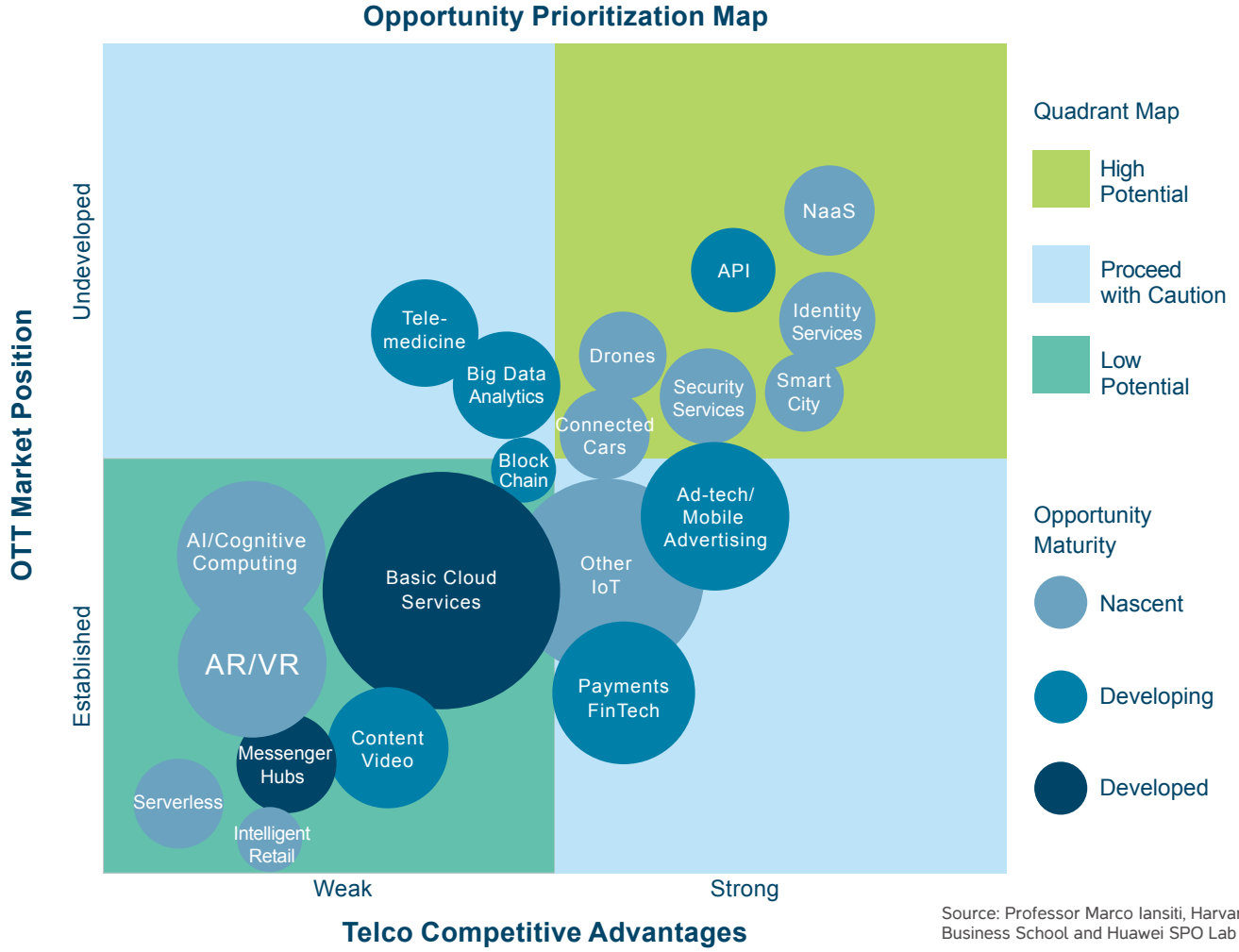
Source: Huawei SPO Lab

complexity, and disruption are huge.

Journey 2: From reactive product-specific security to uniformly orchestrated security. Third parties will be increasingly involved in the delivery of digital services across channels provided by telcos. Frequently, these services have higher security requirements that necessitate complete, business-wide security transformation covering the full technology stack, service creation process, partners, physical environment, and all stakeholders that deliver and use a given service.

Journey 3: From limited data exploitation to a uniformly orchestrated data-centric enterprise. Telcos must develop a single coordinated approach for the collection, analysis, distribution, security, and monetization of big data derived from infrastructure,

Opportunities for telcos based on competition from OTT/internet players and telcos' competitive advantages at their current levels of maturity



Source: Professor Marco Iansiti, Harvard Business School and Huawei SPO Lab

services, social channels, business, and third-party sources. The success of all entities in the digital economy will largely depend on how well they use data, both for internal business optimization and external monetization.

Journey 4: From a closed management infrastructure to a platform for open services. Platform business models are driving the global digital economy, but the role of telcos isn't yet clear. However, it is clear that telcos must evolve their closed environments, which focus on designing and delivering their own services, to open platforms for developing both their own and third-party services under a wide ecosystem.

Journey 5: From a limited portfolio of own services to managing a diverse portfolio of own and third-party services. As the digital economy expands, digital telcos must expand their service portfolios far beyond their current scope. They must also learn which service niches best suit their competencies and define how to manage these diverse service portfolios. They can do so by identifying their competitive advantages and the relative market strengths of competing OTT players. The Opportunity Prioritzation Chart on page 9 shows where telcos' competitive strengths may lie and where they correspond to the currently under-developed OTT market position and investment.

Journey 6: From a limited set of supplier relationships to an open ecosystem of partnership relationships. A digital telco will only be able to expand its service portfolio by changing its approach to the wider ecosystem, engaging with more players, and developing ecosystem management processes that move at Internet speed rather than traditional telco speed.

Journey 7: From a limited set of telco business models to multiple value creation and capture approaches. A larger service portfolio will need to embrace a much wider range of value creation and capture models. Telcos need to transform in a way that lets them seamlessly pivot to a business model that enables a specific service to be successful, which may in turn require fundamental changes to financial processes, business case processes, and enterprise cost base.

Journey 8: From a vertical silo to flexible organization, culture and operations. A wide digital service

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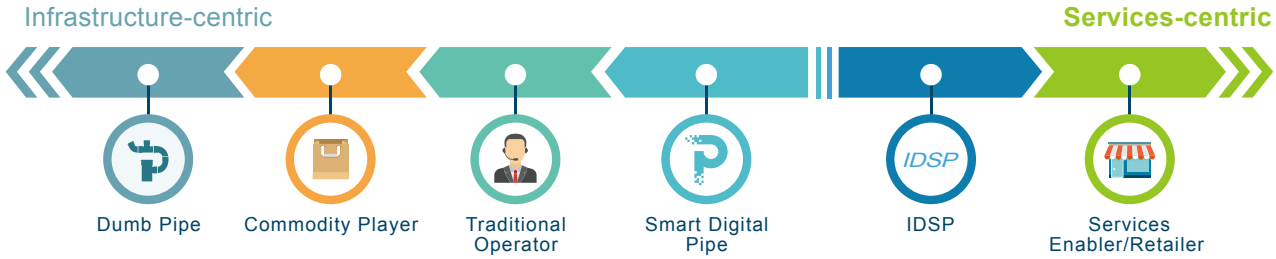
portfolio that's monetized via multiple channels and business models – and that's delivered across an extensive partner ecosystem – requires a commensurate organization and cultural change, which is perhaps the most difficult transformation journey to map and the most painful to travel. But a new culture, set of skills, and operating style that adapts to different parts of the business are essential prerequisites for a digital telco.

Journey 9: From focusing on own channels to market to adopting multiple channels for different vertical markets. With a service portfolio that expands across multiple vertical markets, a digital telco will need to open up new channels to market to maximize revenue. These channels may be based on a specific vertical, location, or retail scenario and lack a service development capability. They may require new operating processes, new ways of incentivizing employees, and new paths for aligning business criteria to vertical market expectations, rather than sticking to telco norms.

Journey 10: From one dimensional management of customer relationships to 360-degree omni-channel management of the whole customer experience. Many telcos are embarking on this transformation process, which requires changes to systems, processes, and culture. These changes can empower all key stakeholders to make smart decisions on-the-go based on the right data. An omni-channel CEM environment will enable digital telcos to capture, store, process, and expose customer data in near real time from all channels.

Five digital destinations

Digital Transformation Scale



Source: Accenture Strategy & Huawei SPO Lab

Not all telcos will arrive at the same destination. While most believe that successful digital transformation involves evolution into a sophisticated digital service provider, by 2025 most telcos will look like something resembling the dumb pipe – closer on the transformation scale to infrastructure-centric than service-centric!

Dumb Pipe: This telco is pure infrastructure and no longer owns a B2C customer relationship. It provides highly efficient connectivity, selling under a wholesale B2B2C model.

Commodity Player: This telco focuses on core competencies like network, marketing, and sales. Some limited B2C customer ownership allows it to be a B2B and B2C partner in a pseudo-protected market environment.

Smart Digital Pipe: This telco develops strong partnerships with web and OTT players, with a strong focus on B2B2C and infrastructure QoS boosted by regulatory protection on core business.

Requirements for Different Digital Transformation Journeys

		Dumb Pipe	Commodity Player	Smart Digital Pipe	IDSP	Services Enabler/Retailer
DIGITAL INFRASTRUCTURE	Autonomous Virtual Infrastructure	High	High	High	High	Low
	Security Centric	Med	Med	High	High	Med
	Data Centirc	Low	Med	High	High	High
	Open Platform API Architecture	N/A	N/A	High	High	Med
DIGITAL OPERATIONS	Flexible Organization Operations Structure	Med	Med	Low	High	Med
	Multiple Business Models	Low	Low	Med	High	Med
DIGITAL CUSTOMER ENGAGEMENT	360°Omni Channel CEM	low	Med	High	High	Med
	Multiple Channels to Market	Low	Low	High	High	Med
DIGITAL SERVICES	Diverse Portfolio of own & 3rd Party Services	N/A	N/A	Med	High	Med
	Open Ecosystem of Partners	N/A	N/A	Med	High	Med

Source: Huawei SPO Lab

Recent analysis by the Huawei SPO lab indicates that less than 15 percent of the world's telcos have the right ingredients to become an IDSP, and instead should set their sights on becoming a finely tuned dumb pipe or smart pipe.

Integrated Digital Services Provider (IDSP): This telco offers access and connectivity, enablement to B2B2C partners, and a full-suite of digital products and services to end customers.

Services Enabler/Retailer: The ultimate destination where the telco no longer provides network infrastructure, instead serving as a VNO that retails services and enables other B2B2C parties to go to market.

The destination that a telco ultimately reaches depends on many factors, including regulatory environment, ambitions of investors and C-suite executives, and the skill profile of the organization. However, there's a growing consensus that only a very few will successfully transform into competitive IDSPs.

Recent analysis by the Huawei SPO lab indicates that less than 15 percent of the world's telcos have the right ingredients to become an IDSP, and instead should set their sights on becoming a finely tuned dumb or smart pipe, with perhaps additional, structurally separated services in the enabler or retailer business.

Becoming an IDSP will be extremely difficult and few telcos have the financial strength and executive staying-power to make the journey. Becoming a smart pipe will be less complex, but will still require extensive investment in all ten journeys.

Developing a service enabler or retailer business also requires investment across most of the ten journeys, but is more achievable if the service business is created as a new stand-alone business rather than as an evolution of an existing one. A gradual evolution into a dumb pipe or commodity player is the path of least resistance for telcos, requiring the least change and least investment. It's therefore the most likely destination for many telco transformations.

A complex reality

We've suffered over recent years by looking at transformation as a monolithic transformation program, primarily technical in nature, with the goal of becoming a new-generation digital services provider. The reality is much more diverse and complex.

The digital transformation journeys that a telco must undertake will vary greatly depending on whether the telco expects to become a dumb pipe or an IDSP, but each journey needs to be planned separately and prioritized differently depending on the final destination target.