

THURAYA

WE WANT EVERYONE
IN THE WORLD
TO BE CONNECTED AT ALL TIMES

Contents

- Thuraya Introduction
- Key Trends - Big Data
- Thuraya Product Strategy
- Future Technologies

Thuraya - About Us

- Established & headquartered in UAE in 1997
- Owns and operates 2 GEO satellites by Boeing
 - Thuraya 2 covers Europe & Africa
 - Thuraya 3 covers Asia & Australia
 - L-band spectrum for all weather use
- Provide voice, data, M2M and IOT services for land, maritime and aero markets
- Provide connectivity to 2/3rd of the World
- Only MSS operator with 2-way GSM Roaming
 - 400 roaming agreements in 174 countries
- GTM is via channel partners - present in more than 160 countries
- Regional sales offices in USA, Singapore & Japan

20
years in the business



400
roaming agreements

Key Market Trends

Trends and key drivers - Data | IOT

26%

Agriculture
damaged due to
climate related
disasters

1.4 trn

Total Damages
due to Natural
Disasters

1.7Bil

People affected
due to Natural
Disaster

80%

Worlds population
suffers serious
threat to its water
security

\$11trn

Economic
Impact by IOT

\$178Bil

Manufacturing
market by 2025

\$78Bil

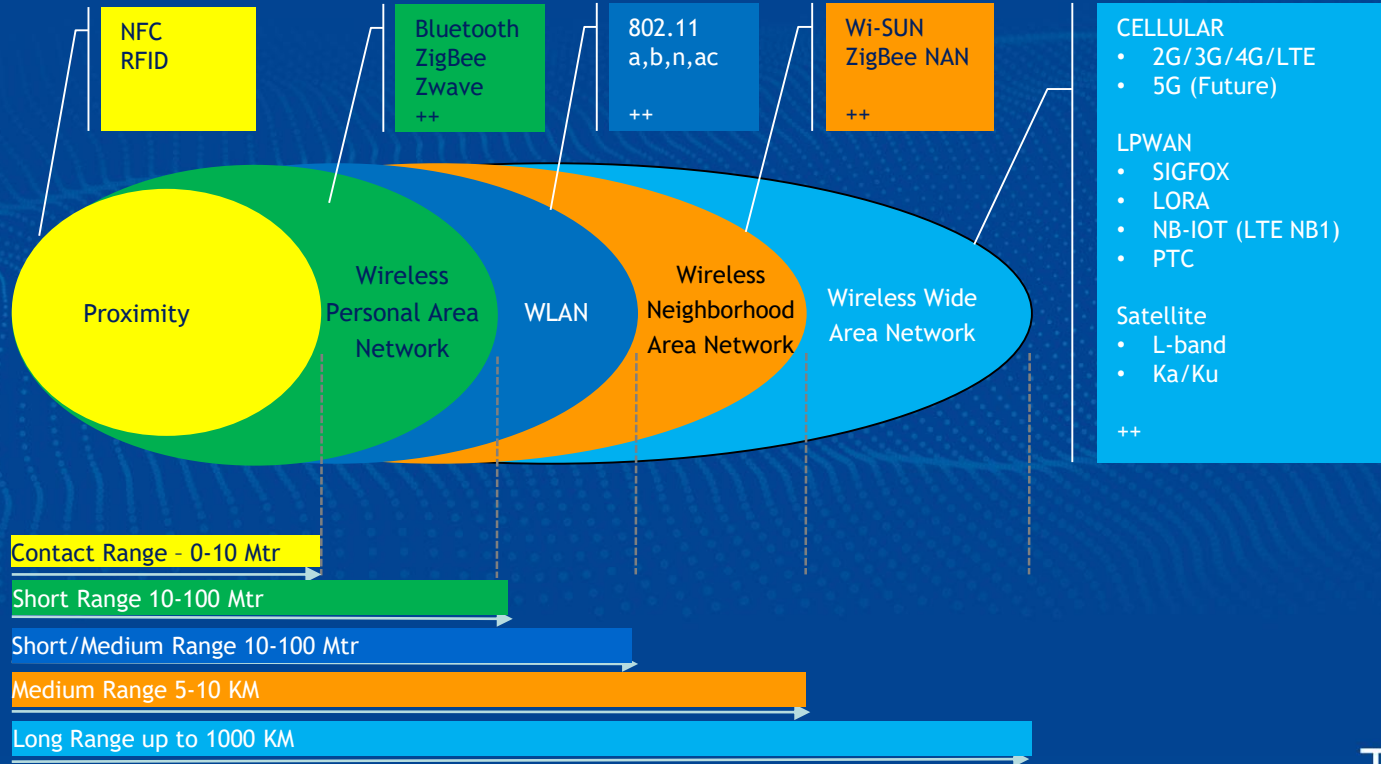
Transportation
market by 2025

\$69Bil

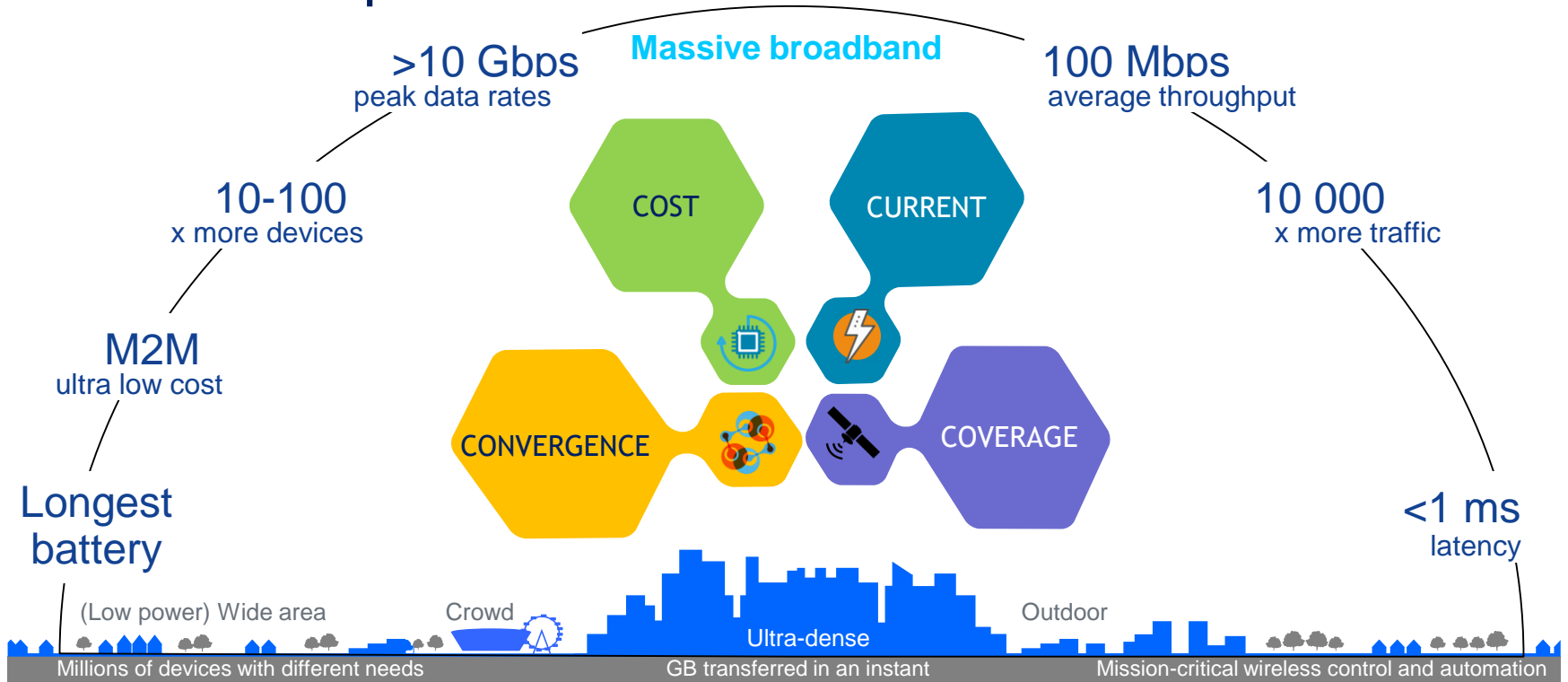
Utilities market
by 2025

Source: Mario Morales, IDC
WMO 2017

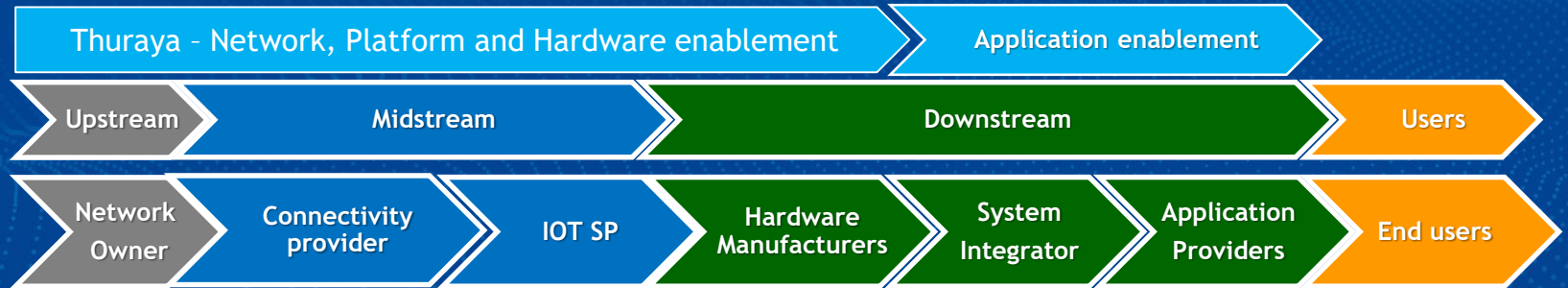
The rise of IoT technologies



Diverse Requirement



Thuraya Enablement Strategy

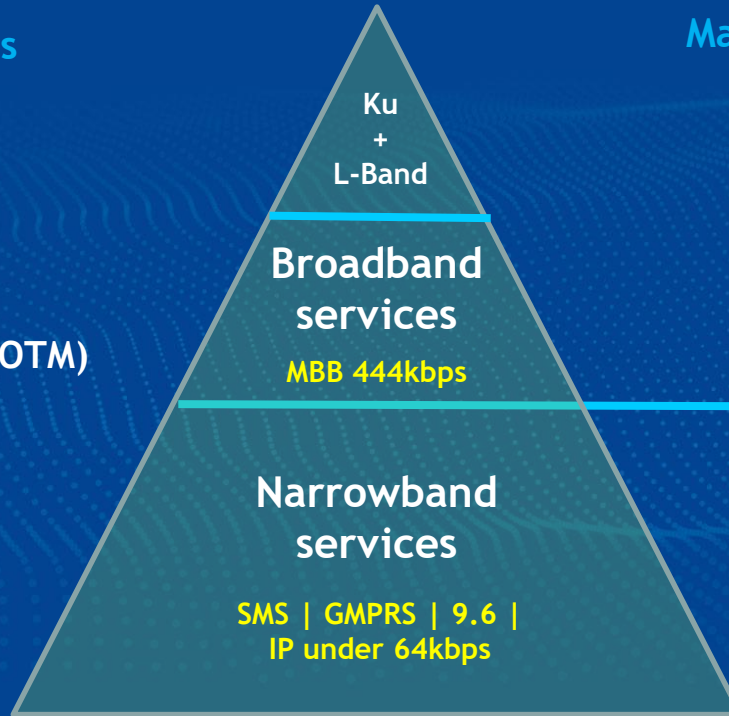


Thuraya Focus

Land Products

- Thuraya IP
- IP M2M
- WE
- Voyager (COTM)

- X5 Touch
- XT Pro
- FT2225
- T2M Dual



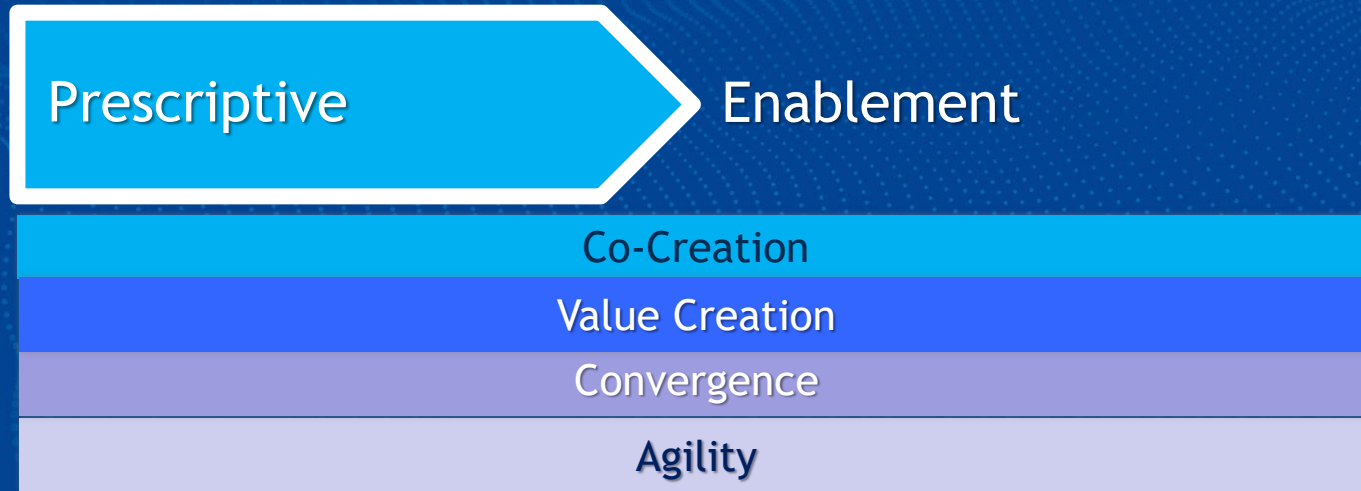
Maritime Products

- VSAT+

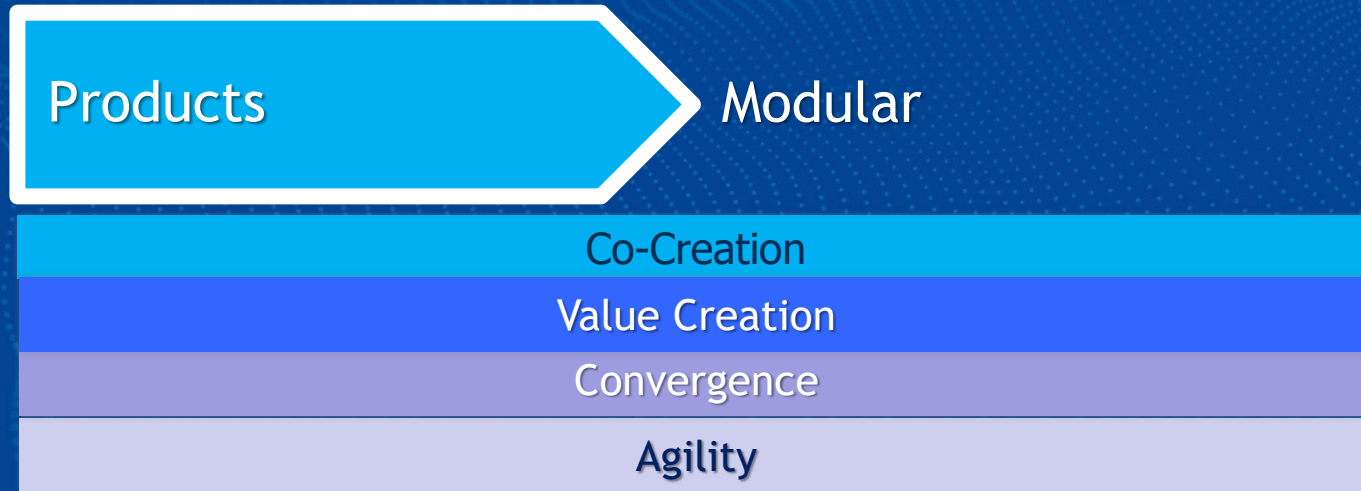
- Orion
- Atlas IP+
- *Project Fusion

- Sea Star
- SF2500
- *New Dev

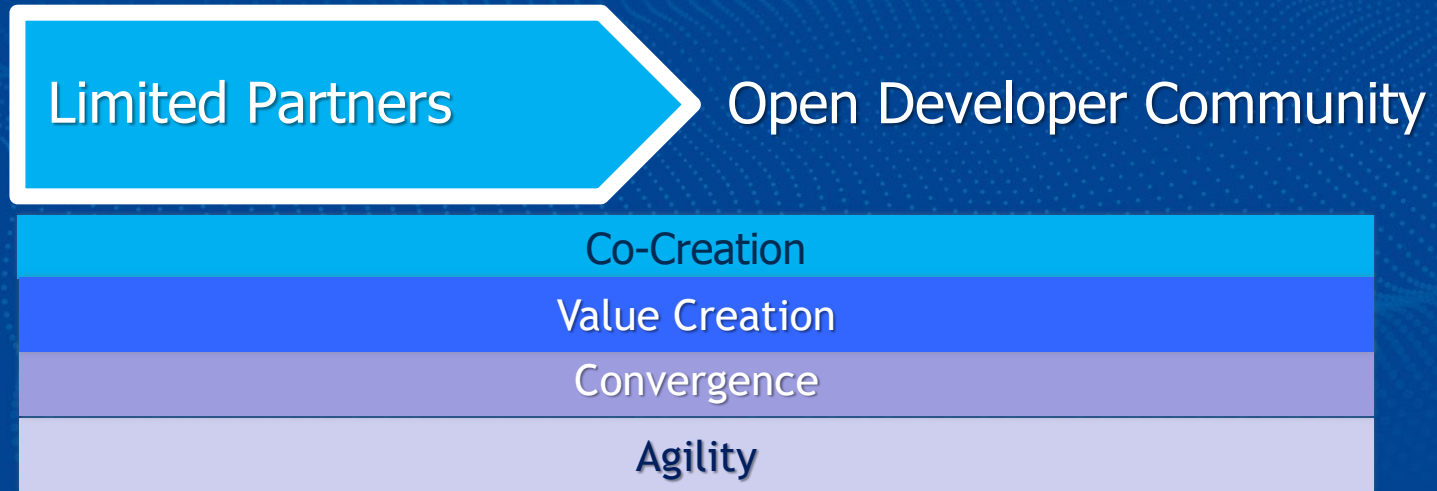
Thuraya M2M product strategy



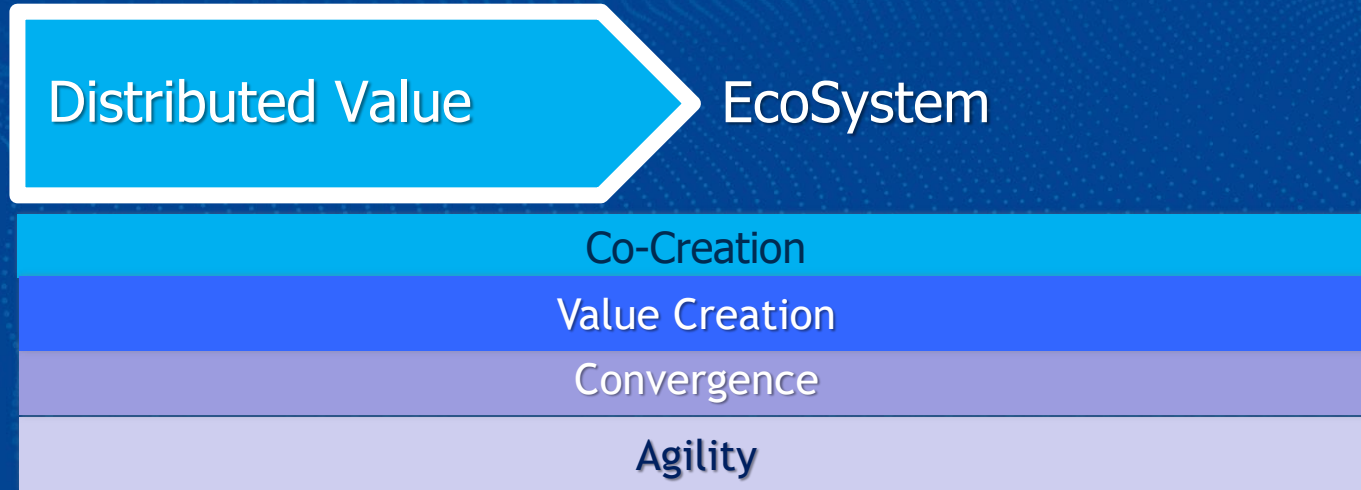
Thuraya M2M product strategy



Thuraya M2M product strategy















Thuraya M2M product strategy



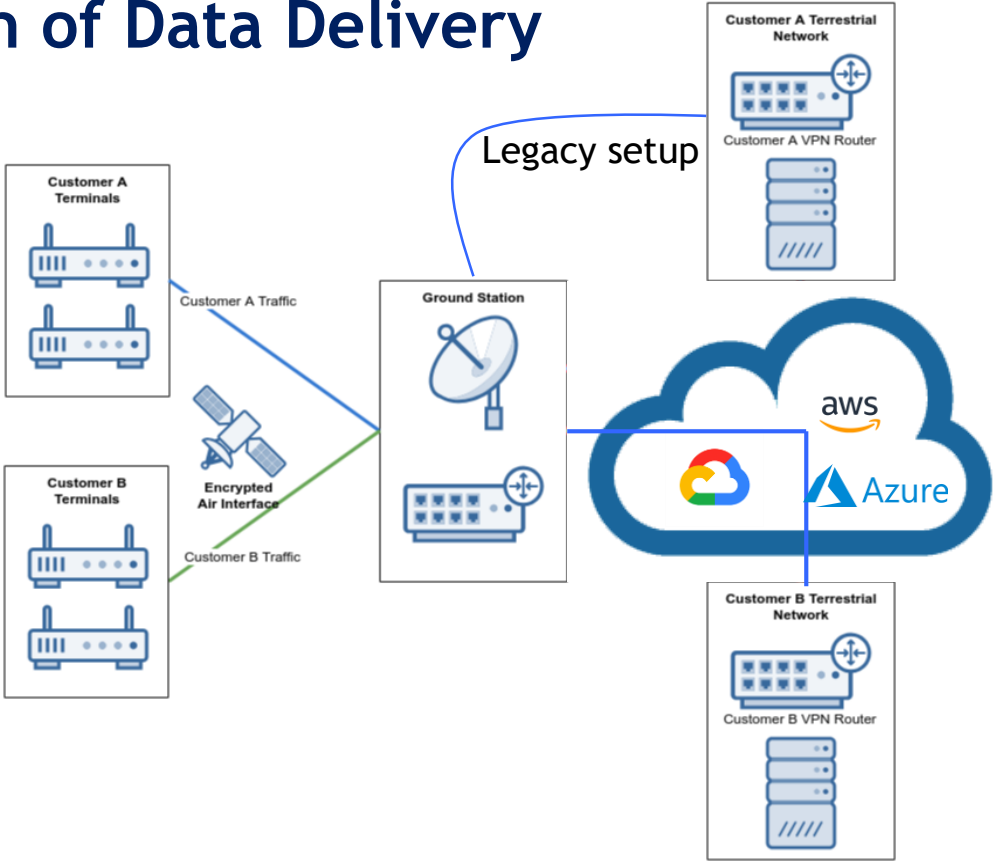
Future vision

Modular enablement

Value Chain Layers

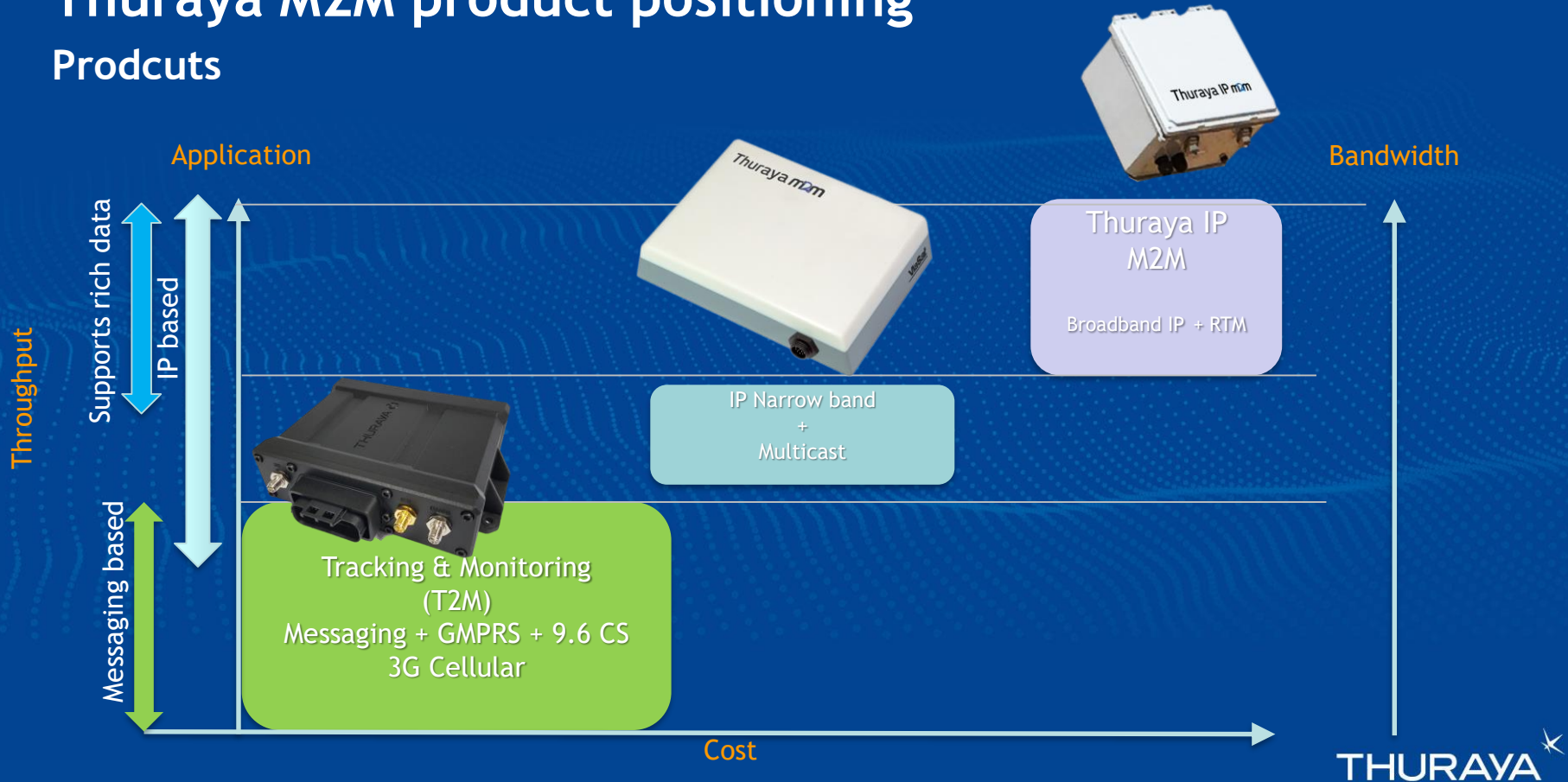
	Enabling Components (Examples)	Sub Enabling Components (Examples)
Business Process	<ul style="list-style-type: none"> Business Applications and Marketplace Business Processes Edge Devices/Analytics 	 API/Integration Gateway  Application Services  Data Visualization  Line-of-Business System  Workflow Process(es)
Applications & Content		<ul style="list-style-type: none"> Data Ingestion Data Analytics Policy and Orchestration Device and Platform Management
Data / Voice Connectivity	<ul style="list-style-type: none"> Ubiquitous Network 	 Satellite Connectivity (GEO, LEO, MEO)  LPWAN  Messaging Protocols  Broadband Narrowband
Devices / Sensors	<ul style="list-style-type: none"> Devices and Appliances Sensors and Actuators Gateways/ Aggregation/Edge Analytics 	 Sensors and Actuators  "Smart" IoT Device  Simple IoT Device

Evolution of Data Delivery



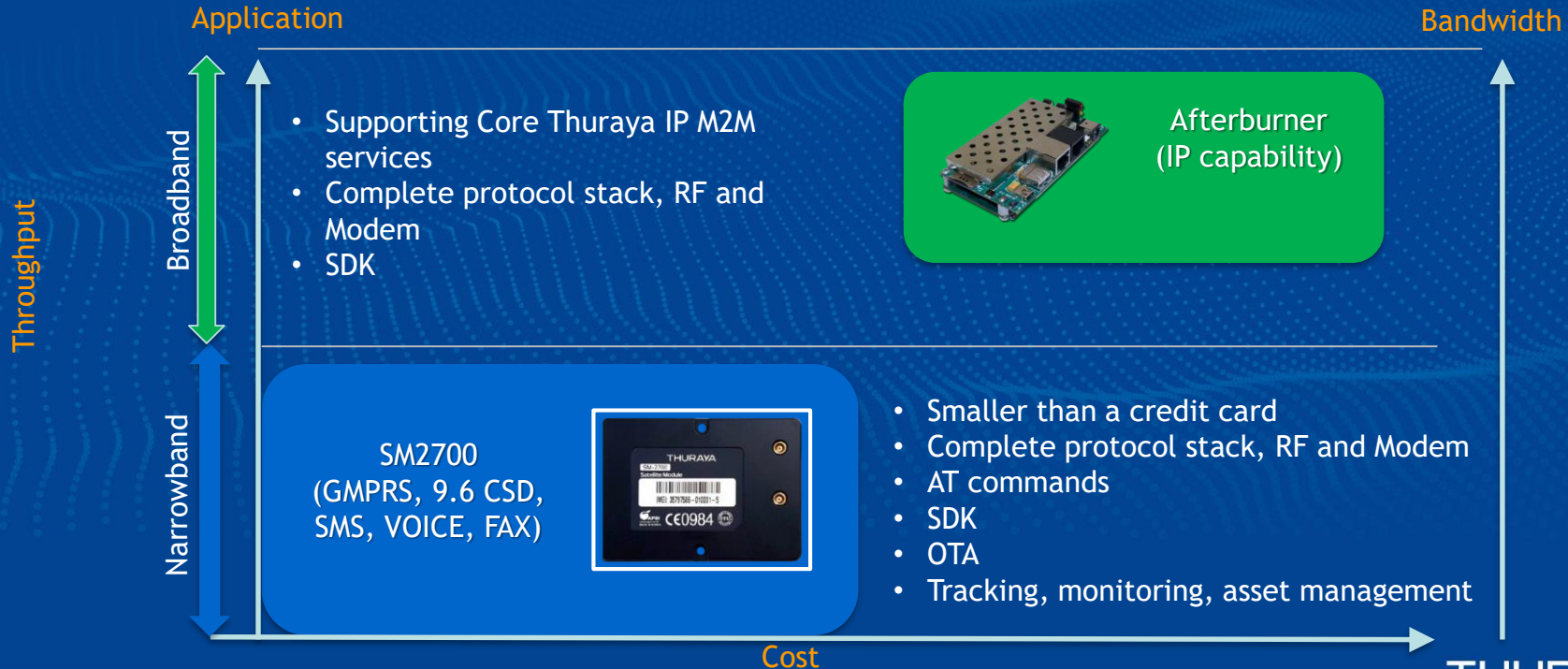
Thuraya M2M product positioning

Products



Thuraya M2M product positioning

Modules



Coming Soon

Project Fusion

Maritime & Land

- Focused on both Maritime and Land segments
- A converged IP terminal with satellite and LTE functionality (2 sim slots)
- Data rates of up to 200Kbps
- A single antenna housing including modem powered by single Ethernet cable for easy installation
- Optional BDU - for terminal interfaces (Focused on maritime)
 - POE LAN ports
 - RS232 port
 - I/O ports
 - Programmable SOS button

LEO | GEO Augmentation



36,000
&
600
Km
From Earth



Smallest
Chipset



High and Low
power

Project IoTx - Changing the paradigm

Maritime & Land

In the works

- Focused at connecting the unconnected assets
- Low IP data rate
- IP based burst
- Battery powered
- Edge processing
- Industry standard sensor connectivity
 - (Wi-Fi/BLE, ZigBee)



Real Time
(Immediate Priority)



e.g.: digital
transaction



On Demand
Reporting



e.g.: API fetch, oil
pressure value



Emergency or
Out-of-Threshold



e.g.: if monoxide
level high, alarm



Store and
Forward



e.g.: weekly data
dump



Fixed Interval
Transmission



e.g.: location data
every minute



Scheduled
Transmission



e.g.: solar radiance,
everyday at 12pm

Project IoTx - Changing the paradigm

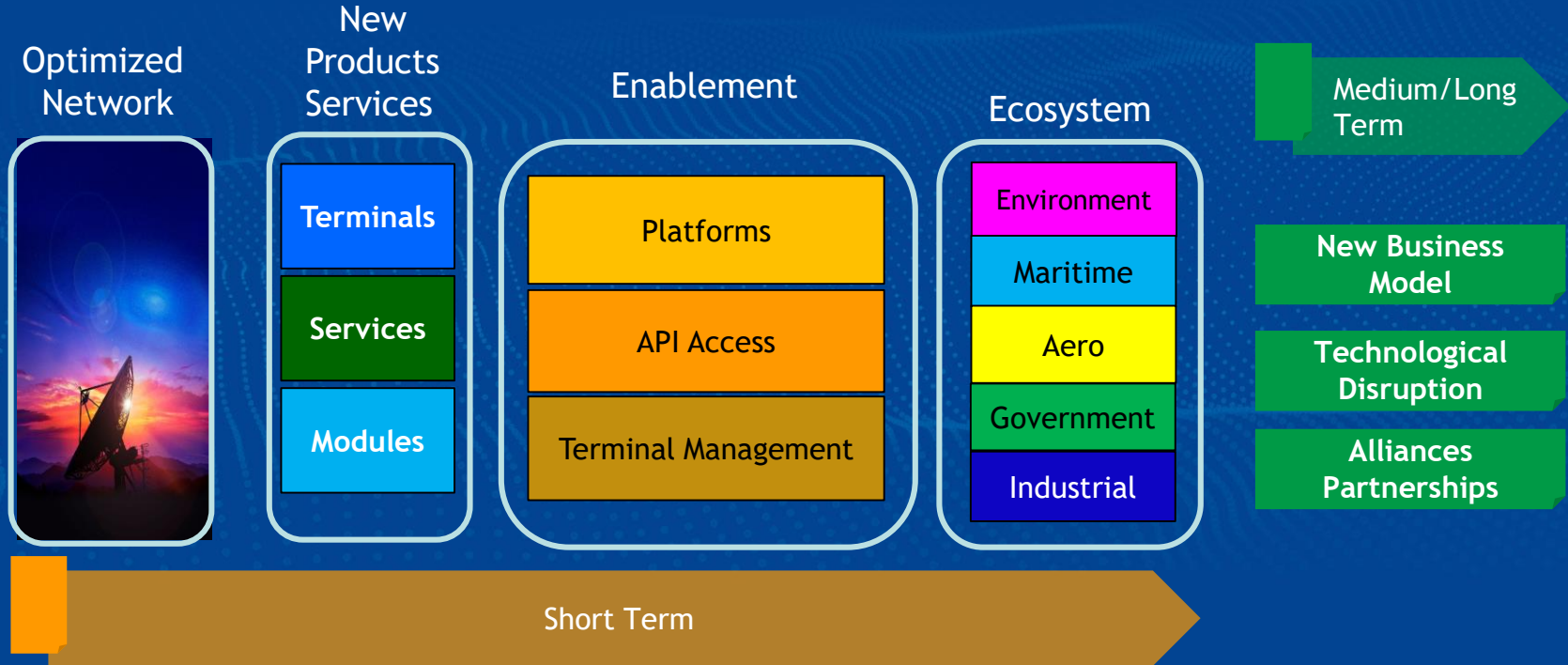


Maritime & Land

- Marine Instruments/Buoys
- Automotive Telematics
- Forestry Services
- Crop Monitoring
- Wind Power
- Equipment OEM
- Oil & Gas SCADA

- Industrial SCADA
- Smart Agriculture Soil Sensors
- Construction IoT
- OEM
- Perimeter control
- Rail Telemetry and Monitoring
- Water kiosks

Summary



THANK YOU

Thuraya Telecommunications Company | www.thuraya.com

Nadeem.Khan@Thuraya.com

Director Maritime | M2M | IOT