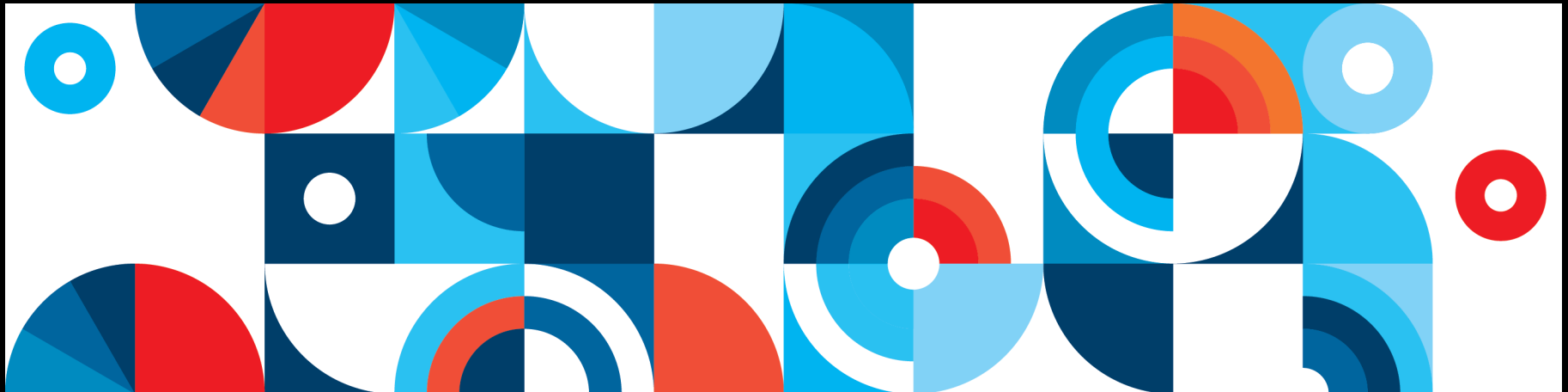SmartCloud

IBM

IBM Institute for Business Value

Ravesh Lala, IBM Corporate Strategy

The Power of Cloud:
Driving Business Model Innovation

Cloud's "game changing" attributes are revolutionizing industry value chains, forcing companies to embrace new business models

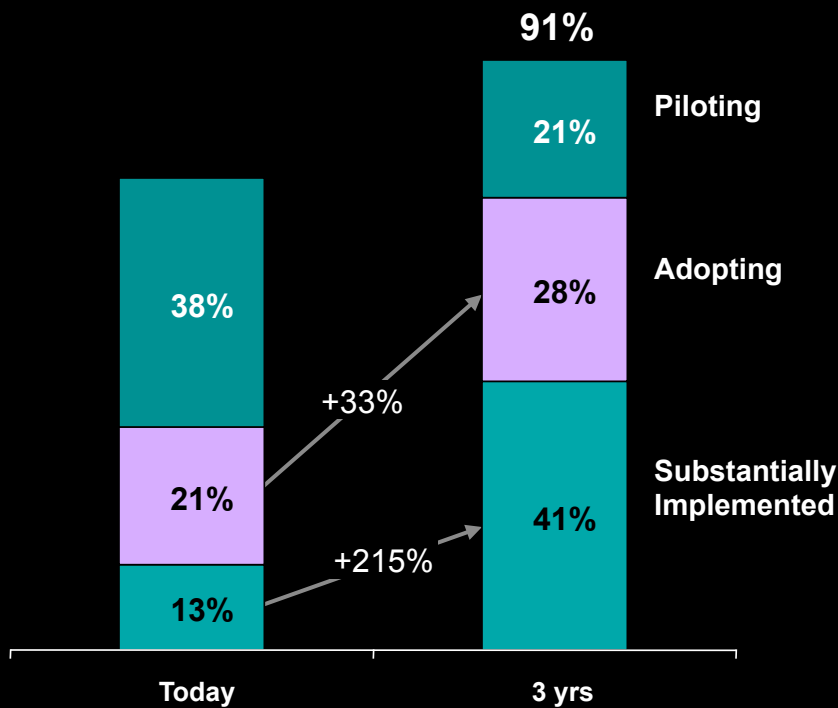# Agenda

Importance of cloud

Cloud business enablers

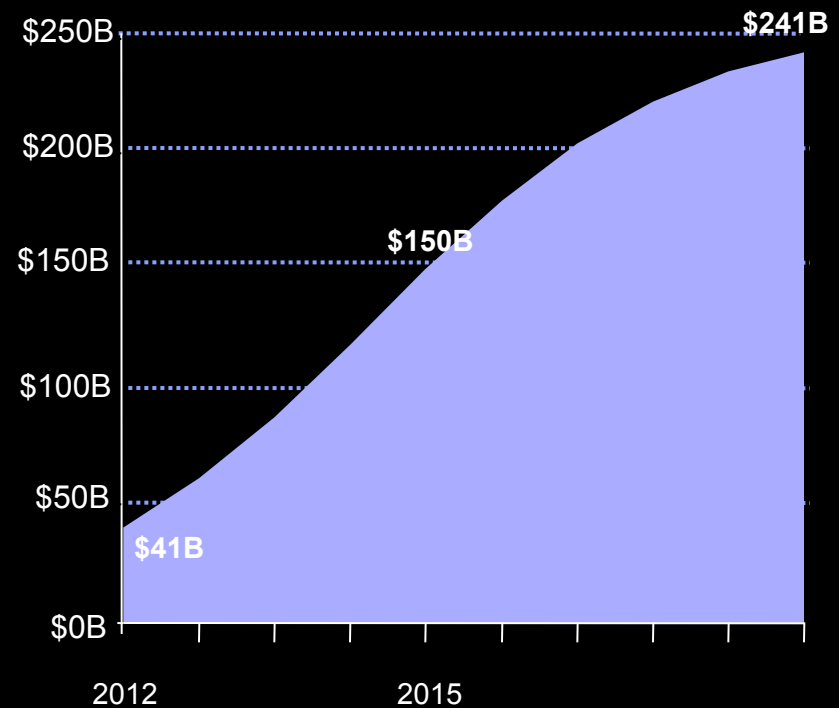Cloud enablement framework and archetypes

Summary and recommendations

Cloud is widely recognized as an increasingly important technology; adoption is expected to accelerate rapidly in the coming years

What is Your Organization's Level of Cloud Adoption?

The Global Cloud Computing Market is Forecast to Grow 22% per year through 2020

91%

Today: 38%, 21%, 13%

3 yrs: Piloting 21%, Adopting 28%, Substantially Implemented 41%

+33%

+215%

Global Cloud Computing Market: $41B (2012) growing to $241B. Reference lines at $150B. Years marked 2012, 2015.

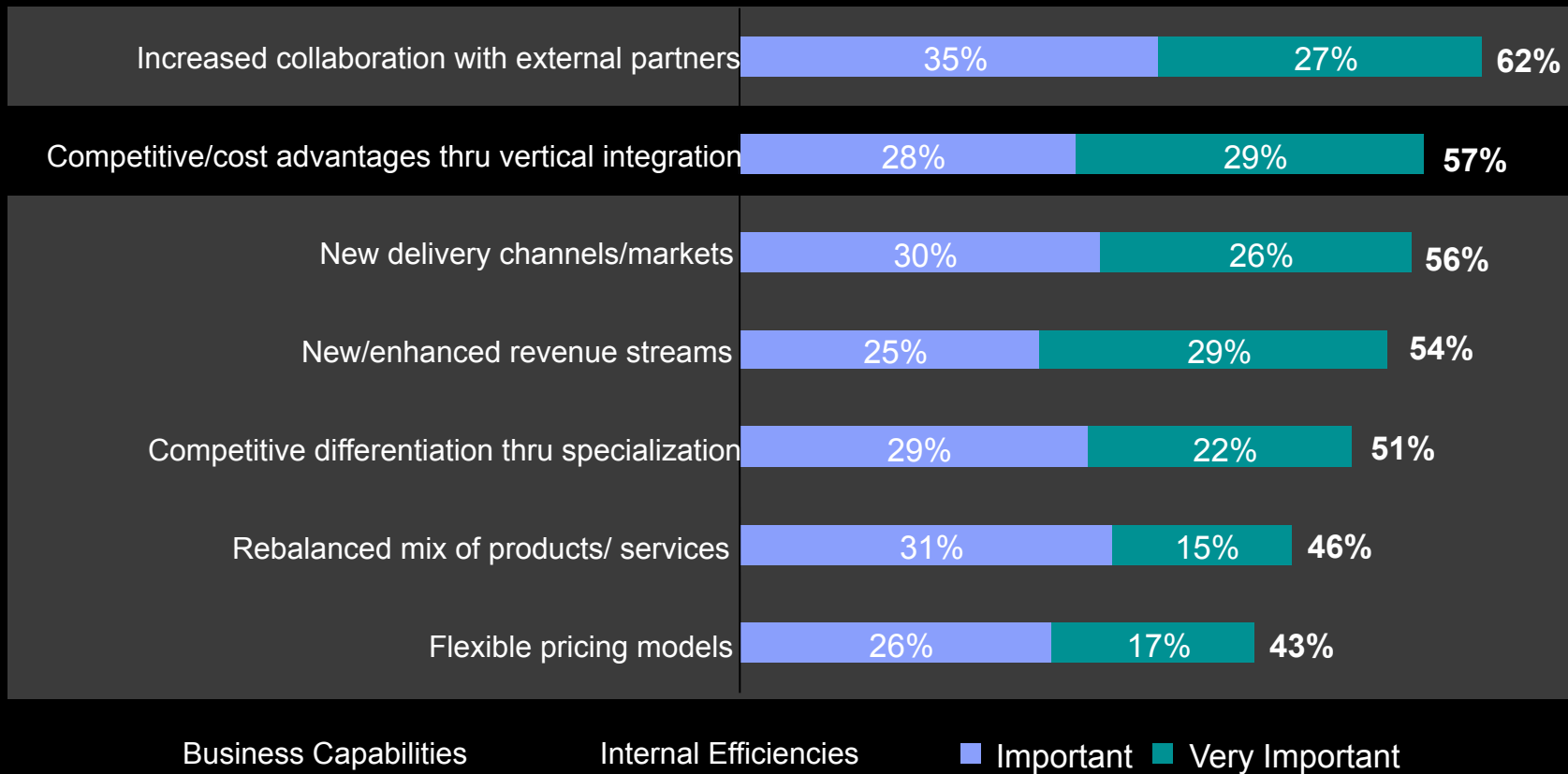*Nearly half (48%) of CIOs surveyed evaluate cloud options first, over traditional IT approaches, before making any new IT investments*

Source: (1) 2012 joint IBV/EIU Cloud-enabled Business Model Survey of 572 business & IT leaders; Q4. Which of the following most accurately describes your organisation's level of cloud technology adoption today and which do you expect will best describe it in three years?
Sizing the cloud , Forrester Research, April 21, 2012; http://www.cio.com/article/684338/Survey_CIOs_Are_Putting_the_Cloud_First

3

Although organizations say they intend to use cloud to solve business issues, almost two thirds relegate it to the IT realm today

How High a Priority is Cloud Adoption for your Organization?

Leading/important priority for IT — 62%

Leading/important priority for entire company — 38%

While only a few visionary businesses today are using cloud for radical business innovation, the number will double in three years

What is the Primary Focus of Your Organization's Cloud Adoption Strategy?

35%	
4%	New business
5%	New industry
10%	Redesign industry
16%	Change industry role

16%
2%
3%
3%
8%

Today **3 yrs**

Over one third (35%) of organizations surveyed plan to harness cloud for radical business model innovation within three years

Cloud helps business and IT create and deliver value in fundamentally new ways

Build enduring customer relationships

Deliver IT without boundaries

Improved speed and dexterity

Transform the economics of IT

Agenda

Importance of cloud

Cloud business enablers

Cloud enablement framework and archetypes

Summary and recommendations

Mobility, social media, increasing digitization and new analytics capabilities are conspiring to drive broad business change

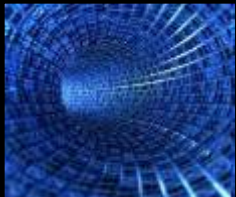## Major Technology Trends driving Business Change

Mobile revolution

Connectivity, access and participation are growing rapidly

Smart devices are becoming the primary route to get connected

Devices are getting smarter as they are increasingly enriched by mobile apps

Social media explosion

Social media is quickly becoming the primary communication and collaboration format

GenY's or "digital natives" use of technology and social media platforms is accelerating adoption

Enterprises are adopting social media but are struggling to realize the value and manage risk

Hyper digitization

Digital content is produced and accessed more quickly than ever before

Internet traffic is growing globally driven by consumer use of video, mobile data, interconnectedness

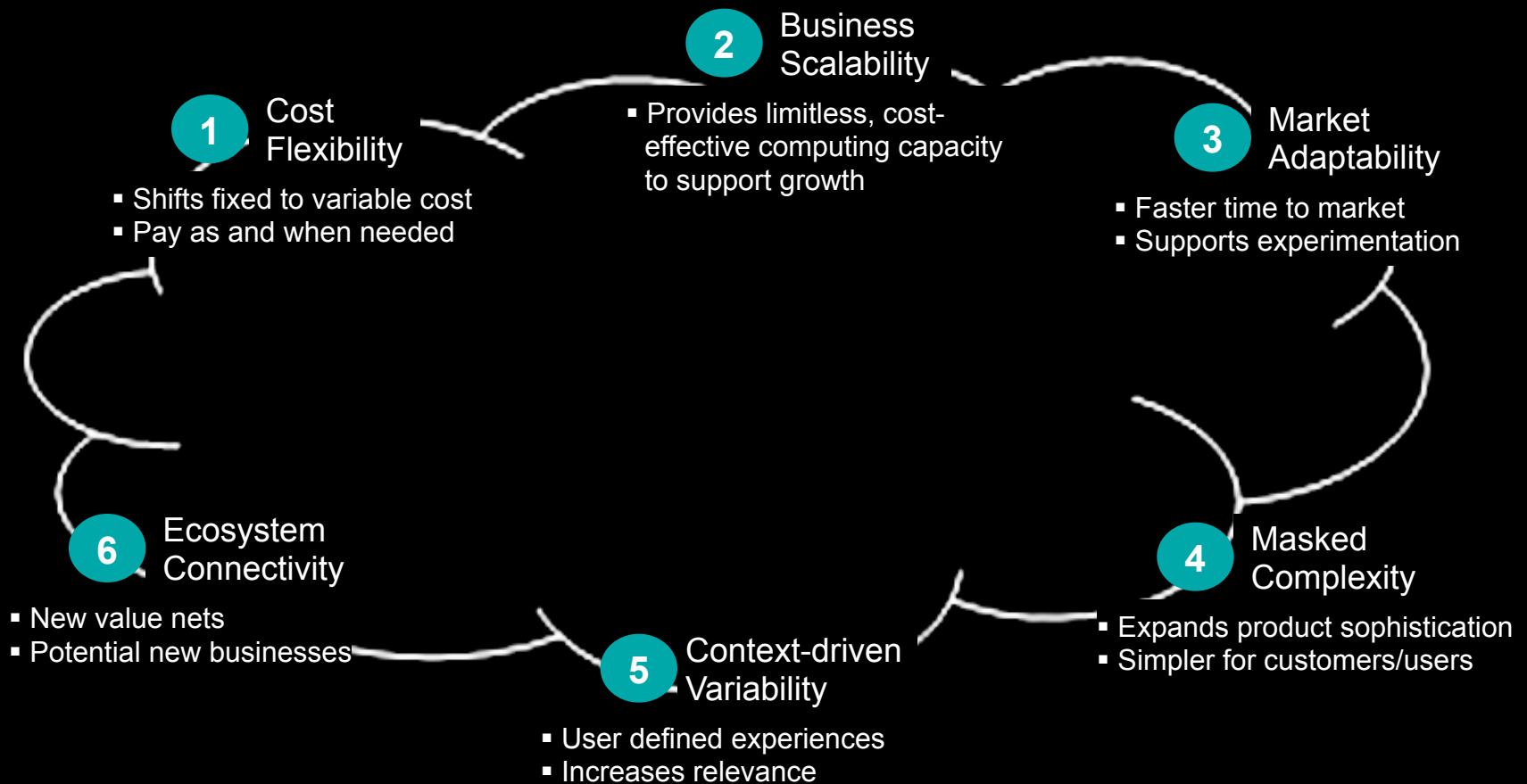An increasing number of connected devices and sensors is further driving growth

The power of analytics

New capabilities for real time analysis, predictive analytics and micro-segmentation are emerging

Top performing companies use analytics to drive action and business value

Analytics are making information "consumable" and is transforming all parts of the organization, from customer intimacy to supply chain management

Cloud harnesses the capabilities borne out of these trends to empower six potentially "game changing" business enablers

Cloud's Business Enablers

1 Cost Flexibility
- Shifts fixed to variable cost
- Pay as and when needed

2 Business Scalability
- Provides limitless, cost-effective computing capacity to support growth

3 Market Adaptability
- Faster time to market
- Supports experimentation

4 Masked Complexity
- Expands product sophistication
- Simpler for customers/users

5 Context-driven Variability
- User defined experiences
- Increases relevance

6 Ecosystem Connectivity
- New value nets
- Potential new businesses

Source: IBV Analysis

Cloud enables businesses to reduce fixed IT costs and shift to a more variable, "pay-as-you-go" cost structure

1 **Cost Flexibility**

Characteristics
- Shifts CapEx to OpEx, when and as needed
- Shifts cost from fixed to variable
- Generates faster payback and higher ROI

Finding
- 31% of executives see cloud's ability to provide pay-as-you go, cost flexibility as a top benefit[1]

Example: Etsy – the world's handmade marketplace

Etsy

- **Etsy** is an online marketplace to buy and sell handmade goods. In addition to bringing buyers and sellers together, Etsy offers product recommendations based on analysis of buyer preferences

- Etsy uses cloud based analytics capabilities for its targeted marketing approach by renting hundreds of computers every night to analyze data from a billion views of its website.

- Cost flexibility of the cloud allows Etsy access to tools and compute power that only large retailers like Gap or Ikea could previously afford.

The cloud frees up capital by significantly reducing the need for IT investment

Source: (1) 2012 joint IBV/EIU Cloud-enabled Business Model Survey of 572 business & IT leaders; Q6a3-Q6b3[1]: Expected benefits of cloud – Greater cost flexibility (today and next three years), N=572

Cloud enables businesses to grow efficiently, expanding the range of business options

2 **Business Scalability**

Example: Netflix

NETFLIX

Characteristics
- Rapid / elastic provisioning of resources
- No scale limitations
- Benefit from scale economics without achieving large volumes on your own

- **Netflix** streams movies on-demand with large surges of capacity required at peak times.

- Use of cloud allowed Netflix to rapidly scale up its business without having to buy, support and operate infrastructure and resources to meet its growth requirements

Finding
- 32% of executives see business scalability as a top cloud benefit[1]

- Netflix's move to the cloud "was largely about paying down our technical debt and building a scalable web-based product using current best practices." – Adrian Cockcroft , Cloud Architect at Netflix[2]

Cloud's ubiquitous and nearly unlimited computing power drives scale economics and enables self-provisioning and peak/non-peak responsiveness

Cloud enables businesses to rapidly adjust processes, products and services to meet the changing needs of the market

3 **Market Adaptability**

Example: ActiveVideo's Cloud TV[TM]

Characteristics
- Facilitates prototyping
- Speeds time to market
- Supports rapid prototyping and innovation

Finding
- 33% of executives see market adaptability as a top cloud benefit[1]

ActiveVideo
N E T W O R K S™

- **Active Video's CloudTV[TM]** platform allows content providers and distributors to react immediately to changing consumer demands and deliver what the consumers want
- Cable, IP and Satellite TV providers can create and deliver interactive, on-demand content dynamically to consumers on any device
- Content providers, TV programmers and web content developers can create or change an application -- for entertainment, commerce, advertising, social media, gaming or news and sports – and deploy it all-at-once for all end-users

Cloud-enabled services can be tuned for market dynamics and demand and then rapidly updated, revamped and deployed via web services

Source: (1) 2012 joint IBV/EIU Cloud-enabled Business Model Survey of 572 business & IT leaders; Q6a1-Q6b1[(1)]: Expected benefits of cloud
– Greater speed and adaptability within the organisation (today and next three years), N=572

13

Cloud enables businesses to attract a broader range of consumers with elegantly simple solutions

4 **Masked Complexity**

Characteristics
- Expands feasible range of sophistication in products and services
- Minimizes requirements of user to understand how product works or how to maintain it

Finding
- Cloud's ability to mask complexity is one of the lesser known business enablers with less than 20% of executives seeing it as a top benefit[1]

Example: Ricoh Cloud Print

RICOH
imagine. change.

- The **Ricoh Cloud Print** platform uses tools via a cloud to convert and process print requests from any mobile device (e.g. tablet, smartphone) to a Ricoh printer

- Removes complexity for users – rapidly enable print services accessible from anywhere with a VPN connection

- Reduces cost and management of supporting diverse end-user mobile devices, content-producing applications, network configurations and printer types

Cloud-enabled services leave the complexity to the experts, delivering only outcomes to the end-user

Cloud enables businesses to create personal experiences that adapt to subtle changes in user-defined context

5 **Context-driven Variability**

Example: Apple's Siri™

Characteristics
- Supports context-driven, user-centric experiences (preferences, movements, behaviors)

Finding
- 52% of Respondents say that addressing fragmented user preferences is important for their organization[1]

Siri™ is the Apple iPhone's cloud-based, natural language "intelligent assistant" – the first of a new type of user experience that relies on context to create a more personal, intimate interaction

Leveraging the computing capabilities and capacity of the cloud, Siri™ "understands a wide variety of ways to ask a question, grasps the context and returns useful information in a friendly way, either audibly or by displaying results…It learns your voice as it goes." - Walter S. Mossberg, Wall Street Journal[2]

The computing power and capacity of cloud enables individualized, context-relevant customer experiences

Source: 1) 2012 joint IBV/EIU Cloud-enabled Business Model Survey of 572 business & IT leaders; How important is it for your organisation to address the following technological and social developments?; 2) Wall Street Journal, Personal Journal: The iPhone Finds Its Voice, Walter S Mossberg, October 12, 2012

Facilitating engagement, alignment and innovation, cloud enables collaboration with volunteers and service providers

6 **Ecosystem Connectivity**

Characteristics
- Facilitates new value nets of partners, customers and other external players

Finding
- One-third of executives see cloud's ability to enable and facilitate external collaboration as one of its major "future" benefits

Example: Colleagues in Care

Colleagues in Care
GLOBAL HEALTH NETWORK

- *Colleagues in Care* is an expanding, cloud-based global network of medical professionals who work together to provide healthcare services to aid the poor and help alleviate suffering.

- Today, CIC's cloud solution expands the reach of healthcare to the Haitian population to treat illnesses, diseases and medical conditions that might otherwise go untreated

- The ecosystem allows healthcare coordinators to match specific skills needed to treat illnesses, conditions and diseases, helping to save lives

More and more, companies are relying on collaborative ecosystems to provide the input for innovation that will drive their growth

Source: (1) 2012 joint IBV/EIU Cloud-enabled Business Model Survey of 572 business & IT leaders; Q6a8-Q6b8[1]: Expected benefits of cloud – Enhanced collaboration with customers/external partners (today and next three years), N=572
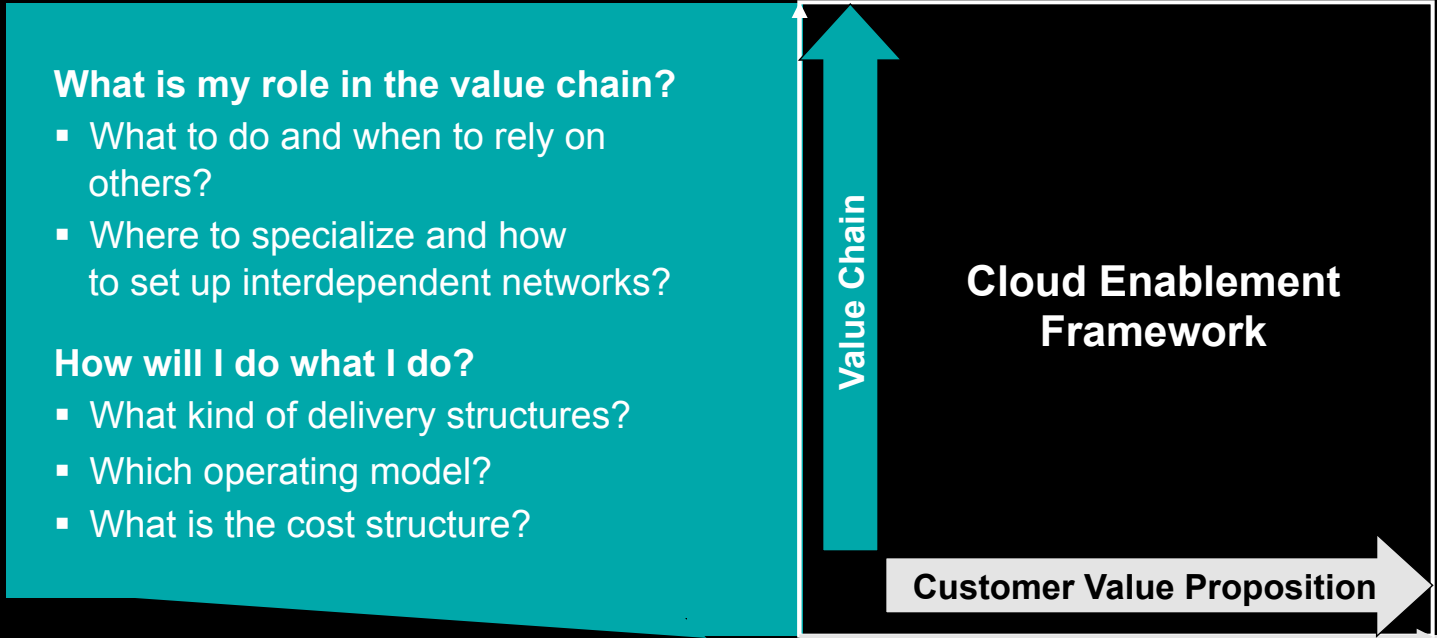
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Importance of cloud

Cloud business enablers
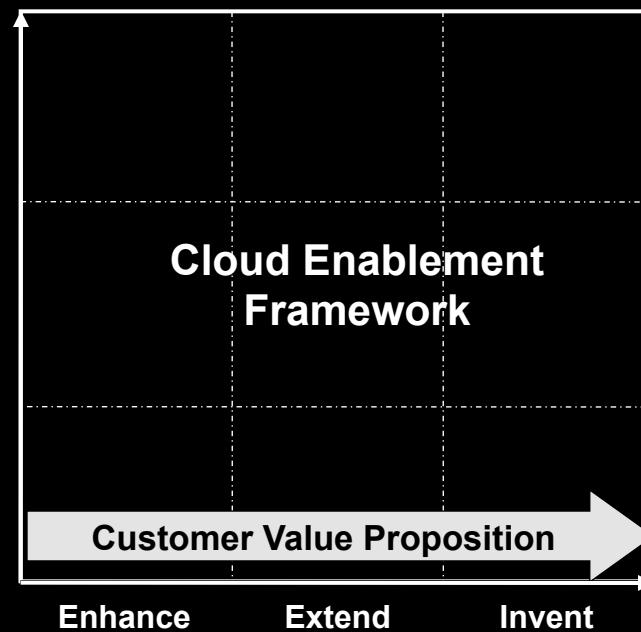
Cloud enablement framework and archetypes

Summary and recommendations

Cloud business enablers are already driving innovation across company/industry value chains and customer value propositions

What is my role in the value chain?

- What to do and when to rely on others?
- Where to specialize and how to set up interdependent networks?

How will I do what I do?

- What kind of delivery structures?
- Which operating model?
- What is the cost structure?

Value Chain

Cloud Enablement Framework

Customer Value Proposition

What is my customer value proposition?

What mix of products and services?

Which customer needs are being satisfied?

Which customers am I serving?

Which customer segments?

What type of relationships to maintain?

Which channels?

How do I generate revenue?

Which pricing models?

How and where to capture value?

Enterprises are leveraging cloud to enhance, extend and invent new customer value propositions

Cloud Enablement Framework

Customer Value Proposition

Enhance   Extend   Invent

Enhance

- Improve current value proposition to retain/attract customers for existing products and services
- Appeal to existing customer segments
- Garner incremental revenue

Extend

- Extend value proposition to attract customers to different products and services
- Attract existing or adjacent customer segments
- Generate significant new revenues

Invent

- Construct radically different value proposition to create a new "need" and own the market
- Form new customer segments
- Generate entirely new revenue streams

Cloud is also being leveraged to improve, transform and create new organization and industry value chains
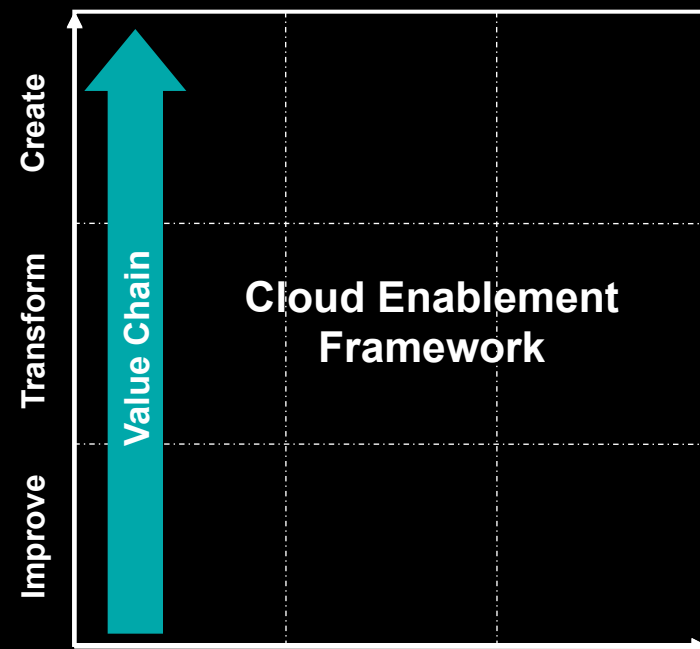
Create

- Build a new industry value chain or disintermediate an existing one
- Radically change industry economics

Transform

- Change organizational role within the industry or enter a different industry value chain
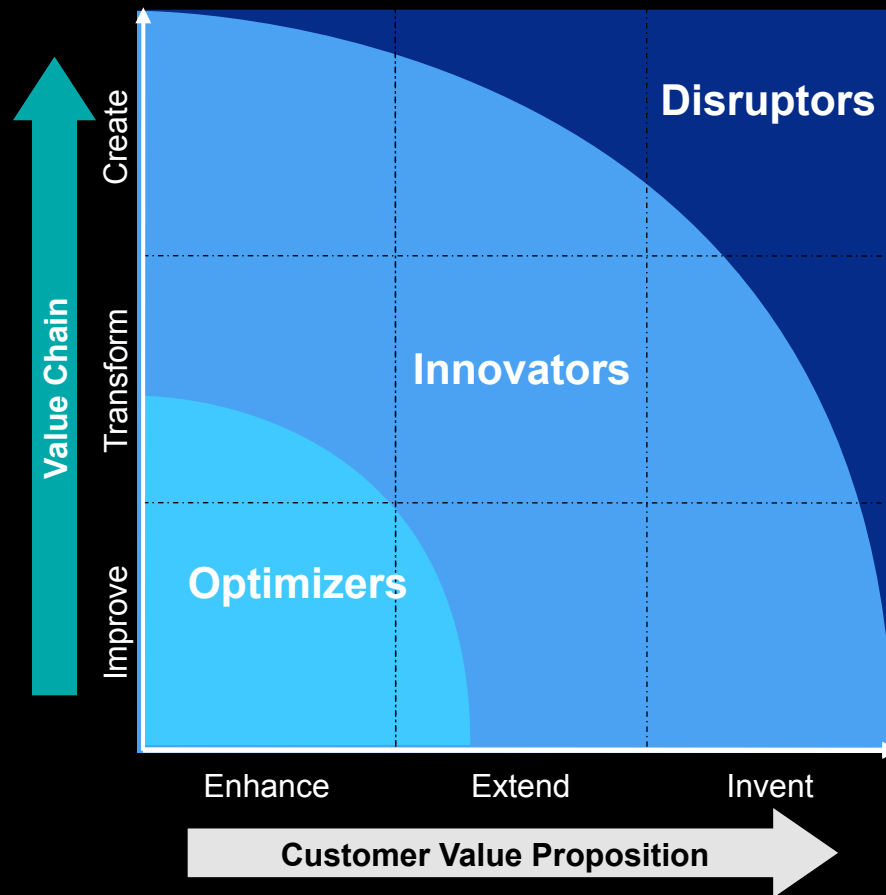- Develop new operating capabilities
- Enter adjacent industries

Improve

- Increase efficiency and effectiveness of the organization
- Increase partnering, sourcing, and collaboration

Create

Transform

Improve

Value Chain

Cloud Enablement Framework

We classify organizations according to the extent to which their use of cloud impacts value chains and value propositions

Cloud Enablement Framework

Disruptors create radically different value propositions, generate new customer needs and segments. They disintermediate existing industries or even create new ecosystems

Innovators significantly extend customer value propositions resulting in new revenue streams and transform their role within their industry or enter a different industry ecosystem

Optimizers use the cloud to incrementally enhance their customer value propositions while improving their organization's efficiency
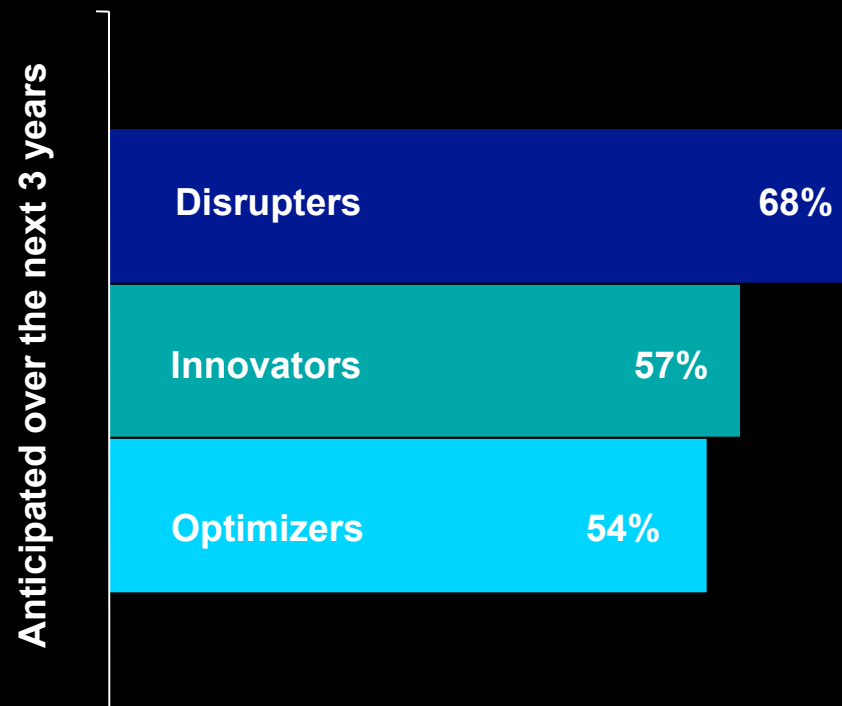
Organizations should determine how and to what degree cloud can be used to enable their business model

Optimizers, innovators and disruptors each face strategic opportunities and significant risks

Organizational Classification	Major Opportunities	Major Risks
Optimizers NC STATE UNIVERSITY	▪ Deepen customer relationships by expanding value ▪ Increase partnering by applying cloud ▪ Reduce costs by leveraging cost flexibility ▪ Increase overall efficiency	▪ Realization of limited revenue or market share gains ▪ Increased dependency on partners ▪ Potential industry disruption from less risk averse player
Innovators 3M	▪ Expand ability to move into adjacent market or industry spaces ▪ Combine previously unrelated elements of the value chain and value proposition to increase total value ▪ Gain competitive advantage	▪ Rapid replication of innovation by competitors ▪ Value capture may not be sustainable
Disruptors Comcast	▪ Capture unique competitive edge through creation of new or disruption of existing industry ▪ Invent new customer needs or define entirely new markets ▪ Take advantage of and sustain first mover advantage	▪ Untested business models may not succeed ▪ Fast followers are often more successful than first movers

In the next three years, disruptors expect to significantly outperform both innovators and optimizers

Percentage of respondents expecting to significantly or somewhat outperform peers

Anticipated over the next 3 years

Disrupters — 68%
Innovators — 57%
Optimizers — 54%

Q9bc1-4[1]: Changes to Value Proposition to increase revenue in three years (N=67) q1- How would you describe your organization's financial performance compared with your peers? (over the next 3 years) (Percentage of responses) N= (next 3 years) : Optimizers: 193; Innovators: 335; Disruptors: 44

Source: (1) 2012 joint IBV/EIU Cloud-enabled Business Model Survey of 572 business & IT leaders

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Importance of cloud

Cloud business enablers

Cloud enablement framework and archetypes

Summary and recommendations

Cloud's business enablers are fuelling innovation and empowering organizations to optimize, innovate and disrupt business models

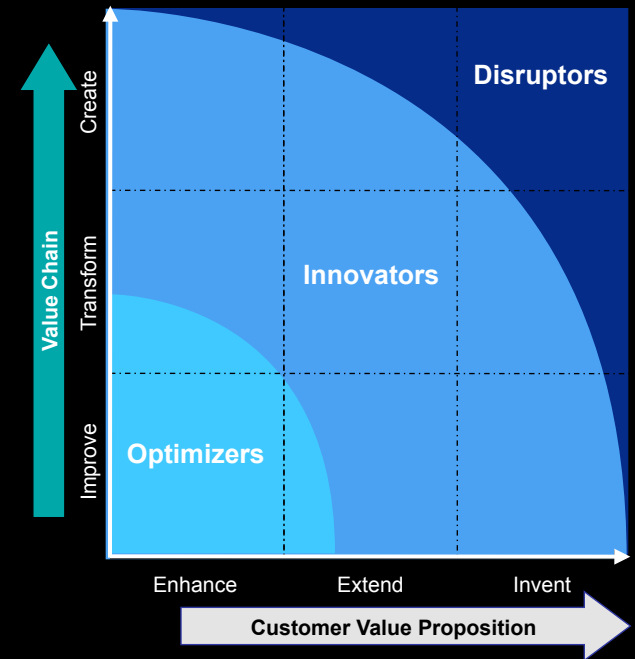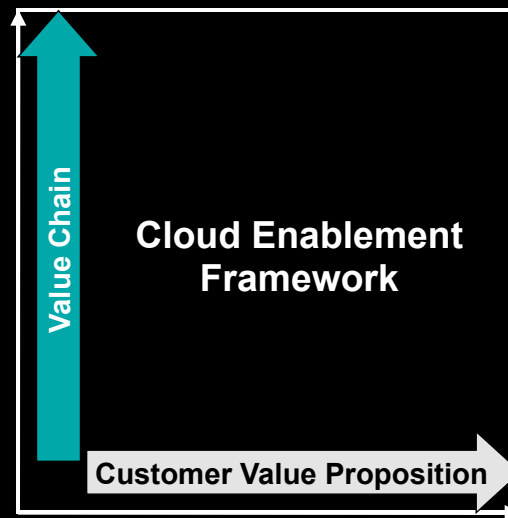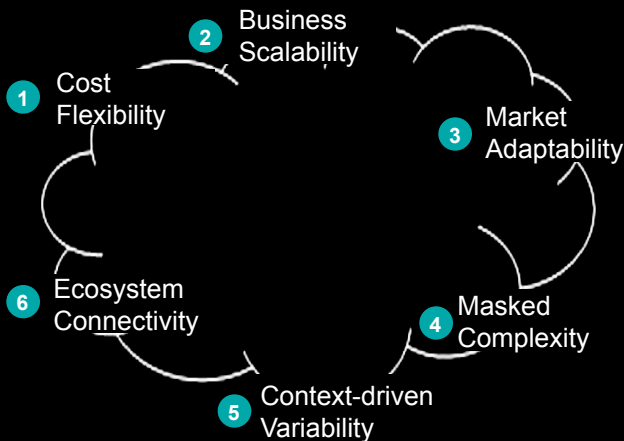**Cloud offers six "game changing" business enablers …**

…that are fuelling innovations across enterprise value chains and customer value propositions…

…empowering organizations to optimize, innovate or disrupt business models

Cloud's Business Enablers

1 Cost Flexibility
2 Business Scalability
3 Market Adaptability
4 Masked Complexity
5 Context-driven Variability
6 Ecosystem Connectivity

Value Chain

Cloud Enablement Framework

Customer Value Proposition

Value Chain

Create
Transform
Improve

Disruptors

Innovators

Optimizers

Enhance   Extend   Invent

Customer Value Proposition

Organizations need to assess themselves using the Cloud Enablement Framework and examine the potential to innovate by leveraging the cloud's business enablers

There are three initiatives you can start today to capture value from cloud-enabled business models

1. Establish shared responsibility for cloud strategy and governance across the Business and IT

2. Look beyond your organization's borders to maximize value derived from your cloud adoption

3. Strategize whether your organization will be an Optimizer, Innovator or Disruptor through the use of cloud-enabled business models

Thank you