

# Sustaining Intergeo with OpenDiscoverySpace

Ulrich Kortenkamp, Paul Libbrecht, Christian Dohrmann  
CADGME 2012, June 23, Novi Sad



Martin-Luther-Universität  
Halle-Wittenberg

# Intergeo

- Demonstration of i2geo.net
  - Search
  - Use
  - Quality

# I2G

## INTERGEO

### Interoperable Interaktive Geometrie für Europa

Benutzername  
  
Anmeld  
 Daten merken [Passwort vergessen](#)

Werden Sie Mitglied

Deutsch

suchen...

[Lehrpläne](#) [Erweiterte Suche](#)

- STARTSEITE
- SUCHEN
- MITMACHEN
- VERNETZEN
- HILFE
- INTERGEO PROJEKT

[Problem melden](#)

#### IZGEO WÄCHST

Material:	3635
Mitglieder:	1674
Gruppen:	22
Bewertungen:	852

[Machen Sie mit!](#)

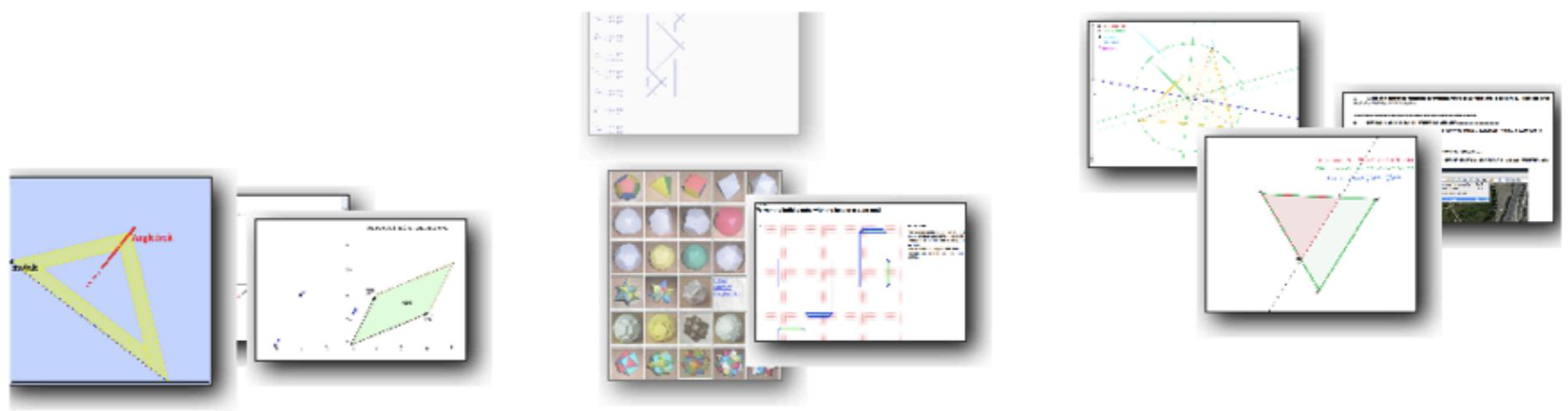
#### FAN CLUB

facebook **I2G** Fans: 190  
INTERGEO



Titelseite

### Neueste Vorschaubilder



Cube nets

#### DAS EU PROJEKT INTERGEO

Interoperable Interaktive Geometrie für Europa  
Mit Intergeo erhalten Sie Zugriff auf tausende von Konstruktionen und anderen Materialien, die mit Hilfe von Dynamischer Geometriesoftware (DGS) erstellt wurden.  
Erfahren Sie mehr über das EU-kofinanzierte Projekt Intergeo:

#### MATERIAL IM FOKUS

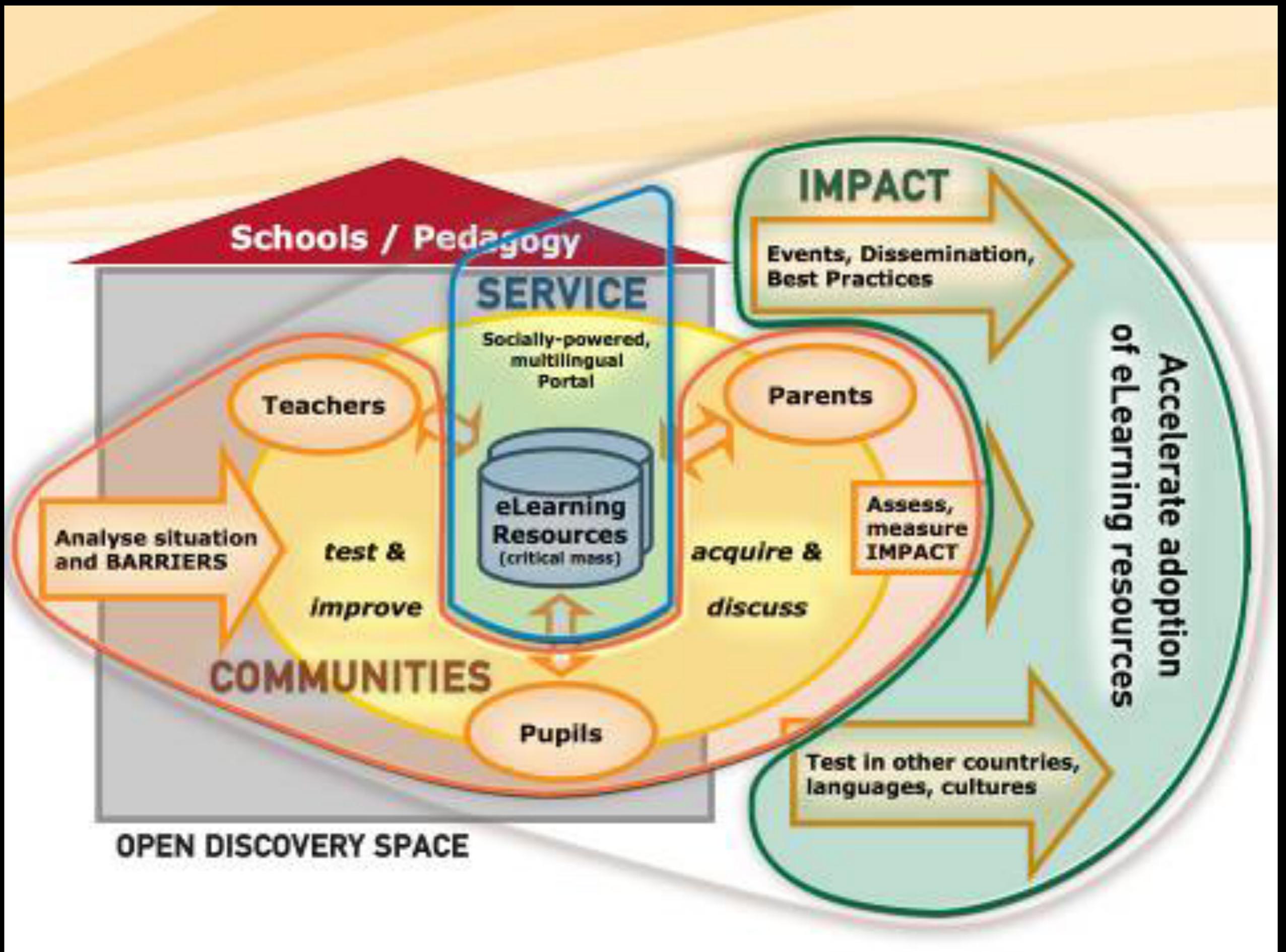


# Open Discovery Space

- Federation of many former eContentplus projects, not only maths
- „Resource based learning“ as a general pedagogic principle
- Synergy between different platforms

# A socially powered educational portal supporting the implementation of the Digital Agenda for Europe

- an accelerator of the sharing, adoption, usage, and re-purposing of the already rich existing educational content base
- involve school communities
- promote community building between numerous schools of Europe and empower them to use, share and exploit unique resources from a wealth of educational repositories, within meaningful educational activities.



# eMaturity

- Concept for schools to check whether they are able to adopt digital resources
- First phase will look for 100 eMature schools

### Elementary school Mario Martinolić, Mali Lošinj, Croatia

Elementary school *Mario Martinolić* (<http://www.os-mmartinolica-mali-losinj.hr>) on the island Mali

Lošinj is a specific example of an eMature school. This school has been part of a wider e-islands project since 2008, in which it serves as a central school onto which schools from other local island (local schools *Ilovik*, *Susak* and *Unije*) are connected in a joint teleconference teaching-learning network. All of these schools are suffering from a shortage of teaching staff, decreasing number of pupils and poor commuting network. The teleconference network provides daily transmission of lectures and classes between the central elementary school Mario Martinolić and other local schools through the application of CARNet's videoconferencing system and LMS (Learning Management System). Children in the remote local schools are thus virtually part of the central school class, and are sharing the same teacher with the central class in real time. The aim of the e-islands project was to create technical preconditions for distance learning on the under-populated remote islands, thus reducing the necessity of frequent travelling of elementary school pupils and teachers, often disrupted by unfavourable natural conditions and poor commuting network. In addition, this project was intended to improve not only the quality of teaching and studying on the islands, but also to positively influence the quality of life of the entire island community.



# Criteria for selecting eMature schools

The proposed criteria for selecting eMature schools are divided into five categories:

- **Leadership and Planning:** A whole-school ICT policy that outlines a strategy and conveys a positive attitude to the use of ICT in the school. The policy addresses curriculum linkage, planning for structured ICT access for all and Internet safety.
- **ICT in the Curriculum:** ICT integration across the curriculum in learning and teaching and staff understand how ICT can be used in the curriculum to improve student learning.
- **e-Learning Culture:** Awareness that ICT has an impact on the quality of teaching and learning, pupils' attitudes and behaviour and the wider school community.
- **Professional Development:** A commitment to ongoing professional development in relation to ICT.
- **Resources and Infrastructure:** The use of appropriate ICT resources to support different learning environments.

Leadership & Planning		<b>Initial</b>	<b>e-Enabled</b>	<b>e-Confident</b>	<b>e-Mature</b>
	Strategy	Strategy focuses mainly on ICT equipment.	e-Learning strategy is developed by an appointed team of teachers.	e-Learning strategy is fully integrated into the whole school.	e-Learning strategy is wide ranging and shared by all stakeholders. It is actively tested through the student learning experience.
	Plan	Basic ICT Plan* is in place.	e-Learning Plan has been developed by e-Learning Team. One teacher /head teacher or a group of teachers has assumed leadership for ICT planning in the school.	Comprehensive e-Learning Plan is integral to the whole school plan. The development of the plan is led by principal/ICT coordinating teacher/e-Learning Team with all staff contributing and whole school acceptance. There is a designated ICT coordinating teacher with clearly defined duties and responsibilities.	Teachers implement the e-Learning Plan in their daily work. Staff & students are actively engaged in innovative and exemplary practice.
	Integration	Focus is mainly on ICT equipment and the acquisition of basic ICT skills.	Focus is mainly on supporting the integration of ICT usage throughout the school.	Focus is mainly on supporting more comprehensive integration of ICT and the exploration of new and more effective approaches to ICT integration.	Focus is mainly on supporting and facilitating personalised and self-directed learning.
	Acceptable Use Policy (AUP)**	School has developed an Acceptable Use Policy by pupils for the Internet.	School has developed an AUP following consultation with staff, students, parents/guardians, board of management/trustees.	School has developed and ratified an AUP for Internet and ICT use following consultations with staff, students, and parents. All stakeholders are familiar with its contents	The AUP accommodates innovative use of new technologies, and facilitates the development of a responsible approach to the use of these technologies.
	Special Educational Needs (SEN)	Support of ICT as a tool for learning in special educational needs exists but is uncoordinated.	Use of ICT is focused on the areas of learning support and resource teaching.	School supports and encourages the use of a wide range of ICT resources and assistive technologies throughout the school to facilitate the inclusion of students with special educational needs	School includes the use of ICT and assistive technologies in the development of all personalized educational plans for students with special educational needs and uses ICT in all aspects of special educational needs assessment.

\*ICT/e-Learning Plan: helps your school identify if it's in the initial, intermediate or advanced stage of ICT management and planning

ICT in the Curriculum		<b>Initial</b>	<b>e-Enabled</b>	<b>e-Confident</b>	<b>e-Mature</b>
	Teacher Understanding	Teachers have a general understanding of how e-learning can improve teaching and learning.	A number of teachers understand methodologies to integrate ICT into the curriculum.	Most teachers understand how e-learning can be used in the curriculum to improve student learning.	Teachers have determined their own methodologies for integrating ICT into the curriculum.
	Planning	There is little planning for ICT integration, with ICT activities focused on students' acquisition of ICT skills, eg word processing.	There is some planning for ICT integration, with the focus mainly on teacher preparation, whole class teaching, group and individual work.	Teachers plan in a structured way for ICT integration in their lessons and classroom activities.	The school devotes time to exploring new approaches to using e-learning to improve student learning.
	Teacher Use	Teachers use computers primarily in isolation from regular classroom learning activity.	Teachers use ICT for lesson planning and as a teaching tool.	Teachers use ICT to provide learning opportunities that support cross-curricular, subject-based and constructivist learning approaches.	Teachers have embedded ICT into their practice to facilitate student directed learning. There is consistent evidence of collaborative, discovery-based and authentic e-learning activities throughout the school.
	Student Experience	Students occasionally use ICT as part of the learning process.	Students experience e-learning activities regularly.	Students experience e-learning activities regularly and use ICT to collaborate on curriculum activities both within the school and with other schools.	Students are facilitated to use ICT to support and assess their learning, e.g. creating digital content and e-portfolios.
	SEN	Teachers are aware that ICT can enhance the learning opportunities of students with special educational needs.	Teachers use of ICT focuses on the development of literacy and numeracy for students with special educational needs.	Teachers use ICT diagnostic tools, assistive technologies and ICT resources to address curriculum objectives with students with special educational needs.	ICT is integral to all aspects of SEN teaching and learning as well as in the development of personalized educational plans. ICT resources and assistive technologies are incorporated into all levels of school planning.

		<b>Initial</b>	<b>e-Enabled</b>	<b>e-Confident</b>	<b>e-Mature</b>
<b>Professional Development</b>	Teacher Awareness & Participation	Some teachers have availed of professional development in ICT (attending national programmes).	Teachers are aware of and many have participated in ICT professional development programmes.	The majority of staff have availed of individual or whole school ICT professional development opportunities.	Teachers meet their professional development needs through active participation in communities of practice, peer-to-peer networks and accredited practice-based research.
	Planning	Interested individuals identify their own ICT continuous professional development (CPD) needs.	An individual teacher or the e-Learning Team identifies the whole staff professional development needs in relation to ICT integration.	The ICT co-ordinating teacher or the e-Learning Team facilitates the identification of overall e-learning needs of staff. Programme for CPD is developed.	Teachers engage in ongoing self-evaluation and reflective practice in progressing the schools CPD programme.
	Focus	Professional development is focused on acquiring basic ICT skills.	Some staff are participating in CPD which focuses on the integration of ICT into the curriculum.	The majority of staff have engaged professional development focused on the integration of ICT into the curriculum.	Schools identify and design whole school professional development programmes based on their specific needs, delivered in their own school with support from other agencies.
	Teacher Confidence	Teachers have basic skills but lack the confidence to apply these in the classroom.	There is growing confidence among staff in the integration of ICT in the curriculum.	The majority of staff are confident in the integration of ICT in their daily teaching.	Teachers confidently share their experiences and innovative practice within their own school and with other schools.
	SEN	Some staff have completed ICT & Special Needs professional development	All teachers in learning support and resource teaching have completed professional development in ICT and SEN.	Teachers have acquired the skills to use some assistive technologies and other technologies to support students with SEN and are adapting their teaching methodologies to use ICT in special educational needs. Teachers have attended professional development on specific areas, eg autism.	Teachers are confident and have acquired the skills to use a wide range of technologies to facilitate the inclusion of students with SEN
	Informal Learning	There is little sharing of e-learning ideas and good practice among staff.	Sharing of e-learning ideas and good practice among staff takes place in an informal manner.	Teachers regularly share new e-learning ideas and good practice with each other eg via staff meeting or e-mail.	School supports and facilitates peer-to-peer learning in ICT, using a Virtual Learning Environment (VLE) and other formal and informal approaches.

e-Learning Culture		<b>Initial</b>	<b>e-Enabled</b>	<b>e-Confident</b>	<b>e-Mature</b>
	Access	Teachers and students have limited access to e-learning resources.	Teachers and students have regular access to e-learning resources.	e-Learning resources are readily available to staff and all students throughout the school.	e-Learning resources are available to staff, students and the wider community outside of school.
	Evidence of Use	There is little visible evidence of e-learning.	There is visible evidence of use of e-learning, eg displays of project work.	Evidence of e-learning is visible in all areas throughout the school.	The school disseminates and shares examples of good practice throughout their own school community.
	Website/Online Presence	School has or is actively planning an online presence, e.g. a blog or basic website.	School has an active and up-to-date website.	The school website contains content developed by teachers and students.	School uses a Content Management System (CMS) to create a communicative space where the school community publishes content and which conforms to access guidelines.
	Projects	Some teachers engage in school-based ICT project work.	School is involved in projects that integrate e-learning (national and/or international), eg e-Twinning.	School has experience of integrating e-learning in interdisciplinary and large scale project work.	Students and teachers regularly develop small-scale projects and external collaboration, eg through use of a VLE or wikis.
	Organisation & Communication	School has an e-mail address, and uses this for basic levels of correspondence and communication.	There is some communication between school, home and the Department of Education via e-mail or text messaging.	School makes regular use of ICT to communicate with teachers, parents, (Board of) Management and the wider community. School has an e-mail newsletter.	School encourages parents and wider community to use ICT to communicate with the school. Teachers, students and parents have online access to student records and timetable.

Resources & Infrastructure		<b>Initial</b>	<b>e-Enabled</b>	<b>e-Confident</b>	<b>e-Mature</b>
	Planning for Acquisition of Resources	Basic level of planning for ICT purchasing exists.	Some level of ICT purchase planning takes place, including standardisation of ICT equipment, use of laser printers, and purchasing with warranty.	Procurement planning and standardisation of ICT equipment takes place. Older computers are disposed of environmentally.	There is an integrated approach to procurement which takes into account full operating costs of ICT equipment and technical support provision.
	LAN & Broadband Access	A network exists in some areas of the school. School is connected to a national broadband programme. Internet access is distributed through the Local Area Network.	Most rooms and computers are connected to the school network, facilitating access to online and network resources.	A high speed and reliable network extends to all areas of the school. All computers are connected to the network facilitating access to online and locally based server resources.	Resources are accessible from a central server. All teachers and students have secure access to server space, and their e-portfolio, from within the school and remotely.
	Technical Support	Technical support is carried out using mainly voluntary assistance. Occasionally a technician is paid to carry out urgent work.	Technical Support is provided by an external company on a call-out basis as required. No technical support contract is in place.	Technical support is factored into procurement planning; all equipment is procured with an appropriate warranty.	Technical support is planned and integrated with ICT procurement planning and takes into account full ICT operating costs.
	Software and Digital Content	Limited e-learning resources are available.	The school has a range of appropriate e-learning resources to support learning at all levels.	There is easy access to appropriate digital content that teachers have catalogued by subject/curriculum area.	The school creates its own customized digital content which is accessible from home and school.
	ICT Equipment	Some classrooms have desktop computers. A laptop and portable projector, printer and digital camera are available as shared resources.	Some rooms have digital projectors and computers. Peripherals, such as digital cameras and scanners are used for e-learning activities.	All learning areas have access to a range of ICT equipment including digital projectors and wirelessly-enabled tablet PC's. Laptop trolleys are used to improve access to resources.	All learning areas have access to a range of ICT equipment. Provision is made for the incorporation of students' mobile devices.

# Next steps

- „Visionary Workshops“
- Gather teachers in each country of the EC (at least 100 for Germany)
- Show best practices and collect feedback
- You can participate online at [i2geo.net](http://i2geo.net)!

# More Info to come

- <http://opendiscoveryspace.eu>
- <http://i2geo.net> - please register and submit your work there!
- [kortenkamp@cermat.org](mailto:kortenkamp@cermat.org)



MARTIN-LUTHER-UNIVERSITÄT  
HALLE-WITTENBERG

**CERMAT**

Centre for Educational Research in  
Mathematics and Technology