



New Teaching Methods for PHD

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Agenda



- An overview of innovative methodologies in educational field
- Practice Management methodology
- UNIBO experience
- Pilot modules in resilience management (A.Y. 2014/2015)



Which methodology for the education ?

- **Distance learning:** the learner follows simple steps to learn a concept. Learning is done with an interaction with the teacher using tools as Moodle. All learning is done online.
- **Practice Management:** This methodology refers to Simulimpresa in which students acquire competencies and skills by doing activities. It consists in the realistic reproduction of organization activities that allow students to develop practical competencies on the field.



The innovation in education

VIRTUAL REALITY

According to Keppell et. al. (1997), VR is “a situation where a person was immersed into a computer generated environment that bores strong similarities with reality”.

The concept of VR includes a psychological and a technological perspective: the first outlines the status of users’ mind in the behaviour between the real and virtual environment while the technological view connects VR to a platform where head mounted visual display units and motion-tracking gloves are present (Fallman et al 1999).

Another aspect in VR is the way of interaction between the user and the computer-generated environment. On this purpose Keppell et. al., (1997) stated that “the users manipulate what is perceived to be “real” objects in the same manner as they would manipulate them in the real world, as opposed to the typing, pointing and clicking you traditionally use to manipulate objects when you interact in other computer environments”.

AUGMENTED REALITY

Mekni & Lemieux (2014) stated the following characteristics : 1) combination of real and virtual dimension; 2) interaction in real time and 3) registration in 3-D. In particular the Authors stated that “it combines technologies that enable real-time mixing of computer-generated content with live video display allowing to make an increased perception of reality”. AR finds application in different sectors as: marketing, tourism, logistics and education. In this last field AR allows the connection between virtual objects and real environments, so that learners can visualize complex spatial relationships and abstract concepts, experience phenomena that could not be realized in the real context (Billinghurst and Dunser 2012). Moreover, it is possible to interact with two and three dimensional synthetic objects in the mixed reality (Yuen et al 2011).

As it concerns VWs, Merchant et al (2014) stated that “Virtual worlds are characterized by: the illusion of being in a 3-D space, ability to build and interact with the 3D objects, digital representation of learners in form of avatar, and ability to communicate with other learners in the virtual worlds. VWs are open-ended environments in which users design and create their own objects, while the simulations and games produce structured situation”.



- 3-D virtual world launched June 23, 2003 and developed by Linden Lab
- *A free downloadable client program called the Second Life Viewer enables its users, called “Residents”, to interact with each other through motional avatars, providing an advanced level of a social network service. Residents can explore, meet other residents, socialize, participate in individual and group activities, and create and trade items (virtual property) and services with one another.*
- a platform for education by many institutions, such as colleges, universities, libraries and government entities.



22 million members (Resident), of which
1,350,000 active over the past 60 days.

UNIBO in Second Life – Perting

<http://maps.secondlife.com/secondlife/Kouhun/209/201/53>



Practice Firm

“a simulated business set-up experienced by students, during their studies, under the supervision of teachers/tutors. As innovative centre of vocational learning, it runs like a real business, using a real firm’s business procedures, products and services”.

<http://www.simulimpresa.com>

Targets

To realize an immediate link between theoretical knowledge and its applied practice founded on an action-oriented learning



- ✓ Practical experience
- ✓ Interdisciplinary skills
- ✓ Self achievement
- ✓ Personal training
- ✓ Facing responsibilities



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The didactical structure

(Course “Simulimpresa in Resilience Project Management – 40 hours; Sept-Dec 2014)

Week N°	Lecture topic
1	Introduction to Simulimpresa in resilience project management; Selection of participants; Simulation start up
2	International Project management and daily management in resilience: business organization in macro and micro structure. Knowledge and use of tools for resilience management and working documents, trade with other practice firms, editing tools for planning, operating budget and business plan, Implementation of Accounting Information System
3	International Project management and daily management in resilience: financial support to RESINT
4	The networking approach for resilience. Intermediate results monitoring.
5	Financial function and human resource management. Marketing for dissemination of resilience topics in different levels: national, regional and municipal
6	Administration Management and Management Control. Marketing for dissemination of resilience topics in different levels: national, regional and municipal.
7	Social Network for the dissemination of resilience topics in different levels: national, regional and municipal.
8	Balance sheet, project management for a better resilience management, conclusions



SIMULIMPRESA in UNIBO



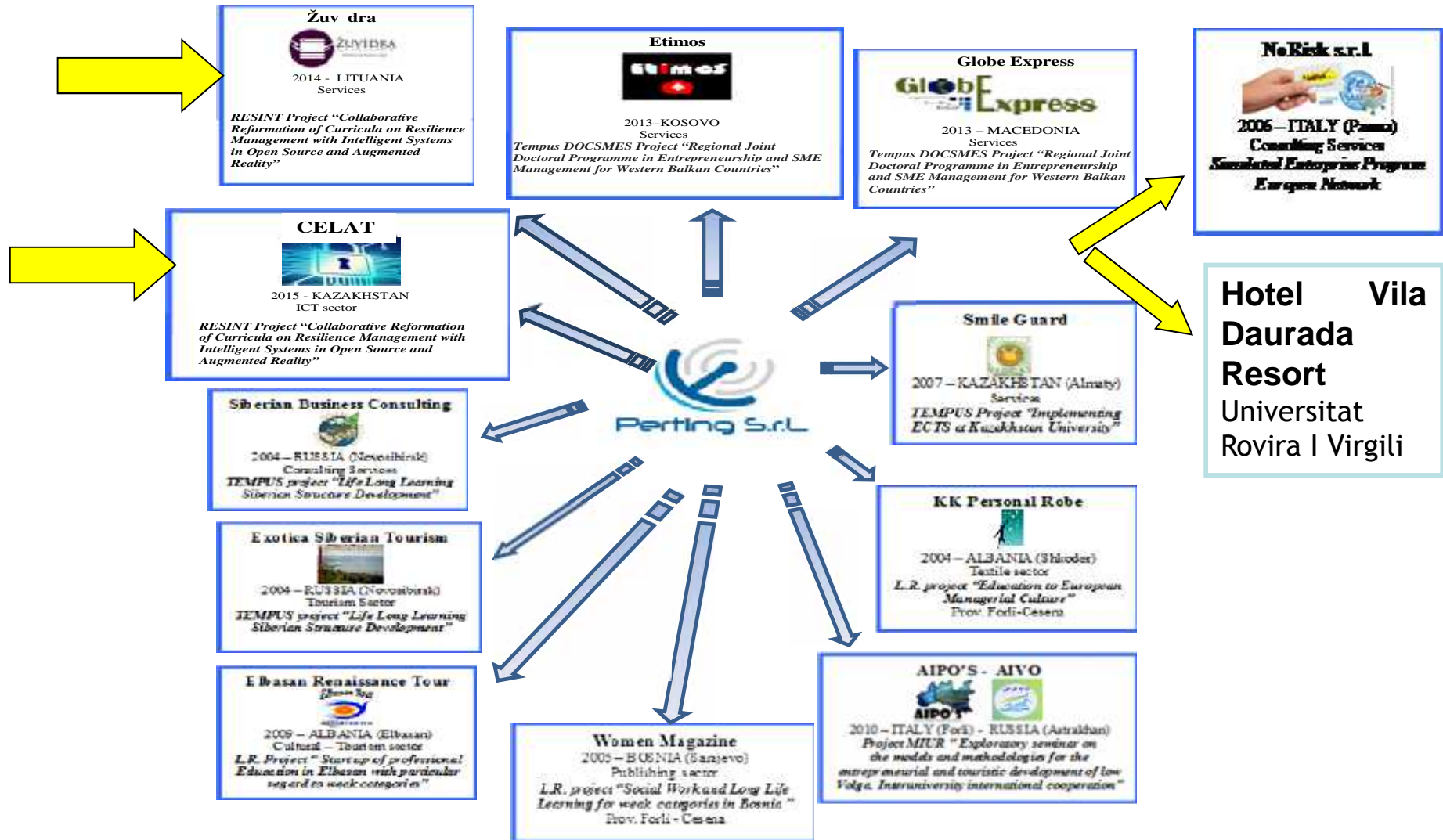
Academic Year	Educational profile of Simulimpresa course				Networking profile of Perting	
	No. teachers	No. tutors	No. students	No. hours	No. customers	No. suppliers
2001/2002	1	1	51	50	0	0
2002/2003	1	1	52	50	10	7
2003/2004	1	2	48	50	34	7
2004/2005	1	2	57	50	13	6
2005/2006	1	2	63	50	25	10
2006/2007	1	2	54	50	53	7
2007/2008	1	2	55	50	28	29
2008/2009	2	7	120	50	122	30
2009/2010	2	2	76	50	51	22
2010/2011	1	2	116	50	23	12
2011/2012	1	2	75	50	28	7
2012/2013	1	1	36	50	27	25
2013/2014	1	1	23	40	26	1
2014/2015	2	4	28	40	21	3



***UNIBO – Simulimpresa
First Award in 2009
New York Global
Business Challenge***



New Practice Firms start up





Simulimpresa on Resilience Management

A.Y. 2014/2015

It is the ability to deal with emergencies and to recover after a disaster, positively reorganizing their lives after traumatic events.



UNIBO Pilot Modules



**Simulimpresa in Resilience
Project Management (Sept-Dec
2014)**



**Simulimpresa for Virtual, Augmented Reality
and Media Context in Resilience (March 2015)**

56 students

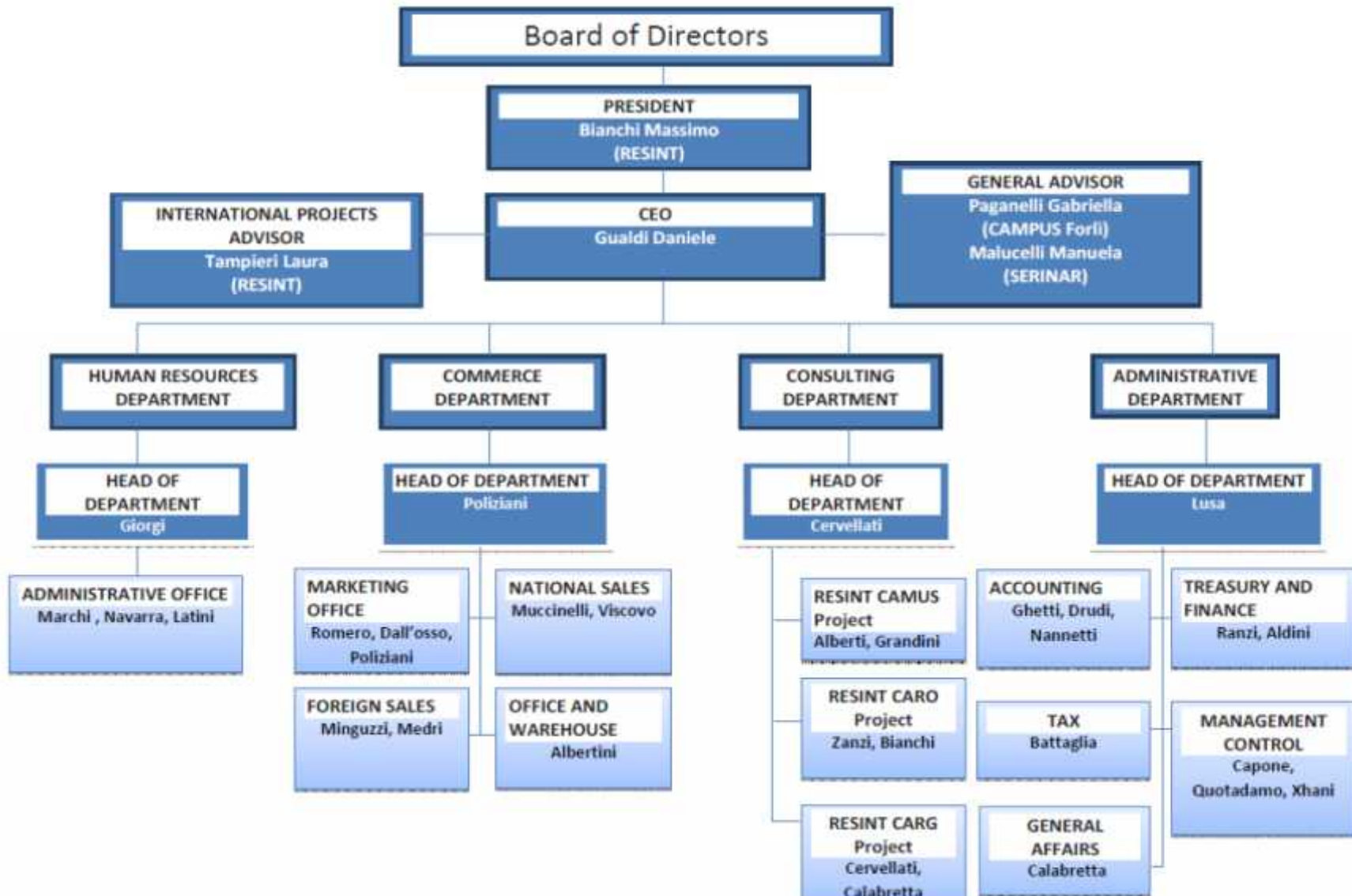
**Simulimpresa in Resilience
for Cultural Heritage (April –
May 2015)**

16 teachers/tutors





Simulimpresa in Resilience Project Management





Main Organizational Units

No.	O.U.	N. Students	Tasks
1	Human resource Administration and General Affairs	4	Contracts of employee's assumption of Perting; elaboration of Perting microstructure, signing of labour contracts; administration and management of human resources. Communications with Italian and foreign simulated enterprises and reopening of the activities and sending promotions. Exchange of information with the Advisory department and verbal recruitment of Perting's employee, in connection with Project Units
2	Accounting	4	Learning on the usage of software OS1; view of the balance before adjustment to produce the balance of the previous exercise in connection with Project Units
3	Management Control	4	Annual Budget : training on OS1. Adjustment entries: Draw up financial statement before the closure
4	Treasury , finance and Tax	2	Economic situation and IBAN: check of bank communications. Sending F24 filled by the fiscal office. Printing tickler made by accounting department and check customers and suppliers expired. Sending payment reminder to customers and suppliers. Treasury budget. Preparing F24 for treasury. Increasing Fiscal variation on gross profit and calculating Ires.
5	Marketing	3	Market analysis through European database; communication with Italian and foreign enterprises; updating the catalogue in paper and on line; production of promotional materials; customer satisfaction surveys, in connection with Project Units
6	Sales and Warehouse	5	Learning about the procedures for fulfilment of modules to foreign firms; execution of received foreign orders; issuing of sale documents to both European Union (EU) and non-EU countries. Elaboration of adjustment records; issuing of national invoices. Updating stock management and online orders based on goods received from customers. Purchases from other Italian simulated enterprises : process.
7	CAMUS Project	2	Project management, preparation of proposal on "Recovering the Historical Heritage on catastrophic events in the Museum of Post and Telecommunications". Contacting university partners to implement Simulimpresa. Organisation of videoconferences with foreign universities.
8	CARO Project	2	Project management, preparation of proposal on "Education for Operative Room Staff". Contacting university partners to implement Simulimpresa. Organisation of videoconferences with foreign universities.
9	CARG Project	2	Project management, preparation of proposal on "Creation of an Agency for river governance". Contacting university partners to implement Simulimpresa. Organisation of videoconferences with foreign universities.