# SATELIST

### Executive Summary The problem

## 80% of the world has no mobile coverage

## Today satellite IoT is not commercially viable for most use-cases

- Most of today's market is serviced by GEO, coverage is limited by region and terrain.
- All solutions in the market today (LEO and GEO) use expensive, proprietary devices (often >\$100) and operate on closed networks that are satellite-only.
- This makes today's solutions too expensive to address the vast majority of use cases.

#### **Result:**

#### **Current market is only 4m connections**

### Executive Summary The Solution

### A telecoms-focussed standardsbased approach

- As a LEO solution, Sateliot provides coverage everywhere.
- Having incorporated satellite NB-IoT into 3GPP standards, devices can roam from terrestrial telco networks to satellite.
- Existing, sub-\$5 off-the-shelf devices can be used, and service can be provided close to a terrestrial price point.

Only 5G NTN NB-IoT can offer coverage everywhere at a terrestrial price point

### **A standards-based approach is the only way to meet customer demands**

There is a huge market opportunity for Satellite IoT if a solution could use off-the-shelf, non-proprietary technology. They evaluated three standards-based protocols against these requirements.

	Customer demands	sigfox	LoRa			
				<b>NB</b> -lot	LI E- 👔	
1	Designed for massive IoT, and affordable				$\mathbf{X}$	
2	Extension of existing MNO coverage	$\mathbf{x}$	$\mathbf{X}$			
3	Seamless ability to roam between terrestrial and space infrastructure, with a single device	$\mathbf{x}$	×			
4	Single point of contact for billing and service, ideally with existing service provider	$\mathbf{X}$	$\mathbf{X}$			

We selected NB-IoT, and then worked for 3 years with the standards organisation to implement satellite connectivity

### Technology Only NB-IoT NTN can offer a price that unlocks the Massive Satellite IoT market

Superior pricing enabled by roaming store & forward, dramatically reducing upfront CapEx



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### Competition A LEO solution is the only way to offer coverage everywhere

**GEO** 

**LEO** 





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has reshaped mobile standards, becoming the first 5G NB-IoT telecom operator from space, providing standards-based, low-cost, coverage everywhere, by unique implementation of roaming store & forward technology

### Technology Sateliot has been #1 contributor from the space industry to the Release 17

Mediatek	60
Ericsson	53
Huawei	50
Nokia	49
Zte	49
Hisilicon	48
Qualcomm	48
Thales	48
Орро	46
Xiaomi	43
Cmcc	41
Samsung	39
Catt	36
Apple	32
Lenovo	31
Motorola	31
Nec	30
Sony	28
Intel	27
Interdigital	27
Spreadtrum	27
Asia Pacific Telecom	22
Sanechips	22
Fgi	21

Sateliot	17
Gatehouse	16
Lg	16
Itri	15
Eutelsat	14
Panasonic	14
	13
Convida Wireless	11
Echostar	11
Esa	11
Fraunhofer	11
Caict	10
Inmarsat	10
Vivo	10
Asus	7
Etri	7
Vodafone	7
99 Error	6
Intelsat	6
Kepler	6
Novamint	6
British Telecom	5
Chairman	5
Ligado	5

Omnispace	5
Zhejiang Lab	5
Bupt	4
Ntt Docomo	4
Sequans	4
Tno	4
Avanti	3
Ct1	3
Hispasat	3
Kt	3
Lockheed Martin	3
Cewit	2
Itl	2
Mitsubishi	2
Moderator Ericsson	2
Moderator Mediatek	2
Moderator Thales	2
Moderator Zte	2
Rakuten	2
Reliance	2
Turkcell	2
Acer	1
Chairman Ericsson	1
Chairman Mediatek	1

Chairman NOKIA	1	
Chairman QUALCOMM	1	
Coordinator MCC	1	
DEUTSCHE TELEKOM	1	
EDF	1	
ESOA	1	
IITH	1	
IITM	1	
MAGISTER	1	
MAVENIR	1	
Moderator EUTELSAT	1	
Moderator NOKIA	1	
Moderator QUALCOMM	1	
Moderator SAMSUNG	1	
NCCUNTU	1	
NOMOR	1	
OQ	1	
PHILIPS	1	
SAANKHYA LABS	1	
SHARP	1	
SIERRA WIRELESS	1	
SOFTBANK	1	
TELECOM ITALIA	1	
UNIBO	1	

Technology Sateliot's approach enables seamless terrestrial extension cost-efficiently





Same device (<\$5 OTS)



Customer keeps 1 point-of-contact for billing/support/etc



Immaterial price increase vs current contract



Service provided with fewer satellites using patent pending store & forward technology



New capex-free revenue stream for the MNO



Technology

Roaming store & forward tech allows Sateliot to begin delivering service with 4 satellites

Competitors using a similar standards-based approach would need to launch 250 upfront



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can...

Go-to-market with a much lower capex requirement

Become profitable without servicing the NRT market



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### Competition Sateliot is the only satellite NB-IoT addressing customer demands affordably

		Telecoms led Approach		NewSpace disruptors		Direct 2 Device (D2D)		Legacy Incumbents		
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ŀ	leadquarters	Spain	Luxembourg	USA	Switzerland	France	USA	USA	USA	UK
Ν	Aarket segment	ΙΟΤ	ΙοΤ	ΙοΤ	ΙοΤ	ΙοΤ	D2D	D2D	Voice & Data	ΙοΤ
C	Drbit	LEO	LEO	GEO	LEO	LEO	LEO	LEO	LEO	GEO
Ν	letwork	Standard	Standard <sup>1</sup>	Standard	Proprietary	Proprietary	Std Phone	Std Phone	Proprietary	Proprietary
F	ull GSMA membership	<b>GSMA</b> <sup>®</sup>	$\mathbf{X}$	GSMA	$\mathbf{x}$	×	×	×	$\mathbf{x}$	GSMA
S	Standard Device		×	×	×	×			×	×
F	Roaming terrestrial		×	$\mathbf{x}$	$\mathbf{x}$	×			×	×
F	Power Utilisation	Low	Low	Low	Low	Low	High	High	High	Low
F	Roaming Store & Forward	Ø	×	×	×	$\mathbf{x}$	$\mathbf{x}$	×	$\mathbf{x}$	×
C	elivery via MNOs		×	×	×	×		Ø	×	×
C	Cost per device	\$	\$\$	\$	\$\$	\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$
S	Services cost	\$	\$	\$\$	\$	\$	\$\$	\$\$	\$\$\$	\$\$\$
s	Service deployment cost	\$	\$\$	\$	\$\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$	\$\$\$

### Market To open the opportunity to address potential 1.4bn devices currently unserviceable



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Once unlocked by Sateliot pricing, these connections

### Technology And direct to device: will it be NTN NB-IoT? 5G NR? Or 6G?



**OVER 500 MILLION WORKERS WORLDWIDE** 



OVER 750 MILLION HOBYSTS WORLDWIDE



BILLIONS OF PEOPLE IN VERY LOW COVERAGE AREA



60M AMERICANS WITH 25% OF THE DAY WITH NO COVERAGE

