MEF Q2 Members Meeting - LISBON, APRIL 13-16 2015

ALESSANDRO TALOTTA - CEO TI SPARKLE
MEF Board Member

SPARKLE

TELECOM ITALIA GROUP

WITH EXPO MILANO 2015

TELECOM ITALIA OVERVIEW

Employees

65,872

Customers (Mn)

118

Revenues (Bn €) *(as of December 2014)*

21,463

Data as of September 2014

TI SPARKLE GROUP OVERVIEW

COMPANY DATA
(as of December 2014)

Headcount

637

Countries of presence

39

Network coverage

PoPs **120**

PoPs via partners

>1.000

KEY FIGURES
(as of December 2014)

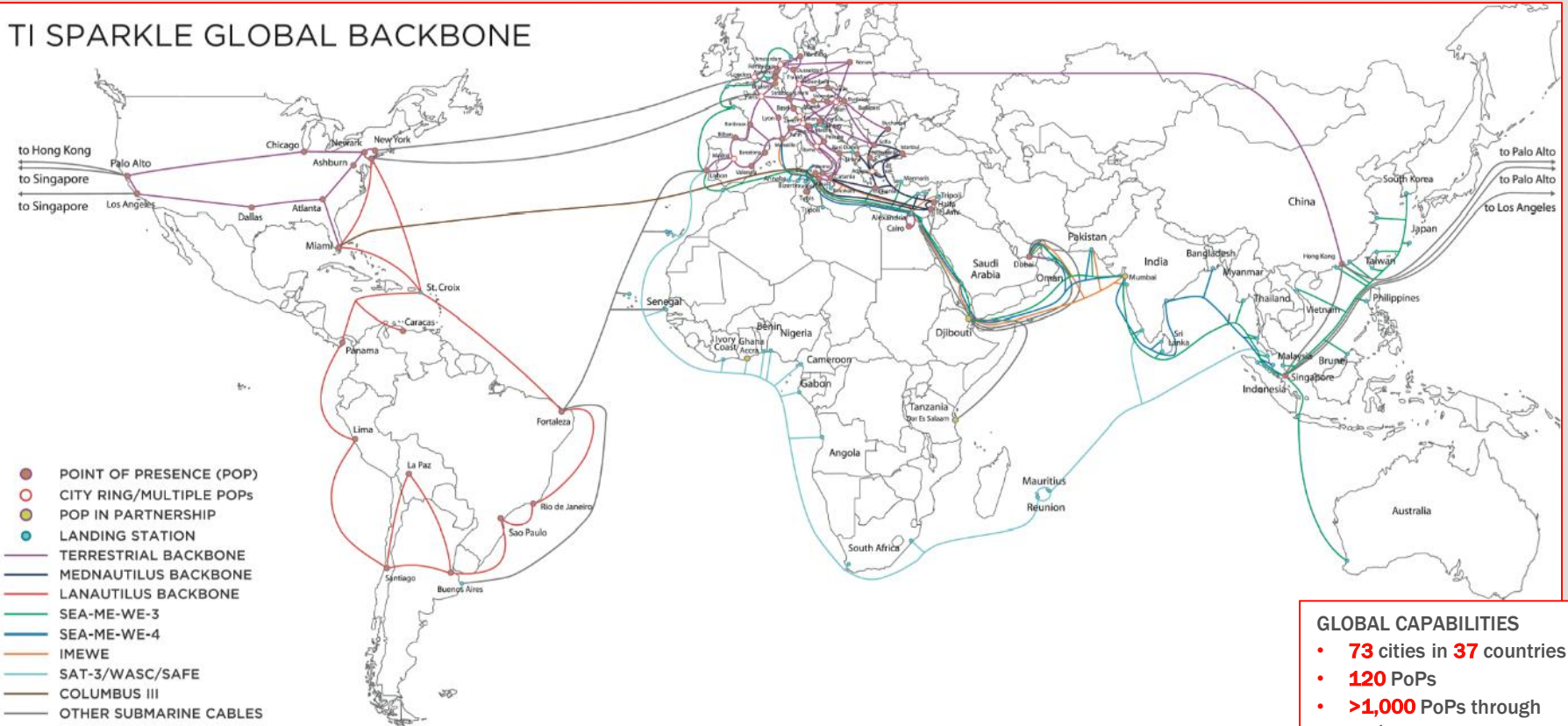**Voice Traffic** *(BN minutes)*

16.0

Revenues *(BN €)*

1.24

TI SPARKLE GROUP GLOBAL NETWORK

TI SPARKLE GLOBAL BACKBONE

Legend:
- POINT OF PRESENCE (POP)
- CITY RING/MULTIPLE POPs
- POP IN PARTNERSHIP
- LANDING STATION
- TERRESTRIAL BACKBONE
- MEDNAUTILUS BACKBONE
- LANAUTILUS BACKBONE
- SEA-ME-WE-3
- SEA-ME-WE-4
- IMEWE
- SAT-3/WASC/SAFE
- COLUMBUS III
- OTHER SUBMARINE CABLES

GLOBAL CAPABILITIES
- **73** cities in **37** countries
- **120** PoPs
- **>1,000** PoPs through partners
- **55,000** km/fibre PEB
- **32,000** km LAN
- **10,800** km MED
- **14,000** km/fibre Italian network
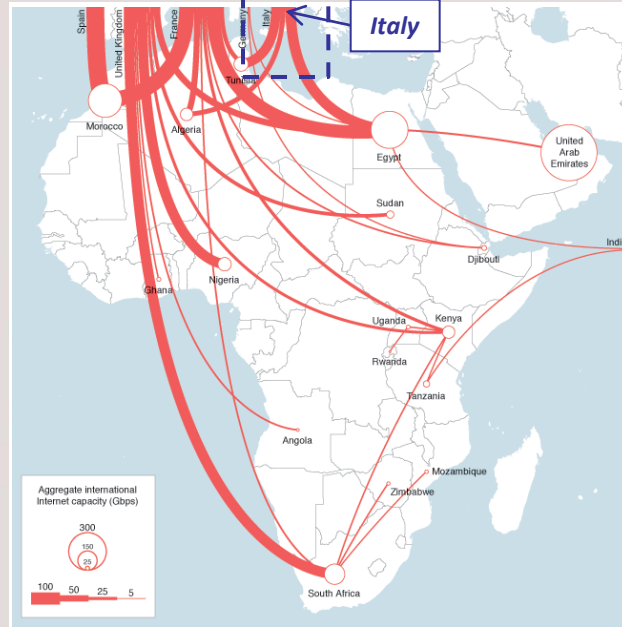- **450,000** km submarine cables

- **Full IP** Global Network with integrated and resilient **proprietary backbones in Europe, Mediterranean Basin and Americas**

- Unique **dual protected fiber path in Europe and global meshed architecture providing full resilience**

- Unique **footprint** in the Mediterranean, Gulf and South East Asia through **MedNautilus, SMW3/4, upcoming SMW5, IMEWE and bilateral cable systems**

- **New POPs** in **Ghana** and **Tanzania** for the provision of IP&DATA services and in **Tirana** and **Tunis** for the provision of MNCs solutions

Data as of March 2015

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TI SPARKLE POSITIONING

IP BACKBONE RANKING

	March 2015
Level 3	1^
Teliasonera	2^
GTT	3^
NTT	4^
Cogent	5^
Tata Communications	6^
SprintLink	7^
TI Sparkle	**8^**
Verizon	9^
PCCW	10^

Source: Renesys, March 2015

AMONG TOP 3 INT'L IP ROUTES IN AFRICA

Italy

Aggregate international
Internet capacity (Gbps)

Source: Telegeography Data 2014

INT'L VOICE WW RANKING

Traffic volumes worldwide

Bn Min		2014
Tata	1^	52,5
Vodafone CS	2^	40,0
Orange	3^	31,2
BICS	4^	27,4
Telefonica	5^	24,4
iBasis	6^	24,0
IDT	7^	21,0
DT	8^	19,0
Reliance	9^	18,0
TI Sparkle	**10^**	**16,0**

Internal Sources

- TI Sparkle Global IP Backbone "Seabone" ranks **#8** worldwide and leader in the Mediterranean *(Renesys, March 2015)*

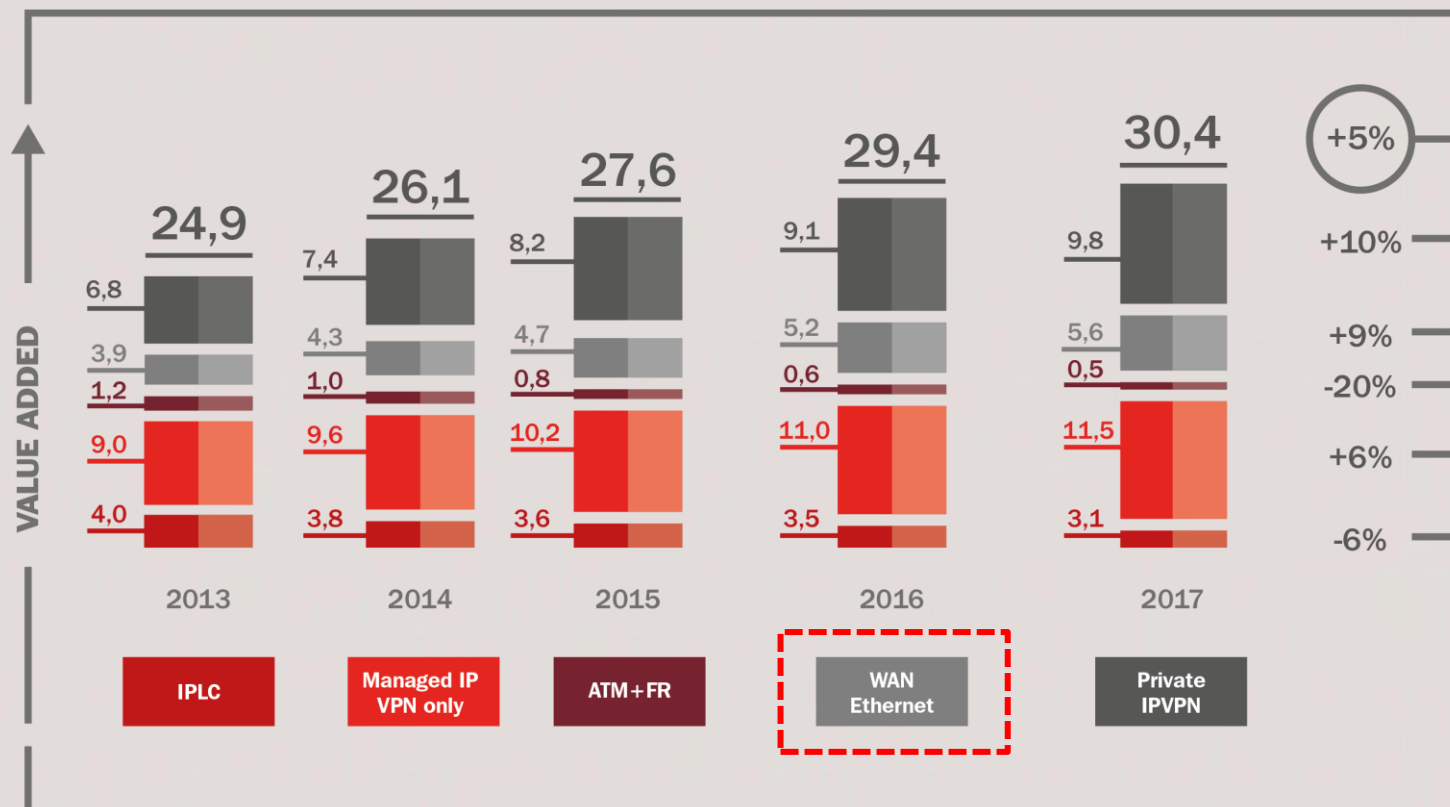- Among the few global players currently active in the wholesale mobile market

- **#1** in Italy, challenger in Europe and emerging player on the global market

- **#10** for worldwide traffic collected on an international basis

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TI SPARKLE SERVICE PORTFOLIO

Total Corporate International Data Networking - Spending by Services (€ Bn)

Year	Total	Values (top to bottom)
2013	24,9	6,8 / 3,9 / 1,2 / 9,0 / 4,0
2014	26,1	7,4 / 4,3 / 1,0 / 9,6 / 3,8
2015	27,6	8,2 / 4,7 / 0,8 / 10,2 / 3,6
2016	29,4	9,1 / 5,2 / 0,6 / 11,0 / 3,5
2017	30,4	9,8 / 5,6 / 0,5 / 11,5 / 3,1

VALUE ADDED

Growth rates: +5% / +10% / +9% / -20% / +6% / -6%

Legend: **IPLC** | **Managed IP VPN only** | **ATM+FR** | **WAN Ethernet** | **Private IPVPN**

Growth driven by IP-VPN and Ethernet services

In particular, Ethernet services – characterized by low cost, ease of use and scalability - are driven by corporate need to reduce OPEX by outsourcing IT infrastructure and adopting web services to replace the traditional business management software solutions.

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TI SPARKLE ETHERNET VALUE PROPOSITION

- Ethernet Suite allows Customers to permanently connect their premises through End-to-End Ethernet connectivity services.

- The solution is based on Sparkle's Metro Ethernet Forum certified state-of-the-art MPLS backbone, and coverage is extended at a global level through selected partners.

Under the Ethernet Suite Service, Sparkle provides the following Ethernet service types:

- **Ethernet Line Service type (E-LINE):**
  connection between only two User Network Interfaces

- **Ethernet LAN Service type (E-LAN):**
  multiple UNIs are connected as physical LAN.

- **Ethernet Access Service type (E-Access):**
  Specific Ethernet Service type for Sparkle Customers with own Ethernet L2 Service backbone.

MEF Compliant Carrier Ethernet continuous evolution

2006

2011

2013

2014

GEN14

MEF member

CE 1.0 MEF CERTIFIED

CE 2.0 MEF CERTIFIED

CE 2.0 MEF CERTIFIED

MEF ETHERNET EXCELLENCE AWARDS 2014

CE 2.0 Wholesale
E-Access Provider - EMEA

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MEF BUSINESS MARKET VALUE

Common language with customers and partners

- *Simplifying and speeding up interconnections with partners and customers:*
  CE 2.0 NNIs: # 30 in one year
- *Expand geographical reach:*
  wide homogeneous coverage
- *Enlarge Customer base: easy qualification process*
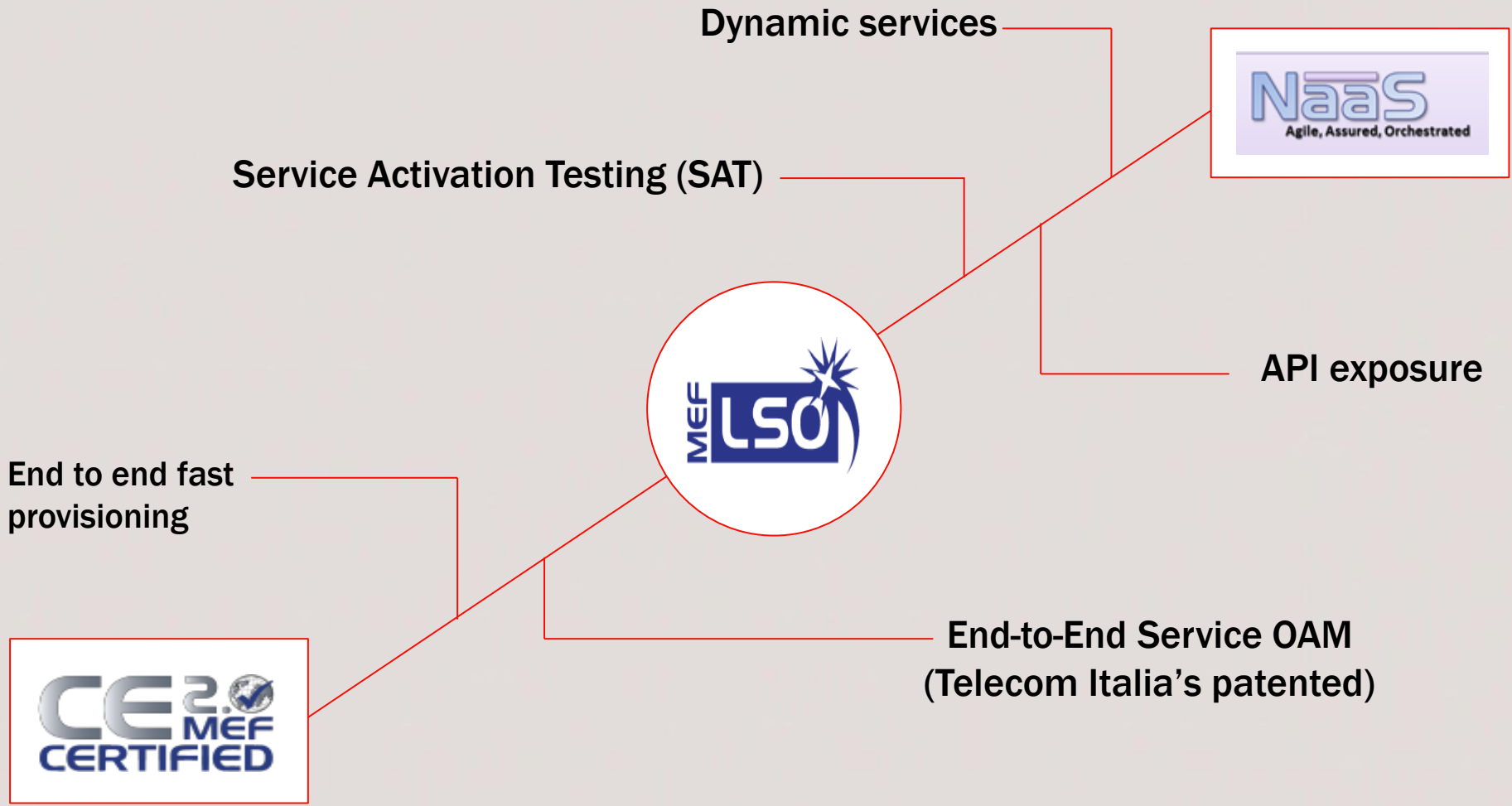
Value for Money

- *Quality as driver :* **launched new valuable profiles**
- *Quality vs Price :* **a wide service portfolio with the proper mix**

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Telecom Italia and Telecom Italia Sparkle are moving towards LSO networks

MEF Survey Report 2015: The communications services industry is undergoing a paradigm shift from static connectivity services toward more dynamic/agile and assured connectivity services that are orchestrated over more automated and interconnected networks.

LIFECYCLE SERVICE ORCHESTRATION

SEAMLESS SERVICES VIA INTERCONNECTED NETWORKS

SHIFT TO APPLICATION DRIVEN SERVICES

END-TO-END AGILE SERVICE CONFIGURATION AND SLAS MONITORING

THE THIRD NETWORK EVOLUTION: TELECOM ITALIA LAB'S SOLUTION

A Customer Centric solution Agile, Assured, Orchestrated, in line with MEF NaaS vision

Dynamic services

NaaS
Agile, Assured, Orchestrated

Service Activation Testing (SAT)

MEF LSO

API exposure

End to end fast provisioning

CE 2.0 MEF CERTIFIED

End-to-End Service OAM
(Telecom Italia's patented)

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THE THIRD NETWORK: CLOUD & NAAS

TI Sparkle has announced Network as a Service (NaaS) in partnership with Cloud Players & Data Center Providers

TI Sparkle NaaS solutions to provide **private connections** & bandwidth on-demand to Cloud and Broadcaster ecosystems by connecting:
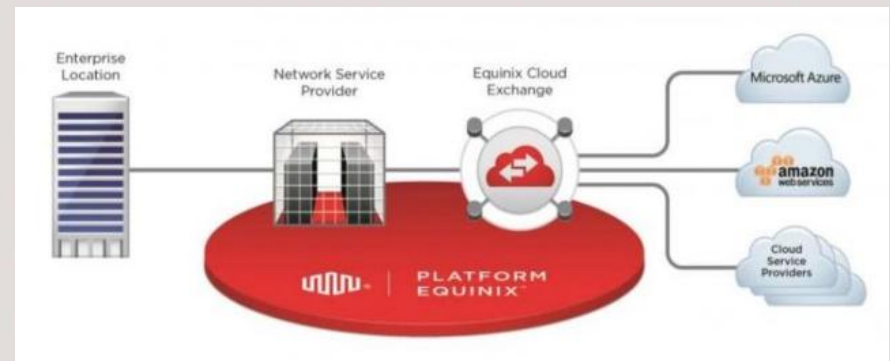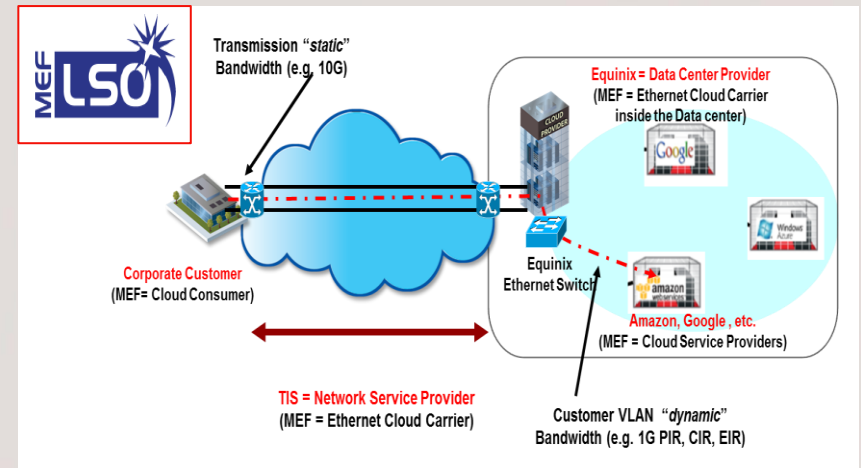
- **Main Data Centers and Cloud Players**

- **Media Hubs**

- **Corporate sites**

TI Sparkle is a partner of Amazon Web Services (AWS) Direct Connect and Equinix Cloud Exchange (ECX) and its network is fully integrated with TI Sparkle Cloud Solutions and the main Italian Data Centers

TODAY

PHASE 1

Static private connections

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THE THIRD NETWORK: LSO BASED SOLUTION

TI Sparkle has announced Network as a Service (NaaS) in partnership with Cloud Players & Data Center Providers

TI Sparkle NaaS solutions to provide private connections & bandwidth on-demand to Cloud and Broadcaster ecosystems by connecting

- **Main Data Centers and Cloud Players**

- **Media Hubs**

- **Corporate sites**

TI Sparkle is a partner of Amazon Web Services (AWS) Direct Connect and Equinix Cloud Exchange (ECX) and its network is fully integrated with TI Sparkle Cloud Solutions and the main Italian Data Centers

NEXT STEP

PHASE 2

On demand connections based on LSO