Design for digital
A business vision to prepare communications service providers for the cognitive era

IBM

1. Digital disruption—
Good news and bad news

Digital disruption is being felt across industries as diverse as retail, air travel, consumer electronics, entertainment, tourism and transportation. Until recently CSPs have been relatively protected from this disruption but that is no longer the case—and the pace of change is accelerating.

The most obvious examples of disruption are where an existing competitor adopts a new business model or where a completely new entrant changes the look and feel of an entire industry.

Companies failing to react quickly enough go out of business or are seriously damaged by these disruptive events. They include household names such as Kodak, Nokia, Radio Shack, Borders, Blockbuster, Blackberry, Tesco and Sears.

The unifying theme that links the companies that are successfully disrupting their industries is that each of them made fundamental changes to the customer experience. Collectively these companies have changed customer expectations for all industries.

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NETFLIX	From mail order video rental business to an on-demand internet streaming service
UBER	Revolutionized taxi dispatch with an incredibly user-friendly mobile app
airbnb	Leveraged the sharing economy and disrupted the hotel industry
RYANAIR THE LOW FARES AIRLINE	Airline with a "burning platform" forced to radically transform - they went totally online
amazon.com	Developed data-driven technologies pushing the boundaries of how best to do business online
(Apple)	Keeps product choices limited and has reinvented the retail business space
WhatsApp	Free instant messaging that disrupted CSPs' text messaging business
giffgaff	Requires its customers to get service and support from each other online
free	Free disrupted the mobile landscape in France with unlimited voice and data plans

There are serious consequences for CSPs who have typically underperformed other industries when it comes to customer experience. This maybe didn't matter too much when the only competition was from other CSPs and the challenge was to be better than, or at least no worse than the others. When customer expectations are being set by Apple and Amazon then CSPs can no longer hide in their "walled garden". Worse still, the "all IP" economy has dramatically reduced the cost of entry into the communications market so competition comes from unexpected sources at unexpected times.

The emergence of WhatsApp is a great example. CSPs have had a healthy revenue stream from messaging for several years with a worldwide market worth tens of billions of dollars annually. Then along comes WhatsApp and essentially offers the same service for free. WhatsApp didn't take some revenue away from CSPs; it destroyed the revenue stream. This is similar to the way services such as Skype and FaceTime have not taken away revenue from international calling. Instead, they have largely destroyed it as a source of revenue.

Communications Tech Firms

CAGR '15 – '18 4%

Growth of Unique Subscribers WW

CAGR '11 – '14 6%
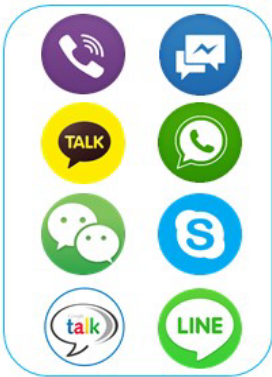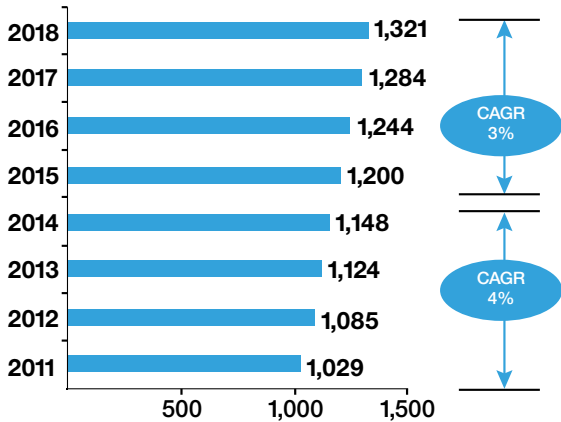
*By 2020, $479B of revenue will be lost by Telcos because of OTT players (Skype, WhatsApp...)

Source: **Ovum,**GSMA report - The Mobile Economy, 2015

Telco Revenue, $B

Year	Revenue
2018	1,321
2017	1,284
2016	1,244
2015	1,200
2014	1,148
2013	1,124
2012	1,085
2011	1,029

CAGR 3%

CAGR 4%

Revenue growth is expected to slow down with a CGR of 3% through to 2020

Cisco boss says half of service providers will be "irrelevant" within a decade

John Chambers, chief executive of tech-giant Cisco, said he expected sweeping changes in the operator landscape, with 50 percent of today's service providers becoming irrelevant in ten year's time as they fail to adapt in a fast-moving digital world.

Mobile World Live, March 3, 2015

This will spread in the next few years with most retail spaces, and indeed whole municipalities, becoming Wi-Fi zones. So what place does a CSP have in this world other than to be the supplier of the digital pipe?

A similar fate is staring in the face of media service providers. Consumers have a fast diminishing need to take on expensive contracts with cable companies, or IPTV providers, to gain access to the TV shows and movies they watch. Over the top providers - Apple, Netflix, Amazon, Hulu and many others have invaded this space and threaten to make the traditional providers irrelevant. As a result many CSPs; triple and quad play strategies of bundling IPTV with their broadband, VoIP and mobile offerings look like too little, too late.

It is not difficult to imagine a future where individual consumers and enterprises do not need a contractual relationship with a CSP, except maybe for broadband access. Imagine a world where Wi-Fi connectivity is ubiquitous.

Consumers will need a broadband connection to their own home or premises, and smart devices for voice, messaging and data. However, the underlying network carrier will be

as irrelevant to them as the providers of electrical power are today. Already, provision of free Wi-Fi is a cost of doing business for many enterprises, from coffee shops to airports. It is taken for granted and is as unremarkable as the provision of heating and lighting.

"Excuse me, but didn't you say there was some good news?"

The really good news about digital disruption is that one way or another CSPs will play a critical role. In the worst case it will be as utility providers, but it can be much more than that. This is not a trivial point. Not all businesses are guaranteed a place in the digital economy, as thousands of book stores and music stores have already found out the hard way.

CSPs have millions of existing customers. They have access to massive amounts of customer data and they have the systems and operational processes to manage their customers, including ordering, provisioning, customer service, billing and payments. Most of all, they have efficient and secure networks that are at the heart of most things digital.

There is a wide variety of companies, and whole industries, that are working out how to get in on the digital economy – banks, healthcare providers, security firms, retailers, transportation and logistics companies, automobile manufacturers and many more. One thing they all need

Telco Data

Product /Service
Media type, Subscriptions, Rate Plans, Category/Classification Price

Customer
Segments, Social Network, Demographics, Gender, Tenure, Rate plan, Credit Rating, ARPU

Network
Availability/Throughput/Speed Latency, Location, Facilities

Transactions
Voice, SMS, MMS, Data & Web Sessions, Click Streams Purchases, Downloads, Signaling, Authentication, Probe/DPI

Device
Class, Manufacturer Model, OS, Media Capability, Keyboard Type

Interface
Discovery, Navigation, Recommendations

Cross Industry Data

Travel and Transport

Travel and Transport

Social Media

Other Industries

Retail Shopping

is access to a secure, robust network. In addition, many of them also need access to the mass customer management solutions that CSPs take for granted.

For the most part, CSPs have been in reactive mode to the digital revolution, trying to respond to Google, Amazon, Apple, Facebook and others as they innovate and set the pace. The big challenge is, how do CSPs transform themselves to become leaders in this new world?

We believe that in an environment that is more and more commoditized and price-driven, differentiation based on superior customer experience will be key. A fresh approach to transformation should be driven by the following design principles:

Put customer experience at the centre of everything you do: Invest in service innovations based on tightly coupled smart network capabilities and digital services to deliver unrivalled digital experiences. This should help your customers to form an emotional engagement with your company and turn them into advocates. Use Design Thinking methodology to design all customer interactions.

Personalize every interaction: Tailor interactions in all phases of the customer lifecycle to the individual and focus on the relationship rather than the transactions. Capitalize on aspects of personalization customers control while enabling where they cannot.

Leverage analytics as a differentiator: Employ disruptive data analytics to better understand customers so you can meet their wants and needs. Enable more real-time data capture and analysis that support decision making at the 'point of impact'.

Automate the ordinary to deliver the extraordinary: Dramatically simplify support functions and business processes to drive out cost and enable staff to focus on service excellence. Simplify interactions without intervention. Integrate presence and services seamlessly across channels and devices using lean principles.

Turn social business into serious business: Get in tune with today's digital consumer by listening to the digital dialogue and becoming part of it; find real influencers and use social tools to collaborate and innovate with customers and partners.