Technology entrepreneurship and innovations in IT education in Bulgaria

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Outline of Talk

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“If you are planning for a year, sow rice;
if you are planning for a decade, plant trees;
if you are planning for a lifetime, educate people.”

Chinese proverb

Purpose

- The purpose of the paper is to introduce the idea of technology entrepreneurship education and to present the experience gained from running the MSc program "Technology entrepreneurship and innovations in information technologies" (TE&I), outlining lessons learned.

- **Design/methodology/approach –** The authors studied the MSc curriculum design in the university master level course, using a complex of different analytical methods and observation techniques to assess its feasibility and applicability. Information sources analyses include best practices, written material, provided by web and the students, teachers' observations, and group discussions during planning and running of the program.

- **Practical implications** – The program can help graduated students from university become competitive professionals and focus their efforts on innovation and entrepreneurship potential.

- **Originality/value** – The value of our program is in integrating knowledge, experience, best practices and tools within one new innovative paradigm. The paper shows how to translate the world best practice in technology entrepreneurship education and demonstrates clearly that IT/IS education gains significant impact in terms of attractiveness and quality.

- **Findings** –TE program is very attractive and successful and happen to be the most desirable MSc program among IT/IS education in Bulgaria.

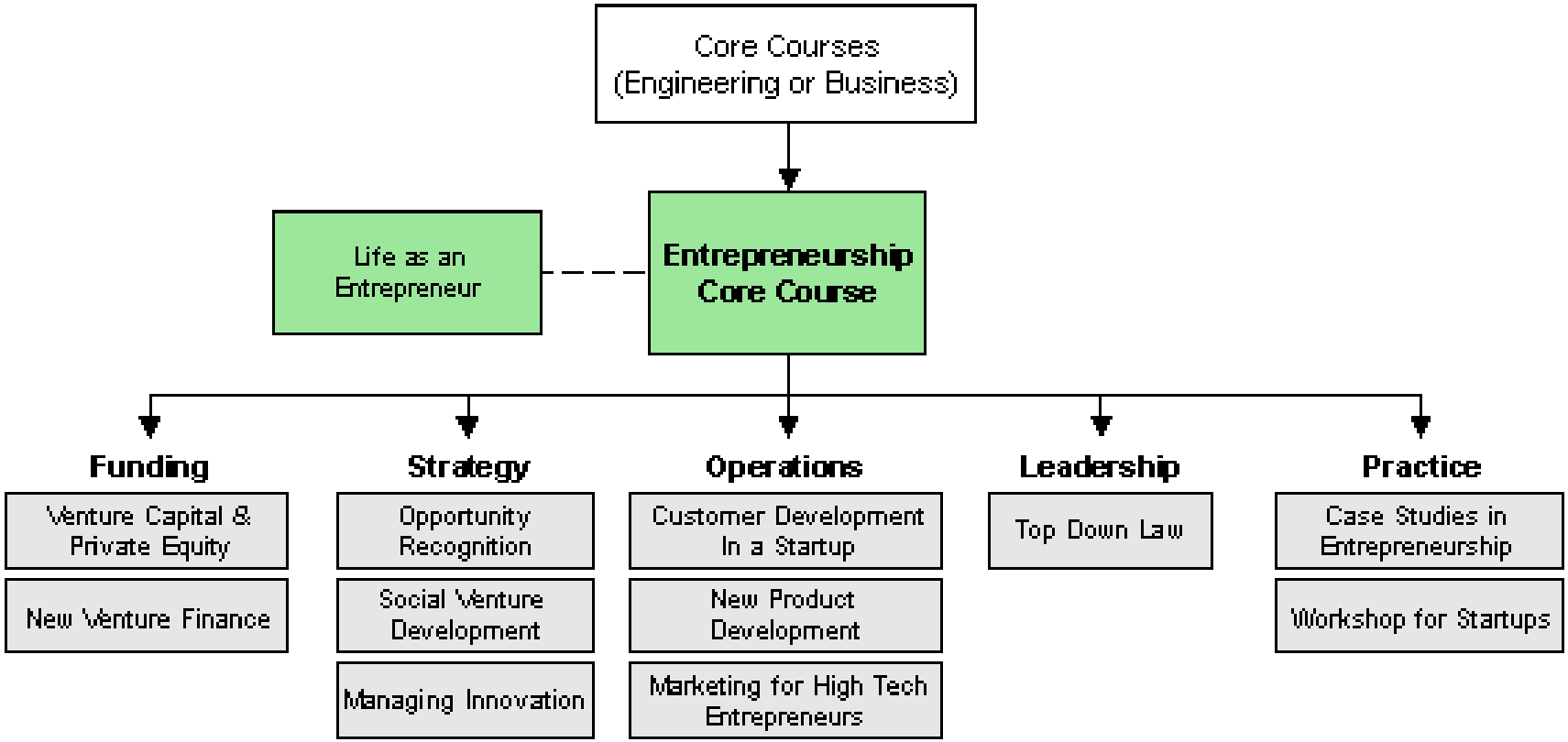
INTEL AND UC BERKELEY TE EDUCATION FRAMEWORK

- ***Theory to Practice entrepreneurship training seminars (T2 seminars)***
- ***Global Faculty Colloquium (GFC)***
- ***Intel+UC Berkeley Technology Entrepreneurship Challenge (IBTEC)***

The major components to the MSc education are:

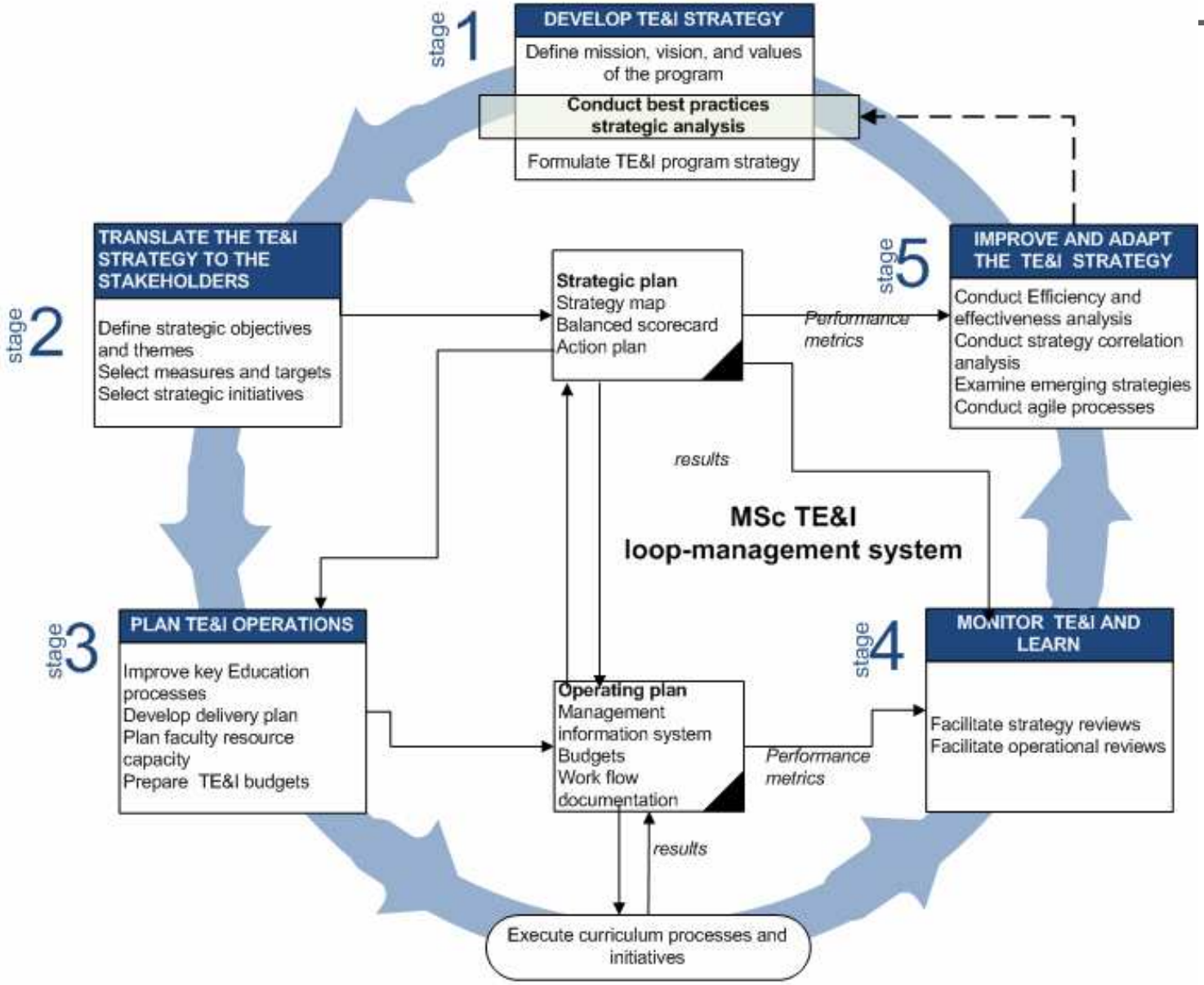
- Curriculum
- Faculty and Teachers
- Extracurricular Programs
  - Student initiated seminars
  - Guest lecturer's seminars
  - Network events
- The Ecosystem

The UC Berkeley basic TE curriculum



The TE&I program in Bulgaria

- The idea of specialized entrepreneurship education in Bulgaria is relatively new, and the notion of technology entrepreneurship education still sounds quite exotic. At present, in most technology universities there are single courses on entrepreneurship and innovation management, but it can be said that they are more or less fragmental and purely informative, especially the courses for non-management students. An overall concept introducing the vision, philosophy and importance of the technological entrepreneurship education to the economic development has not yet been developed.



Adopted from Kaplan and Norton, Mastering the management system, HBR, 2008

Curriculum

УЧЕБЕН ПЛАН

Дисциплина	*ECTS-кредити*	*Хорариум семестриален*	*седмичен*
I семестър			
Технологично предприемачество	5	60	2+0+2
Иновационен мениджмънт в информационните технологии	7.5	75	2+1+2
Финансов мениджмънт и фондове за рисков капитал	7.5	75	2+1+2
Организационно поведение	5	60	2+1+1
Електронен бизнес	5	60	2+0+2
Търговско законодателство	5	60	2+0+2
Основи на електронното управление	7,5	90	4+1+1
Проектно финансиране за иновации	5	60	2+2+0
II семестър			
Технологично предприемачество в информационните технологии	5	60	1+1+2
Маркетингов мениджмънт	5	60	2+0+2
Стратегическо управление	5	60	2+0+2
Интернет и право	5	60	2+0+2
Мениджмънт на взаимоотношенията с клиентите	5	60	2+1+1
Управление на проекти	5	60	2+0+2
Предприемачество „Учебна компания”	5	60	2+1+1
Управление на знанието и технологичен трансфер	5	60	2+0+2
III семестър			
Стаж/Преддипломен курсов проект	15	150	
Разработване и защита на дипломна работа	15	150	

State of technology entrepreneurship education in FMI, SU I

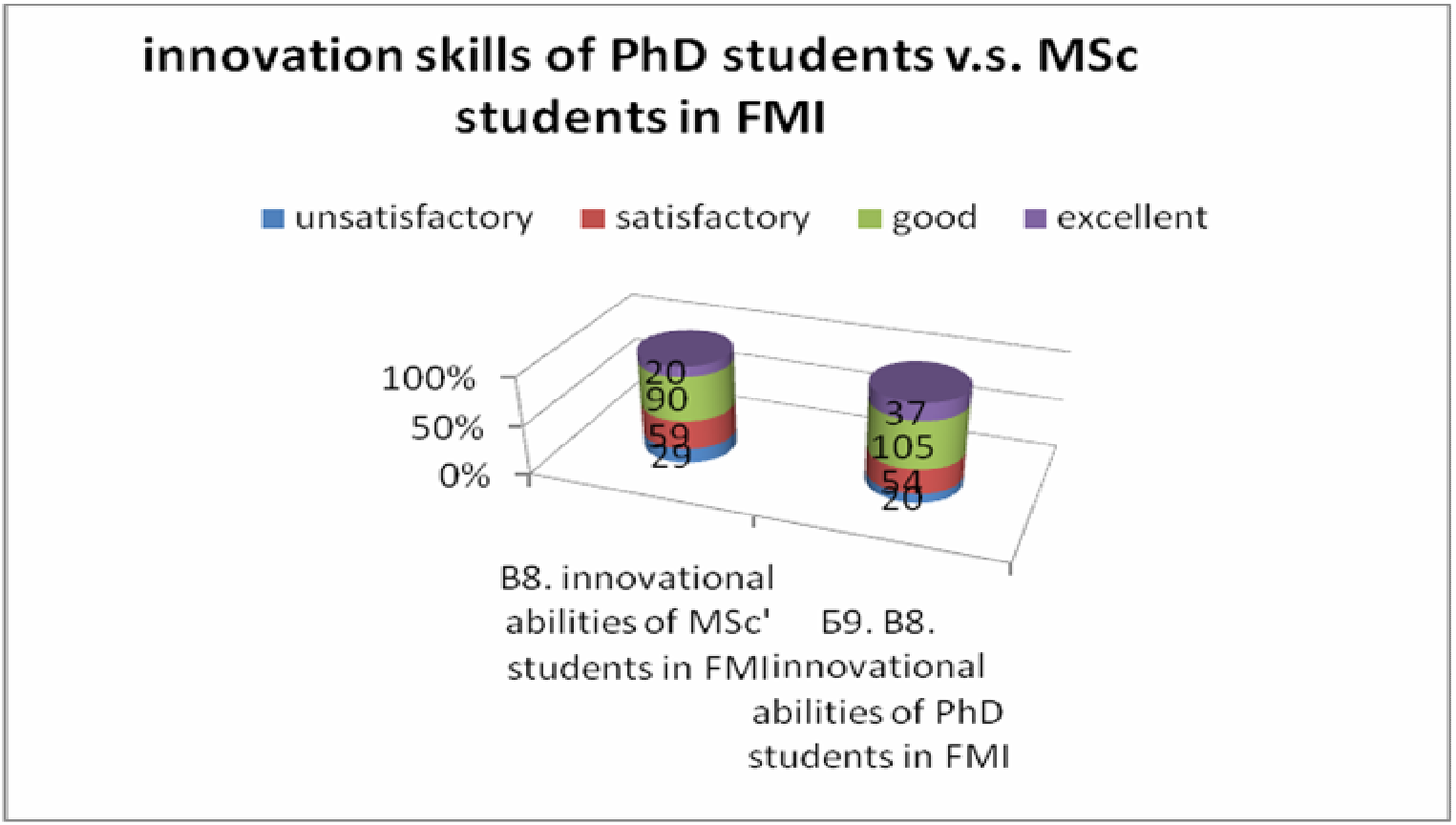
- In the autumn of 2007 Sofia University, Faculty of Mathematics and Informatics launched new MSc program in Technology Entrepreneurship. The program turned out to be very successful as the students for school year 2008/2009 more than doubled.

- The Bulgarian format of TE&I graduate program has been created due to the transfer of knowledge and support provided by the Intel and UC Berkeley initiative. Due to that initiative a new way of thinking and working was introduced. The teaching methods changed and became more interactive, applying the Intel-UC Berkeley education patterns. New, different courses about TE were introduced, in line with the UC Berkeley curriculum. The entrepreneurship curriculum is taught in Bulgarian and is very popular among students. This on its hand has a positive impact on the total environment. The new TE program has provoked the students' enthusiasm, raised their curiosity and desire to look for new opportunities within the university.

State of technology entrepreneurship education in FMI, SU II

This is proved by the fact that only a year after launching the program it has become the most desired MSc program at the Sofia University. For 2008/2009 academic year there were more than 200 applicants for 40 positions, meaning the candidates for the program were 5 times more than the available places (total about 300 applicants for 20 master programs at the FMI). The course Technology Entrepreneurship with Prof. Dr. Mark Harris brings together more than 80 students, while the average number of student is 40 for a master program. Tangible signs of success of this program are already observed as some of the graduates from this program started their own businesses as a result of it. The success of the program is proved further – during the first year students from the program created two Student Companies and took 1st and 2nd place at Junior Achievement Student Company competition in Bulgaria One of students' team took 2nd place at local Intel-UC Berkeley business plan competition and participated at regional competition.

Innovation skills of FMI graduated students



Technology entrepreneurship education at TUS I

First step at TUS was to develop lifelong learning vocational training program ‘Entrepreneurship and start-ups management’. The program is aimed at graduates with working experience holding a BSc or MSc on engineering or science. At present initial investment to support the launch of the program is needed, since the intention is to attract high quality lecturers.

Technology entrepreneurship education at TUS II

The curriculum of the Faculty of Computer Systems and Control has been changed since the 2008 winter semester introducing new courses in: Management of High Technologies; Marketing of High Technologies; Innovation Management and Entrepreneurship for the 4th year BSc students. The entrepreneurship and innovation management courses are among the most preferred among students.

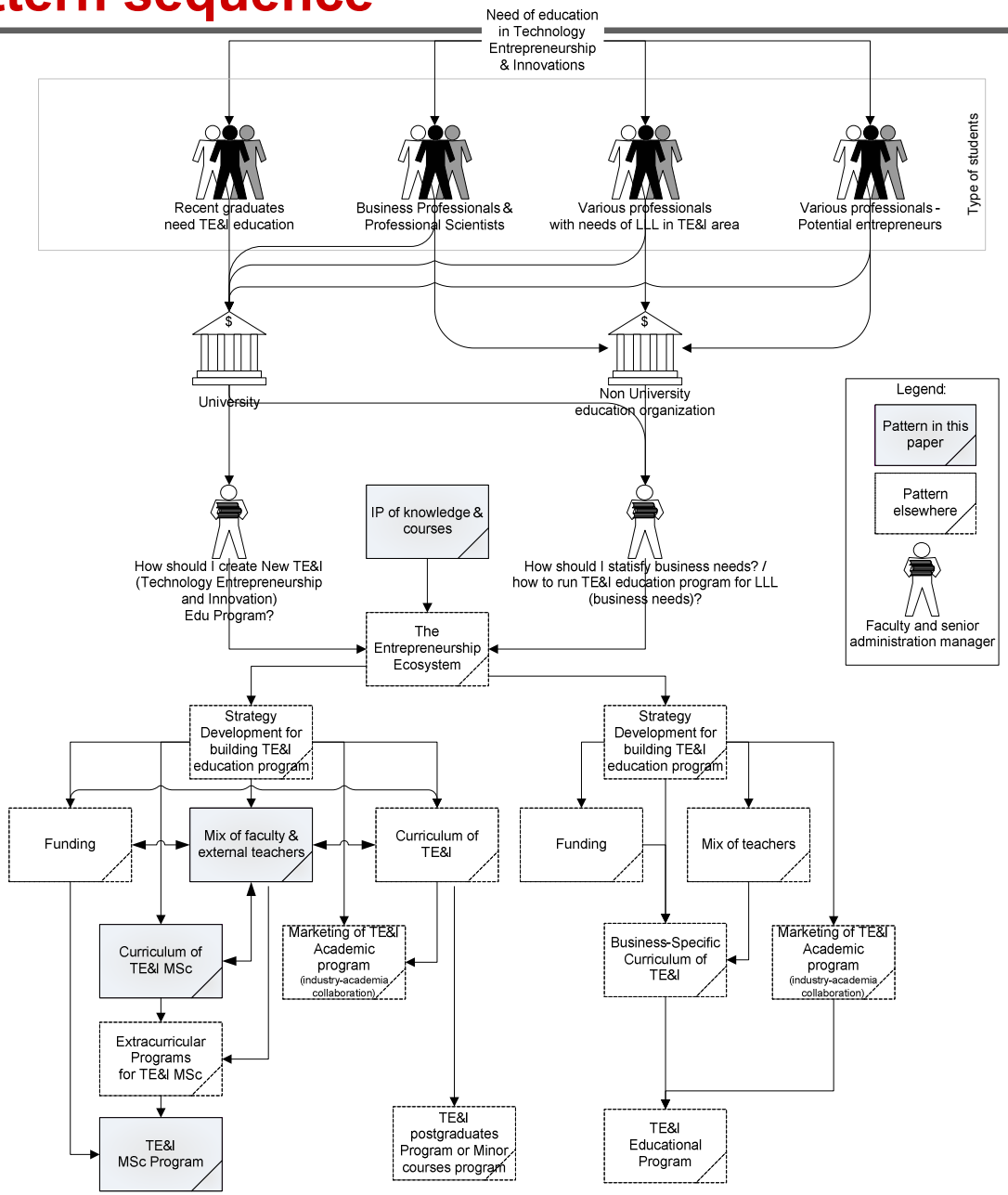
The MSc course in Small Business and Entrepreneurship (read in English Language Faculty of Industrial Engineering) has been updated considerably and focused more towards fast growing technology oriented start-ups. A new MSc course in Technological Entrepreneurship is to be introduced from next year.

CONCLUSION

- Nowadays, entrepreneurship education and especially technology entrepreneurship is positioned to the national and Balkans region as a priority for the coming years.

- The findings of our recent study show that students with an engineering or science background who undertake specialized technology entrepreneurship training, have a significantly higher motivation to start and develop their own business. Our experience suggests that an exclusive opportunity to advance education for technology entrepreneurship has arrived and we have to promote and to collaborate innovative approaches in different Balkan countries.

Development of TE&I education program pattern sequence



Acknowledgement

The work on this paper has been sponsored by the Intel and UC Berkeley Project <entrepreneutship.berkeley.edu> that is funded by the Intel. <http://www.intel.com/education/highered>)

The work on this paper has been sponsored by the UC 7FP Project SISTER Grant agreement no.: 205030

THANK YOU!

QUESTIONS?

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