TOMORROW starts here.

Rob Lloyd
President, Development and Sales

Chris White
Senior Vice President, IoT/IoE Global Sales

November 4, 2014

CISCO

Cisco live!

Forward-looking Statements

This presentation contains projections and other forward-looking statements regarding future events or the future financial performance of Cisco, including future operating results. These projections and statements are only predictions. Actual events or results may differ materially from those in the projections or other forward-looking statements. Please see Cisco's filings with the SEC, including its most recent filings on Form 10-K and 10-Q, for a discussion of important risk factors that could cause actual events or results to differ materially from those in the projections or other forward-looking statements.

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CHANGE
IS THE NEW STATUS QUO

Pace of Change is Accelerating

Retail
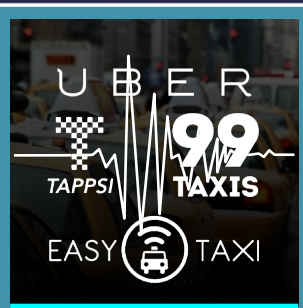
Taxi
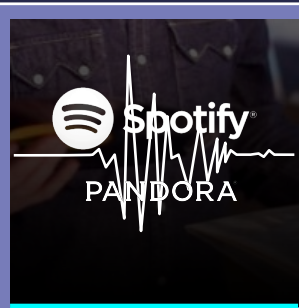
Music

Point-of-Sale

Advertising

Technology Is Enabling Innovation and Disruption

CIOs Top of Mind… Digital Company

BUSINESS PRIORITIES

- Growth
- Cost Reduction
- Innovation
- Efficiency / Speed
- Security
- Customer Experience
- Productivity

TECHNOLOGY PRIORITIES

- Cloud
- Security
- Mobility
- IoE
- Big Data / Analytics
- Collaboration

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New Mandate for IT

Mobile

Cloud

New Breed of Applications

IoT

Big Data & Analytics

Fast Innovation Requires

Fast IT

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Cisco Innovations in the Past Year

Application Centric Infrastructure (ACI)

High End Routing & Switching

Intercloud

IoE Leadership

Security

Outcomes / Results

Acquisitions

Collaboration

UCS

Architectures come to Life ➜ Outcomes / Results

Boxes ➜ Architectures ➜ Solutions ➜ Outcomes

Market Transitions ⟷ Cisco "The Disruptor"

Internet of Everything — Unconnected

Application Centric — Network Centric

Intercloud — DC

Video — Voice & Data

Mobile — Fixed

Packet — Circuit

Switched — Shared

Routed — Bridged

MOVING TO IP
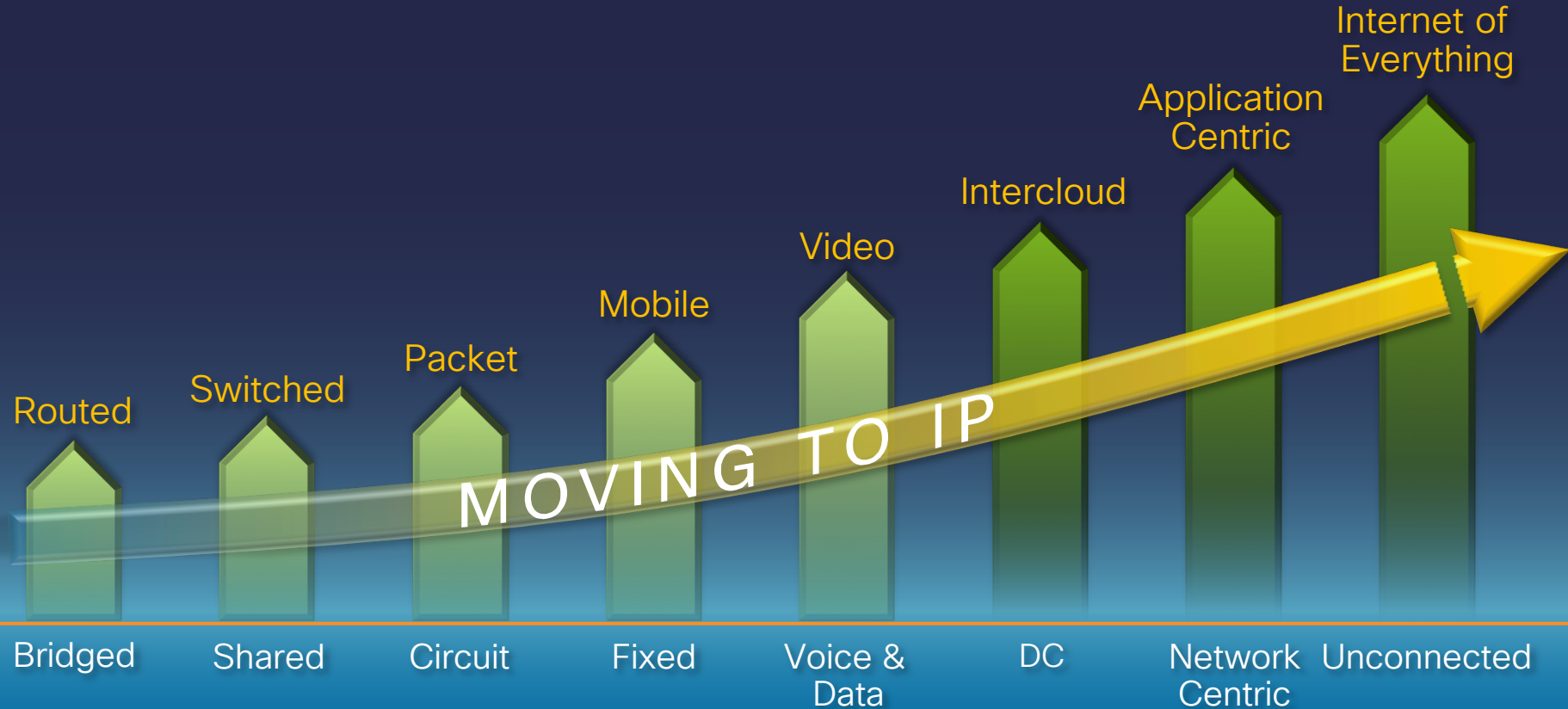
Internet of Everything

Digitizing / Connecting the World

Internet of Everything

PROCESS

PEOPLE

Architectures
Cloud / Mobile / Secure
Big Data / Analytics

DATA

010101
11001
001

THINGS

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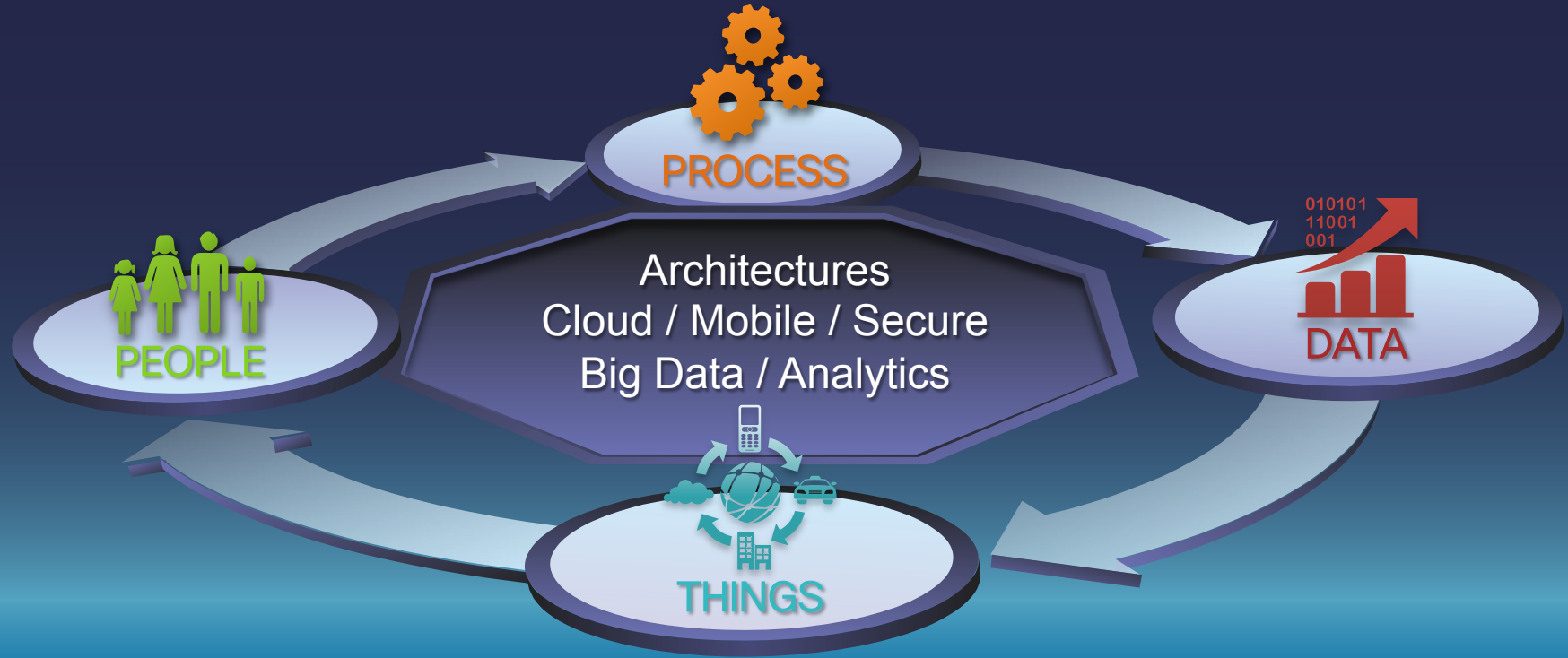
Internet of Everything Increasing Demands on IT

IoE Has the Potential to Grow Global Corporate Profits 21%

Number of Mobile-Connected Devices will **Exceed the Number of People on Earth**

There will be **~50 Billion Objects** Connected to the Internet

An Estimated **77 Billion Apps** will be Downloaded

Created **More Data Than Previous 5,000** Years Combined

Captured Just 53% of IoE's Value at Stake, **Leaving $544B of Unrealized Value**

M2M IP Traffic will Grow 20-Fold

2/3 of the World's Mobile **Data Traffic will be Video**

2012

2013

2014

2015

2017

2020

2022

Secure Critical Infrastructure

Open APIs for ISVs and Developers

Distributed Mobile and Fixed Networking Requirements

What is the Value at Stake?

$19 TRILLION*

Private $14.4T

- Asset Utilization
- Employee Productivity
- Supply Chain Logistics
- Customer Experience
- Innovation

Public $4.6T

- Increased Revenue
- Reduced Costs
- Employee Productivity
- Connected Public Safety
- Citizen Experience

*2013-2022 - 10-year NPV

The Internet of Everything
Fast Innovation

Manufacturing	Retail	Oil + Gas	Finance	Healthcare
$3.9T	$1.5T	$504B	$1.3T	$1.1T
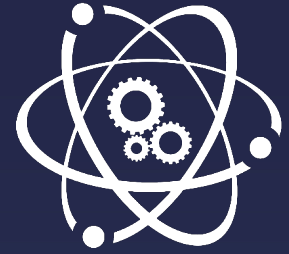
Application Centric Infrastructure

Powering Applications at Scale

Powering Applications at Every Scale

Edge-Scale Computing

Core Data Center Workloads

Cloud-Scale Computing

APP

Customer Needs

Seamless Extension of the Data Center to the Edge

MOBILE / IOT / ANALYTICS

Power and Operational Simplicity in the Data Center Core

MSFT / SAP / ORACLE

A More Efficient Way to Power Cloud-Scale Applications

DEVOPS/ WEBSCALE

© 2014 Cisco and

Applications Have Unique Requirements at Every Scale

Connecting to Opportunity

Faster Decisions

Deeper Insight

APP

MOBILITY

IoT

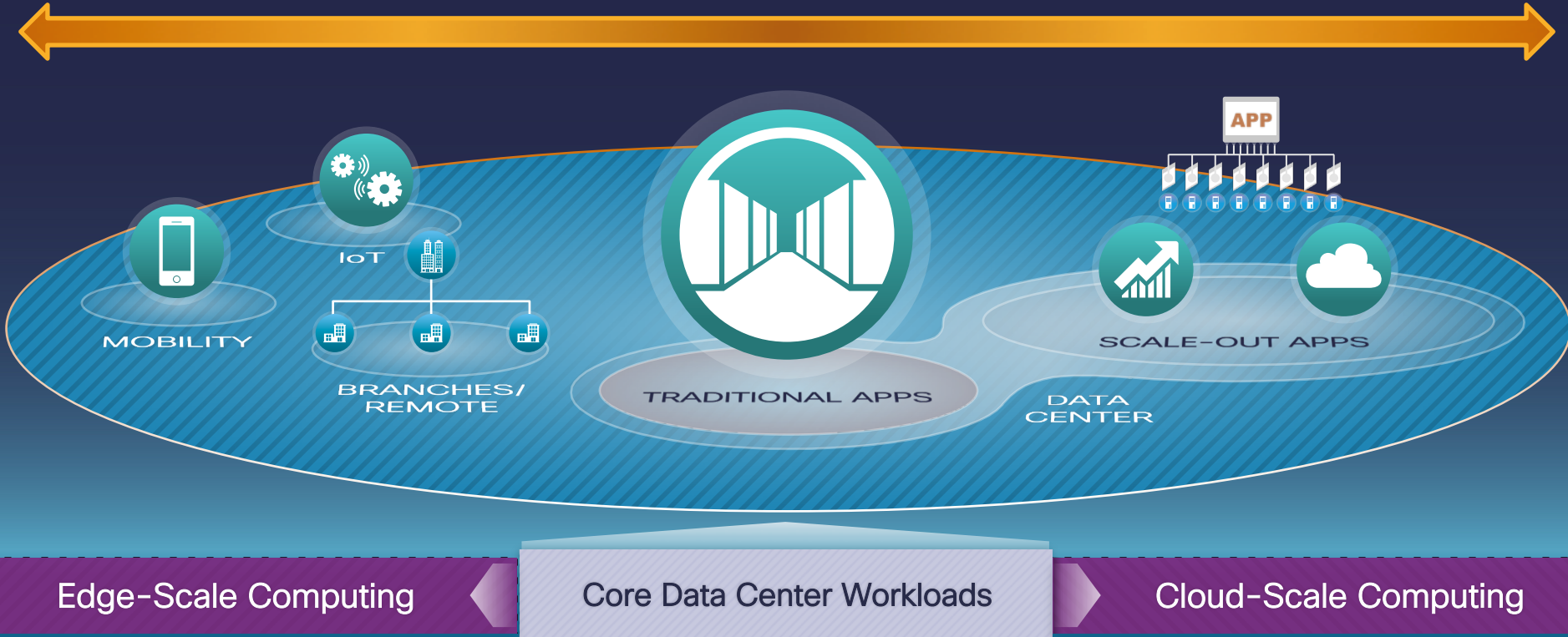BRANCHES/ REMOTE

TRADITIONAL APPS

DATA CENTER

SCALE-OUT APPS

Edge-Scale Computing

Core Data Center Workloads

Cloud-Scale Computing

Next Wave of Unified Computing
Powering Applications at Every Scale

Fourth Generation UCS Servers

UCS Management Innovation

UCS M-Series Modular Servers

Core Data Center Workloads
ACI / N9K / Intercloud Fabric

UCS Mini

UCS C3160

Edge-Scale Computing
vSphere / Hyper-V / XenServer

APP

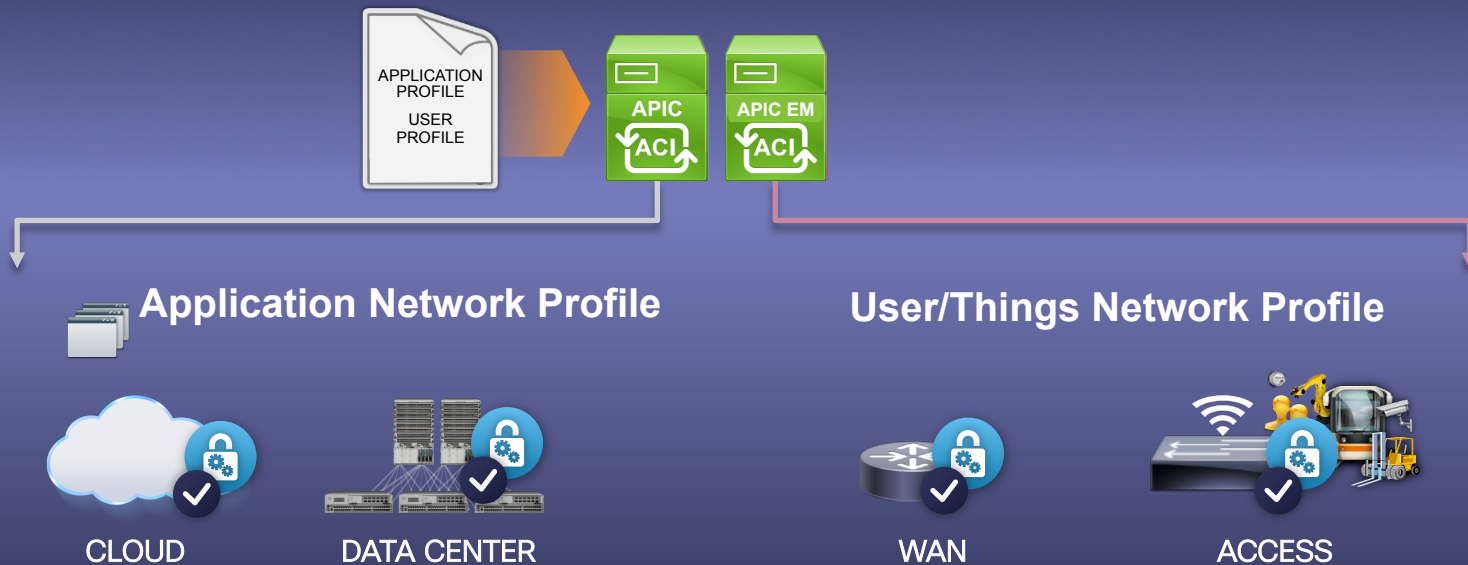**Cloud-Scale Computing**
OpenStack

UCS Management

Compute • Network • Storage • Virtualization • Management and Automation

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Cisco ACI Common Policy Model

Consistent Policy Across Cloud, DC, WAN and Access

APPLICATION PROFILE

USER PROFILE

APIC ACI

APIC EM ACI

Application Network Profile

CLOUD

DATA CENTER

User/Things Network Profile

WAN

ACCESS

Cisco live!

Application Policy Infrastructure Controller (APIC)

Network Automation

Connectivity
Security
QoS
L4-7 Services

APPLICATION
NETWORK PROFILE

f/w
ADC

APIC

ADC

APP

APP APP APP

DB

DB DB DB

Physical
Networking

Hypervisors
and Virtual
Networking

L4–L7
Services

Multi DC
WAN and
Cloud

Storage

Compute
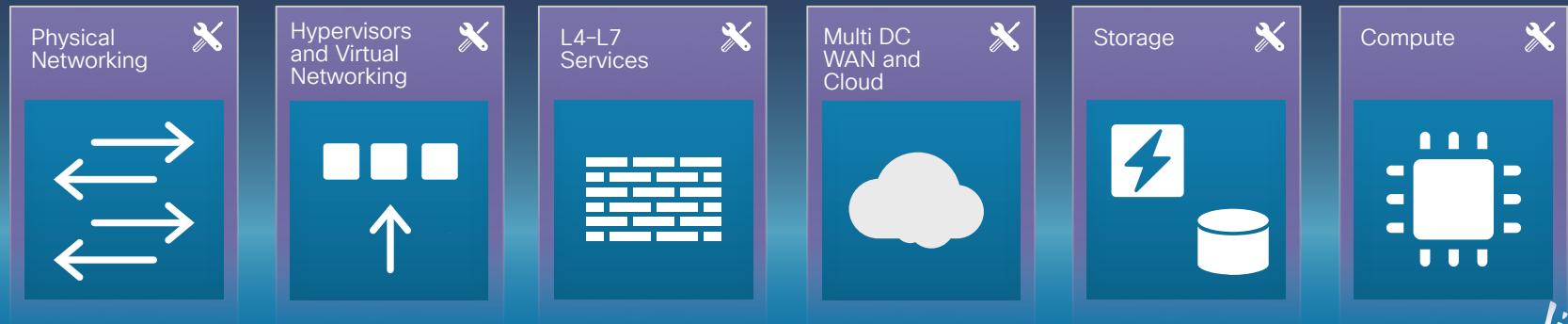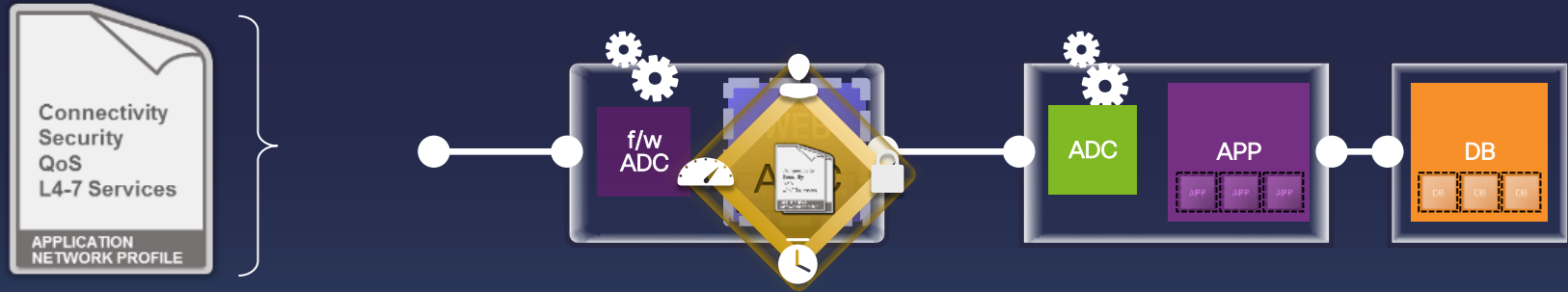
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Cisco Application Centric Infrastructure

580+ Customers

Nexus 9000/ACI

60+ Customers 30 Days!

STORAGE · SECURITY · COMPUTE · NETWORK · APPLICATION · CLOUD · APIC

APIC

33 Ecosystem Partners

NetQoS · radware · CFEngine · Microsoft · avi networks · IBM · NUTANIX · MAPR TECHNOLOGIES · EMC² · PANDUIT · VCE · ca technologies · puppet labs · niksun · Symantec · splunk> · CITRIX · catbird · cloudstack · SAP · A10 Networks · OPSCODE CODE CAN · openstack · cloudera · embrane · CANONICAL · redhat · NETSCOUT · bmc · f5 · NetApp · EMULEX · SOURCEfire

Open ACI Ecosystem

Cisco live!

Building Blocks for Intercloud

ACI

APIC

Nexus 9k

Intercloud Fabric

Cisco *live!*

Voice of the Partner Video

Intercloud

Delivering Hybrid Clouds

Cloud Growth Through 2018

78%
of all workloads will
be in Cloud

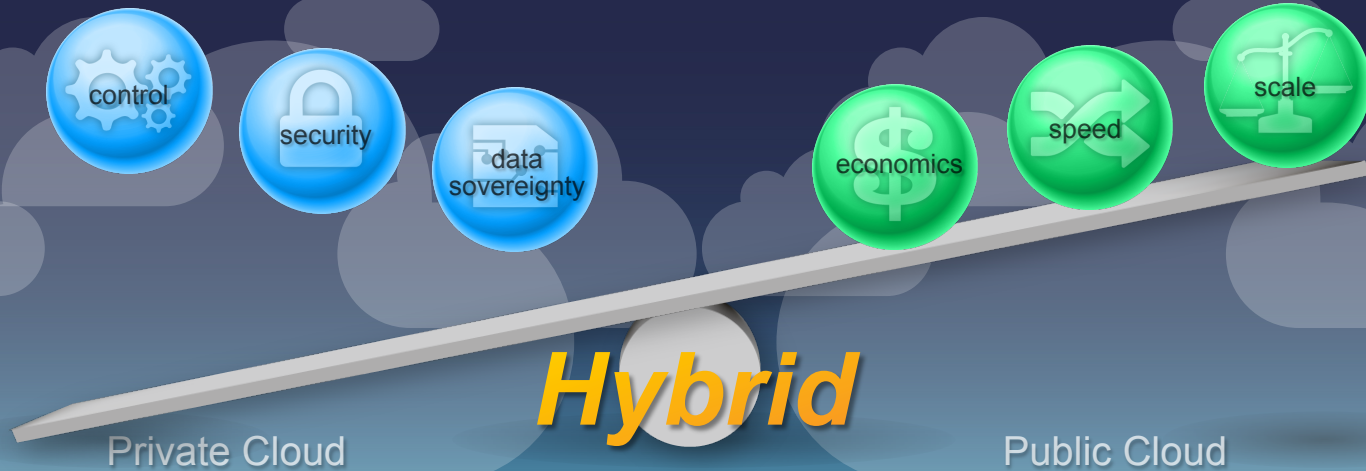**70%**
of Cloud workloads
still Private Cloud-related

4X
increase
in Cloud Traffic

SaaS Dominates
as most popular Cloud Service Model

Cisco *live!*

We Have Been Here Before

Internet

Islands of Isolated PC LAN Networks (1990s)

IBM
Novell
digital

Multiple LANs using multitude of protocols

The Internet

IBM
Novell
digital

Connected using Industry Standard IP protocol

IP Based | Open Standards

Intercloud

World of Cloud Islands (2000s)

IBM
Microsoft
Google
amazon web services

Each Cloud is custom built with no consistent APIs

The Intercloud

cisco Powered
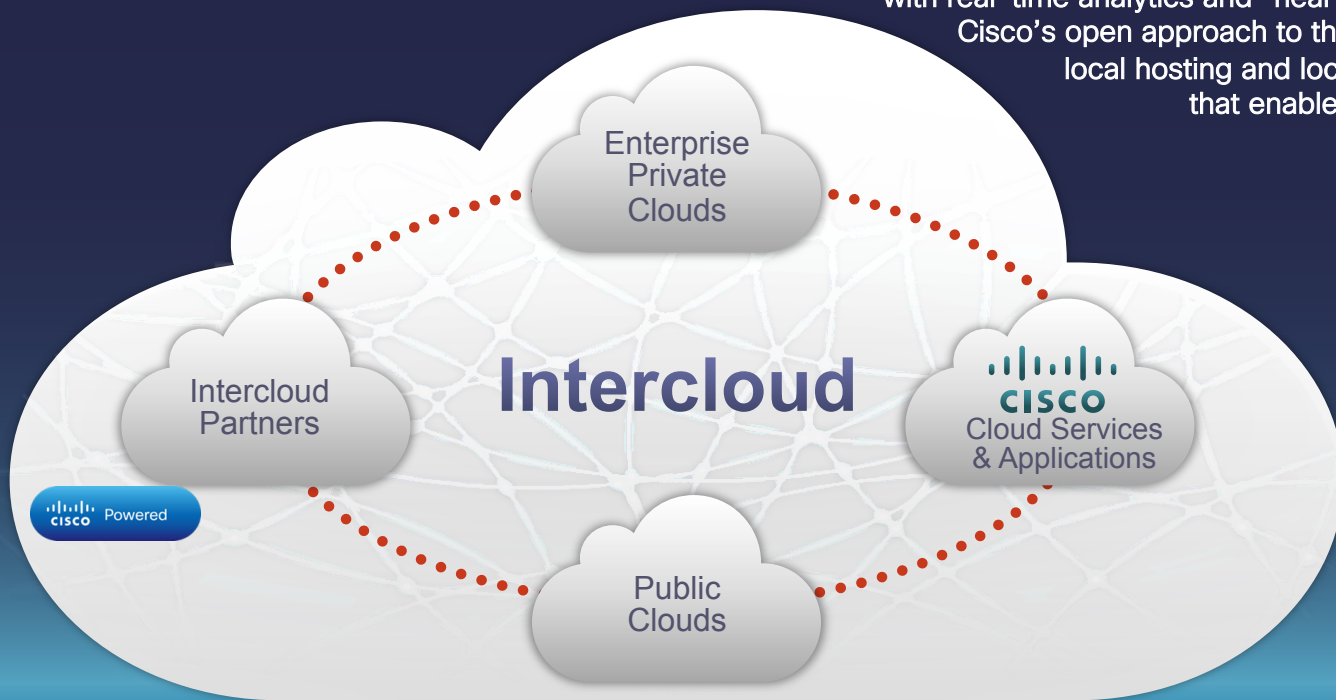dimension data
amazon web services
Intercloud
CISCO

Connected for application acceleration with Open APIs
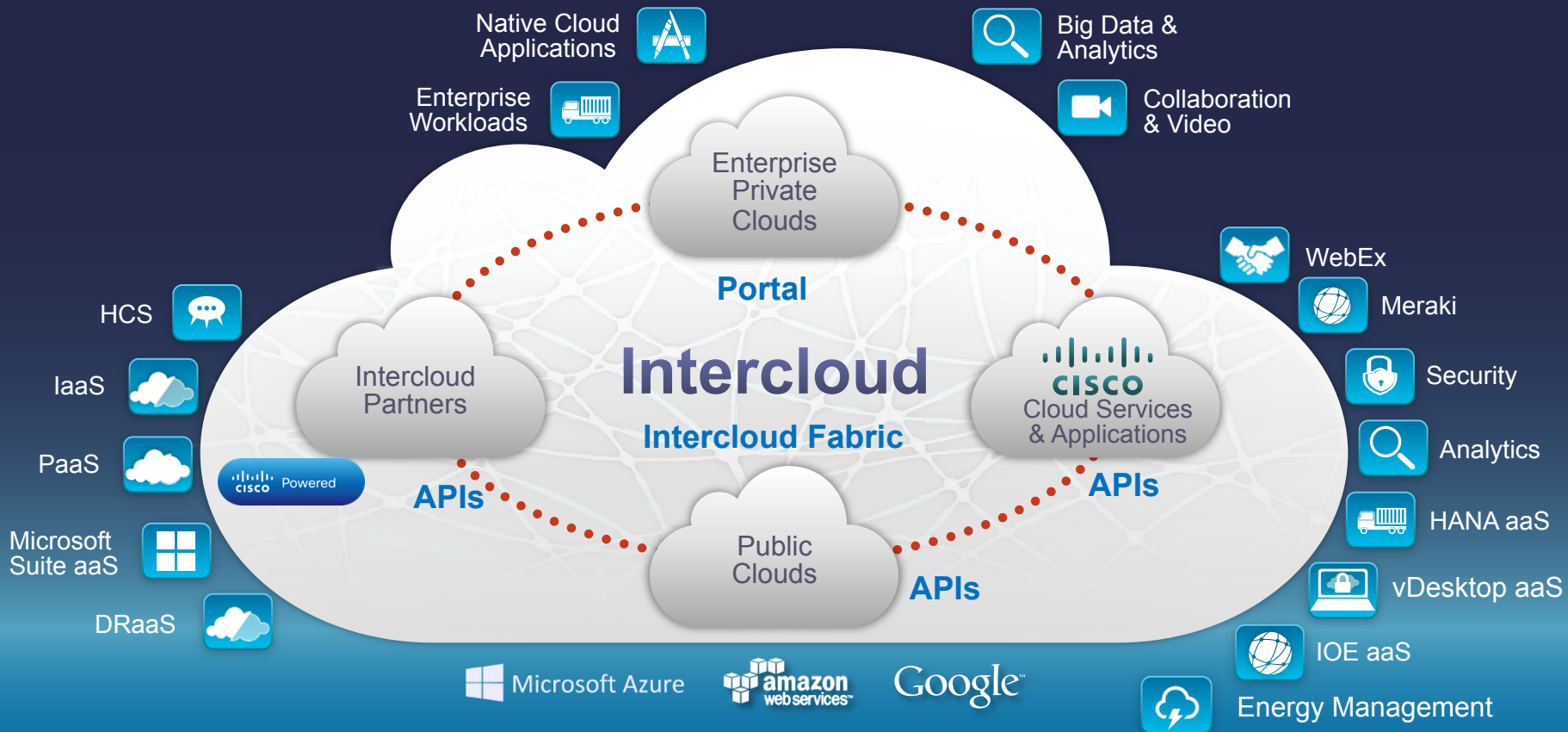
Web-scale | Automated | Open, Secure, Hybrid

Intercloud Is…

"…a globally distributed, highly secure cloud platform capable of meeting the robust demands of the Internet of Everything. Designed for high-value application workloads, with real-time analytics and "near infinite" scalability, Cisco's open approach to the Intercloud allows local hosting and local provider options that enable data sovereignty."

Intercloud

Enterprise Private Clouds

Intercloud Partners

CISCO
Cloud Services & Applications

Public Clouds

CISCO Powered

Cisco live!

Intercloud Strategy

Native Cloud Applications

Big Data & Analytics

Enterprise Workloads

Collaboration & Video

Enterprise Private Clouds

Portal

HCS

Intercloud

WebEx

Meraki

IaaS

Intercloud Partners

Intercloud Fabric

CISCO
Cloud Services & Applications

Security

PaaS

CISCO Powered

APIs

APIs

Analytics

Microsoft Suite aaS

Public Clouds

HANA aaS

APIs

vDesktop aaS

DRaaS

Microsoft Azure   amazon web services   Google

IOE aaS

Energy Management

Intercloud Differentiated Principles

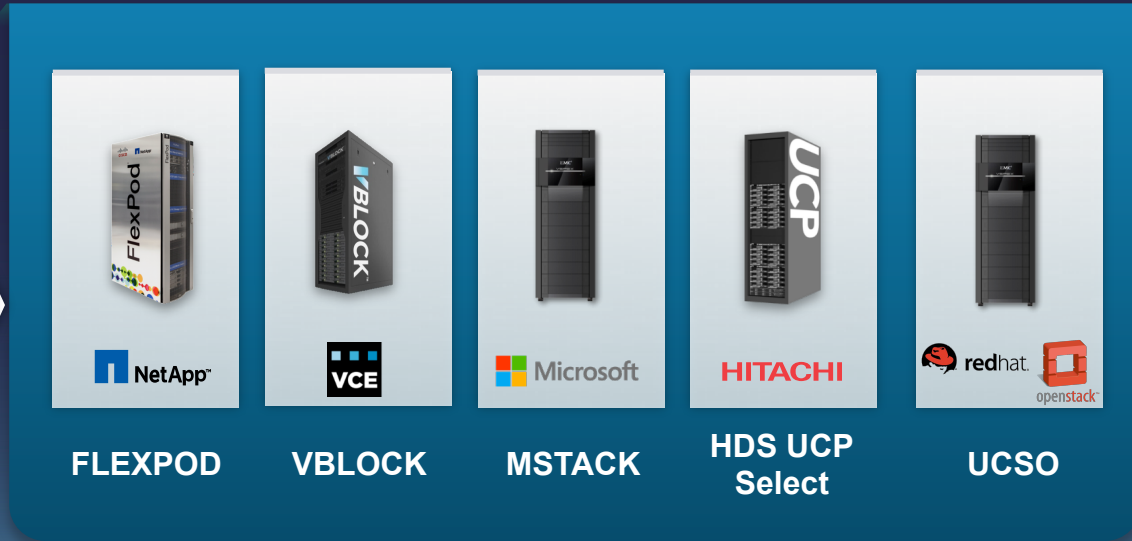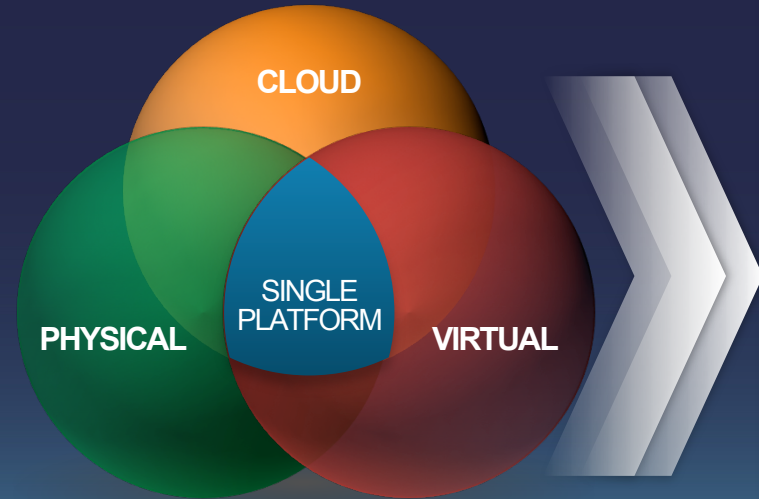**Hybrid Cloud requires the ability to place workloads on any cloud and move them back**

CIOs need application centric policy control across all IT components and all clouds at scale

A network-centric partner ecosystem will provide the most choice and data sovereignty over a vendor direct model

The IoE explosion will require data virtualization in a highly distributed environment, not data replication

Cisco *live!*

Cisco Unified Computing System (UCS):
Building Block of Private Cloud Infrastructure

CLOUD

PHYSICAL

SINGLE PLATFORM

VIRTUAL

FLEXPOD — NetApp

VBLOCK — VCE

MSTACK — Microsoft

HDS UCP Select — HITACHI

UCSO — redhat, openstack

Physical → Virtual
Blade → Rack
Local Storage → Centralized

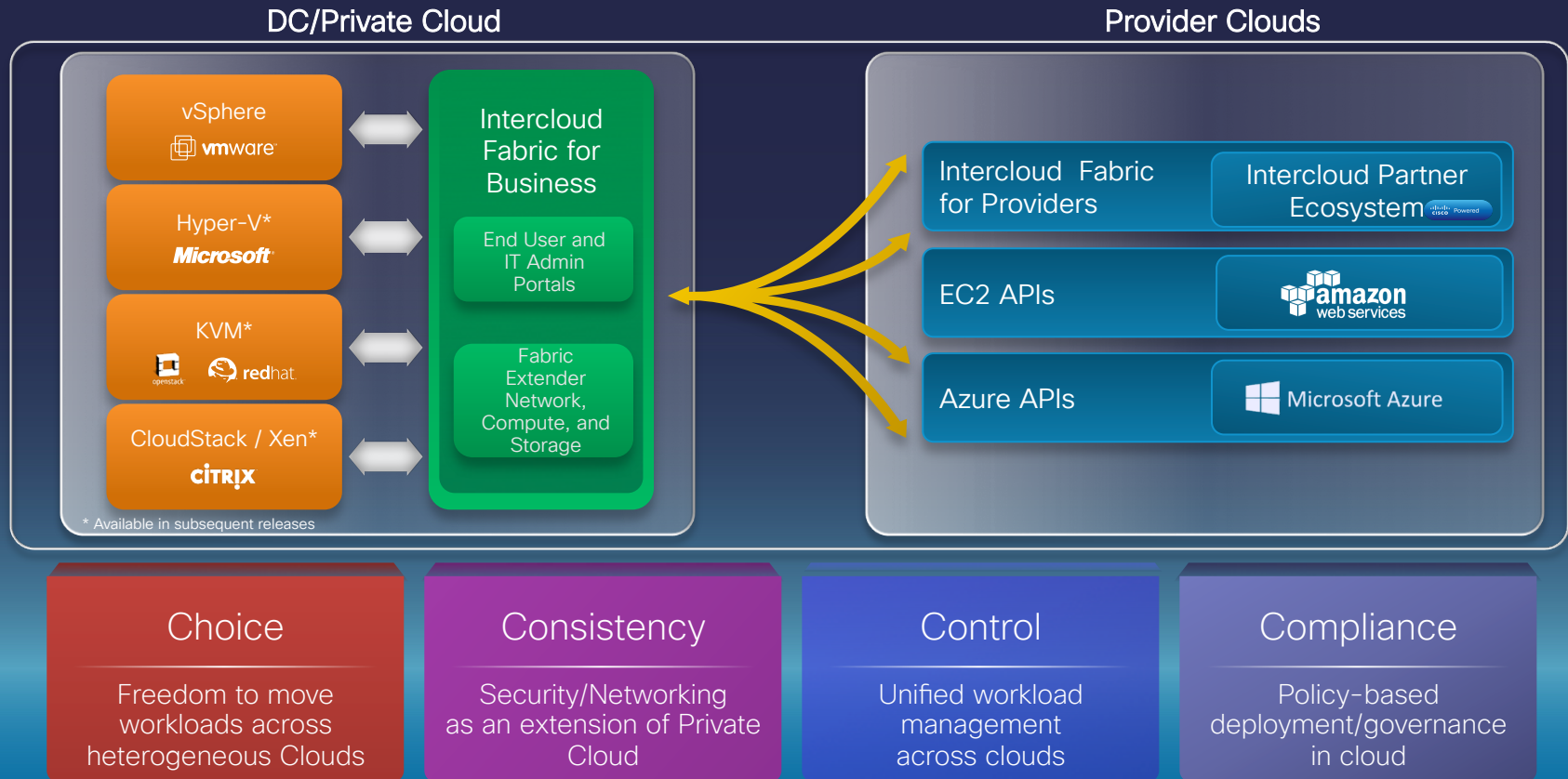Single Tenant → Multi-Tenant
Single DC → Multi DC

Intercloud Enablement

APIC
ACI Ready

Intercloud Fabric

Cisco Intercloud Fabric
Workload Portability in Hybrid Clouds

Common Policy and Workload Mobility
Across All Deployment Models

ACI drives consistent policy across all deployment models

PRIVATE

Traditional
3-Tier
Application
APPLICATION
NETWORK PROFILE

MANAGED

Traditional
3-Tier
Application
APPLICATION
NETWORK PROFILE

HOSTED

Traditional
3-Tier
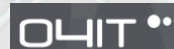Application
APPLICATION
NETWORK PROFILE

PUBLIC

Traditional
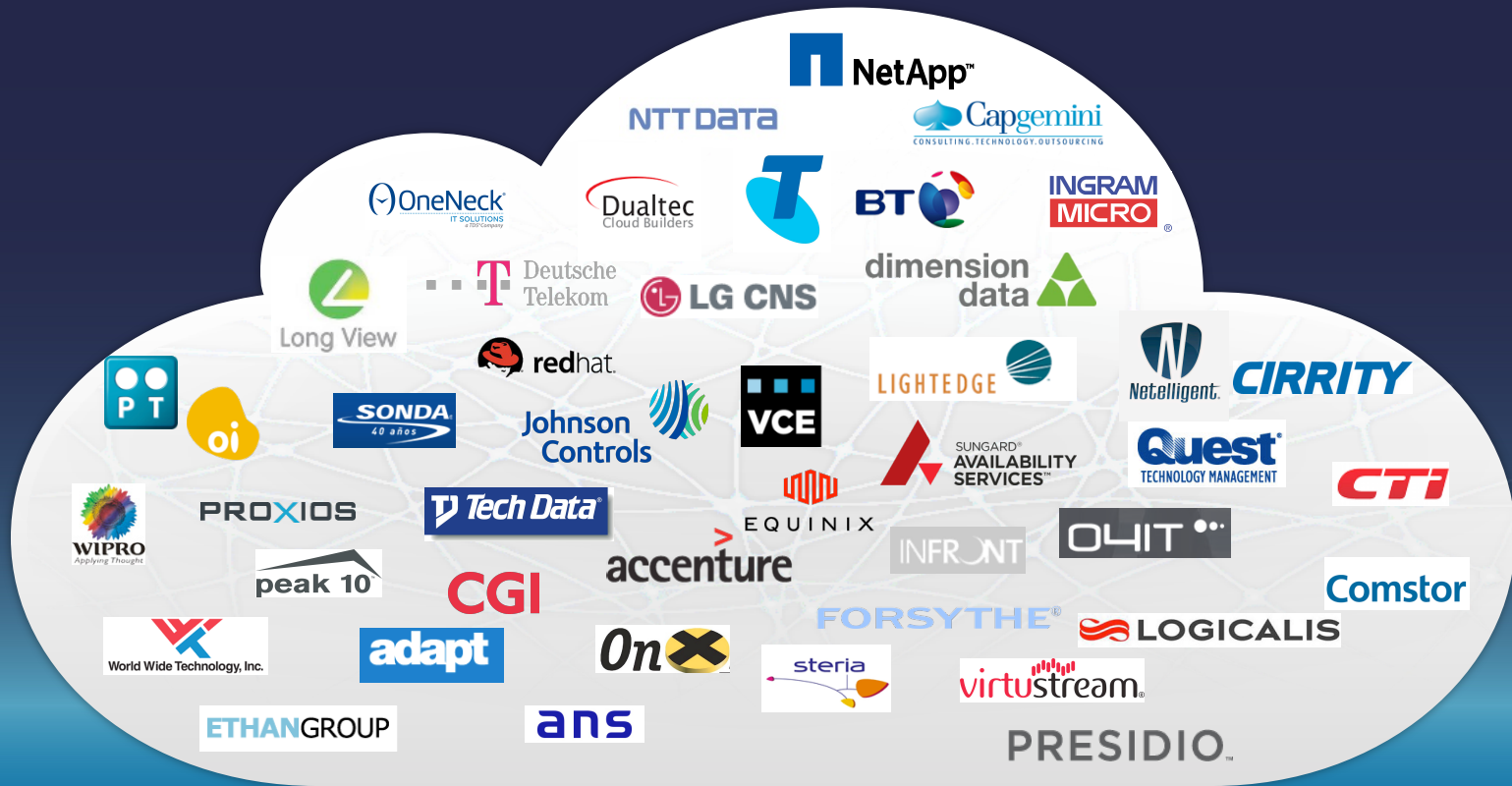3-Tier
Application
APPLICATION
NETWORK PROFILE

Intercloud enables workload mobility with choice, consistency, control and compliance

New LATAM Intercloud Partners

Cisco live!

More Than 45 Partners in the Global Intercloud Ecosystem

Powering the Internet of Everything
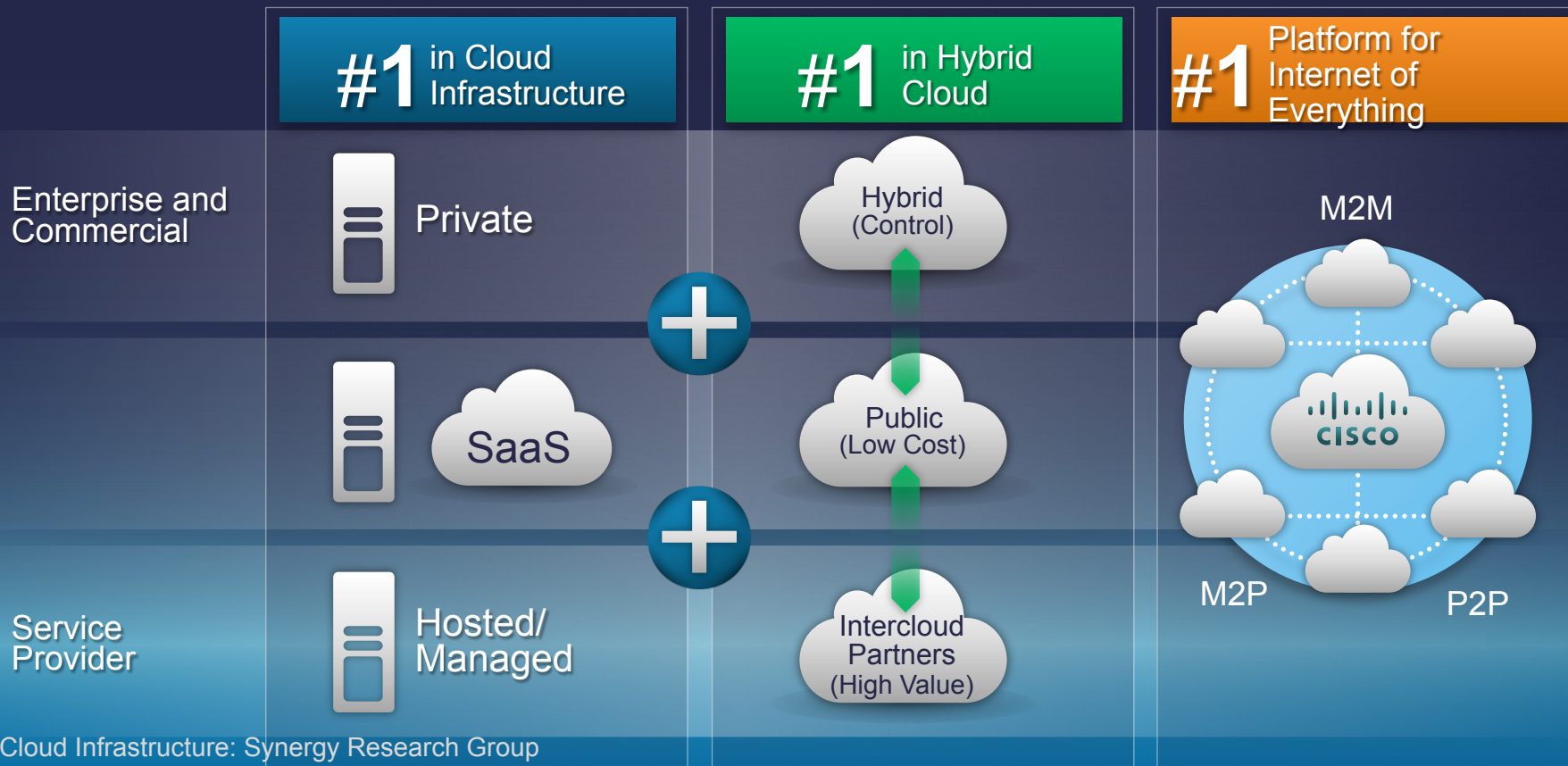
#1 in Cloud Infrastructure	#1 in Hybrid Cloud	#1 Platform for Internet of Everything

Enterprise and Commercial

Private

SaaS

Service Provider

Hosted/Managed

+

+

Hybrid (Control)

Public (Low Cost)

Intercloud Partners (High Value)

M2M

CISCO

M2P

P2P

Amazing Things Happen
When You Connect the Unconnected

99%
*of the world
is still not
connected*

Cisco *live!*
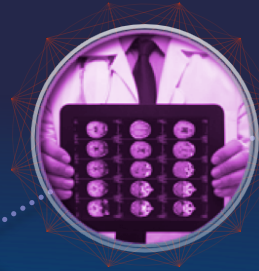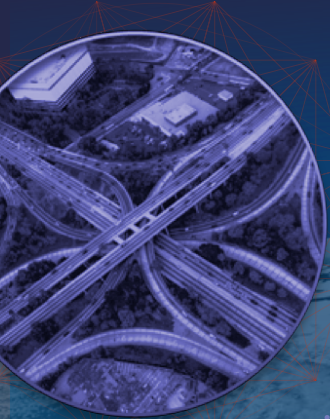
Unleash IoT Value with IoE

People
Connecting People in More Relevant, Valuable Ways

Process
Delivering the Right Information to the Right Person (or Machine) at the Right Time

$19T

Internet of Things
Connecting Physical Devices and Objects to the Internet and Each Other for Intelligent Decision Making

Data
Using Data for Decision Making

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IoE: Connecting Data with Business Outcomes

Business Outcomes
Process | People | **Wisdom**

- Improve Experiences
- Increase Efficiencies
- New Business Models
- Minimize Risk

Big Data and Analytics
Analytics | **Knowledge**

- Cloud
- Fog Distributed Compute
- Data in Motion
- Analytics

Connecting Assets
Sensing | Control | Raw **Data**

- Automation
- Jet Engine
- Wheelchair
- Lamp Post

Cisco *live!*

IoE Acceleration

Gartner introduces IoE

John Chambers delivers IoT keynote at CES

IoE #3 in Gartner's Top Technology Trends for 2014

"IoT could be the next industrial revolution"

"IoE is the next big thing for tech"

Cisco introduces IoE at Partner Summit

"IoE can make Cisco the #1 IT vendor"

2012 — Dec — Jan — Feb — **2013** — Oct — Jan — Feb — Mar — **2014** — — Oct

Cisco's 1st IoE PoV

Cisco's $14.4T Value at Stake for private sector

1st IoTWF Barcelona 832 participants

Cisco releases $4.6T Value at Stake for public sector

Industrial Internet Consortium formed

45K media articles YTD (12x spike from 2012)

1500 attend 2nd IoTWF in Chicago

Cisco announces IOx

189 IoT start-ups YTD (4x increase from 2012)

23B sensors shipped YTD (6x jump from 2012)

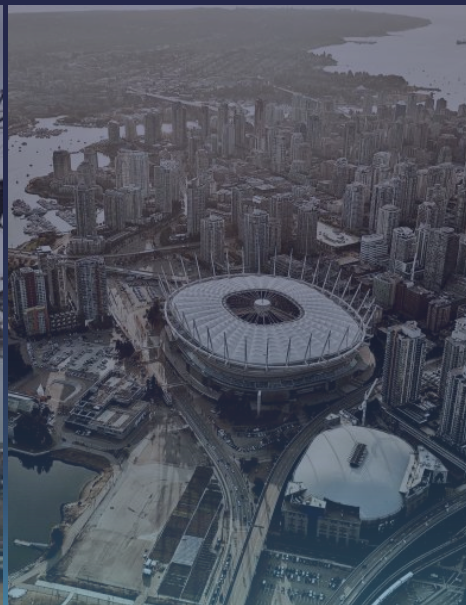Cisco live!

BIG

What Is the Value at Stake?

$19 TRILLION*

What Fuels Internet of Everything Value At Stake?

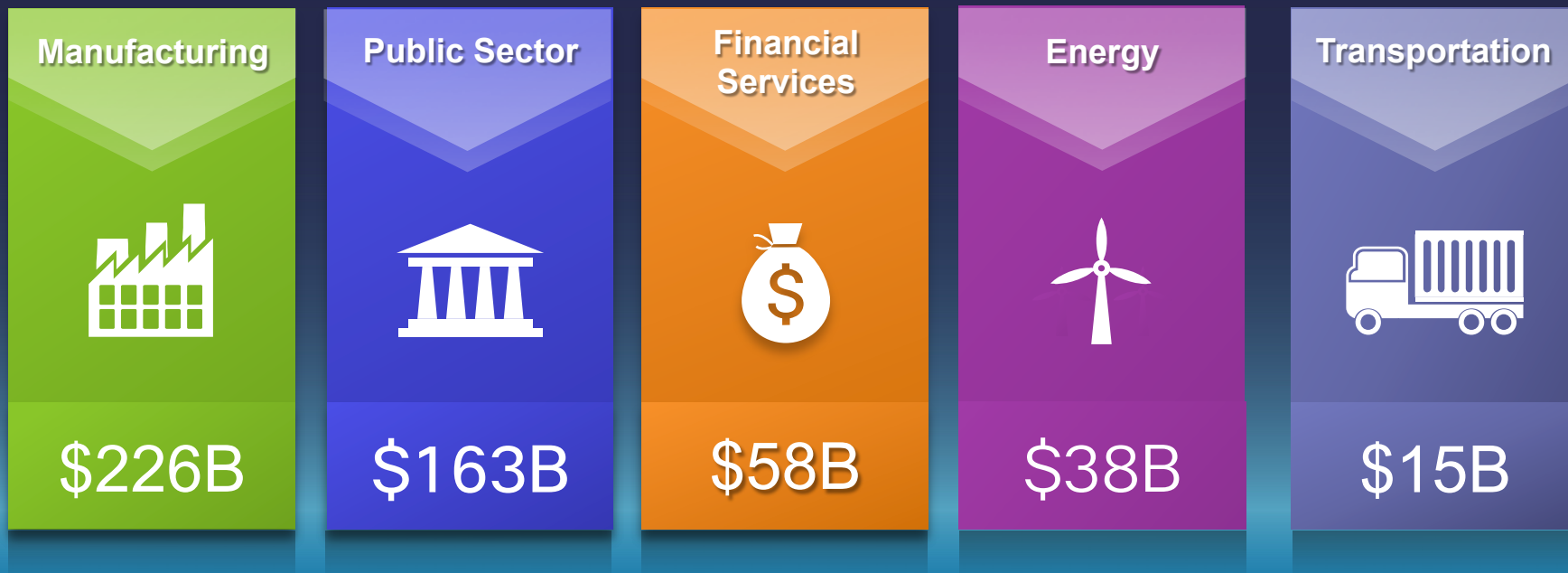| Asset Utilization | Employee Productivity | Supply Chain/ Logistics | Customer Experience | Innovation |

The Internet of Everything has the potential
to grow global corporate profits by 21% in 2022

Total LATAM IoE Market Value is $870B

A Closer Look at Top LATAM IoE Verticals

Manufacturing	Public Sector	Financial Services	Energy	Transportation
$226B	$163B	$58B	$38B	$15B

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Great IoE Opportunity Among Top LATAM Brands

Cisco live!

IOT/IOE IN ACTION

Barcelona: Smart City…$3.6B Value Creation

Train/Bus Stations | Hospitals | Shopping Plazas/Malls | Parks | Arenas/Stadiums

Smart Lighting | Smart Buses | Smart Water | Smart Bus Stop | Smart Parking | Smart Waste

- 1,500 New Companies
- 44,000 New Jobs
- Mobile Collaboration: $1.6B
- Telework: $199M
- Smart Parking: $67M
- Smart Water: $58M
- Smart Lighting: $47M

Smart Citizens

Revenue | Citizen Experiences | Jobs | Productivity | Cost Avoidance

Digital Cities and Countries

CITIES

Barcelona
Nice
Hamburg
Songdo
Chicago
Bangalore

COUNTRIES

Israel... 1st Digital State
Germany... Industry 4.0
United Kingdom
France
South Korea
Mexico
India

LATAM

Quito
Guayaquil
Yachay
Medellin
Rio
Guadalajara
Puebla

Jobs • Growth • Inclusion • Education • Healthcare • Innovation • Urbanization…S+CC • Security

Cisco *live!*

Accelerating Mexico's IoE Journey

IoE Economic Value (10-year NPV)	Alignment to Government Agenda		
$75B	Smart Cities		**Economy:** growth and jobs creation
$80B	Smart Manufacturing		**National security:** reduce violence
$25B (WIP)	Smart Border		**Telecom reform:** competition, universal broadband access, and national connectivity
			National infrastructure development
$200B Total Mexico	Country Digitalization		**Energy reform:** Reduce government budget dependence in oil revenues

"We want to realize the dream of transforming Mexico"

John Chambers. Davos, Jan. 24, 2014

Railway Systems

Fear of Derailment

Underutilized Equipment

Poor Passenger Amenities and Services

Railway Systems

Immediate Response to Equipment Failure

Real-time Health Status of Trains

New Passenger Amenities and Services

CAR **07**

35% REPLACE BEARINGS

Davra RuBAN™ and Iox
Enabling IOT for Transportation

davra networks

PRESIDIO
Be Secure in the Knowledge
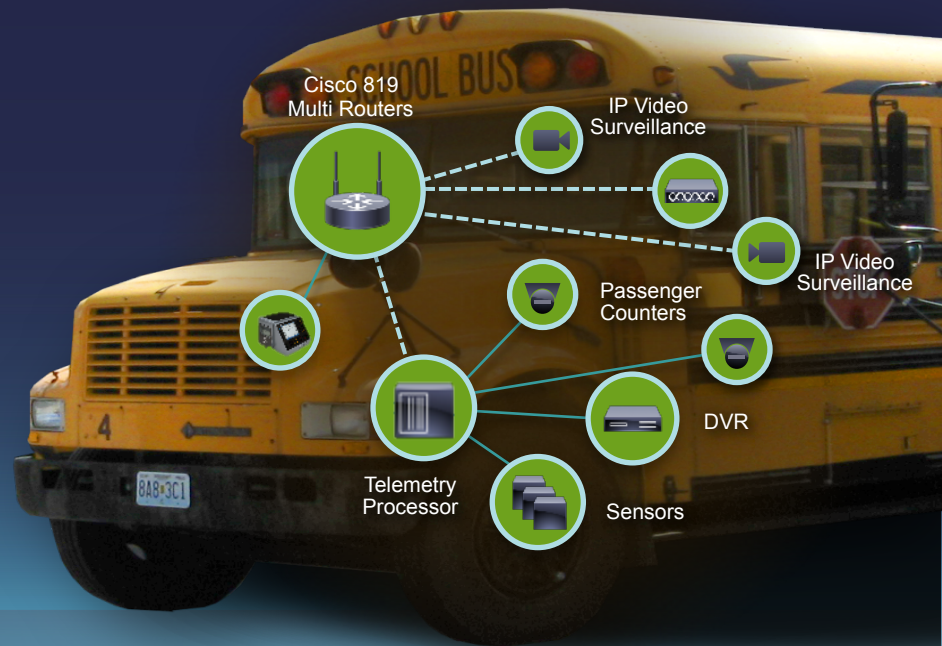
- 300 school buses in a rural district

- 10,000 students, 4+ hours daily on buses

Student Safety

Vehicle Maintenance and Efficiency

Insurance Liability and Traffic

Compliance

Student Productivity

Cisco 819 Multi Routers

IP Video Surveillance

IP Video Surveillance

Passenger Counters

DVR

Telemetry Processor

Sensors

Automated Management of Network Systems

Vehicle Management and Telematics

Physical Security (Video Tagging and Remote Control)

Vehicle to Vehicle Communications (V2V)

Vehicle to Infrastructure Communications (V2I)

Passenger Wi-Fi

People Tracking and Counting

IoE Delivers Robust Infrastructure and Platform for all City Services in Cuiaba, Brazil

PREFEITURA DE Cuiabá

- Very Light Train (VLT) system utilization improved by 15%

- Reduced ticket fraud by 40% for US$4M annual savings

- Location-based services projected to generate US$3M yearly advertising revenue

Cisco *live!*

Utility Substation

Load Imbalances

Poor Use of Brownfield Assets

Increasing Demand

Utility Substation

Local Load Balancing

Operational Efficiencies

New Business Models

Maintenance Needed on Transformer 7

01 02 03 04 05 06 07 08 09 10

Manufacturing

Poor Overall Equipment Effectiveness (OEE)
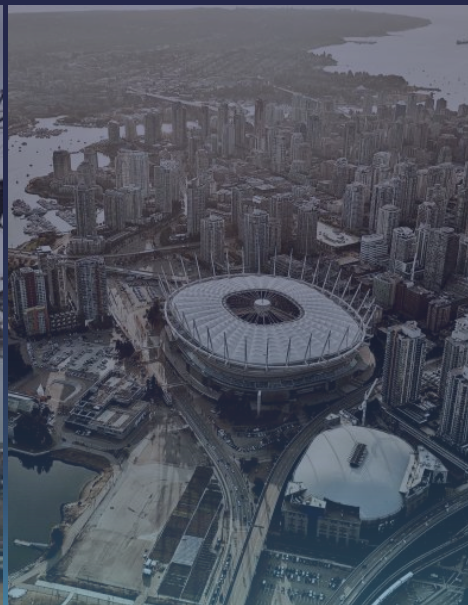
Increasing Energy Costs

Cyber Security Threats
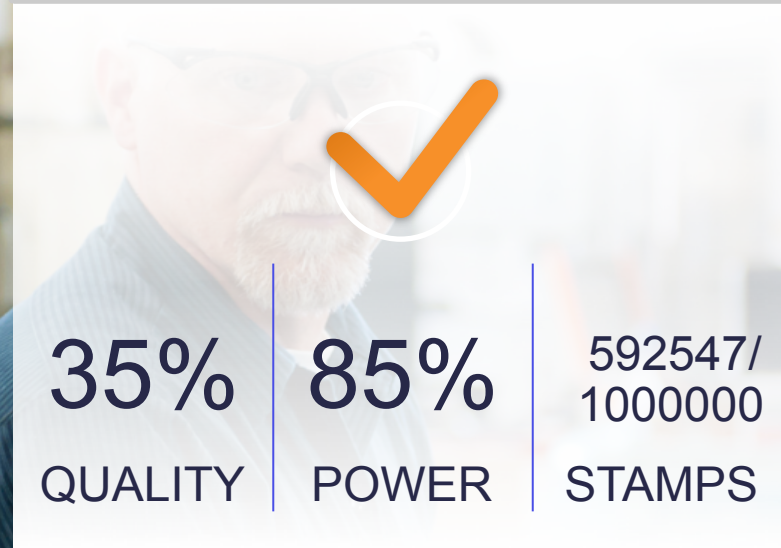
Manufacturing Demo

DIFFERENT

Convergence of Operational Technology and Information Technology

From basic connectivity...

…to a critical part of the enterprise infrastructure
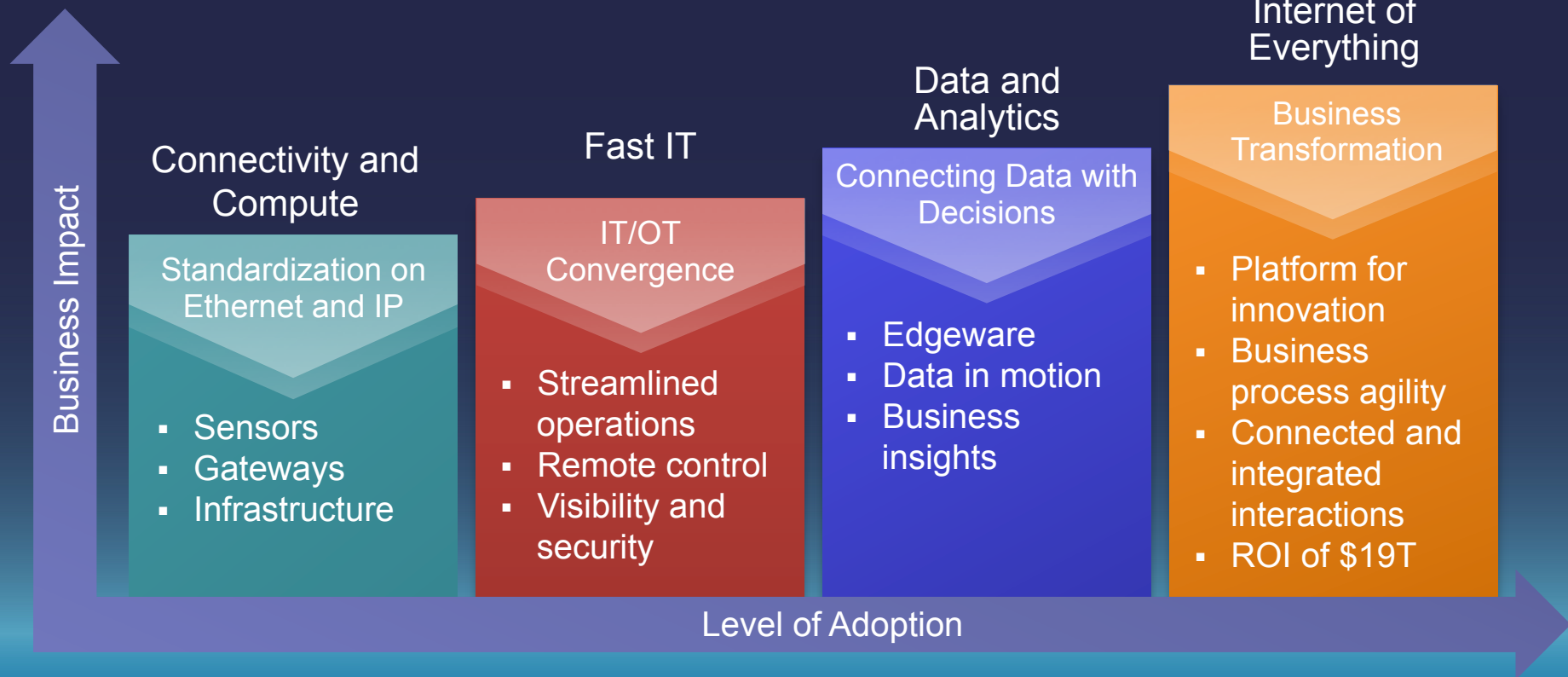
From proprietary standards...

…to open standards

From disparate IT and OT networks…

…to converged, secure, managed, and collaborative operations

IoE Journey to Value

Business Impact (vertical axis)

Level of Adoption (horizontal axis)

Connectivity and Compute

Standardization on Ethernet and IP

- Sensors
- Gateways
- Infrastructure

Fast IT

IT/OT Convergence

- Streamlined operations
- Remote control
- Visibility and security

Data and Analytics

Connecting Data with Decisions

- Edgeware
- Data in motion
- Business insights

Internet of Everything

Business Transformation

- Platform for innovation
- Business process agility
- Connected and integrated interactions
- ROI of $19T

Cisco live!

NOW
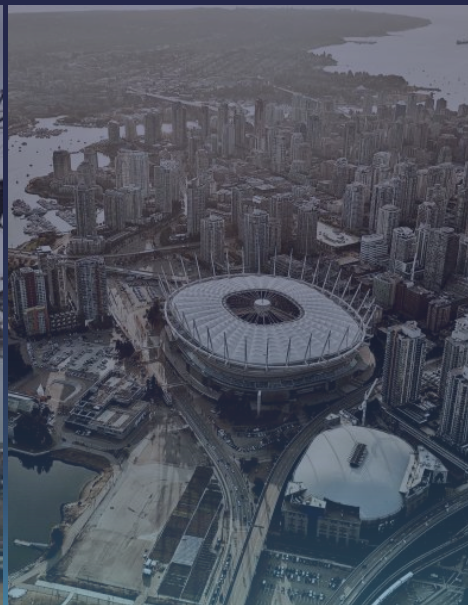
Accelerating the IoE Opportunity

Vertical Solutions

| Manufacturing | Government | Energy | Financial Services | Retail | Transportation | Health Care | Education |

Consulting Services

IoE Software Suite

Experiences and Engagement

Enterprise Mobility Solutions Platform
Remote Expert Platform
Interactive Services Platform
IP Interoperability and Collaboration System

Process Automation and App Integration

API

ServiceGrid (SolveDirect)
Integration Platform
Services Exchange Platform
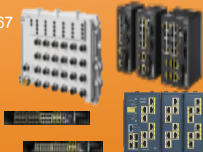
Data and Analytics

Data Virtualization (Composite)
Connected Analytics
Prime Analytics

Hardware Products

Switching

IE 2000
IE2000 IP67
IE 3000
IE 3010
CGS 2500

Routing

CGR 2000

ASR 903

Wireless

CGR 1000

1552 Rugged Wireless

819H M2M ISR Gateway Router

Embedded

5915 + 5921 + 5940 Rugged Embedded Services Routers

ESS2020 Rugged Switch

Video Surveillance

IPICS

Physical Access Manager

Video Surveillance Manager and IP Cameras

Support Services

Managed Services

Professional Services

Internet of Things World Forum Reference Model

7 — **Collaboration and Processes**
(Involving People and Business Processes)

6 — **Application**
(Reporting, Analytics, Control)

5 — **Data Abstraction**
(Aggregation and Access)

4 — **Data Accumulation**
(Storage)

3 — **Edge Computing**
(Data Element Analysis and Transformation)

2 — **Connectivity**
(Communication and Processing Units)

1 — **Physical Devices and Controllers**
(The "Things" in IoT)

Technology Drivers
- Asset modernization
- Cloud-based technology
- Pervasive multi-service networks

IT	Query Based	Data at Rest	Non-Real Time
↑	↑	↑	↑
↓	↓	↓	↓
OT	Event Based	Data in Motion	Real Time
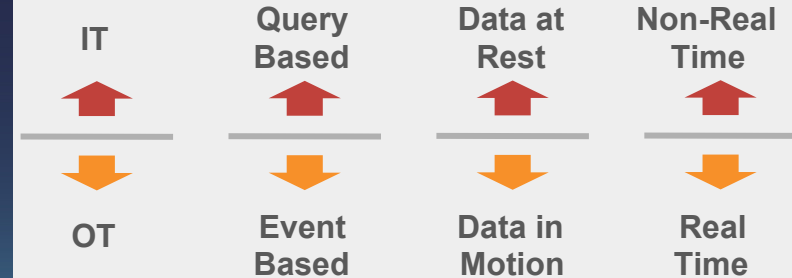
Business Drivers
- Business automation
- Customer experience
- Accelerating innovation

Cisco *live!*

IoE Enables… All IT Market Transitions

Internet of Things

Mobility

Cloud

Big Data and Analytics

Social Collaboration

Security

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Black & Decker Video

How Companies are Capturing Their Portion of the $19T

DUNDEE ONE CITY, MANY DISCOVERIES	**BLACK&DECKER**	**Barcelona**	**Network Rail**
4X	$40M	30%	21%
Increased Production	Scrap Avoidance	Less Traffic Congestion	Lower Capital Costs

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BIG
$19T

DIFFERENT
Business solutions
and outcomes

NOW
Markets
already accelerating

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Forward-looking Statements

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