

# Starman **fiber project**

June, 2016



starman

cgates 

# Megatrends

- » 1Gbps service is expected
- » Growth of internet usage remains close to 50% p.a.
- » Users move from HFC based linear TV to IP based catchup
- » Quality of service becomes essential
- » Worldwide greenfield is built with FttH

# Technological crossroads

## Alternative 1

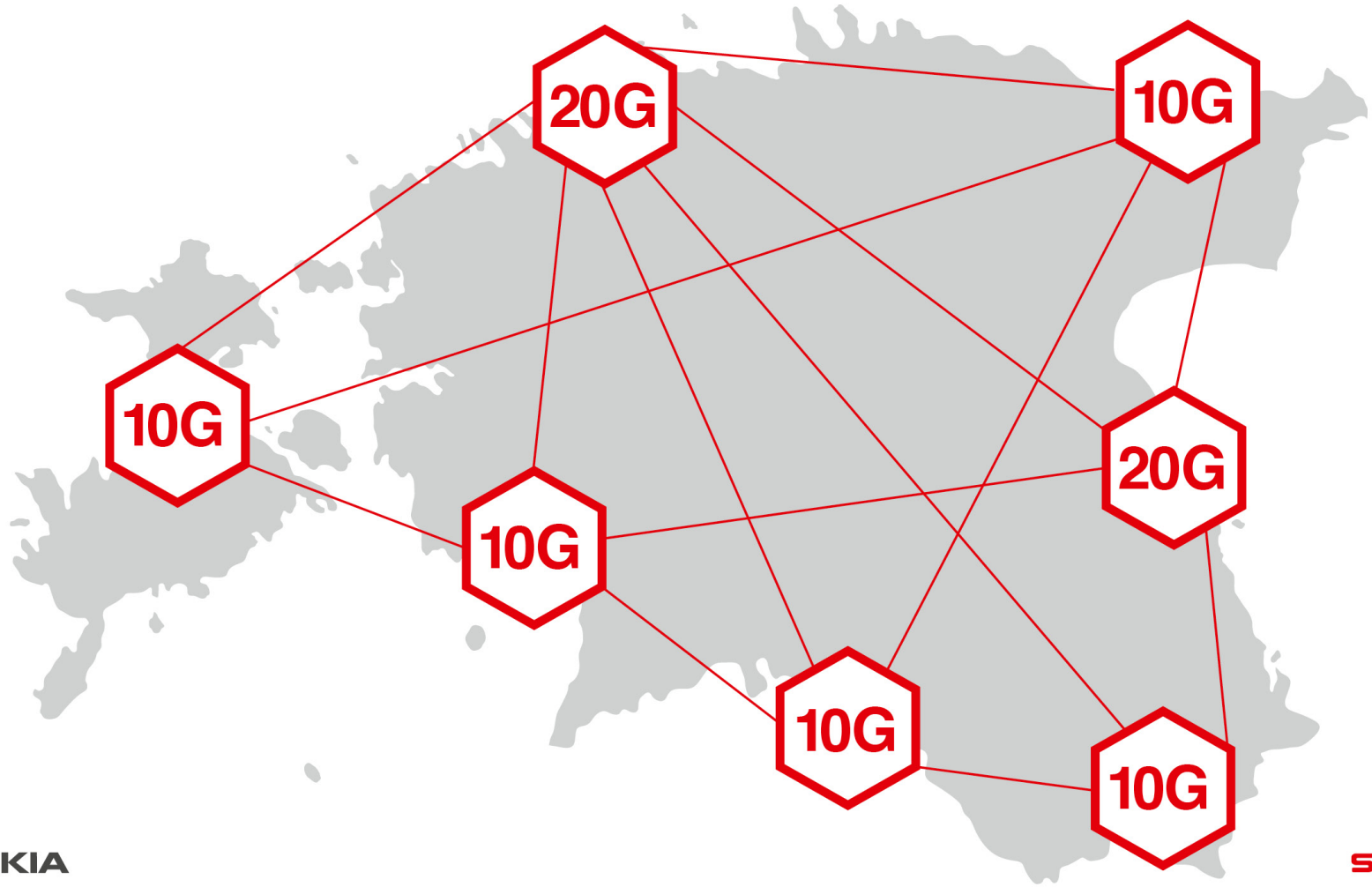
Proceed with D 3.0 as long as possible, upgrade when necessary

## Alternative 2

Focus on DOCSIS 3.1 upgrade

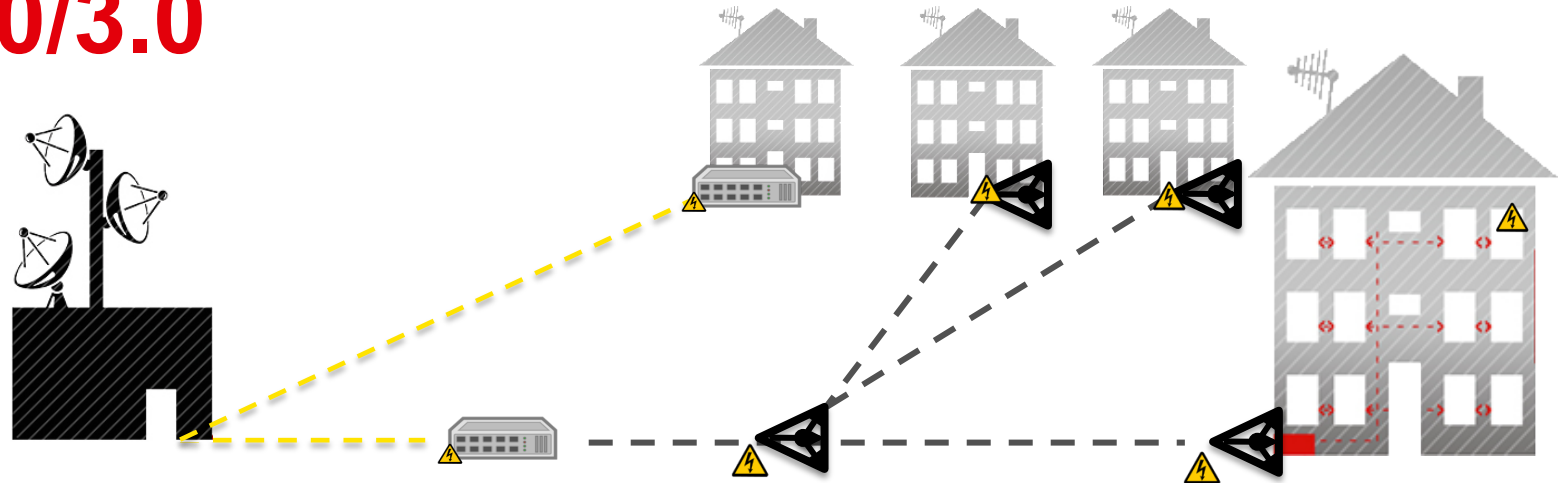
## Alternative 3

Is there a way to bring FttH on board



# DOCSIS

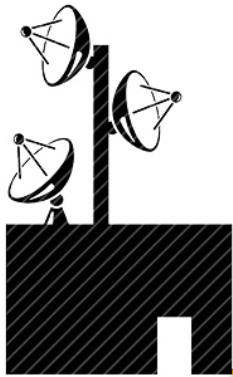
## 2.0/3.0



DOCSIS	2.0		3.0	
Port capacity, Gbps shared	Download	0,05	Download	3
	Upload	0,03	UpLoad	1
Client package, Gbps	Download	0,002	Download	0,8
	Upload	0,001	UpLoad	0,1

# PON

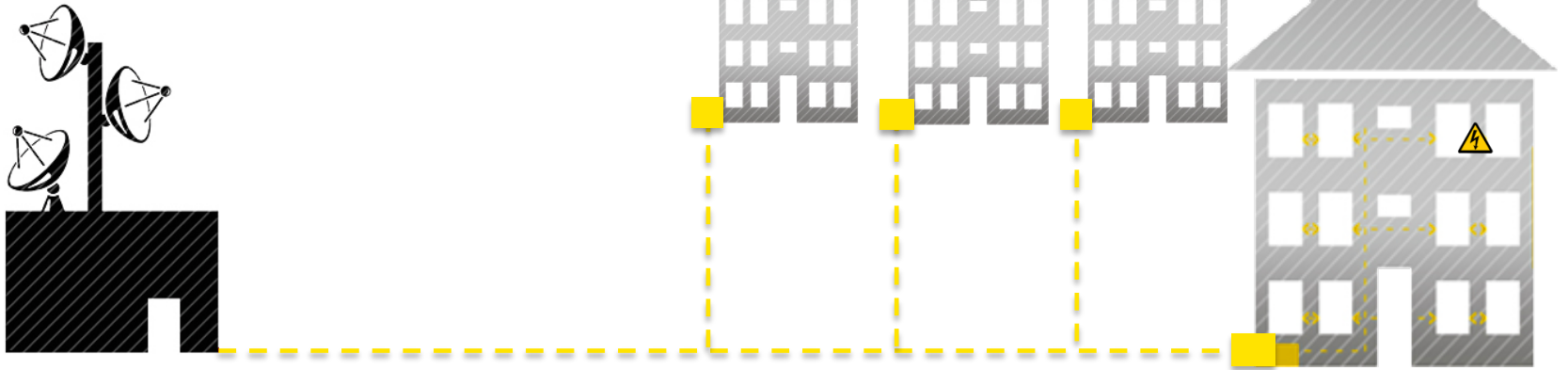
## GPON



ITU (GPON)		GPON	XGPON	XGS-PON XG-PON2	NG PON2
Port capacity, Gbps shared	Download	2,5	10	10	40
	Upload	1,25	2,5	10	40
Client package, Gbps	Download	1	1+	1+	10
	Upload	0,5	0,5	1+	10

# PON

## EPON



IEEE(EPON)		EPON	EPON Turbo	EPON 10G	NG EPON
Port capacity, Gbps shared	Download	1,25	2,5	10	40
	Upload	1,25	1,25	10	40
Client package, Gbps	Download	0,5	1	1+	10
	Upload	0,5	0,5	1+	10



# EPON vs GPON

IEEE (EPON)		EPON	EPON Turbo		EPON 10G	NG EPON
Channel i.e. shared capacity, Gbps	Download	1,25	2,5		10	40
	Upload	1,25	1,25		10	40
Client package, Gbps	Download	0,5	1		1+	10
	Upload	0,5	0,5		1+	10

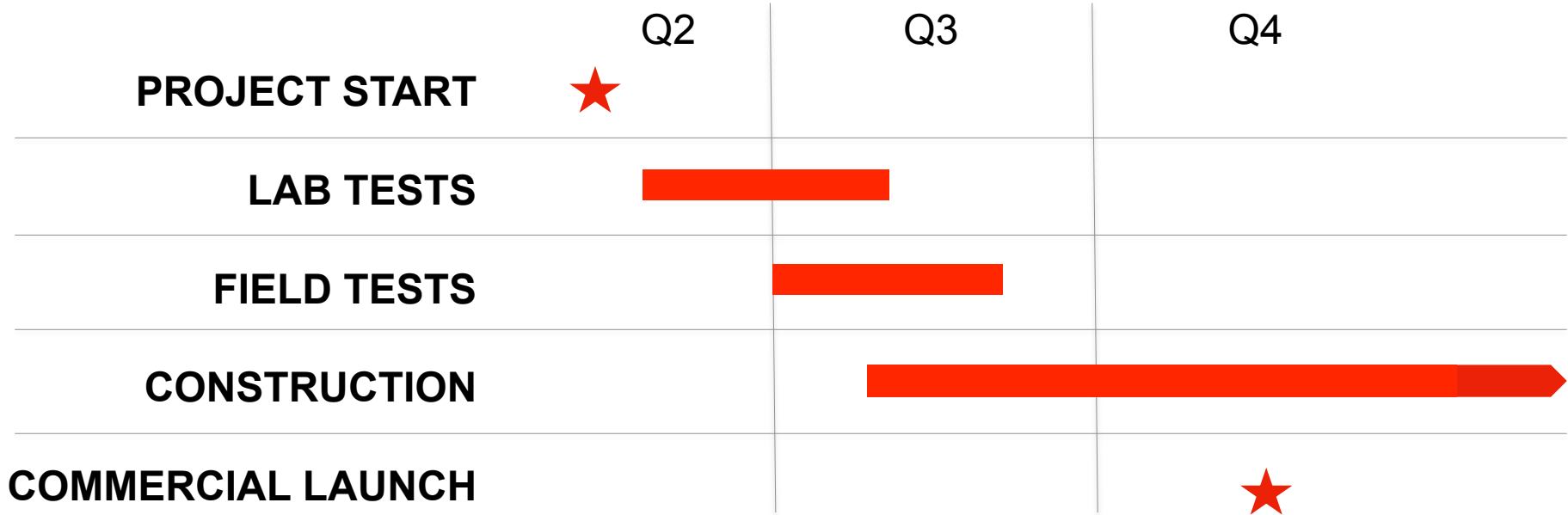
ITU (GPON)			GPON	XGPON	XGS-PON XG-PON2	NG PON2
Channel i.e. shared capacity, Gbps	Download		2,5	10	10	40
	Upload		1,25	2,5	10	40
Client package, Gbps	Download		1	1+	1+	10
	Upload		0,5	0,5	1+	10



# Why **NOKIA**?

- **EPON Pioneer**
- **Full commitment to Starman fiber project**
- **Quality**
- **Long experience in telecommunications equipment business**

# Time Plan



# THANK YOU!



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