Instrumente şi metode de promovare a Guvernării electronice

E-Infrastuctura de cercetare-dezvoltare din Republica Moldova

Igor Cojocaru

Director,

Institutul de Dezvoltare a Societății Informaționale

cojocaru@asm.md

Furnizarea serviciilor publice prin mijloace electronice se poate efectua la diferite niveluri:

- **I. Informare:** furnizarea informațiilor despre serviciile publice şi despre activitatea autorităților publice;
- **II. Interacțiune:** descărcarea de formulare din Internet, procesarea formelor, inclusiv autentificarea, implementarea sistemului de circulație a documentelor electronice;
- **III. Tranzacții:** transmiterea informațiilor, adoptarea deciziilor şi efectuarea livrărilor de mărfuri şi/sau servicii (inclusiv achitarea plăților prin mijloace electronice);
- **IV. Transformare:** redefinirea actului de guvernare

Serviciile din categoria “Guvern – Cetățean” (G-C) – 12 e-servicii publice de bază stabilite de Comunitatea Europeană:

1. Plata impozitelor şi taxelor pentru cetățeni;
2. Căutarea de locuri de muncă prin oficii de muncă;
3. Ajutor prin servicii sociale;
4. Acte personale (acte de identitate, paşapoarte, permise de conducere);
5. Înmatricularea autoturismelor;
6. Autorizări pentru construcții;
7. Solicitări şi reclamații la poliție;
8. **Acces la biblioteci publice (cataloage on-line, instrumente de căutare, cărți electronice)**
9. Solicitarea şi obținerea de certificate (naştere, căsătorie);
10. Înmatricularea în universități;
11. Notificarea schimbării adresei de domiciliu;
12. Servicii legate de sănătate (ofertele medicale ale spitalelor, programarea la consultații etc.)

- **Serviciile din categoria “Guvern – Business” (G-B) – 8 e-servicii de bază** propuse de Comunitatea Europeana care trebuie să fie oferite mediului de afaceri şi prin intermediul mijloacelor electronice:

1. **Achiziții publice**
2. **Contribuția socială a angajaților**
3. Înregistrarea unei noi întreprinderi
4. Permise legate de mediu, inclusiv raportări
5. Sectorul fiscal (TVA: declarare, notificare)
6. Sectorul vamal
7. Taxe ale întreprinderilor (declarare, notificare)
8. **Furnizarea de date pentru statistici.**

e-Smart World Eurasia 2011

Hosted by Ministry of Knowledge Economy

Organized by kotra Korea Trade-Investment Promotion Agency

Public Procurement Agency
Electronic Public Procurement Platform (History)

- **8 February 2010**: New infrastructure (servers, network etc.) was commissioned for EKAP.
- **23 February 2010**: Bidders and Authorities protocol entries were taken. EKAPs' Call Center has put into use.
- **1 September 2010: EKAP S1.0:** EKAP was put into use. All administrations in Turkey have begun to use EKAP through the purchase process.
- **1 December 2010: EKAP S1.1:** Bidders can download the tender document with e-signatures and according to law, the title can be won is «may be willing to».
- **1 March 2011: EKAP S1.2:** First e-bidding and e-tender evaluation was took place in the pilot sector.
- Tender Guarantee and Bank reference letter were taken via web services through the banks.E-signature used for the first time in Turkey for web services.
- **April – September 2011: EKAP S1.2.x: 6 new version (**new features, improvements, corrections, changes to legislation), **263 changes**
- **8 September 2011:** ŞİBİS S3.0 was commissioned.

EKAP with FIGURES

01 September 2010 – 27 October 2011	EKAP
Registered Authority Number	23.430
Registered Bidder Number	20.961
Registered User Number	292.488
Tender Authority Number	15.386
Direct Input Provided Authority Number	10.386
Entered Directly Input Number	308.240
Received IKN Number	259.136
Advertised Tender Number	122.088
Addendum Number	17.470
Confirmation Number	558.749
Reported Contracts Number	199.425
Number of Visitors	17.259.996
Number of Documents Downloaded with e-signature	132.621

EXPECTED SAVINGS WITH EKAP

ADMINISTRATION	
The tender document cost savings from printing	11 million TL
Anticipated cost savings from electronically prepared notices	3 million TL
Savings in the tender process is completed in less time	99 million TL
The expected savings from the increased competition and price drops	4,6 billion TL
TOTAL EXPECTED SAVING	**4,7 billion TL**

1 Euro= 2,49 Lire Turcesti

Istanbul Metropolitan Municipality
Directorate of Traffic

ITS Applications in Istanbul

ITS and Signalization

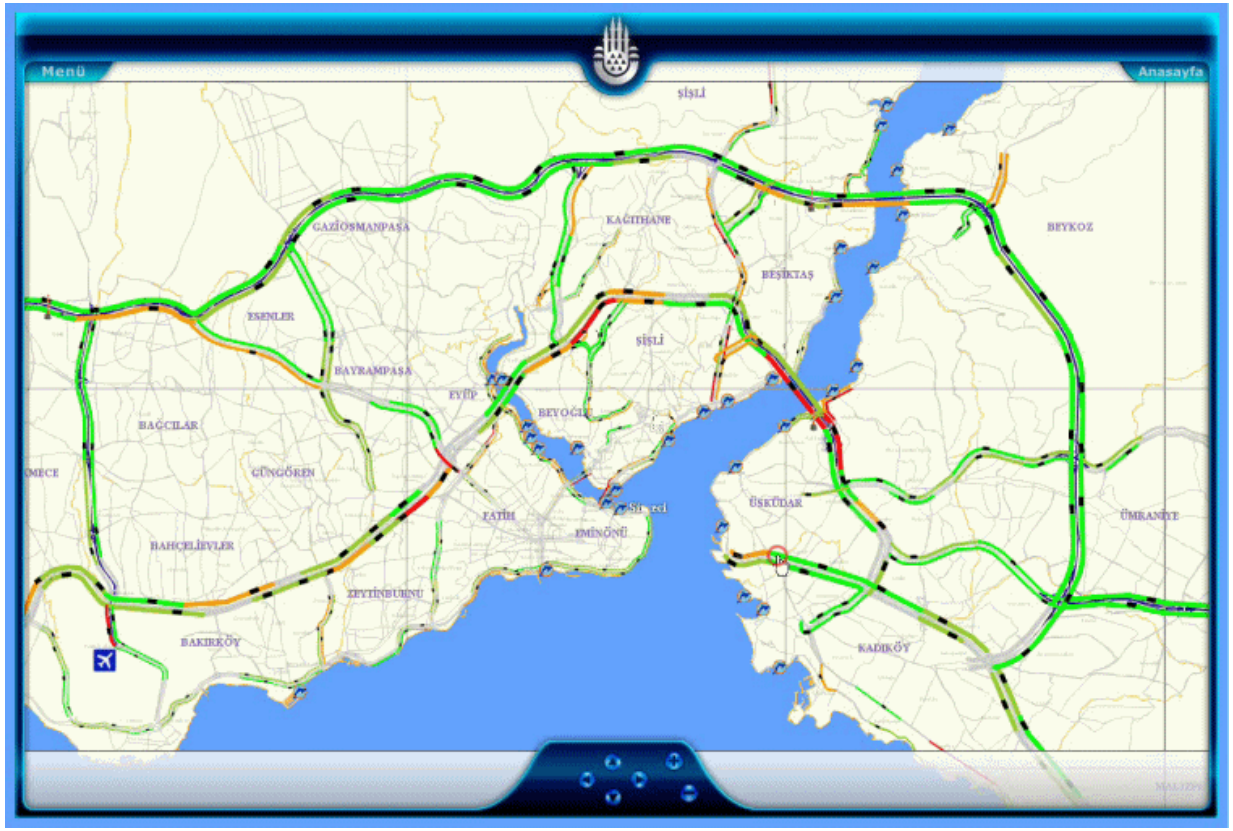
- **TCC**
  - Traffic Control Center
  - Tunnel Management Center
- **Traffic Measurement and Obs. System**
  - Traffic Measurement Dedectors
  - Cameras
  - Weather Observation Sensors
- **Traffic Information System**
  - Call Center 44 44 154
  - Web Applications
  - TV Broadcast
  - IMM Mobile Traffic
  - Variable Message Signs(VMS)
  - Lane Control System(LCS)
  - Variable Traffic Signs(VTS)
- **Electronic Detection System(EDS)**
  - Red Light Violation Detection Sys.
  - Safety Lane Violation Detection Sys.
  - Speed Violation Dtection Sys.
- **Signalization**
  - Signalization System
  - Accessiable Pedestrian Signals(EYS)
  - Online Signalization

Traffic Density Map (Web applications)

Actual information about infrastructure maintenance, dramatical speed ups/downs and scheduled roadworks on network

- Free over 75 km/s
- Fluent 61-75 km/s
- Dense 35-60 km/s
- Very Dense 0- 35km/s
- No Data

Speed Ranges and Colours



Red Light Violation Detection System

- Detection of red light violations
- Storage of the images to prepare a citation
- Make sure that the plate number is not counterfeit

	Number	Cost	TOTAL
2007	41.536	108,00 TL	4.485.888,00 TL
2008	225.255	115,00 TL	25.904.325,00 TL
2009	321.554	128,00 TL	41.158.912,00 TL
2010	210.013	192,00 TL	26.713.626,00 TL
2011	173.235	66,00 – 140,00	23.212.534,00 TL
TOTAL	971.593		121.475.285,00 TL

e-Government of Korea :

Development History and outcomes

History of e-Government

Stages	Period	classification	Major Actions
Inception	1978~1987	Implementing Administrative Computerization	■ The first & 2nd administrative computerization project
	1987~1996	Building Administrative Computer Networks	■ The first & 2nd National Basic Information System computer networks project
Foundation	1997~2000	Promoting informatization	■ Building the foundation for high-speed information and communications - Building 144 regional optical transport network nationally ■ Informatization on unit business or function - procurement, passport, patent, customs etc
Launch	2001~2002	11 major tasks for e-Government	■ pan-ministry 11 major tasks such as e-civil service, e-procurement ■ partial & limited convergence among unit businesses
Diffusion	2003~2007	31 major tasks for e-Government	■ Execution of 31 e-Government Project ■ Amendment of e-Government Acts (2007.1)
Maturity	2008~	Expansion of convergence & sharing	■ Implementation of e-Government focused on usage and convergence - Expansion of linked convergence into public & private sector ■ Unification of implementation system for national informatization and e-Government

e-Government Budget

	2002	2005	2010	2011
Budget	12,155	20,272	22,203	21,948
Fund	7,053	8,780	10,892	11,075
Total	19,208	29,052	33,095	33,023

(Unit: KRW 100 million)

- **Built early e-Government foundation form government budget and the Information and Telecommunication Promotion Fund**
- **Around 10 years of continued investment into informatization** (1% of State Finance Budget)

- **The ministry in charge of e-Government (MOPAS) set aside a separate budget for horizontal projects involving multiple ministries**
  (prevent duplicative investment and effectively carry out horizontal projects)

Success Factors

1 Customer Oriented e-Government Services

- e-Government initiatives with the most potential to impact everyday lives of citizens such as resident registration, vehicle, customs clearance, employoment, statistics management, etc... were given first priority, which became the foundation for e-Government

  * Korea's e-Customs, e-Procurement, and e-Patent solutions grew to become globally recognized brand products

2 Appropriate Institutions for Each Phase of e-Gove Implementation

- In order to sustain e-government implementation, appropriate laws were enacted during each phase ensuring a positive enabling environmtn for e-Government

  * Act on Expansion of Dissemination and Promotion of Utilization of Information System (1986), Framework Act on Informatization Promotion(1996), Digital Signature Act(1999), e-Government Act(2001), Act on Shared Utilization of Public Adminstration Information(2010), etc.

3 Sustained Investment in e-Government Budget

- 1% of the national budget was invested into e-Government construction every year
- Created and utilized the Information and Telecommunication Promotion Fund to build early e-Government

  * Appropriated 10% of the informatization budget for e-Government support projects by MOPAS in order to effectively implement multi-ministry horizontal projects (2004)

Success Factors

4 Dedicated Organization Structure for e-Government Implementation

- Established supervisory committees to drive e-Governemnt directly under the President or Prime Minister
- Assigned CIO for central and regional e-Government and created dedicated support structures
- Utilized specialized e-Government technical support agencies

* National Information Society Agency , Korea Local Information Research & Development Institute

5 Change Management of Public Officers in a Changing e-Government Environment

- Overcame issues such as public officers' fear of workforce reduction due to e-Government deployment, and resistance in using information systems through sustained change management education

* electronic system user training, public officer e-capacity development, informatization contests and so forth

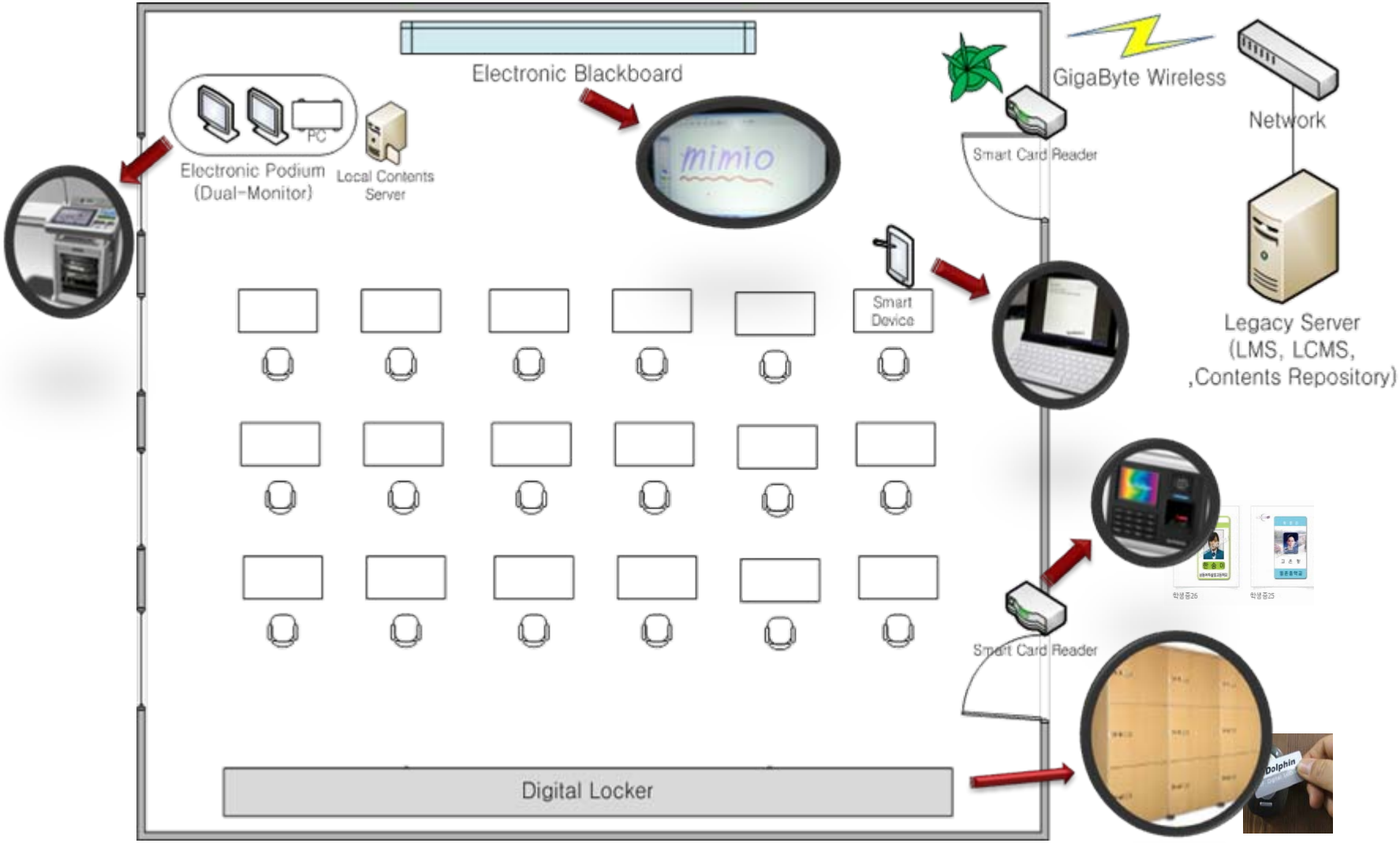
6 Public - Private Partnership

- Efficient role division with the government taking care of e-Government policy making, IT companies providing technology and skills, and citizens actively participating were key factors in e-Government construction and utilization

* Informatization Promotion Committee (1996), Special Committee on e-Government (2001), Presidential Committee on Government Innovation and Decentralization (2003), Presidential Committee on Government Information Strategy (2009)

Smart-Mate System Configuration

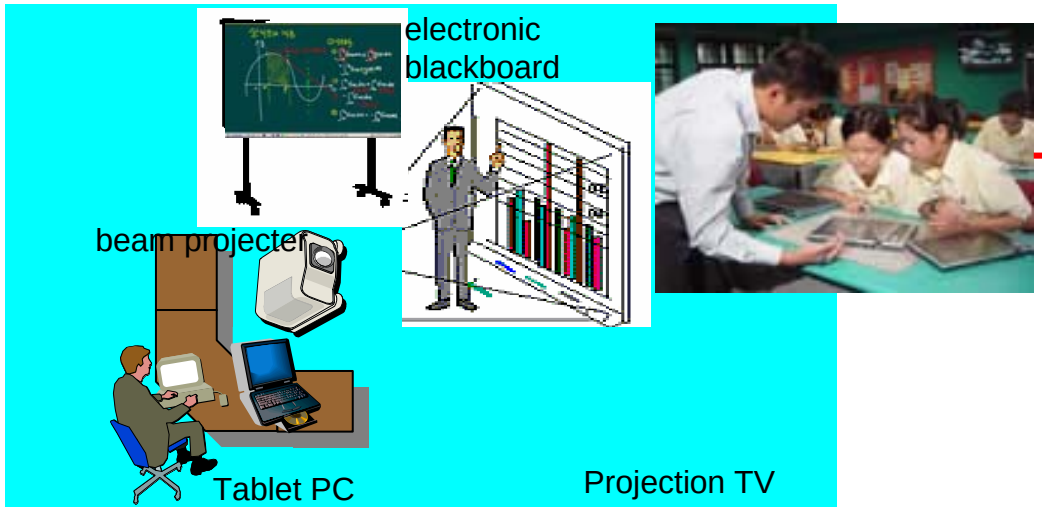
■ **A Smart-Mate classroom**

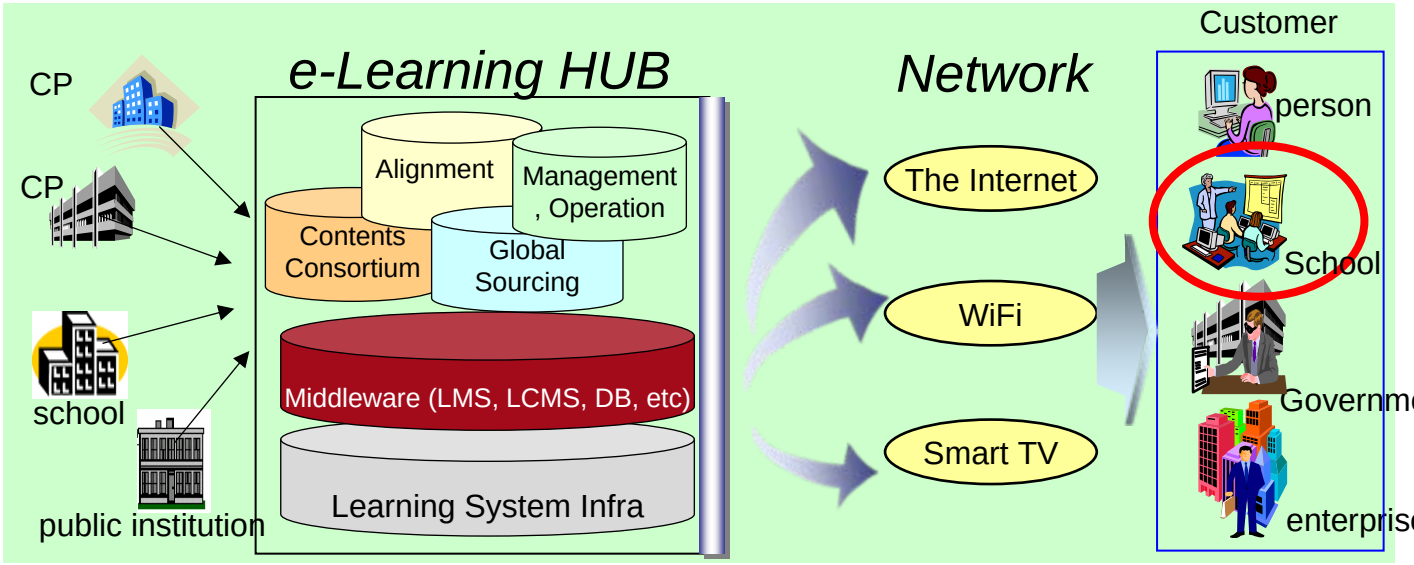


18

Smart-Mate System Configuration

■ The Definition of an Smart Classroom





art lesson

science lesson

biology lesson (field)

19

Function of Smart-mate

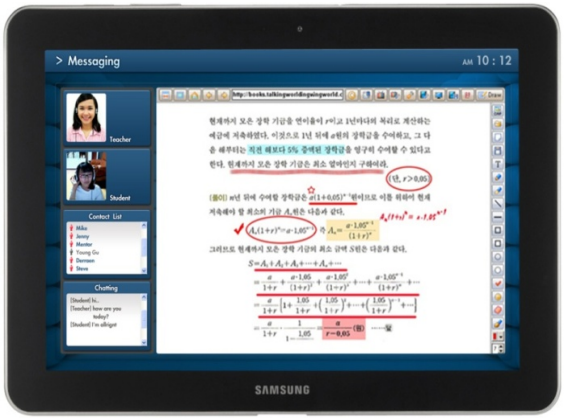
■ Operation of Smart-Mate System

- HTML 5 Platform
- Control Smart-Device
  - Android, widows, Bada OS available
- Hybrid Application
- Main Function
  - Contents Sharing
  - Interactive
  - teaching, self-learning
  - voting, Quiz
  - Content Viewer
  - Cooperative learning
  - e- conference(chat, talk)
  - Control smart-device

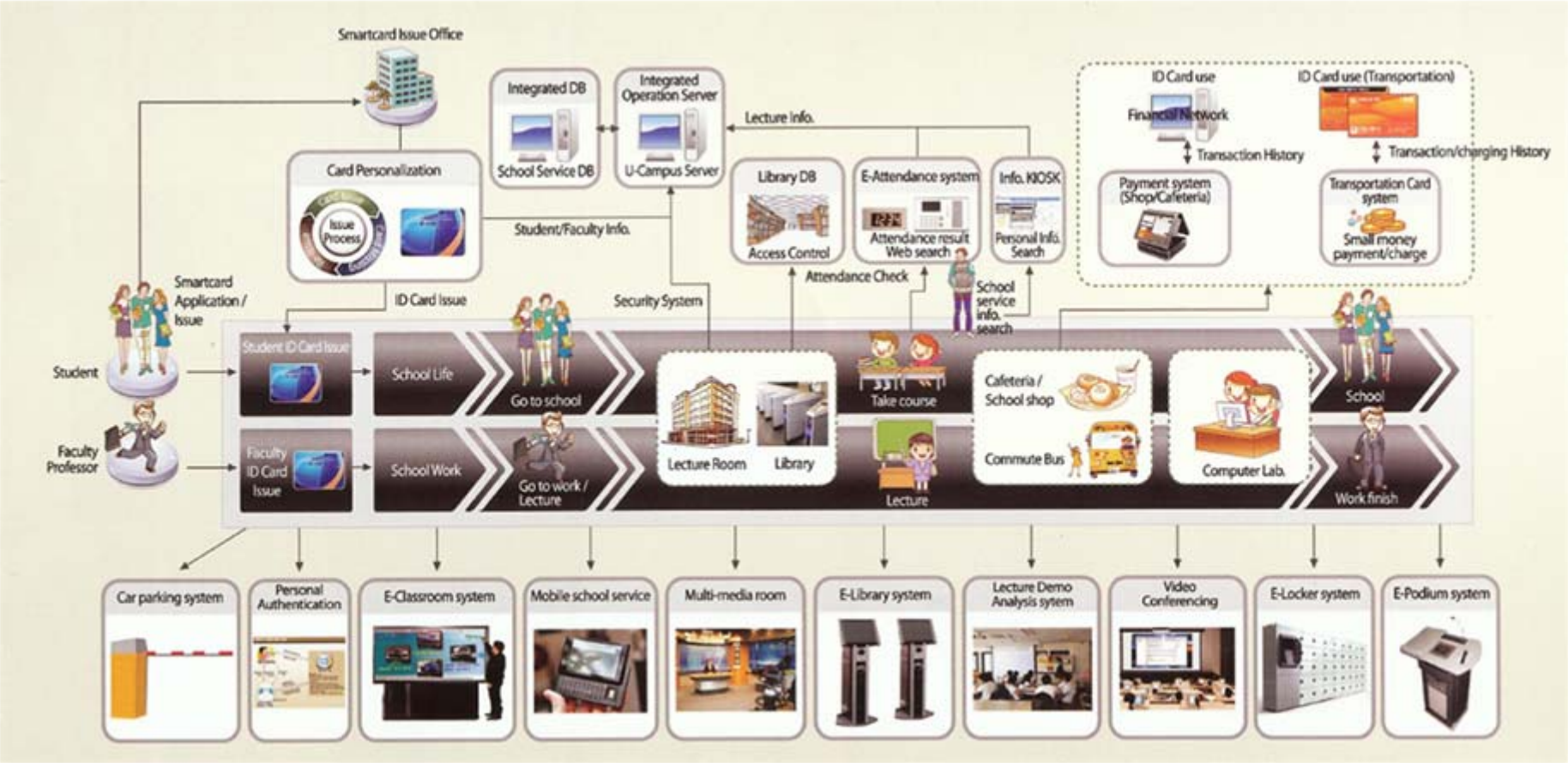
4. Function of Smart-mate

■ Main Function

- Interworking with LMS/LCMS
- Interworking with electronic Blackboard and others
- Collaborative audio & video meeting
- Live audio & video lecture
- Self-Learning, Distance Learning
- Language Lab function
- Learning anytime, anywhere



Smart Campus

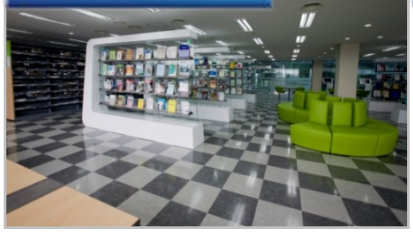


Reference : University in Korea

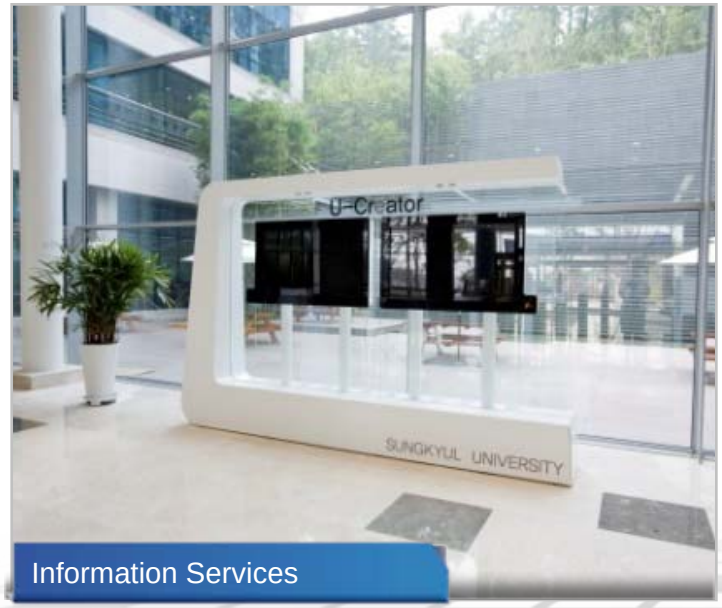
Automatic Book Search System

Smart Table

Reading Room



Seat Assign System



Information Services

U-Lounge

e-Infrastuctura
de cercetare-dezvoltare
din Republica Moldova

Rețeaua ACADEMICA

Acces direct la GEANT şi Internet 200Mbps/1Gbps Mbps – A.O RENAM

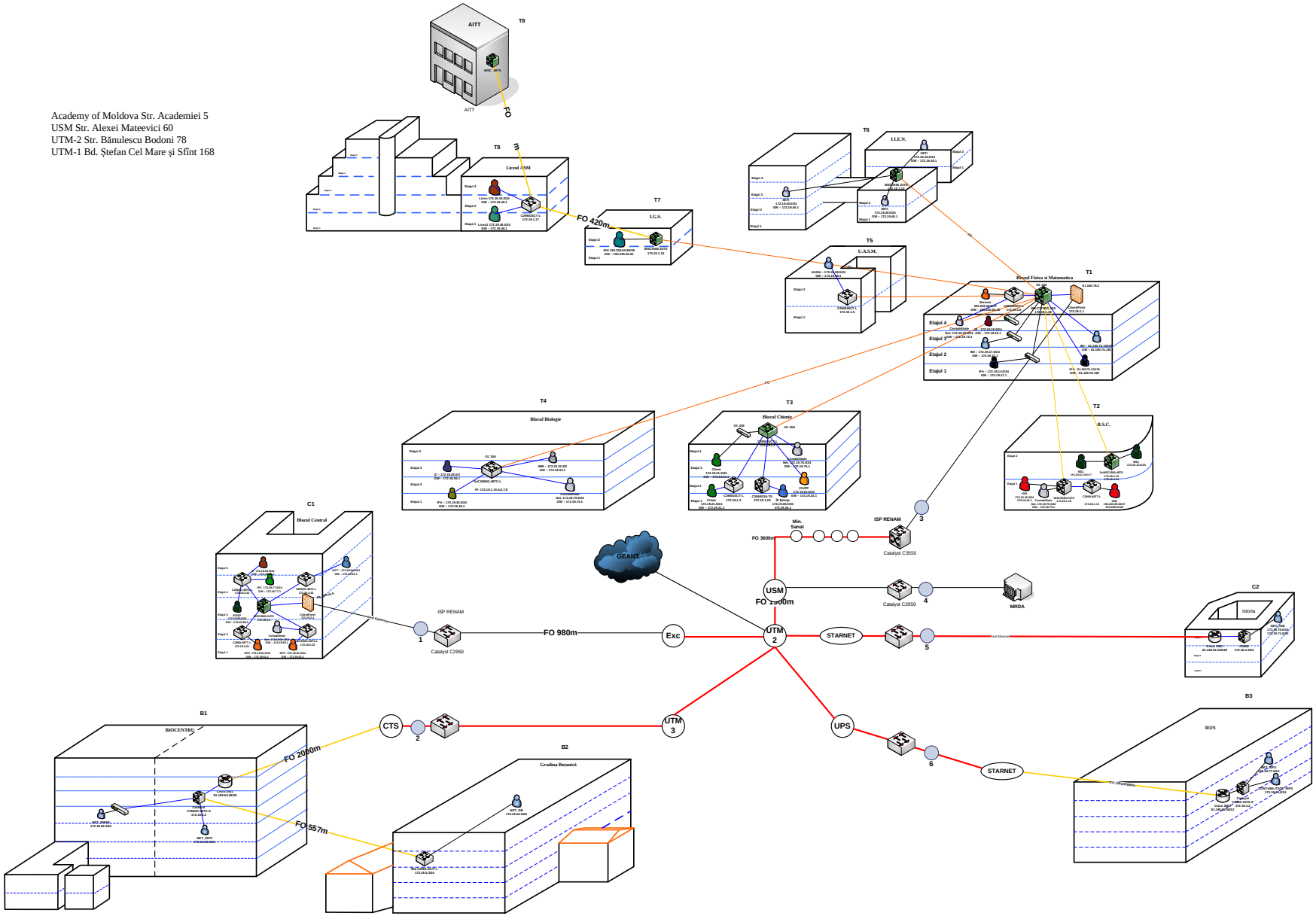
2 canale de rezervă Internet/Intranet MDX – Moldtelecom – **2 x 8/100 Mbps**

19 - instituții de cercetare, membri instituționali ai AŞM
1 – Academia de Ştiințe a Moldovei
1 – Agenția de Inovare şi transfer Tehnologic
auxiliare
1 – Biblioteca ştiințifică a AŞM “A.Lupan”
1 – Centrul de Proiecte Internaționale
învățământ
1 – Universitatea AŞM
1 – Liceul AŞM
de profil
1 – Institutul de Dezvoltare a Societății informaționale

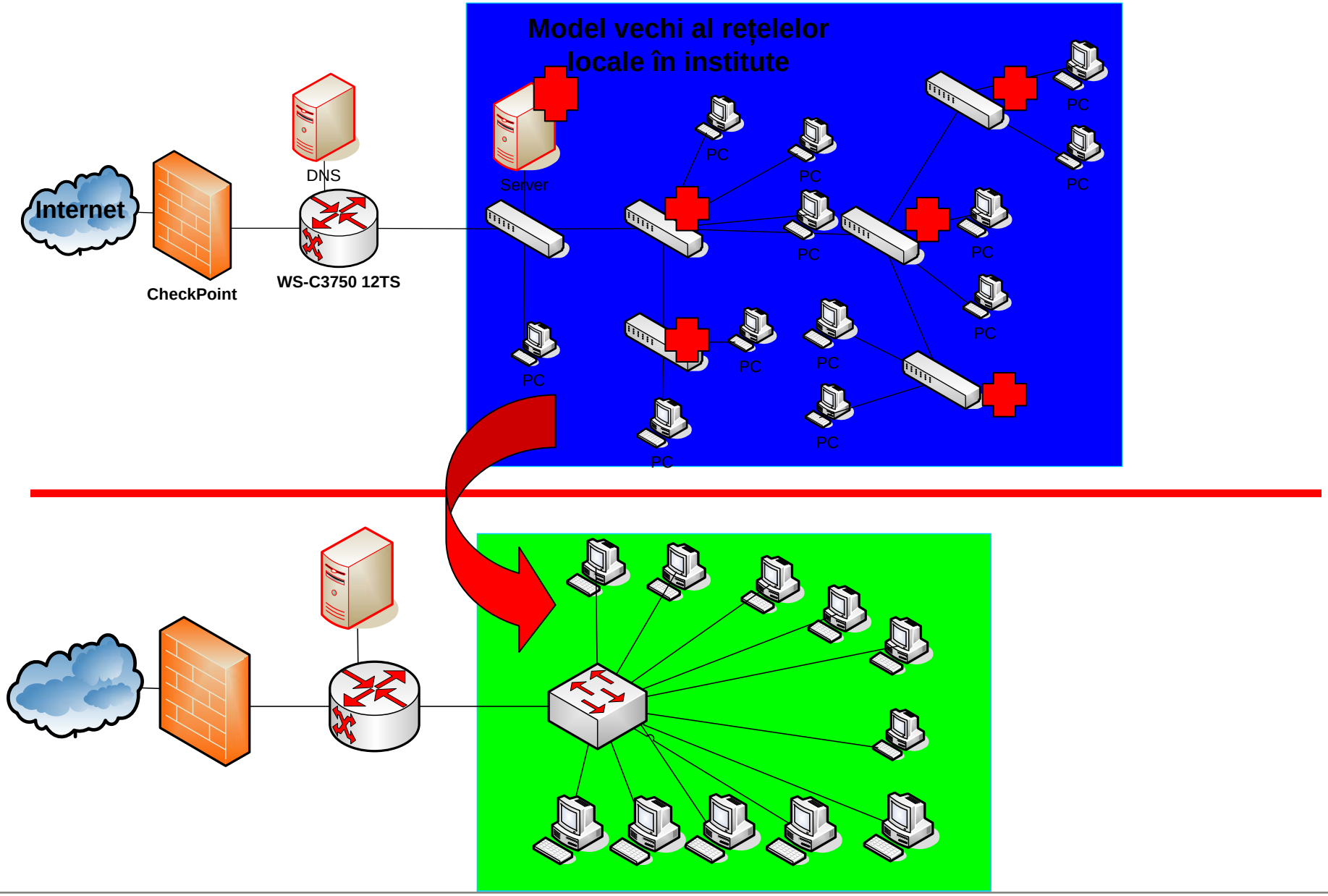
TOTAL	**14 edificii**	**5 sectoare,**
	26 organizații	**1 100 calculatoare**
	3 km – Fibră optică	**40 km – Cablu UTP, cat.6**
	37 Switchiuri	**1416 porturi CISCO,**
	3 Routere	**12 Servere – 11 servicii informatice**

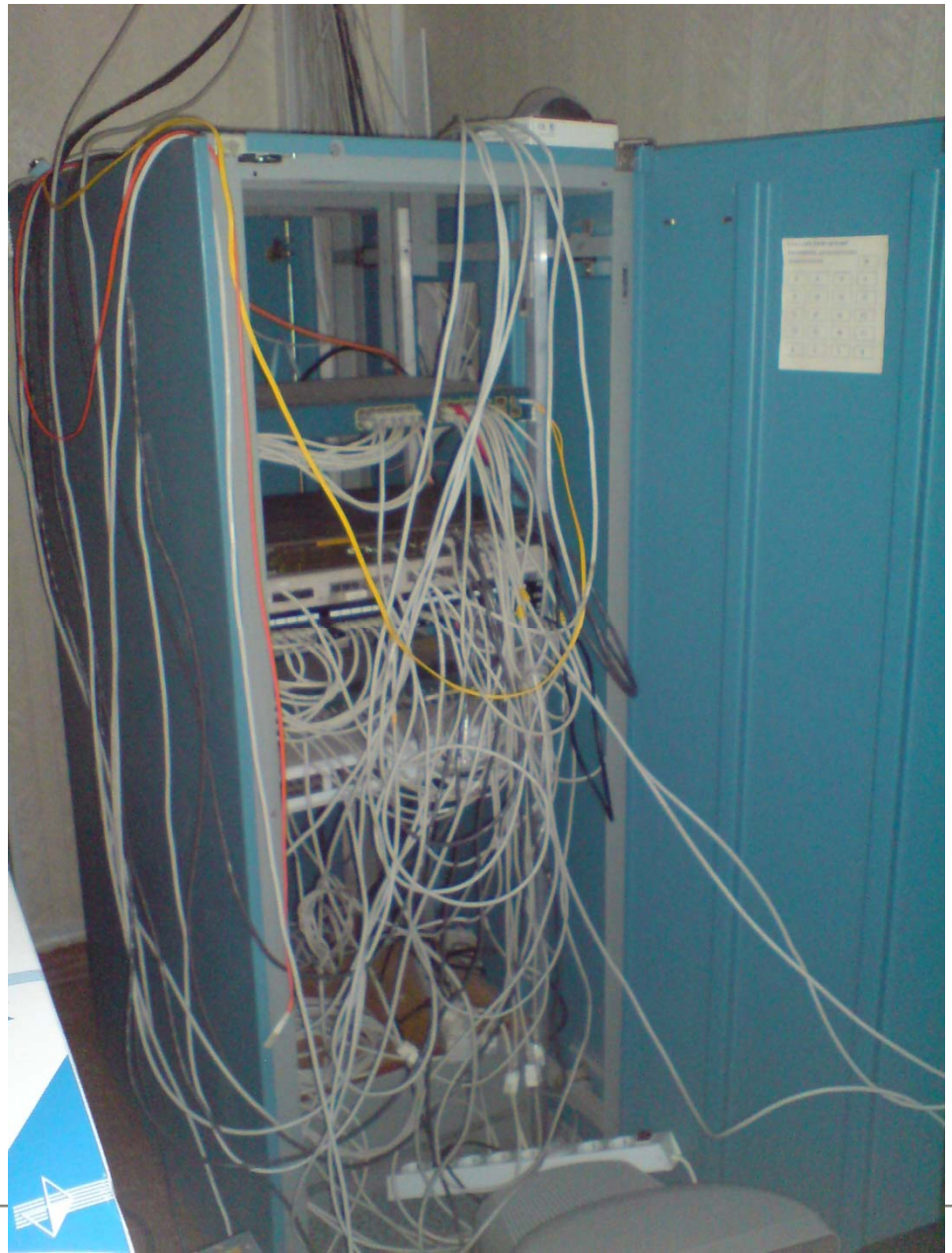
Topologia fizică a rețelei ACADEMICA

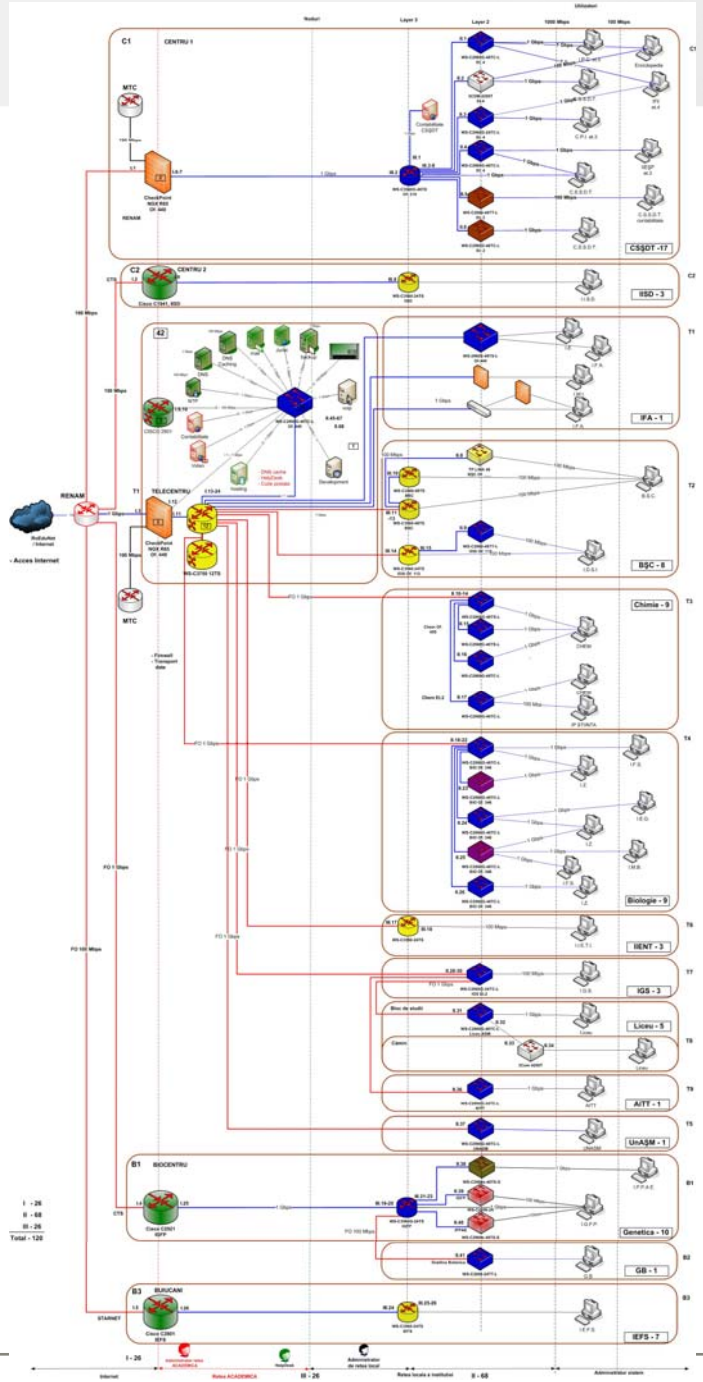
Academy of Moldova Str. Academiei 5
USM Str. Alexei Mateevici 60
UTM-2 Str. Bănulescu Bodoni 78
UTM-1 Bd. Ștefan Cel Mare și Sfînt 168



Transformarea rețelei







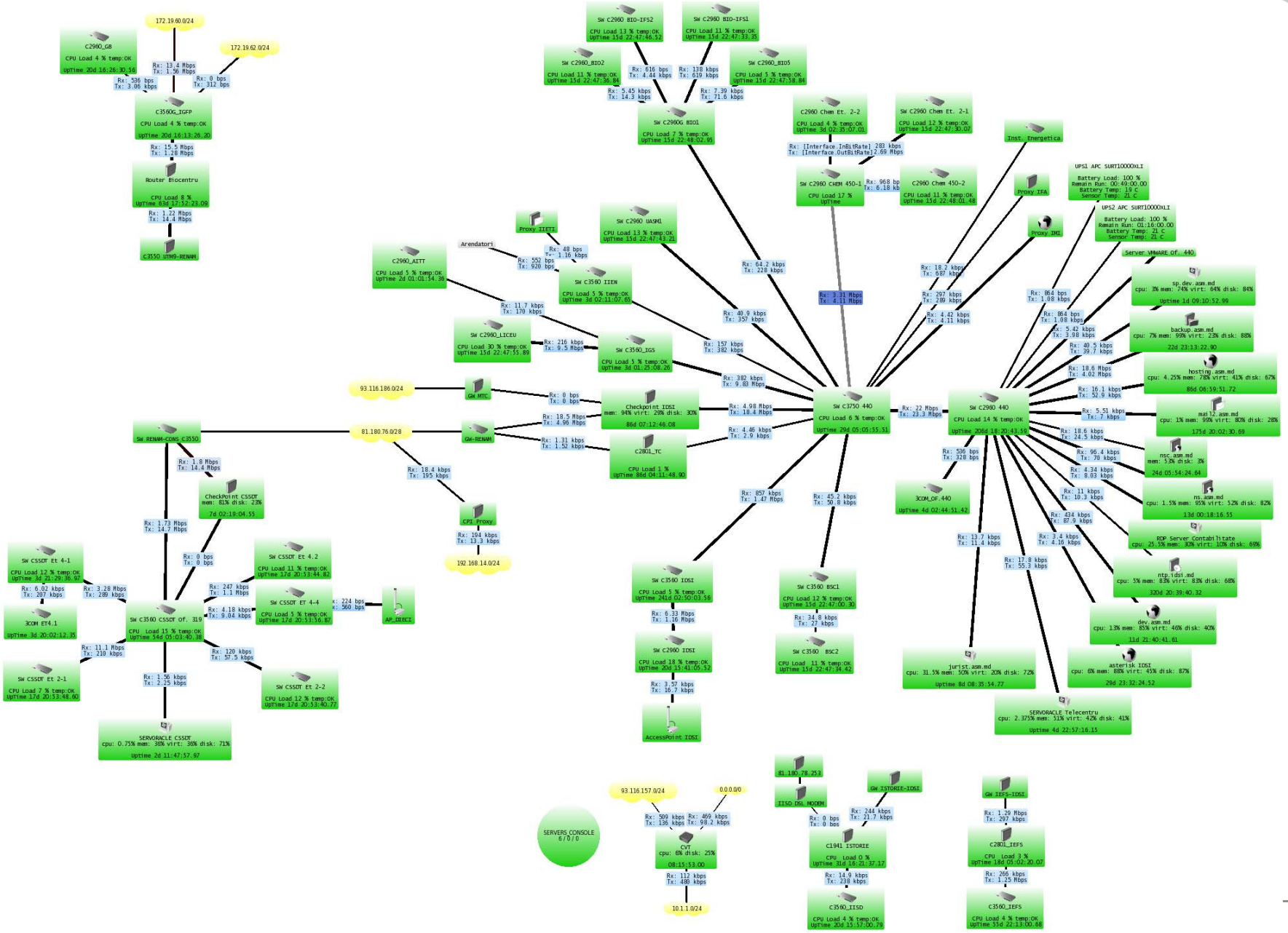
BENEFICII e-Insfrastructură ACADEMICA:

- s-a **redus consumul de energie electrică** – 20 %
- rețeaua este **administrată 80% la distanță**
- s-a **redus de 4 ori personalul** de administrare (8 persoane)
- rețea fizică unică pentru toate organizațiile
- **rețele virtuale** pentru fiecare **organizație**

- Instituțiile **nu procură** nici un **echipament** de rețea/servere
- **conectarea** unui nou PC – se realizează în baza unei cereri din partea conducerii instituției, **fără plată** pentru conectare

- rețea a devenit una fiabilă
- rețeaua este protejată de Firewall
- este asigurată securitatea de acces în rețea
- suport informatic din partea IDSI

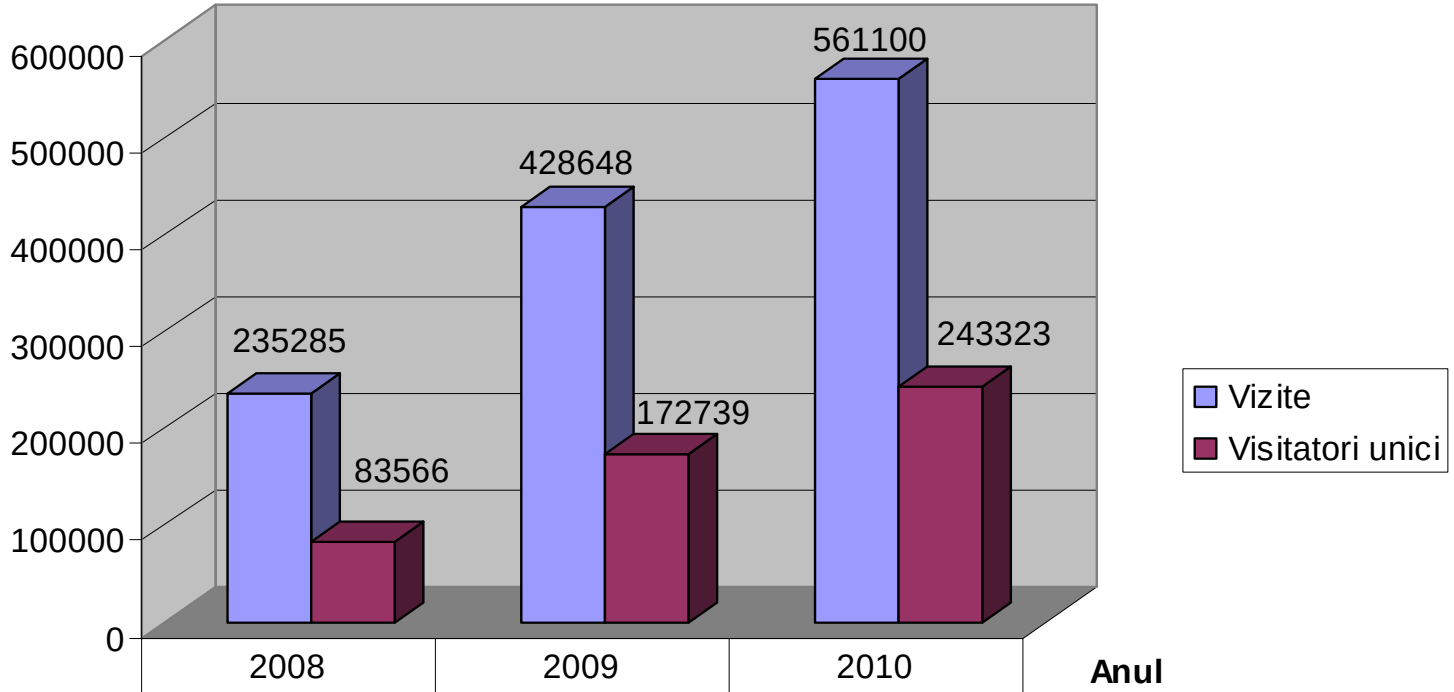
Administrarea online a rețelei ACADEMICA



Infrastructura MD-GRID

MD-GRID NGI site	Available CPU	Available storage	Network
Certificated sites			
MD-01-TUM	5 Intel P-IV 3,0 GHz CPUs	5 120 Gb equals to 500 Gb of storage	1 Gbit Ethernet
MD-04-REN	5 Dual Core Xeon 5130 CPUs	3 250GB SATAII Drives in RAID 5, equals to 500 Gb of storage	1 Gbit Ethernet
Installed cluster's equipment (not certificated yet)			
MD-02-IMI	9 Dual Core Xeon 5130 CPUs	5 250GB Drives in RAID 5, equals to 1 TB of storage	1 Gbit Ethernet
Plan to be integrated in MD-NGI			
MD-05-USM	4x2xAMD 275 Dual-Core 2.2GHz and 3x2xAMD 280 Dual-Core 2.4GHz CPUs	2x500GB 7.2k SATA and 4x80 GB 7.2k SATA	1 Gbit Ethernet

Vizibilitate resurse informaționale academice



	2008	2009	2010
Vizite	235285	428648	561100
Visitatori unici	83566	172739	243323
nr. site-uri	11	24	31

Funcții inginereşti în domeniul TIC

		ing.prog. Coord.	ing. prog. cat. I	ing. prog. cat. II	ing. prog. cat. III	ing. prog.	tehn. prog. cat. I	Total
1	Institutul de Matematică şi Informatică	5	2	2	16			25
2	Institutul de Fizică Aplicată	7		1			1	9
3	Î.S. Institutul de Dezvoltare a Societații Informaționale	1	5	2				8
4	Institutul de Geologie şi Seismologie	3	2				3	8
5	Institutul de Energetica	3	1		3			7
6	Institutul de Tehnică Agricolă "Mecagro"		1	5			1	7
7	Institutul de Inginerie Electronică şi Tehnologii industri	4	1	1				6
8	Universitatea Tehnică a Moldovei	1					4	5
9	Institutul de Economie, Finanțe şi Statistică al AŞM					3		3
10	Universitatea de Stat din Moldova		1	1			1	3
11	Centrul Ştiintifico-Practic "Porumbeni"	1						1
12	Instituția medico-sanitară publică Institutul Oncologic		1					1
13	Institutul de Chimie	1						1
14	Institutul de Ecologie şi Geografie al AŞM					1		1
15	Institutul de Genetica şi Fiziologie a Plantelor		1					1
16	Institutul de Protecție a Plantelor şi Agricultură Ecologică					1		1
17	Institutul de Zoologie al Academiei de Ştiințe	1						1
18	Institutul Ştiințifico-Practic de Fitotehnie	1						1
	Total	28	15	12	19	5	10	89

Propuneri de proiecte înaintate în cadrul proiectului eTransformation de către organizațiile din sfera ştiinței şi inovării (e-Servicii)

1	**Sistem de avertizare seismica În timp real (pentru mun. Chisinau) – IGS**
2	Laboratorul de e-Learning si Management al Instruirii; - USTiraspol
3	**Registrul national cu acces on-line al patologiilor/anomaliilor zonei hepato-pancreato-biliare depistate cu ajutorul diagnosticarii ultrasonografice (e-Registru-p); - IMI al ASM**
4	**Sistemul Informational si de Avertizare pentru Protectia Integrata a Plantelor În baza tehnologiei Sisteme Informationale Geografice (SIG); - IPPAE**
5	**Servicii de comunicatii În Sistemul stiintifico-educational integrat si distribuit la nivel national si acces la infrastructura si serviciile retelei academice transeuropene GEANT - RENAM**
6	**Videocomunicarea – un instrument de instruire - BSC a ASM**
7	**Digitalizarea fondurilor arhivistice ale mediului stiintific - BSC a ASM**
8	e-Prescolar - Univrsiatea de Stat "A.Russo" din m.Balti
9	**Serviciul on-line GIS de hidrogeologia si geologia inginerească - IGS**
10	Elaborarea programului informational (soft) si dotarea cu echipament a serviciului informational si telemedicina din cadrul imsp institutul de cercetari stiintifice În domeniul ocrotirii sanatatii mamei si copilului - IMSP ICSDOSMC

Etapa următoare:

Dezvoltarea rețelei ACADEMICA – rețea de cunoştințe

"...trecerea de la
CONSUMATORI de Internet
către

FURNIZORI de informații ştiințifice online"

Mulțumesc pentru atenție!

Igor Cojocaru

Director,

Institutul de Dezvoltare a Societății Informaționale

cojocaru@asm.md

www.idsi.md