Africa Telecommunications Union
Case Study – Broadband for Africa

April, 2016
Cotonou, Benin

yahsat الياه سات

Yahsat Overview

Al Yah Satellite Communications Company PJSC (Yahsat) is a private joint stock company fully owned by Mubadala, the investment arm of the Government of Abu Dhabi.

Yahsat provides multipurpose satellite solutions (government and commercial) for broadband, broadcast, and communications use across the Middle East, Africa, and Europe in addition to Central and South West Asia.

Yahsat is the first company in the Middle East and Africa to offer multi-purpose Ka-band satellite services.

"To be the global partner of choice for reliable, innovative and affordable satellite solutions"

HQ in the UAE, offices in South Africa, Nigeria, Kenya, DRC, Ghana, Pakistan and Brazil

Yahsat Today

We cover **600 mil** people globally

Present in **140** countries

#1 provider of satellite broadband services in Africa

World's **7th largest** satellite operator in terms of revenue

Over **US$ 300m** in revenue

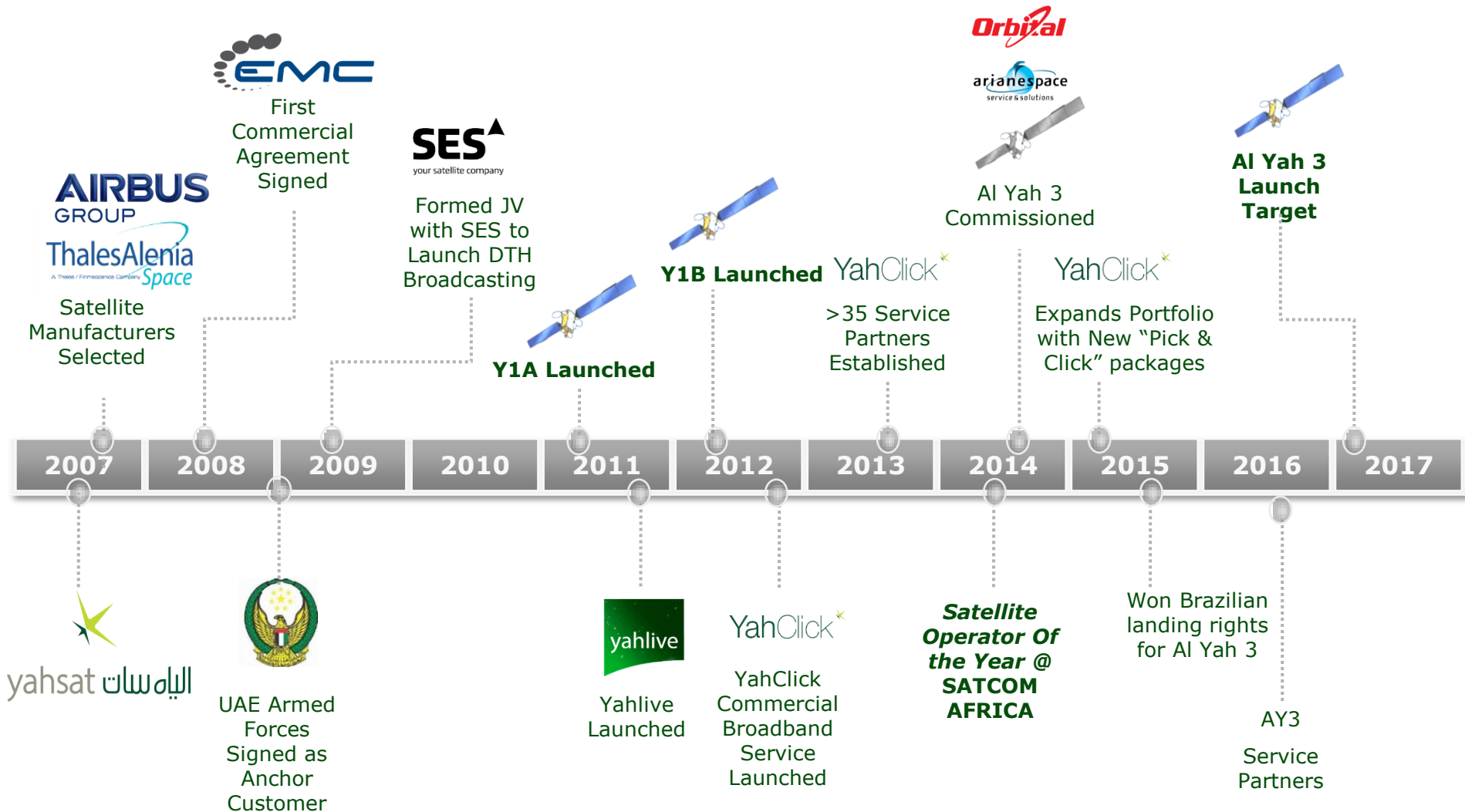**23%** Net Income annual growth

25Mn Eyes on YahLive

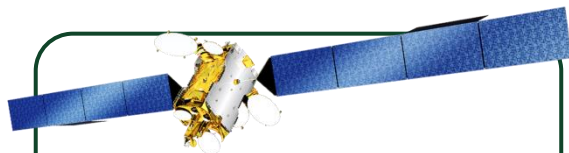yahsat الياه سات

Our Journey So Far...

AIRBUS GROUP
ThalesAlenia Space
A Thales / Finmeccanica Company

EMC
First Commercial Agreement Signed

SES
your satellite company

Formed JV with SES to Launch DTH Broadcasting

Orbital

arianespace service & solutions

Al Yah 3 Commissioned

Al Yah 3 Launch Target

Satellite Manufacturers Selected

Y1B Launched

YahClick

>35 Service Partners Established

YahClick

Expands Portfolio with New "Pick & Click" packages

Y1A Launched

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017

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UAE Armed Forces Signed as Anchor Customer

yahlive

Yahlive Launched

YahClick

YahClick Commercial Broadband Service Launched

Satellite Operator Of the Year @ SATCOM AFRICA

Won Brazilian landing rights for Al Yah 3

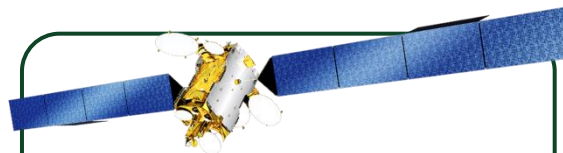AY3 Service Partners

www.Yahsat.ae

Our Fleet

Contractor: Airbus & Thales Alenia
Orbital Location: 52.5° E
Lifetime: 15 Years
Launcher: Ariane 5
Capacity/Payload:
C-band: 8 x 36MHz + 6 x 54MHz Transponders
Ku-band BSS: 25 x 33MHz Transponders
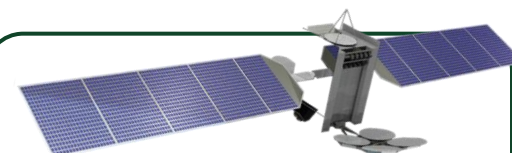**Ka-band** Secured Government

Y1A

Launched: April 2011

Contractor: Airbus & Thales Alenia
Orbital Location: 47.5°E
Lifetime: 15 Years
Launcher: ILS-Proton
Capacity/Payload:
Ka-band Commercial: 25 x 110 MHz
Transponders (56 Spot beams)
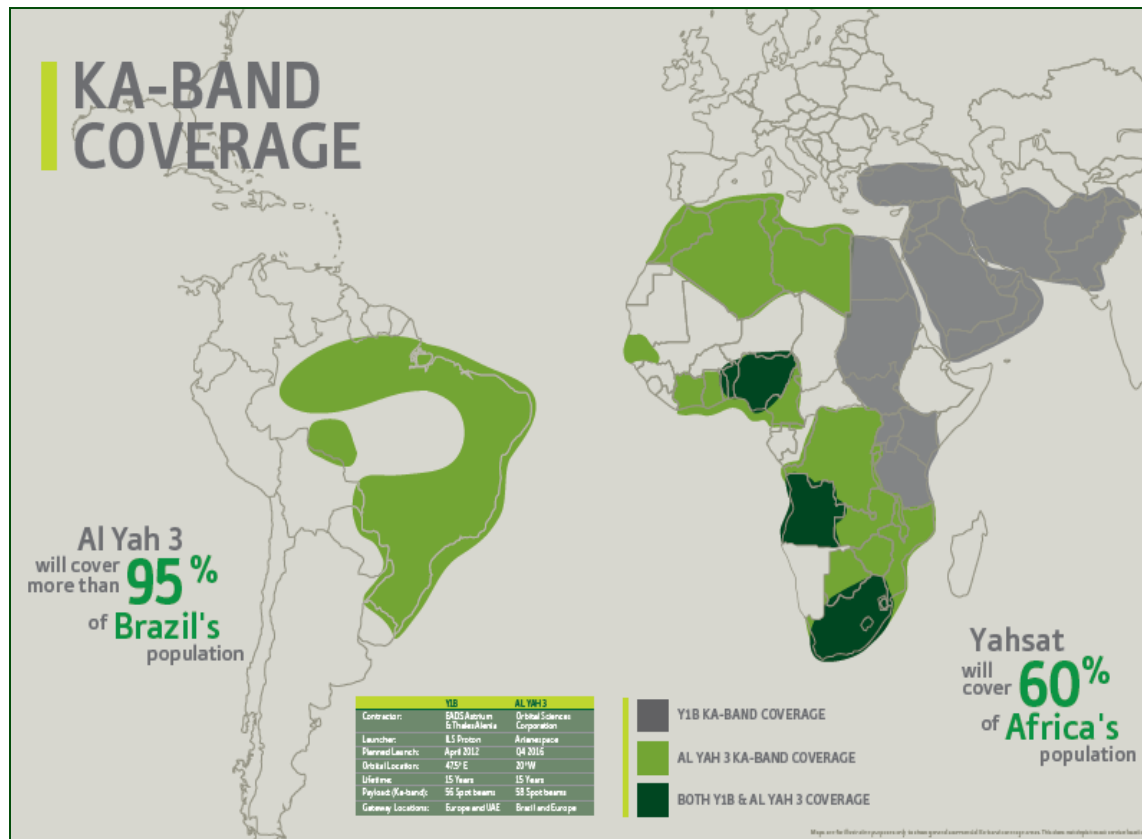**Ka-band** Secured Government

Y1B

Launched: April 2012

Contractor: Orbital ATK
Orbital Location: 20°W
Lifetime: 15 Years
Launcher: Arianespace
Capacity/Payload:
Ka-band Commercial: 58 Spot beams

AL YAH 3

Planned Launch: Q1 2017

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Africa Coverage

KA-BAND COVERAGE

Al Yah 3 will cover more than **95%** of **Brazil's** population

Yahsat will cover **60%** of **Africa's** population

	Y1B	AL YAH 3
Contractor:	EADS Astrium & Thales Alenia	Orbital Sciences Corporation
Launcher:	ILS Proton	Arianespace
Planned Launch:	April 2012	Q4 2015
Orbital Location:	47.5° E	20° W
Lifetime:	15 Years	15 Years
Payload (Ka-band):	56 Spot beams	53 Spot beams
Gateway Locations:	Europe and UAE	Brazil and Europe

- Y1B KA-BAND COVERAGE
- AL YAH 3 KA-BAND COVERAGE
- BOTH Y1B & AL YAH 3 COVERAGE

- Algeria
- Angola
- Benin
- Botswana
- Burundi
- Cameroon
- DRC
- Egypt
- Gambia
- Ivory Coast
- Lesotho
- Libya
- Kenya
- Malawi
- Mozambique
- Nigeria
- Rwanda
- Senegal
- South Africa
- South Sudan
- Sudan
- Swaziland
- Togo
- Tanzania
- Uganda
- Zambia
- Zimbabwe

AY3 extends Ka- band to **17 new markets** plus top-up on key African markets

About YahClick

- **Pioneer** of Ka Satellite Service in Africa (Y1B).
- Yahsat invests in **Satellite & Ground segment** infrastructure.
- Available in **26 African countries**.
- Service Partners have **no infrastructure investment**
- Service Partners **manage** their own subscriber base.
- Network and terminals capable of maximum speeds of **5/35** Mbps
- Subscription starting at **$x pm**

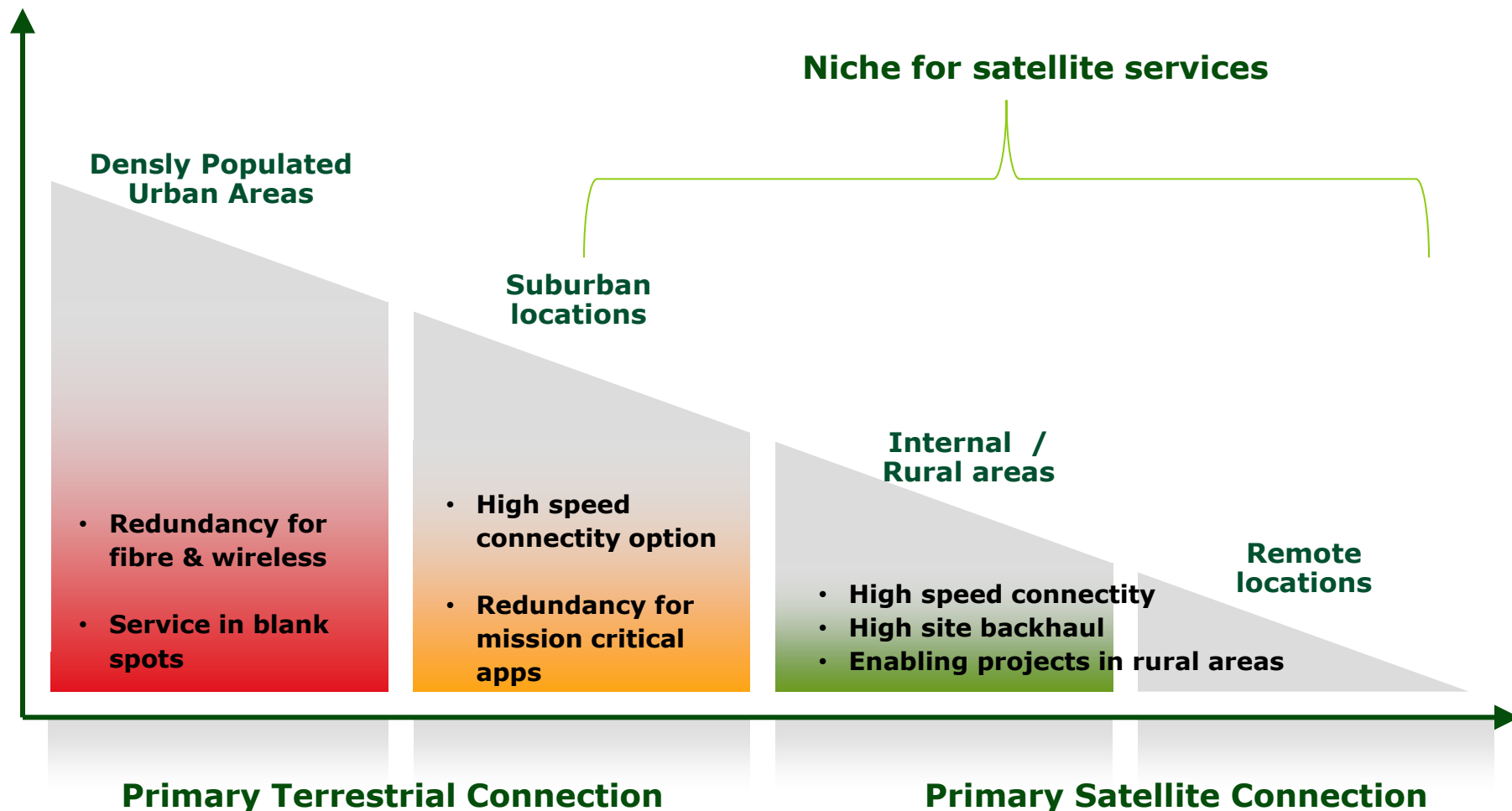✓ **Trusted broadband partner** for key projects including:
  - Universal Service & Access Agency, S. Africa
  - E. Cape Libraries, South Africa
  - SKA , South Africa
  - Revenue Authority, Uganda
  - National Identity Program, Nigeria
  - Micro Mediclinics, Kenya

Satellite Services
Compliment Terrestrial Broadband

Niche for satellite services

Densly Populated Urban Areas

- Redundancy for fibre & wireless
- Service in blank spots

Suburban locations

- High speed connectity option
- Redundancy for mission critical apps

Internal / Rural areas

- High speed connectity
- High site backhaul
- Enabling projects in rural areas

Remote locations

Primary Terrestrial Connection

Primary Satellite Connection

AY3
Space & Ground Segment

SPACE SEGMENT

- Based on Orbital GeoStar 3 technology

- Arianne launcher vehicle

- Transparent "bent pipe"

- Launch Mass 3.5 tons

- 58 Ka Spot Beams

- 40+ Gbps capacity

- Frequency re-use technology multiplies Gbps capacity per satellite

- Reducing cost for HTS spacecraft platforms from innovations

GROUND SEGMENT

- 3 Teleports – Luxembourg, Athens & São Paulo

- Africa Service Platform – HNS Jupiter 2

- "Managed" solutions - multiple beams utilize a single gateway

- HNS Jupiter 2 serves spectrum of customer segments / applications simultaneously

- Reducing CPE prices

- Enhanced features compared to current system

Technology/Features/Support ... is it only a price game ?

Product portfolio
Africa

Product Segments	YAHCLICK					VNO	MHz
	Consumer	SOHO	SME	Low end Enterprise	High end Enterprise	VNO Bulk Capacity	MHz + Co-Lo
Product family	YahClick Wholesale Packages (Volume limited pre-defined packages)			CIR/MIR type product		VNO	Raw capacity with Co-Location rate card
Service specs	D/L Speeds **<35Mbps** Provide SOME access for SPs to traffic monitoring tools and DPI			D/L Speeds **<35Mbps** CIR 1:5, 1:10, 1:20 Access for SPs to traffic monitoring tools and DPI		Ded BW pools with access to HN NMS and Traffic shapers	Incl Co-Lo, RF, Onsite support + rate card for ad-hoc config, per Mbps for internet
CPE type	HT-1100 One Ethernet, Single IIFL 1 watt , 74cm antenna	HT-1100 One Ethernet Single IFL 1 or 2 watt 74cm antenna	HT-1200 Two Ethernet Single IFL 2 watt 98cm antenna	HT-1200 Two Ethernet Single IFL 2 watt 98cm antenna	HT-1300 Two Ethernet Dual IFL, 4 / 6 watt 98cm antenna	HT-1100, HT1200, HT-1300 (per YahClick)	NA

Constant **evolution** increases levels of service yet contains **cost & simplicity** for partners

Yahclick
Value to Broadband & Community Services

COUNTRY / COMMUNITY

- Regulatory compliance

- Ability to extend broadband reach without investment
  - Ability to connect rural communities
  - 10% BB growth = 1.3% Economy
  - Encourage entrepreneurship in rural communities

- Ability for government to execute special projects

- Service Partner opportunity for local businesses

SERVICE PARTNERS

- Local licensed companies

- Business Opportunity without the Capital investment

- Extend offices and subscriber network across the country (not limited to urban areas)

- Support Services & Remote offices reduces unemployment

- Upskill of technical resources

Encourage Ka as BB offering
Technically sound & Competitively priced

Regulatory Environment

- Individual licensing of terminals hinders deployment of satellite broadband. Need help of national regulators in simplifying licensing rules (e.g. blanket licensing.

- Grateful for countries at WRC-15 protecting Ka band from 5G deployment. Next challenge is the V/Q band, which will be under consideration for 5G at WRC-19.

- The V/Q band is critical for satellite broadband: this band will enable a sizeable increase in satellite throughput.