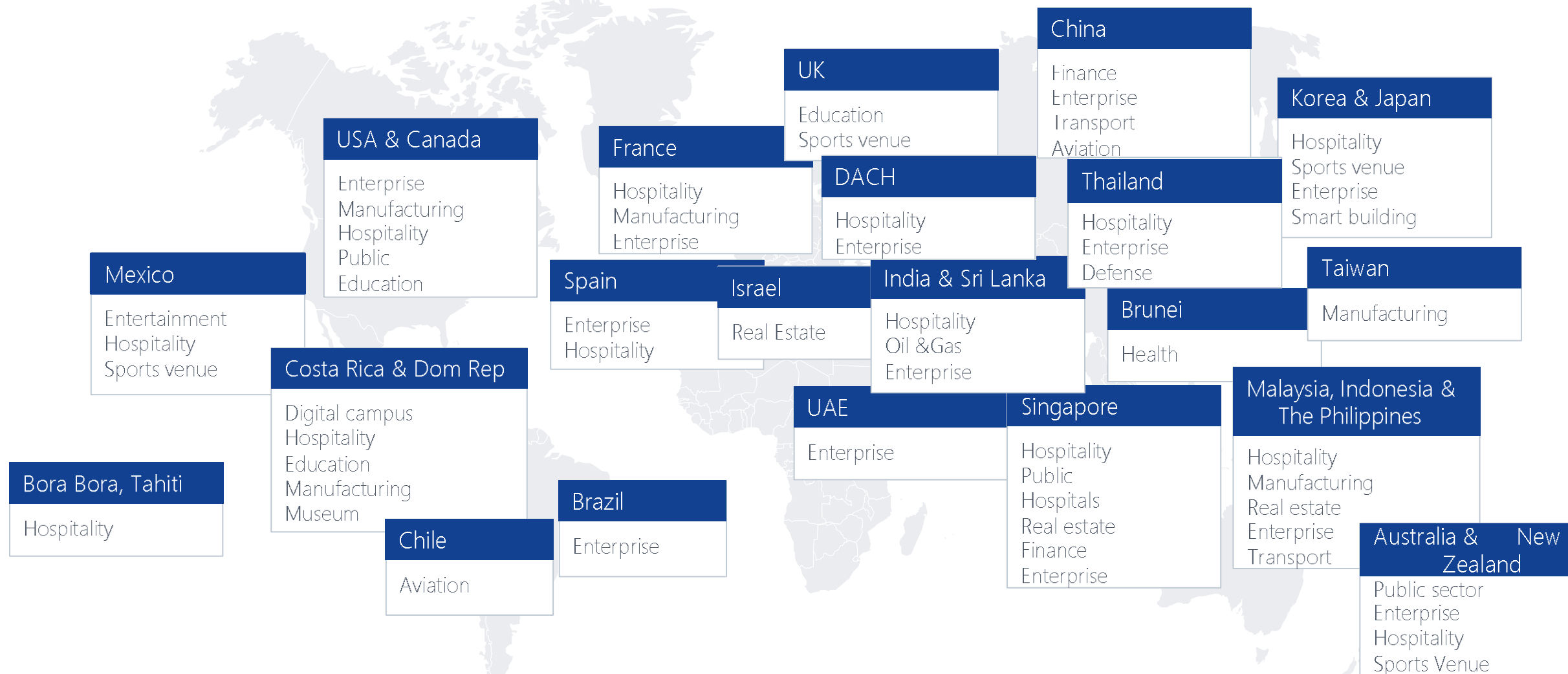


Referinte de clienți: Nokia Optical LAN 500+ (2022)



Enterprise



Manufacturing



Transport



Real estate



Public sector



Health sector



Hospitality



Entertainment



Education

Campusul Nokia de la Timisoara, cel mai mare centru de cercetare si dezvoltare din industria de telecomunicatii din Romania FOTO

NOKIA

Alcatel·Lucent 

https://adevarul.ro/locale/timisoara/campusul-nokia-timisoara-mai-mare-centru-cercetare-dezvoltare-industria-telecomunicatii-romania-foto-1_594908065ab6550cb852a3b2/index.html

NOKIA



Relocarea activitatilor Nokia in noul campus reprezinta o investitie totala de peste 73 de milioane de euro. Noua cladire de birouri va fi gata la sfarsitul acestui an.

Compania finlandeza Nokia extinde campusul din Timisoara cu cel mai mare centru de cercetare si dezvoltare din industria de telecomunicatii din Romania. Centrul dezvoltă tehnologii broadband wireless care sunt aplicate in domenii precum Internet si noile tehnologii de comunicatii mobile. In urma extinderii, noul Nokia Campus din Timisoara va avea o suprafata de 27.000 de metri patrati.

Investitia totala in Nokia Campus este de peste 73 de milioane de euro. In prezent, peste 1.300 de angajati sunt in campus: 600 de ingineri din departamentul de Cercetare si Dezvoltare, inaugurat acum, si peste 700 de specialisti din centrul global de operare de retele, deschis in prima etapa de relocare a echipei din Timisoara, in decembrie 2015.



Airport Terminal 3

Country: Indonesia Date: Q4 2017

Smart Building

Descrierea Proiectului:

- Terminalul 3 este un terminal nou, iar strategia aeroporturilor este de a implementa toate clădirile noi într-o rețea POL din cauza simplității implementării cablurilor de infrastructură și a operării sistemelor

Servicii & Aplicații:

- PoE pentru Video services.
- VoIP over SIP
- HSI
- Acoperire WiFi
- Building Automation System (Sistem de incendiu, control acces, dispozitive multiple pentru bariere, uși, lifturi)
- CCTV
- Semnatura Digitala



VoIP
telephony



High Speed
Internet



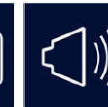
Wi-fi
Access



Access
Door
Security



IPTV



Alarm
system



CCTV



Digital
Signage

Project Scope	OLT	PON Port	ONT	5520 AMS
QTY	3	XX	YY	YES





Chile Airport

Country: Chile Date: Q1 2018

Descrierea proiectului:

- 3 site-uri distincte
- Modernizarea serviciilor de voce, acoperire pe distanțe lungi și infrastructura de cabluri cu tehnologie pe fibră optică de ultimă generație.
- Integrarea sistemului de voce prin telefonul (ALE) și POL (Nokia), soluția potrivită pentru clientul final.
- Obiective: modernizare LAN, economii semnificative de spațiu în birourile de administrare, QoS și caracteristici de securitate avansate ale soluției POL.

Servicii & Aplicații:

- SIP Phones / VoIP
- Retea locala LAN
- High Speed Internet



Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	1	32	134	YES





Aeroport Singapore

Country: Singapore Date: Q3 2020

Enterprise Office

Project Description:

- Proiect de supraveghere CCTV în Aeroportul Singapore Changi
- Va acoperi 3 terminale cu Nokia Passive Optical LAN ca infra-backhaul pentru trafic CCTV
- Implementarea proiectului este de 2 ani

Servicii & Aplicații:

- CCTV surveillance



Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	6	xx	2000	YES





Pudong Security

Tara: China Data: Q3 2018

Militar

Descrierea Proiectului:

- Departamentul de securitate al Aeroportului Pudong China

Servicii si Aplicatii: CCTV

OLT-uri = 2

Porturi PON = 864

ONT-uri = 2103 buc

Numar de camere conectate = 8412 buc



CCTV

Project Scope	OLT	PON Port	ONT	CCTV
QTY	2	864	2103	8412



NOKIA



Beijing Railway

Country: China Date: Q4 2017

Enterprise Office & Transport

Descrierea proiectului:

- Biroul Căilor Ferate din Beijing intenționează să folosească GPON pentru a conecta toate fabricile, birourile de-a lungul căii ferate de mare viteză și pentru a oferi LAN de birou și servicii de internet.
- Redundanță îmbunătățită cu control/comutare/legături în sus redundante și protecție PON de tip B – Disponibilitate ridicată
- Lățime de bandă mare, acoperire pe distanțe lungi și cablare infrastructură rezistentă la viitor cu tehnologie de ultimă oră cu fibră

Servicii & Aplicații:

- Office LAN
- High Speed Internet
- VoIP



Office LAN



VoIP
telephony



High Speed
Internet

Project Scope	OLT	PON Port	ONT	CLI
QTY	84	1100	100 (7353), 1000(16160)	5520 AMS





Education

Prestigious Graduate School

Country: France Date: 4Q 2019

Project Description:

- Telecom SudParis, established in 1979 as the Institut national des télécommunications (INT), is a Grande École which belongs to the Institut Mines-Télécom (IMT) Group. As a "Grande Ecole", it trains tomorrow's elite engineers and managers in the field of digital sciences and technology.
- Nokia Optical LAN is deployed in Telecom SudParis's Broadband FTTx ecosystem
- The objective is to contribute on « Future Networks for Tomorrow's Services »
- It will serve to serve new teaching methods where teachers and students collaborate & submit innovative projects

Services & Applications:

- Bureau LAN (FTTdesktop)
- VoIP
- High Speed Internet
- Wi-Fi



Office LAN



VoIP
telephony



High Speed
Internet



Wi-fi
Access

Project Scope

OLT

PON Port

ONT

5571 PCC

QTY

PRESTIGIOUS GRADUATE SCHOOL

<https://www.telecom-sudparis.eu/>





Saint-Mary's School in Cambridge

Country: UK Date: Q3 2016

Education

Project Description:

- This girl's school wanted to renew the Wifi network, and reseller Fwd-IP and our distributor Temple convinced them to use POL network for this.
- Installation of the POL network has been finished, now waiting opening of the new building.

Services & Applications:

- Wifi network
- High-Speed Internet Access



High Speed
Internet



Wi-fi
Access

Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	1	3	42	YES



NOKIA



Clemson University

Country: USA Date: 2Q2018

Education

Project Description:

- Clemson is a public university in South Carolina with ambitions of becoming a "Top 20" US public institution
- Clemson won the 2016 college national championship in American football, which has increased its capital expansion
- Key selling points:
 - 10G PON solution to connect researchers with powerful computing platforms that require more than GigE
 - Nokia/Bell Labs brand & frustration with other POL vendors

Services & Applications:

- Initial deployment is an historic building called Godfrey Hall
 - Office LAN (FTTdesktop)
 - Voice over IP
 - WiFi
- Clemson is expected to expand the POL deployment within Godfrey Hall in 2018 & begin modernizing the larger campus
- Likely to overlay with XGS-PON for 10GE connectivity



Office LAN

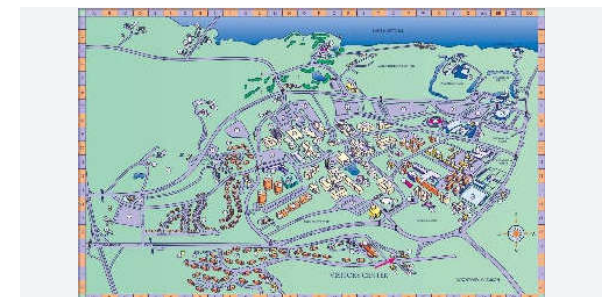


VoIP
telephony



Wi-fi
Access

Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	1	7	86	YES





Gyeonggido Office of Education

Country: Korea,

Date: Q3 2019

Education

Project Description:

- Gyeonggi province education office is planning to replace legacy LAN with a Fiber-To-The-Classroom solution for each school in Gyeonggi province starting from 2020 onwards.
- In 2019, a pilot was conducted for two schools with Nokia Optical LAN as the school LAN infrastructure
- One OLT & multiple ONTs per classroom are deployed in each school.
- # schools is expected to increase from 2020 onwards.
- Partners: DKUNC and ERUM I&C
- OLT : 7360 ISAM FX-4, ONT : G240G-E

Services & Applications:

- High Speed Internet
- Office LAN for teacher
- IP Phone
- Wi-Fi



Office LAN



VoIP
telephony



High Speed
Internet



Wi-fi
Access

Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	2	8	33	No



NOKIA



Hotel Kempinski

Country: India Date: 2012

Hospitality

Project Description:

- Located in Delhi, the oldest capital cities in the world
- Two towers with 480 rooms and suites
- State of the art Fiber optics backbone for the flagship Hotel in India

Services & Applications:

- High Speed Internet
- WiFi
- Analog / Voice Over IP



High
Speed
Internet



Wi-fi
Access

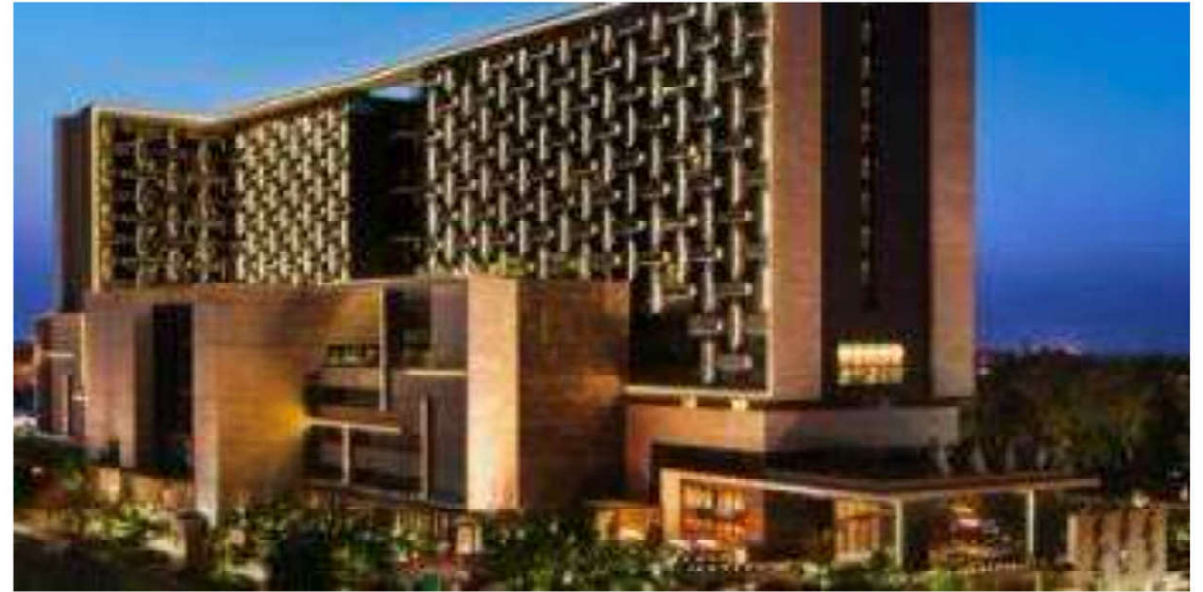


Analog
Phone



VoIP
telephony

Project Scope	OLT	PON Port	ONT	5520 AMS
QTY	1	8	510	YES





Hilton La Romana

Country: Dominican Republic Date: Mar 2019

Hospitality

Project Description:

- **Hilton La Romana** is just minutes away from Punta Cana on the southeast coast of the Dominican Republic
- Set on a virginal, eco-friendly beach, surrounded by tropical jungle, Hilton La Romana, an All-Inclusive Resort offers infinite beauty and countless amenities.
- Partner: **ALE International**.
- Integrator: **Unisoft SRL (ISBEL DR)**
- They chose Nokia Optical LAN because it provides a network solution ideal for huge and eco-friendly facilities.
- ONT with POE/POE+:
 - G-040P-Q (820 units)
 - G-010P-A (60 units) ideal for outdoor places

Services & Applications:

- IPTV, Wi-Fi , LAN and VoiP.



Office
LAN



VoIP
telephony



High
Speed
Internet



Wi-fi
Access



IPTV

Project Scope	OLT	PON Port	ONT	5571 PCC
Q1Y	1	48	880	YES




Hilton
HOTELS & RESORTS

NOKIA



Namhai Four Season Hotel

Country: Vietnam Date: Q4 2016

Hospitality

Project Description:

- POL implementation for Foursea resort at Namhai beach
- Implementation Q4 2016
- Partner is ALE
- Implementation by Nokia CE team

Services & Applications:

- High Speed Internet
- HSI via Wifi
- IPTV
- Analog Phone



High
Speed
Internet



Wi-fi
Access



IPTV



Analog
Phone

Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	1	8	200	YES





THK

Country: Japan

Date: Q3 2017

Enterprise Office

Project Description:

- THK is a worldwide pioneer in the development of the Linear Motion (LM) Guide mechanism.
- Their HQ will move new office in Sep 2017 and POL will be the infrastructure of their new offices.
- Go-To-Market: SPaaP
 - Service Provider: KDDI
 - I&C services: EXEO (Nokia's partner)
 - O&M: KDDI

Services & Applications:

- HSI
- Wi-Fi access
- VoIP
- Office LAN



Office LAN



VoIP
telephony



High Speed
Internet



Wi-fi
Access

Project Scope	OLT	PON Port	ONT	PCC 5571
QTY	1	22	376	Yes





SIA Engineering

Country: Singapore Date: Q1 2016

Smart Building

Project Description:

- CCTV surveillance and Door Access for higher security.
- Distance is a limitation due to the height and length of the hangar to accommodate the airplane for MRO.

Services & Applications:

- IP-HD CCTV
- Door Access



Access
Door
Security



CCTV

Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	1	18	204	YES



NOKIA



Shoval Investment & Mgt

Country: Israel Date: Q2 2018

Real estate

'Alon 2' Building: (2018)

- Offices are spread on 4 floors
- Optical splitter 2:32
- Dual 7360-FX 8 with 48 PON ports
- 1330 4 port POE ONT's (Alon 1+2)
- 5571 PCC server

Arlozorov 111 Building (2018):

- Offices are spread on 2 floors
- Optical splitter 2:32
- Dual 7360-FX 4 with 12 PON ports
- 280 4 port POE ONT's
- 5571 PCC server

Yehuda Halevi Building (2018):

- Offices are spread on 3 floors with plans to expand
- Optical splitter 2:32
- Dual 7360-FX 4 with 16 PON ports
- 140 4 port POE ONT's
- 5571 PCC server



Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	8	152	2020	YES



Alon 2 Building



Yehuda Halevi Building



Arlozorov 111 Building





Guizhou Zunyi Traditional Hospital

Tara: China Data: Q4 2018

Sanatate

Descrierea Proiectului: Spitalul national chinez ede Clasa III Zunyi Traditional Hospital

- Banda mare de transfer locala, XGS PON (10Gbps)

Servicii si Aplicatii:

- Conexiuni de mare viteza; Wi-Fi; IPTV; VOIP; High Speed Internet

OLT-uri = 2

Porturi PON = 480

ONT-uri = 1172 buc

Numar de puncte conectate = 5520 buc



Intranet



Wi-fi Acces



VoIP
Telefonie



High Speed
Internet



IPTV

Proiect	Nr. de OLT	Porturi PON	ONT-uri	CLI
Cantitate	2	480	1172	5520 AMS





Mexico F1 Grand Prix

Country: Mexico Date: Q4 2015

Sports Venue

Descrierea Proiectului:

Broadband acces pe o suprafață extrem de mare capabila să suporte peste 30.000 de vizitatori conectati la acces WiFi de mare viteză.

Servicii si Aplicatii: Access WiFi; Internet de mare viteză

Numar de puncte WiFi conectate = 216

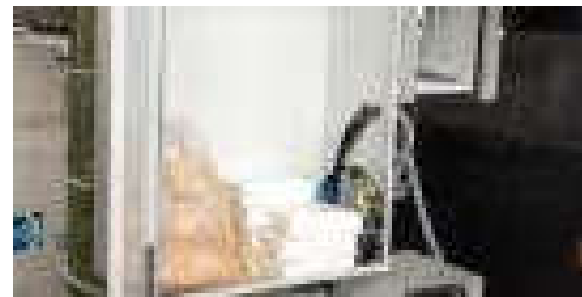


High Speed
Internet



Wi-fi
Access

Project Scope	OLT	PON Port	ONT
QTY	1	3	54





Wimbledon Tennis Championship 2017

Country: UK Date: 1Q2017

Sports Venue

Descrierea Proiectului:

- Primul stadionul cu infrastructura moderna din Europa (Proof of Concept), parte din IBM Sports & Entertainment consortium

Servicii si Aplicatii: Access WiFi de mare viteză

OLT-uri = 1

Porturi PON = 9

ONT-uri = 50 buc

Numar de puncte WiFi conectate = 196



Project Scope	OLT	PON Port	ONT
QTY	1	9	50



NOKIA



Defence Science & Technology Agency

Tara: Singapore Data: Q4 2017

Militar

Descrierea Proiectului:

- Sediul Defence Science & Technology Agency din cadrul Ministerului de Aparare

Servicii si Aplicatii:

- Conexiuni de mare viteza LAN
- High Speed Internet



Intranet



High Speed Internet

Proiect	Nr. de OLT	Porturi PON	ONT-uri	CLI
Cantitate			clasificat	





Guizhou Zunyi Traditional Hospital

Tara: China Data: Q4 2018

Sanatate

Descrierea Proiectului: Spitalul national chinez ede Clasa III Zunyi Traditional Hospital

- Banda mare de transfer locala, XGS PON (10Gbps)

Servicii si Aplicatii:

- Conexiuni de mare viteza; Wi-Fi; IPTV; VOIP; High Speed Internet

OLT-uri = 2

Porturi PON = 480

ONT-uri = 1172 buc

Numar de puncte conectate = 5520 buc



Proiect	Nr. de OLT	Porturi PON	ONT-uri	CLI
Cantitate	2	480	1172	5520 AMS





Novena Eye Specialist Centre

Tara: Singapore Data: Q4 2014

Sanatate

Descrierea Proiectului:

- Spitalul Clinic Specialist Specialist situat in Healthcare Hub (Novena) din Singapore
- Spitalul se doreste un exemplu pentru industria medicala folosind numai retele de fibra optica pentru infrastructura IT

Servicii si Aplicatii:

- Conexiuni de mare viteza
- Voice over IP
- Intranet



Intranet



Telefonie
VoIP



Internet
High Speed

Proiect	Nr. de OLT	Porturi PON	ONT-uri	CLI
Cantitate	1	8	20	YES



NOVENA MEDICAL CENTER
At the heart of Singapore's Medical Hub



NOKIA



Assisi Hospice

Tara: Singapore Data: Q3 2016

Sanatate

Descrierea Proiectului:

- Implementarea unei infrastructuri exceptionale de retea capabila de Gigabit Passive Optical Network

Servicii si Aplicatii:

796 de conexiuni la retea

- Wi-Fi
- Telefonie
- Camere de Supraveghere
- Transmisii Live si Servicii Telecast
- IP-TV



VoIP
Telefonie



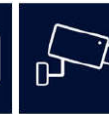
High Speed
Internet



Wi-fi Acces

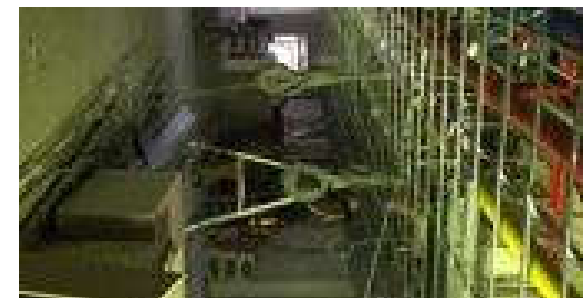


IPTV



CCTV

Proiect	Nr. de OLT	Porturi PON	ONT-uri	5571 PCC
Cantitate	1	16	196	YES





The Brunei Cancer Centre

Country: Brunei Date: Q2 2014

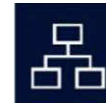
Enterprise
Medical

Project Description:

- Brunei government decide to build a new state of the art national cancer centre in 2012
- Targeted to obtain the BCA Green Mark certification – Reduce water, energy consumption and reduce potential environment impact
- Hospital is already soft-opened. Full opening expect in early 2016.

Services & Applications:

- Office LAN
- VoIP
- WiFi
- Medical Equipment (Oncology)
- CCTV Surveillance
- Security Door Access
- RF Video Overlay



Office
LAN



VoIP
telephony



Wi-fi
Access



Access
Door
Security



CCTV

Project Scope	OLT	PON Port	ONT	5520 AMS
QTY	2	64	810	YES





Clínica de las Américas

Country: Bolivia Date: Q4 2020

Healthcare

Project Description:

- <https://www.clinicadelasamericas.com.bo/>
- CDLA, located in Santa Cruz de la Sierra, would like to become the most modern private health center in Bolivia, embracing E2E processes for digitalization and all Industry 4.0 concepts with solutions that provide extended access to Clinical IP services (Voice, Data, Video, CCTV, Access Control, Wi-Fi, VAS and a full BMS system). Required a solution that meets their mission critical requirements in terms of availability, scalability, performance and infrastructure management.
- Our Nokia Optical LAN solution (POL) solves all those needs, enabling the convergence of services in a single network without compromising the performance of them. A technology based on Fiber Optic free of electromagnetic interference was an absolute differentiator in a green field deployment
- Competition: Cisco, HP-Aruba, and even Furukawa.
- Under construction, and phase 1 will be open in 2021
- Partner: INET (Intelligent Networking), consulting BSC (Business Consulting))
- Drivers: Innovation, future proof with unlimited capacity growth

13

8 © Nokia 2016



Project Scope	OLT	PON Port	ONT	5571 PCC
QTY	1	32	420	YES



NOKIA

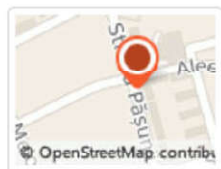
<https://youtu.be/zJf1zNXmSpc>

Experiențe Nokia bazate pe lucrări executate Romania



33 de colegii, licee si scoli in Orasul Baia Mare

- executate in patru luni de zile -

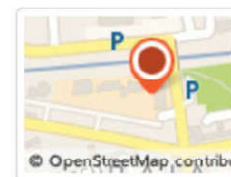


Școala Cu Clasele i-Viii Vasile Alecsandri



🕒 Deschis acum
[Program de lucru](#) [Site](#)

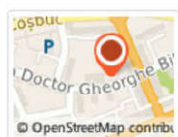
Strada Pășunii Nr. 2A
430352 **Baia Mare**
Maramureș



Liceul National Vasile Lucaciu Baia Mare

[Site](#)

Strada Culturii Nr. 2
430282 **Baia Mare**
Maramureș
☎ 0262 211 042



Școala Cu Clasele i-Viii George Coșbuc

🕒 Deschis acum
[Program de lucru](#) [Site](#)

Strada Gheorghe Bîlașcu Nr. 19A
430243 **Baia Mare**
Maramureș
☎ 0262 218 110



Școala Cu Clasele i-Viii Nichita Stănescu

🕒 Deschis acum
[Program de lucru](#) [Site](#)

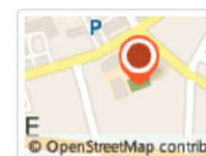
Strada Iza Nr. 2
430073 **Baia Mare**
Maramureș
☎ +40 262 218 666



Liceul Teoretic Nemeth Laszlo Baia Mare

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[Program de lucru](#) [Site](#)

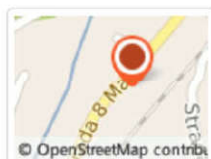
Strada Luminiișului Nr. 1
430393 **Baia Mare**
Maramureș
☎ +40 262 213 586



Colegiul National Gh.sincal Baia Mare

🕒 Deschis acum
[Program de lucru](#) [Site](#)

Strada Gheorghe Șincal Nr. 25
430311 **Baia Mare**
Maramureș



Colegiul Tehnic Transilvania

[Site](#)

Strada 8 Martie Nr. 7
430411 **Baia Mare**
Maramureș



Colegiul National Mihai Eminescu Baia Mare

🕒 Deschis acum
[Program de lucru](#) [Site](#)

Strada Culturii Nr. 7
430316 **Baia Mare**
Maramureș
☎ 0262 211 069

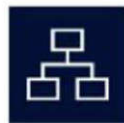
130km Fibra Optica instalate in 987 clase, sali de curs, biblioteci si laboratoare



STADION SIBIU



Wi-fi
Access



Office
LAN



Analog
Phone



CCTV



Access
Door
Security



Digital
TV

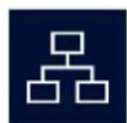
30km Fibra vs 58km Cablu CAT6 si 10km Coaxial



STADION STEAUA



Wi-fi
Access



Office
LAN

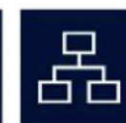


Analog
Phone

STADION RAPID ARENA



Wi-fi
Access



Office
LAN



Analog
Phone



Access Door
Security

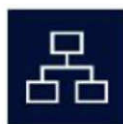
Rețea voce-date: wireless, telefonie analogică, LAN



HOTEL AVRAM IANCU - Cluj



Wi-fi
Access



Office
LAN



Analog
Phone



VoIP
telephony



Analog
Phone



Digital
TV

10km Fibra vs 25km Cablu CAT6a



AEROPORT TIMISOARA



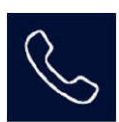
Wi-fi
Access



Office
LAN



Analog
Phone



VoIP
telephony



High Speed
Internet



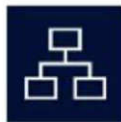
CCTV



ASE BUCUREȘTI



Wi-fi
Access



Office
LAN



Analog
Phone



VoIP
telephony

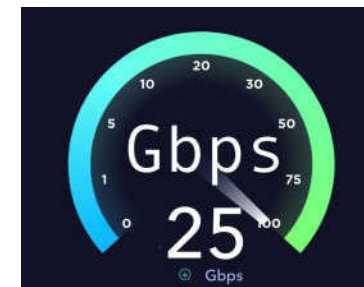


High Speed
Internet



Access
Door
Security

16km Fibra vs 61km Cablu CAT6a





IBIS HOTEL - Timisoara



Office
LAN



Digital
TV



Analog
Phone

Rețea voce-date: Telefonie analogică, LAN, Televiziune digitală

Nr. ONTuri 102 distributie pentru 200 camere de hotel

7 km Fibra vs 24km Cablu CAT6 si 7,4km de Cablu Coaxial