



SETI SUMMER SCHOOL

CONTAMINATION LAB TRENTO - 5 - 11 SEPTEMBER 2017

The SETI "hands-in SummEr school on critical raw maTerials: Innovation and entrepreneurship" is organized with the support of the EIT Raw Materials by the following partners:

SETI CONSORTIUM PARTNER



INDUSTRIAL PARTNER



KEY NOTES

Dear participants of the EIT Raw Materials Summer School SETI "hands-in SummEr school on critical raw maTerials: Innovation and entrepreneurship", we consider that this Students' Program will help you in understanding why this could be a relevant investment for your career as an engineer.

This summer school is organized by the EIT Raw Materials in cooperation with the University of Trento (UNITN, Italy), Hub Innovazione Trentino (HIT, Italy) KU Leuven (Belgium), National Technical University of Athens (NTUA, Greece) and University of Bordeaux (France). SETI 2017 aims at bringing students together for one week, to work in team on industrial challenges and innovative business ideas in an increasingly relevant thematic area, such as the replacement of critical raw materials for a more efficient energy generation, saving and sustainability.

- Venue: Contamination Lab (CLab) Trento, Piazza Fiera, 6 Trento, Italy
- When: From Tuesday 5th until Monday 11th of September 2017. In the evening of the 4th, a Gamified introduction to the school will be organized for those already in town and willing to take a further challenge
- Where: Contamination lab creative room, co-working space and break-out session room.

Clab Trento coworking space



ON BEHALF OF THE LOCAL ORGANIZING TEAM:

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INTRODUCTION TO THE SUMMER SCHOOL

The summer school SETI is part of the innovation and entrepreneurship (I&E) education component of the EIT Raw Materials. The principal objectives of the SETI can be summarized as follows:

- § demonstrate the importance of the use of suitable raw materials in the field of energy generation and saving and sustainability;
- § identify the market needs and business opportunities in the area;
- § identify the technology and its level of readiness, teach the students how to transform the gained knowledge into concrete business proposals and coach them how to present the pitches to companies or investors.

Frenotecnica (www.frenotecnica.it) and SOLIDpower (www.solidpower.it), the main industrial partners of the school, will launch Challenges to the participants. During the week, teams will work on different solutions that will be presented to the company during the Demo Day.



HOW THE SETI SUMMER SCHOOL IS ORGANIZED

In the morning, the participants will be exposed to tutorials and frontal lessons on technical topics related to innovative cutting-edge technologies. In the afternoon students will enjoy tutorials and teamwork on Innovation and Entrepreneurship finalized in doing business with such technologies. What makes this summer school unique is that every lesson and tutorial will be immediately put into practice.

- During the first day, the Challenges will be proposed by the industrial partners to the participants (Industrial challenges for young innovators).
- Every student will be stimulated and encouraged to generate some ideas related to the Challenges. Students with a seminal idea will present it to the rest of the class: the best ones will emerge in the idea trading session. Once ideas are settled, students will gather in teams based of their preferences for one idea or another. Mentors will closely follow the team-forming process, supporting it if and when needed.
- From that moment onwards, teams will develop, with the support of technology experts and business mentors, their ideas into a business. Students will be exposed to principles of marketing, idea validation, competitor analysis/Unique Selling Proposition (USP) and business modelling related to technology ventures.
- Finally, all teams will be prepared on how to present their business idea to a company or to an investor. We will start with a brief introduction on public speaking, a tutorial on project presentation, a session of pitch clinics, all applied to your own project.
- The last day of the Summer School will be the Demo Day, an official presentation of all projects solutions to the industrial partners, industry experts, academics and investors that will identify the best one.

During the weekend students will complement some teamwork and mentoring with social events, relaxation and team challenges. All events will be held in the beautiful scenario of the Dolomites. In the Clab Trento ecosystem there will also be the opportunity to meet startupper who are now in business thanks on their own innovative ideas.

OBJECTIVES & LEARNING METHODS OF THE SUMMER SCHOOL

The SETI summer school is mainly focused to Master students already possessing higher technical capabilities and or are interested in business in the field of raw materials and sustainability, but might lack the experience. The school will bring students together for a week to work in groups on a business development process in the context of a societal relevant thematic area. In addition, it has to foster a community of students among various universities and create interaction with companies and start-ups.

The SETI summer school is valued 2 ECTS

OBJECTIVES

The aim of the school is to provide students with an introduction to entrepreneurial thinking and behaviour, business and innovation processes, technology ventures marketing, and business model generation techniques. The principal objectives of SETI are:

- § to demonstrate the importance of choosing appropriate raw materials (e.g. replacing critical ones) in the broad field of energy generation, saving and sustainability;
- § to point out the market needs and business opportunities in the area;
- § to teach the students how to transform the gained knowledge into innovative business ideas and turn these ideas into concrete business proposals;
- § and to coach students on how to present their pitches to companies and /or investors.



INTENDED LEARNING OUTCOMES

After completing the SETI summer school course students would have the ability to:

- o Perform a concept creation and business proposal formulation process in the context of one of the use case thematic area.
- o Identify/assess the impact of material technologies and innovations in the use case thematic area, for its markets and stakeholders (competitors, alliances, networks) and the business opportunities they create.
- o Understand user-centricity, business modelling, business life cycles, global market trends, industry value chains, market segments, IPR issues, financial and risk-related issues, and recognizing their relative importance for product/service and business development.
- o Transform new ideas and business innovations into viable business solutions.
- o Apply personal presentation and communications skills.
- o Apply decision-making and leadership competencies.
- o Reflect upon ethical, societal, scientific and sustainability considerations when developing new products/technologies and business models.

Students pitching projects in front of a jury at CLab Trento



LEARNING METHODS

The summer-school contains focus-lectures of academics and practitioners, project work, usability tests, customer validation work, field visits and socializing events. Focus is put on: business project work, team building, (personal) networking, cultural exchange, knowledge on interaction between ethics and society and creating global awareness of societal and business trends.

During the week, students are confronted with involved stakeholders to consider **the technological and economical sustainability and relevance of their ideas**. The applied approach is based on the following pillars:

- multidisciplinary with attention to specific components on key issues related to innovative sustainable materials and technologies and entrepreneurship
- balanced combination of lectures with practical tutorials, mentoring, study visits, and teamwork
- social events to identify project ideas.

Throughout the summer school, students will work in teams of 4-6 participants to craft and develop into project-ideas the solutions they have identified to address the technical problems presented to them. A selection of initial use cases is planned to be provided in cooperation with companies involved in the Summer School.



FOLLOW-UP OPPORTUNITIES FOR THE BEST SELECTED PROJECTS

The jury would offer to high potential teams and projects:

- Additional mentoring in the HIT co-working and
- Opportunity to present a project in one of the future EIT Raw Materials events.

SCHEMATIC DRAFT PROGRAM OF THE SUMMER SCHOOL COURSE

The main activity for the students is to **work on the industrial challenge and a business plan/proposal**. The short duration of the school will allow for morning technical sessions followed by afternoon I&E activities:

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	Tue	Wed	Thu	Fri	Sat	Sun	Mon
MORNING	Introduction to summer school	Technical lecture	Technical lecture	Technical lecture	Technical mentoring	Team Work	Demo Day
	Introduction to technical design	Technical lecture	Technical mentoring	Technical lecture	Team work, mentoring		
	AFTERNOON	Presentation of Challenges	Tell me your idea	Technology economics	Team work, mentoring		Team work, mentoring
Customer, segment, solution, USP		Idea trading, team formation	Team work, mentoring	Pitch tutorial	Team work, mentoring		
How to present ideas in 1 minute		Team building	Business model, market, competitors	Team work, mentoring	Pitch clinics	Social dinner	

On day zero, an unofficial gamified introduction of the school will be organised

SETI - DRAFT PROGRAM OF THE WEEK

DAILY SCHEDULE

Morning lectures from **09:00-13:00**; Afternoon lectures/teamwork from **14:00-18:00**

07:45 Breakfast

08:35 - 09:00 walk to CLab Trento, Summer School premises

10:50 - 11:10 Coffee break

13:00 - 14:00 Lunch

15:50 - 16:10 Tea break

20:30 Dinner

DAY 0 - MONDAY, SEPTEMBER 4 "UNOFFICIAL GAMIFIED INTRODUCTION"

19:00-20:30 Vittorino Filippas: *Welcome and Gamified Introduction to the SETI Summer School*

DAY 1 - TUESDAY, SEPTEMBER 5

09:00-10:50 Matteo Leoni, Massimo Pellizzari & Vittorino Filippas: *Welcome, introduction to SETI Summer School and Rules of the Game*

10:50-11:10 Coffee break

11:10-13:00 Massimo Pellizzari: *An introduction to technical design: a sustainable approach to materials and process selection*



13:00-14:00 Lunch

14:00-15:50 Frenotecnica and SOLIDpower: *Introduction of Challenges*

15:50-16:10 Tea break

16:10-17:00 **Vittorino Filippas**: *Customer and Solution, Unique Selling Point, Minimum Viable Product*

17:00-18:00 **Vittorino Filippas**: *How to pitch a seminal Idea in one minute (Elevator Pitch)*

DAY 2 - WEDNESDAY, SEPTEMBER 6

09:00-10:50 **KU Leuven**: *Technical lecture and hands on practice*

10:50-11:10 Coffee break

11:10-13:00 **Université de Bordeaux**: *Technical lecture and hands on practice*

13:00-14:00 Lunch

14:00-15:50 **Vittorino Filippas**: *Students will pitch their individual ideas/projects*

15:50-16:10 Tea break

16:10-17:00 **Vittorino Filippas, Gert Guri, Milena Bigatto**: *Hands-On: Idea Trading and Idea Refinement, Team Creation*

17:00 Team building activity

DAY 3 THURSDAY, SEPTEMBER 7

09:00-09:50 **Matteo Federici, Mara Leonardi**: *Eco-friendly braking systems: present knowledge and future perspectives?*

09:50-10:50 **Stefano Modena**: *Materials, energy and innovation*

10:50-11:10 Coffee break

11:10-13:00 **Frenotecnica and SOLIDpower**: *Technical mentoring. Challenges revisited. Idea and USP validation*

13:00-14:00 Lunch

14:00-15:00 **Vittorino Filippas**: *Market, competitors*

15:00-17:00 **Vittorino Filippas, Gert Guri, Milena Bigatto**: *Teamwork and mentoring (with Tea break 15:50-16.10)*

17:00-18:00 **Vittorino Filippas**: *Business Model, Technology Economics and Financials: costs, investments and cash flow*

DAY 4 - FRIDAY, SEPTEMBER 8

09:00-10:50 **KU Leuven**: *Technical lecture and hands on practice*

10:50-11:10 Coffee break

11:10-13:00 **NTUA**: *Technical lecture and hands on practice*

13:00-14:00 Lunch

14:00-15:50 **Vittorino Filippas, Gert Guri, Milena Bigatto**: *Teamwork & Mentoring*

15:50-16:10 Tea break

16:10-17:00 **Vittorino Filippas**: *Pitching tutorial*

17:00-18:00 **Vittorino Filippas and Gert Guri**: *Teamwork & Mentoring*

DAY 5 - SATURDAY, SEPTEMBER 9

09:00-10:50 Frenotecnica and SOLIDpower: *Technical mentoring to all teams*

10:50-11:10 Coffee break

11:10-13:00 Vittorino Filippas and Gert Guri: *Teamwork and mentoring*

13:00-14:00 Lunch

14:00-17:00 Vittorino Filippas and Gert Guri: *Teamwork and mentoring* (with Tea break 15:50-16.10)

17:00-18:00 Vittorino Filippas, Gert Guri: *Pitch clinics and slide deck optimization*

DAY 6 - SUNDAY, SEPTEMBER 10

Teamwork and free time for students.

18:00 Visit of the Castello del Buonconsiglio and social dinner

DAY 7 - MONDAY, SEPTEMBER 11

09:00-12:00 **Demo Day:** *Project presentation to the jury formed by customer companies, professionals and academics (coffee station available)*

12:00-13:00 Key Note speech

13:00-14:00 Lunch

14:00 Award Ceremony: *Diplomas and declaration of the three best projects*

14:30 Closing ceremony

CLab will still be open after the Closing Ceremony for Social Activities and networking

GUIDELINES TO STUDENTS' EVALUATION CRITERIA

At the end of the Summer School, the students will be evaluated on the base of the **business proposal** as presented in front of a jury (independent company representatives, business consultants, entrepreneurs, complemented with EIT Raw Materials members, the local I&E coordinator, and representative(s) of the summer school business coaches/mentors),

The **business panel** will only judge the quality and feasibility of the business proposal ("will it fly?"). The panel will not be influenced by the effort the students have put in their project or plan.

LOGISTICS AND ADDITIONAL INFORMATION

Students will be hosted in a 4 star hotel in Trento. The venue where the school is located, CLab Trento, is within walking distance. Different arrangements can be made for students needing them.

Lunches will be served by a top catering company at the Clab. Breakfast and dinner will be served at the hotel.

Students must attend all classes. In case of extraordinary circumstances students shall ask permission to coaches to leave the class.