



TITLE STUDY

COUNTRY / REGION(S) INVOLVED
AUSTRIA / CARINTHIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC

TIME OF LAUNCH
ACADEMIC YEAR 2019/2020

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

As it is becoming increasingly difficult for industry to find highly qualified specialists the initiative "Study & Work" offers the possibility of early contact between selected students and recruitment industry representatives. In addition, it creates the opportunity for companies to confront students and the Carinthia University of Applied Sciences with questions from practice that can be worked out in the theoretical framework. An intensive exchange on subject-specific problems not only promotes the bond between university and business, but also offers both sides considerable added value.

This program supports studies in following areas: Civil Engineering & Architecture, Engineering & IT and Management

ORGANISATIONS INVOLVED

INDUSTRY

Infineon Technologies Austria, PMS, Stadtwerke Klagenfurt AG, Flextronics International GmbH, ROBOOPTIC Systems GmbH [for Systems Engineering studies]

EDUCATION

University of Applied Sciences - Carinthia

LESSONS LEARNT / CONDITIONS FOR SUCCESS

The main condition for success is to have dedication of industry partners to provide internships/part-time jobs to students and devote to on the job learning of the students

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Students have the opportunity to get in touch with potential employers at the start of their studies. Depending on the company and area of study, students can in parallel work [part-time] and study and this allows an optimal combination between theory and practice and at the same time offer the opportunity to study in a goal-oriented manner and earn money at the same time.

The objective is to create a solid basis for further professional development. The Carinthia University of Applied Sciences supports students with a professional-friendly schedule for each semester. In Engineering and IT areas of studies, this program supports bachelor and master studies candidates.

EVALUATION AND OUTCOMES

Expected outcome is to have fresh graduates who already have practical experience and knowledge from the industry and can be fully operational after they complete studies.



TITLE

**INFINEON ENDOWED
PROFESSORSHIPS**

COUNTRY / REGION(S) INVOLVED

AUSTRIA / CARINTHIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

PRIVATE

TIME OF LAUNCH

2016 - ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

In view of the accelerated digital transformation, the promotion and exchange of knowledge and know-how are crucial factors. In order to provide the best possible conditions for the education and further training of young talents in scientific and technical disciplines in Austria, Infineon Austria maintains close partnerships with universities.

SIZE OF THE FUNDING

N/A - A few of this endowed professorship are part of initiatives of the federal ministry and some of them are 100% sponsored by IFAT.

ORGANISATIONS INVOLVED

INDUSTRY

Infineon Technologies Austria AG

EDUCATION

- University of Innsbruck – Power Electronics
- Technical University of Graz – Data Science
- Technical University of Graz – Autonomous driving
- Technical University of Vienna – Human-Centered Cyber-Physical Production and Assembly Systems
- University of Klagenfurt & Technical University of Graz: Industry 4.0 – Adaptive and connected production systems
- University of Klagenfurt – Sustainable Energy Management

GOVERNMENT

Federal Ministry Austria

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

The Infineon endowed professorships support the university education of much needed graduates in specific MINT fields. In addition, the collaboration between basic and applied research will be intensified through this initiative.

EVALUATION AND OUTCOMES

6 successful endowed professorships (including Theses, Journals and specific researches in the targeted areas of interest for the industry)



TITLE
SMART LEARNING CLASSES
(PART OF “CARINTHIA
COALITION” INITIATIVE)

COUNTRY / REGION(S) INVOLVED
AUSTRIA / CARINTHIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PRIVATE

TIME OF LAUNCH
START OF CLASSES 9TH
SEPT. 2019 TILL JULY 2020

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Goal:

Creating a common standard for new digitally supported forms of teaching to make pupils fit for their future work life

The aim of the “Carinthia Coalition” is to counteract the brain drain and take measures to ensure that there are modern training provisions available for young people in Carinthia to find good career prospects there. This will also raise the level of education in Carinthia in the long term. The aim is to create an educational offer that lives up to the expectations and requirements of the labor market and is appropriate for a modern business location and an industrialized country.

Scope:

- Closer connection between academia and industry through smart technology and didactics as well as a common standard for innovative teaching methods supported by digitization
- Expanding the Infineon talent network and early positioning as an employer of choice for technical college students

ORGANISATIONS INVOLVED

INDUSTRY

Infineon Technologies Austria AG

EDUCATION

- 5 higher technical colleges (HTLs):
- HTL Wolfsberg
 - HTL Villach
 - HTL Klagenfurt Mössingerstraße
 - HTL Klagenfurt Lastenstraße
 - HTBLA Ferlach (Since Sept 2020)

GOVERNMENT

Carinthian Education Department

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

The Smart Learning classes are designed as pilot classes and were launched at the secondary technical colleges in Carinthia. Smart Learning means using digital technologies for teaching and studying technical subjects and linking them with analog learning experience, such as working in teams, social exchange and close connection to industry practice.

There are 7 classes involving approx. 210 students. The

pilot project is meant to last 5 years.

The technical colleges benefit from knowledge exchange, product & material support as well as financial support every academic year.



METIS

EVALUATION AND OUTCOMES

Cooperation with 5 technical colleges in Carinthia:

- Common Smart Learning Framework & Standards
- Closer connection and mutual support between Smart Learning Schools and Infineon
 - o Use of provided teaching material and links, request for individual topics
 - o Close cooperation between departments and schools
- Notable increase in interest in summer internships, diploma thesis and Study & Work Program amongst students from these schools
- Events: Participation of Teachers & Students in the UniDay, Summer School and Infineon formats like webinars & lectures, site visits, school visits, other events
- Infineon branded classrooms/labs [ongoing]

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Conditions for success

- Close cooperation between technical colleges and Infineon and regular exchange within the project team.

Interaction with students via site visits, virtual events for them to experience the benefits of this cooperation and to create additional motivation amongst students

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

AVERAGE

[due to possible legal restrictions on other countries in terms of industry-school-relations]



TITLE

**INFINEON STIPENDIUM
(INFINEON SCHOLARSHIP
FOR MINT STUDENTS FOR A
SEMESTER ABROAD)**

COUNTRY / REGION(S) INVOLVED

AUSTRIA / CARINTHIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

PRIVATE

TIME OF LAUNCH

EVERY ACADEMIC YEAR

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

TU Graz offers companies the opportunity to support excellent students going abroad. Infineon supports this program with certain amount per academic year supporting 1-2 MINT students in their semester abroad. [*MINT-Mathematics/Informatics/Natural Sciences/Technical Sciences]

ORGANISATIONS INVOLVED

INDUSTRY

Infineon Technologies Austria AG

EDUCATION

Technical University of Graz

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Students of TU Graz can apply for specific company scholarships and Infineon can choose amongst their scholarship applicants. The applicants learn about Infineon and the microelectronics industry. There is also an official ceremony, where Infineon gets to meet the chosen students and symbolically hands over the scholarship.

EVALUATION AND OUTCOMES

Excellent MINT students are given the opportunity to gather experience at a different university abroad and expand their horizon.

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Conditions for success

- Close cooperation between technical colleges and Infineon and regular exchange within the project team.

Interaction with students via site visits, virtual events for them to experience the benefits of this cooperation and to create additional motivation amongst students

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH



TITLE

BM = X³ INNOVATIVE CONCEPTS FOR VOCATIONAL TRAINING IN THE HIGH-TECH SECTOR

COUNTRY / REGION(S) INVOLVED

GERMANY / BADEN-WÜRTTEMBERG, SCHLESWIG-HOLSTEIN, BERLIN, OTHER REGIONS

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

PUBLIC

TIME OF LAUNCH

BY 2024, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Comprehensive vocational training academy as an open, decentralized structure for the high-tech sector with a digital learning platform.

Increasing the attractiveness of dual training.

Creation of flexible training modules to increase the quality of education, training, and further education.

Advanced training in the micro and nanotechnologies.

Paths of advancement and new additional concepts and degrees. Consistency and equivalence of occupational & academic education.

SIZE OF THE FUNDING

Federal Ministry of Education and Research (BMBF) Competition InnoVET: Approx. 4,8 Million Euros [total 82 Million Euros for 17 different projects]

ORGANISATIONS INVOLVED

INDUSTRY

Robert Bosch GmbH, Bosch Sensortech GmbH, other companies

EDUCATION

- Ferdinand Braun Institute, Leibniz Institute for High Frequency Technology Berlin e.V. [FBH] - network coordination;
- Lise-Meitner-Schule Berlin [LMS] , Berlin University of Technology and Economics - DE: HIVE [HTW]; Regional vocational training center of the Steinburg district, [department of micro and nanotechnologies, Itzehoe] [RBZ];
- Technical University of Braunschweig - Institute for Microtechnology [IMT];
- University of Kaiserslautern, training and further education network pro-mst; microTEC Südwest e.V., Freiburg;
- University of Rostock - Institute for Vocational Education [IBP]

GOVERNMENT

Federal Ministry of Education and Research [BMBF]

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

The transformation or digitalization creates the opportunity for employees / specialists or academics to further their education in the field of semiconductor technology. The aim is to develop the talented employees in the direction of semiconductor experts and to create new prospects for the future.

EVALUATION AND OUTCOMES

Through internal / external training courses and also cooperation with other companies / educational institutions / universities, we secure the shortage of skilled workers on the competitive job market and we strengthen the cooperation between high-tech companies.

LESSONS LEARNT/CONDITIONS FOR SUCCESS

The motivation of the employee and the commitment of the cooperation partners offer employees new perspectives and career opportunities to prepare for the future.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH



TITLE
APPRENTICESHIP

COUNTRY / REGION(S) INVOLVED
FRANCE

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC

TIME OF LAUNCH
**MORE THAN 10 YEARS,
ONGOING**

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

PART OF THE EDUCATIONAL FRENCH STRATEGY TO MIX WORK AND EDUCATION

As it is becoming increasingly difficult for industry to find highly qualified young specialists the initiative offers the possibility of early contact between selected students and industry. It creates the opportunity for students to work on specific topics during a period of time [from 1 to 5 years].

This program supports studies in all areas and most of the educational level [EQF : 5,6,7]

SIZE OF THE FUNDING

In average [depends on the student profile] 8000€/Apprentice/Year + 9 000€ to cover training fees

ORGANISATIONS INVOLVED

INDUSTRY
Yes

EDUCATION
Yes

GOVERNMENT
Yes

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Students manage in parallel work [part-time] and study and this allows an optimal combination between theory and practice and at the same time offer the opportunity to study in a goal-oriented manner and earn money at the same time.

EVALUATION AND OUTCOMES

Expected outcome is to have fresh graduates who already have practical experience and knowledge from the industry and can be fully operational after they complete studies.

LESSONS LEARNT/CONDITIONS FOR SUCCESS

To make sure that apprentice work on real projects or tasks and can count on a dedicated company tutor. If we want to hire them at the end of the apprenticeship period, we need to make them a job offer before they are graduate [lot of competition between industry to hire the good student]



TITLE
EMPLOYEE LENDING

COUNTRY / REGION(S) INVOLVED
FRANCE

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
**PRIVATE SUPPORTED BY PUBLIC
LEGAL FRAME**

TIME OF LAUNCH
2020, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Business crises and use of short time work in company when the activity strongly decrease or there is no activity

ORGANISATIONS INVOLVED

INDUSTRY
Yes

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

On voluntary bases, employees who are working within a company with no or low activities du to Covid Crises, might work for an external company during a negotiated period of time – his/her salary and wages are paid per the host company . In this case the employee is not in short time work

EVALUATION AND OUTCOMES

For the host company: expected outcome is to have expert from other company that could bring new expertise, new vision or process solving methodologies. For the Home company: it decrease the labor cost during the crisis but it's also a way to train the employee -he/ she is back having seen other way of working and other competencies

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

MEDIUM

[need to be legally supported by labor law]

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Legal frame is a key success factor to ensure trust between the 2 companies – partnership



TITLE
WORK & TEACH

COUNTRY / REGION(S) INVOLVED
FRANCE

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PRIVATE AND PUBLIC DEPEND ON THE SCHOOL STATUS

TIME OF LAUNCH
ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Employee working in companies might also teach at university or business/Engineering School for few hours on a specific topics or on a long run

ORGANISATIONS INVOLVED

INDUSTRY
Agreed that the employee is off and have 2 activities

EDUCATION
They hire the employee

GOVERNMENT
They pay teaching hours

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

MEDIUM

[need to be legally supported by education and government]

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Some employee, expert in 1 or several topics might on top of their normal working activities, deliver some training within university or schools

EVALUATION AND OUTCOMES

Allow the students to have feedback and training from expert with working life experience

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Lot of work for the employee who will cumulate work and teaching activities – need to be on voluntary bases



TITLE
EUROPRACTICE

COUNTRY / REGION(S) INVOLVED
**BELGIUM, UK, GERMANY,
FRANCE, IRELAND**

TIME OF LAUNCH
1995, ONGOING

**CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED
IN THE FRAMEWORK OF A NATIONAL OR REGIONAL
STRATEGY/ PART OF CORPORATE OBJECTIVES/
PART OF A PUBLICLY FUNDED PROGRAMME)**

EUROPRACTICE was launched by the European Commission in 1995 as a successor of EUROCHIP [1989-1995] to enhance European industrial competitiveness in the global market. Over the past 25 years, EUROPRACTICE has provided the industry and academia with a platform to develop smart integrated systems, ranging from advanced prototype design to volume production.

ORGANISATIONS INVOLVED

INDUSTRY

End users

EDUCATION

5 research organisations involved IMEC, STFC, Fraunhofer, CMP, Tyndall National Institute [providing the service], universities and research centres can be end users too

GOVERNMENT

Funding came from the European Commission

**SUMMARY OF THE INITIATIVE AND ITS
OBJECTIVES**

EUROPRACTICE is a consortium of five renowned European research organisations, who support academic institutions and medium-sized companies with IC prototyping services, system integration solutions, training activities and possibilities for small volume production. In addition, they provide universities and research institutes with access to CAD tools.

EVALUATION AND OUTCOMES

Early prototyping capabilities, access to large infrastructures [IMEC, Fraunhofer, etc.], staff/student training

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Great example of industry-academia collaboration

**LEVEL OF TRANSFERABILITY (IN OTHER
COUNTRIES / OTHER FACETS OF THE
VALUE CHAIN)**

HIGH



TITLE
PAY SUBSIDY

COUNTRY / REGION(S) INVOLVED
FINLAND

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC

TIME OF LAUNCH
N/A - ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Ministry of Economic Affairs and Employment of Finland managed TE-office offers pay subsidy. A pay subsidy is an economic benefit that a TE Office may grant an employer to cover pay costs of an unemployed jobseeker. The purpose of work supported by pay subsidy is to enhance the professional competence of prospective employees to be hired with pay subsidy, and to help them find work in the open labour market. [Link](#)

SIZE OF THE FUNDING

~10 k€ per employee eligible for subsidy

ORGANISATIONS INVOLVED

INDUSTRY
All eligible companies

GOVERNMENT
Ministry of Economic Affairs and Employment of Finland / TE-office

LESSONS LEARNT/CONDITIONS FOR SUCCESS
Lack of specific experience may hinder the employment of persons with otherwise suitable skills and mind-set for microelectronics manufacturing. Pay subsidy provides an employer a risk-reduced method to employ and enhance the competence of such persons.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

Depending on similar programs existing in other countries.

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

The granting of pay subsidy is subject to an estimation made by the Employment and Economic Development Office [TE Office] that the jobseeker's unemployment is caused by the lack of professional competence, and work supported by pay subsidy will enhance the jobseeker's professional competence and opportunities to find work in the open labor market. If the person to be hired with pay subsidy is aged 60 or over, the granting of pay subsidy primarily requires that the person has been unemployed for an uninterrupted period of 12 months immediately preceding the granting of pay subsidy.

Although a pay subsidy is granted and paid to the employer, the granting of the subsidy is always based on the unemployed jobseeker's need for the service.

EVALUATION AND OUTCOMES

Summa Semiconductor has found two excellent and skilled cleanroom engineers with the help of this program. One person had a long academic career but no industrial experience. Other person had lacking language skills but extensive education. Decision to employ these persons was facilitated by the availability of pay subsidy.



TITLE
**“INTEGRATED,
SCALABLE, FUNCTIONAL
NANOSTRUCTURES AND
SYSTEMS” (NANOSIS)**

COUNTRY / REGION(S) INVOLVED
**TURKEY, SOUTH KOREA,
ITALY, RUSSIA, U.K., GREECE**

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC

TIME OF LAUNCH
Q1 FROM 2021, ONGOING

**CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED
IN THE FRAMEWORK OF A NATIONAL OR REGIONAL
STRATEGY/ PART OF CORPORATE OBJECTIVES/
PART OF A PUBLICLY FUNDED PROGRAMME)**

Part of a publicly funded program

SIZE OF THE FUNDING

5.55 M€ [5.77 k€ for Argelik]

ORGANISATIONS INVOLVED

INDUSTRY
12 private companies

EDUCATION
9 Universities

GOVERNMENT
3 Research centres

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

NANOSIS will conduct research with a vision focused on detecting and preventing health-threatening and contaminating factors

- Under the leadership of the infrastructure, experience and human resources of its stakeholders
- With materials, structures and systems functionalized using nano-based technologies
- Reducing foreign dependency with the goal of localization
- For the development of integrated and scalable products and technologies
- As a pivot technology platform for different sectors, primarily healthcare
- Creating outputs that create socio-economic added value and creating social awareness

The technological targets for the NANOSIS are:

- Synthesizing and / or controlling the properties of nanomaterials that stand out with their physico-bio-chemical properties, with engineering approaches,
- Development of nanotechnological devices that gain superior performance and functionality with the use of these materials, and realization of integrated systems that can reach the end user in target applications with material-device integration.



BEST PRACTICE #12

TITLE

**WORKING GROUP: STEM
(EDUCATION)**

COUNTRY / REGION(S) INVOLVED

GERMANY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

PRIVATE

TIME OF LAUNCH

Q4 — 2019, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Part of corporate objectives /collaborative initiative
-> informal working group between HR people from big companies within Silicon Saxony and similar/same needs/challenges -> pre HR process, targeting mostly pupils, partly also students

SIZE OF THE FUNDING

Appr. 25k EUR + internal staff costs at involved companies
-> Estimation: at least 10k [internal costs] for each participating institution

Implemented without external funding

ORGANISATIONS INVOLVED

INDUSTRY

Infineon, Global Foundries, X-Fab, SiSax

EDUCATION

DCA

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Quarterly Meetings with practical developments for corporate branding activities

EVALUATION AND OUTCOMES

Group based Student internship program [1-2 weeks per year] for microelectronics [internship is mandatory for every pupil in Germany], group of appr. 15-20 pupils

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Internship in Microelectronics can't be virtual, suspended for the time being due to COVID19

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

VERY HIGH

Best practice example available within Silicon Saxony from Software players [e.g. SAP et al.]



TITLE
DRESDEN MICROELECTRONIC ACADEMY

COUNTRY / REGION(S) INVOLVED
EUROPEAN RESP. WORLD-WIDE ACTIVITY, BUT TAKING PLACE IN DRESDEN

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC (DRESDEN UNIVERSITY)

TIME OF LAUNCH
FROM 1999 ONWARDS

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

[Yearly Summer School, driven by various funded projects within the University + ecosystem in the framework of different projects] – at the moment connected to a so called “excellence cluster” for electronics within the university <https://cfaed.tu-dresden.de/dma-welcome>

SIZE OF THE FUNDING
App. 30k EUR

ORGANISATIONS INVOLVED

INDUSTRY

- TU Dresden with its Research Cluster cfaed
- Globalfoundries
- X-Fab
- Bosch
- Infineon

City of Dresden and Silicon Saxony as promotion partners

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

<https://cfaed.tu-dresden.de/dma-welcome>

EVALUATION AND OUTCOMES

2 weeks summer school programme with visibility for regional ecosystem players

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Mobility, visibility, relatively generic title allows flexibility with regard to [value chain] content

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH



TITLE
INFORMATION EVENT:
SILICON VALLEY OF AUSTRIA

COUNTRY / REGION(S) INVOLVED
AUSTRIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC

TIME OF LAUNCH
YEARLY, FROM 2014

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

The industry should actively go to the University and offer that their experts are included into the lectures to give the students a better insight into the needed skills for working in a microelectronics industry.

SIZE OF THE FUNDING

External lecturers mainly funded by industry

ORGANISATIONS INVOLVED

INDUSTRY
Infineon, ams, NXP

EDUCATION
TU Graz, mostly master students

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Industry experts should give talks on different aspects on microelectronics.

EVALUATION AND OUTCOMES

Industry was wishing for students to be educated in the topics, they provide external lecturers for.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

Easy to transfer, organizational requirements similar to other lectures, easier if similar courses are already held



TITLE

EXTERNAL LECTURERS

COUNTRY / REGION(S) INVOLVED

AUSTRIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

PUBLIC

TIME OF LAUNCH

2014, ONGOING EVERY SEMESTER

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

The aim of this event, is to give our students a chance to listen to the microelectronics industry introducing themselves [typically representatives of 10-12 integrated circuits design and manufacturing companies], to give a possibility to network and chance to exchange information: with a formal podium as well as in a foyer meeting.

ORGANISATIONS INVOLVED

INDUSTRY

Infineon, Intel, NXP, ams, Pantronics, Usound, dialog, IDT, ST microelectronics, SteadySense, CISC

EDUCATION

TU Graz, sometimes also students from other schools [EQF 5]

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

The main goal is to motivate students to study microelectronics and IC design in their master's program.

EVALUATION AND OUTCOMES

Since this event, we definitely have more students interested in electronics and IC design.

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Motivated students and company representatives

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

Easy to transfer, medium organizational requirements



TITLE
SPECIALIST IN SEMICONDUCTOR TECHNOLOGY, SPECIALIST IN MICROSYSTEM TECHNOLOGY

COUNTRY / REGION(S) INVOLVED
GERMANY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PRIVATE (COMPANIES) AND PUBLIC

TIME OF LAUNCH
2010, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Demographic change and the shortage of skilled workers brought companies, educational institutions and the public sector together to set up a program to remain competitive. The target group are lateral entrants who want to switch to a completely new professional field. Funded by the employment agencies and support from companies in the semiconductor industry and their suppliers.

SIZE OF THE FUNDING
about 9.200 € /person

ORGANISATIONS INVOLVED

INDUSTRY
Different companies in the semiconductor industry and their suppliers

EDUCATION
SBH Südost GmbH, dresden chip academy

PUBLIC
Federal Employment Agency

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

SBH Südost GmbH developed a training program for career changers in the fields of semiconductor technology and microsystem technology. The practice-oriented training lasts 6-8 months. The program then includes a 6-8 month internship in a company in the semiconductor industry. content:

- Electrical engineering
- Electronics
- Pneumatics
- semiconductor processes
- semiconductor technology
- clean room technology
- clean room behavior
- microsystem technology
- structure and connection technology
- English
- measurement and control technology

[for example: RHe Microsystems GmbH, X-Fab GmbH Dresden, First Sensor Microelectronic Packaging GmbH]

EVALUATION AND OUTCOMES

About 500 trained participants who were able to take a job in the semiconductor industry

LESSONS LEARNT/CONDITIONS FOR SUCCESS

High quality and practice-oriented training that is tailored to the needs of industry and can be adapted at short time



TITLE
BACHELOR OF ENGINEERING (B.ENG.) / + VOCATIONAL EDUCATION MICROTECHNOLOGY

COUNTRY / REGION(S) INVOLVED
GERMANY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PRIVATE (COMPANIES) AND PUBLIC

TIME OF LAUNCH
FROM 1999 ONWARDS

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Bachelor's degree in microtechnology with professional training in microtechnology
9 Semester / 210 ECTS

SIZE OF THE FUNDING

about 6.200 € / person [SBH]
Study is free
+ The students receive a salary from the company providing the training during the entire training period.

ORGANISATIONS INVOLVED

INDUSTRY

Different companies in the semiconductor industry and their suppliers

EDUCATION

SBH Südost GmbH, dresden chip academy

PUBLIC

Westsächsische Hochschule Zwickau [University of Applied Sciences]

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

This form of study leads in nine semesters to both the professional qualification as a micro technologist and a Bachelor of Engineering degree. In order to achieve both degrees, practical professional training takes place parallel to the course, alternating with periods of study.

EVALUATION AND OUTCOMES

About 100 trained participants [semiconductor industry]

LESSONS LEARNT/CONDITIONS FOR SUCCESS

The cooperative study is significantly shorter than training and study together.

A very practice-oriented degree due to the close interlinking of theory and practice.

During their studies, the student gets to know his future field of activity in the company and is gradually prepared for his future work as a bachelor's degree.



TITLE

**INDUSTRIAL EXPERT
ROBOTICS**

COUNTRY / REGION(S) INVOLVED

GERMANY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

**PRIVATE (COMPANIES) AND
PUBLIC**

TIME OF LAUNCH

**SINCE OCTOBER 2020,
ONGOING**

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

National strategy to prepare and train employees in companies for new technologies and to make them fit for the digitalized world of work.

ORGANISATIONS INVOLVED

INDUSTRY

Different companies in the semiconductor industry and other

EDUCATION

SBH Südost GmbH, dresden chip academy

PUBLIC

Federal Employment Agency, further education
BiBB [Federal Institut for Vocational Education and Training] for vocational Education

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

Offer that combines the basics of Industry 4.0, robot technology and the related specialist areas.
content:

- Industry 4.0
- Electrical engineering
- Electronics
- Automation technology
- Sensors
- Electro pneumatics
- Robotics
- Programmable logic controller

EVALUATION AND OUTCOMES

Courses are still running

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH



TITLE LINE EXPERT

COUNTRY / REGION(S) INVOLVED
GERMANY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
**PRIVATE (COMPANIES) AND
PUBLIC**

TIME OF LAUNCH
2020, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Part of the corporate goals

ORGANISATIONS INVOLVED

INDUSTRY

Infineon Technologies Dresden GmbH

EDUCATION

SBH Südost GmbH, dresden chip academy

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

IFD - HR development strategy.

Content:

- Semiconductor theory [dca]
- Semiconductor processes [dca]
- Quality management [IFD]
- FMEA, SPC, [IFD]

EVALUATION AND OUTCOMES

First group is ready, group 2 started May 2021

LESSONS LEARNT/CONDITIONS FOR SUCCESS

Practice-oriented, special training for employees of Infineon Technologies Dresden GmbH.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH



TITLE

**SPECIALIST
MICROTECHNOLOGY (IHK)**

COUNTRY / REGION(S) INVOLVED

GERMANY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

**PRIVATE (COMPANIES) AND
PUBLIC**

TIME OF LAUNCH

SINCE 2012, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Create offers, advanced training below the engineering level in microtechnology. Up until that point there was nothing more than training for skilled workers in Germany.

SIZE OF THE FUNDING

about 9.200 € /person

ORGANISATIONS INVOLVED

INDUSTRY

Different companies in the semiconductor industry and their suppliers

EDUCATION

SBH Südost GmbH, dresden chip academy

PUBLIC

Chamber of industry and commerce

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

A part-time training model based on the work-process-oriented training model with decisive advantages:

- Part-time, oriented towards the work process
- Individual training agreement, takes into account specialist knowledge already acquired in the work process
- Use of the most varied forms of education possible

Content:

- Quality management
- semiconductor technology
- semiconductor processes
- operational project work

Examination in front of the chamber of industry and commerce.

EVALUATION AND OUTCOMES

About 100 trained participants [semiconductor industry]

LESSONS LEARNT/CONDITIONS FOR SUCCESS

High quality and practice-oriented training with an examination in front of the chamber of industry and commerce.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH



METIS

BEST PRACTICE #21

TITLE
THE NORWEGIAN INFRASTRUCTURE FOR MICRO- AND NANOFABRICATION (NORFAB)

COUNTRY / REGION(S) INVOLVED
NORWAY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PUBLIC

TIME OF LAUNCH
2011, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

The vision of NorFab is to be a robust and competent backbone consortium supporting and enabling research and innovation within micro- and nanotechnology (MNT) in Norway. NorFab will be an enabling resource for both academic and industrial R&D. Funded by research council of Norway.

SIZE OF THE FUNDING

5 million Euros for USN and total 32 million Euros

ORGANISATIONS INVOLVED

INDUSTRY
SINTEF

EDUCATION
University of Oslo, University of South Eastern Norway and Norwegian University of Science and Technology (NTNU)

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

The European countries [France, Norway, The Netherlands, Spain, Sweden, Portugal, Italy and the Czech Republic] have established a consortium, EuroNanoLab, with the aim to make better use of existing investments and reduce the time of process development by sharing process know-how, similar model as Norfab.

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

NorFab provides access to state-of-the-art laboratories for Norwegian researchers, independent of their academic, institute or company affiliation. The laboratories include the three nodes NTNU NanoLab in Trondheim, SINTEF MiNaLab and UiO MiNaLab in Oslo, and the University of South-Eastern Norway's MST-Lab in Horten.

Norfab offers more than 2000 m² of cleanroom laboratories with advanced synthesis and analytical equipment.

EVALUATION AND OUTCOMES

This cooperation has gives us access to many more processing equipment that we would have if we would stand alone.

LESSONS LEARNT/CONDITIONS FOR SUCCESS

This cooperation has given access to lab and knowledge across universities



TITLE
COMPANY SPONSORING OF LABORATORIES AT TUS

COUNTRY / REGION(S) INVOLVED
BULGARIA

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PRIVATE

TIME OF LAUNCH
ONGOING SINCE 2012

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

Part of corporate objectives and of the goals of the university to collaborate with the industry

SIZE OF THE FUNDING

More than EUR 500 000

ORGANISATIONS INVOLVED

INDUSTRY
COSTAL, AREXIM Engineering, VISTEON, CEZ

EDUCATION
University of Oslo, University of South Eastern Norway and Norwegian University of Science and Technology (NTNU)

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

The companies sponsored the creation of laboratories at TUS with expensive and modern equipment to train students specific skills for the needs of the companies, i.e. to prepare their future employees.

The experts from the companies participate in the training process.

A new practice is the contract of TUS with a company that pays the education fees of some students from one speciality to stimulate them to study it and to be prepared for further job at the company. These are the big companies, as in nuclear energy for example.

Other practice is the grant paid by a company for the 5 years of education of a student who should work at the company after graduation.

EVALUATION AND OUTCOMES

Quantitative

100s of graduates ready for a job at big companies without need of in-company training during the first 6 months or one year

The enterprises in electronics, mechatronics and energetics (COSTAL, AREXIM Engineering, VISTEON, CEZ) rely on trained new employees.

Qualitative

VET responsive to the needs of the industry
University equipped with innovative professional laboratories
Students have work-oriented education

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

HIGH

LESSONS LEARNT/CONDITIONS FOR SUCCESS

These practices exist in most if not all polytechnics in Europe. It would be good to transfer them to the VET schools providing training at lower levels of EQF.



TITLE

AEIT ASSOCIAZIONE ITALIANA DI ELETTROTECNICA, ELETTRONICA, AUTOMAZIONE, INFORMATICA E TELECOMUNICAZIONI (ITALIAN ASSOCIATION OF ELECTROTECHNICS, ELECTRONICS, AUTOMATION, INFORMATION AND COMMUNICATION TECHNOLOGIES)

COUNTRY / REGION(S) INVOLVED

ITALY WITH CONNECTION WITH THE EUROPEAN ASSOCIATION FITCE (FEDERATION OF TELECOMMUNICATION ENGINEERS OF THE EUROPEAN COMMUNITY).

TYPE OF INITIATIVE (PUBLIC, PRIVATE)

PRIVATE (NO-PROFIT)

TIME OF LAUNCH

1897, ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

AEIT is a private initiative which received a public recognition of organisation with a cultural mission.

ORGANISATIONS INVOLVED

INDUSTRY

ABB, e-distribuzione, Edison EDF Group, GEWISS, Prysmian Group, Terna

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

AEIT promotes and support:

- the study of science, electronic, automation, information technologies and telecommunications;
- the development of related technologies and applications;
- cultural growth and professional development of its members in the mentioned areas.

AEIT also supports young researchers and students, active in the related fields or joining them, and contributes to:

- address technical training towards employment proposals and expectations in the industrial segments of interest of AEIT;
- support professional development.



METIS

EVALUATION AND OUTCOMES

1. R&D support, know-how dissemination and application of innovation
 - Collaboration with universities, schools, industries, institutions, research centres, national and international associations (AICA, EUREL, INFORAV etc.) to increase members' knowledge and skills;
 - Promotion of links with universities, schools, institutions and industries to support young people training and career development, targeting their employment;
 - Establishment of awards, and awarding of scholarships;
 - Surveys on new technologies and new technical regulations, and on the quality of young students/researchers' technical training.
 - VET courses in: Electrotechnics, Energy, Maintenance, Electrical Systems, Measurements, Regulations, Security.
2. Institutional Relations and External Communication
 - interaction with Ministries and Authorities, mostly on innovation, law evolution and regulations in the reference sectors.

LESSONS LEARNT/CONDITIONS FOR SUCCESS

VET courses and other initiatives are performed on a peer-to-peer basis by company staff and experts. There is a shared interest to train people with skills and competences which are demanded by the industry sector.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

AIET is in connection with the European Association FITCE (Federation of Telecommunication Engineers of the European Community).

Similar initiatives may be found elsewhere in Europe and there is a full transferability of the practice.



TITLE
THE ITALIAN SOCIETY OF ELECTRONICS - SIE (SOCIETÀ ITALIANA DI ELETTRONICA)

COUNTRY / REGION(S) INVOLVED
ITALY

TYPE OF INITIATIVE (PUBLIC, PRIVATE)
PRIVATE

TIME OF LAUNCH
(PRIOR TO 2015), ONGOING

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

This is an association of individuals [no organizations are admitted as members], mainly from HEIs.

ORGANISATIONS INVOLVED

EDUCATION

Professors, researchers and students

SUMMARY OF THE INITIATIVE AND ITS OBJECTIVES

It is a non-profit association established with the aim to promote and develop education, training, research and technology transfer activities in the Electronics sector. SIE members are full professors, associated professors and students from Italian Universities, and researchers from Italian public Research institutions.

Its main aim is to pursue the research through the cooperation among individuals.

Activities include, among others:

- promotion of research, development and advanced training initiatives and projects in the field of Electronics, its applications and technologies;
- active support for the participation of its members in projects financed by public and private bodies;
- dissemination of papers and publications;
- organisation and management of courses, seminars, conferences, and any other event aimed at promoting and disseminating the results of research and innovation in Electronics;
- enhancement of scholars' and researchers' skills with the support of scholarships or training awards.



METIS

EVALUATION AND OUTCOMES

Among the other activities, the following worth a mention:

- the Annual Doctoral School with the participation of outstanding experts from the academia and doctoral students from Italy and abroad.
- SIE issued a brochure for Secondary Education students, in order to give essential information on this branch of science and technology, on its role in today's society, and on what it will inevitably have in outlining the future of humanity [*L'elettronica inventa il tuo futuro* (*Electronics create your future*)]
- YouTube Channel <https://www.youtube.com/channel/UCQqw7T-ac8TLUdhqX1u587A/featured>
The SIE YouTube Channel allows to a) support guidance activities targeted at students accessing to higher education and b) disseminate topics related to higher education, training, research and technology transfer in the Electronics sector. Editorial and scientific contents are visualised via videos, using appropriate testimonials (e.g., Youtubers, science communicators). Using social media that are popular among young people, as well as adopting a friendly and informal communication allow to better target messages to a young audience, and make scientific topics understandable, more appealing and easier to disseminate than traditional publications. In addition, the practice allows fast publishing, updating and creating links among contents

LESSONS LEARNT/CONDITIONS FOR SUCCESS

- Information is a key factor to find the best resources to place in the labour market of Electronics and Microelectronics
- A friendly language is the best way to address young people
- Practical examples and concrete numbers are key factors to approach students and stimulate their interest
- The use of videos increases potential of dissemination and accessibility of information
- The use of familiar testimonials increases potential of dissemination among young people

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

- *The brochure can be easily translated in national contexts, adding country-specific information.*
- *The brochure can also be used in a EU context, giving an overview of the existing opportunities in Electronics and/or Microelectronics.*
- *The idea of the Youtube Channel can be promoted in other countries in order to support the development of virtual networks and a wider database of resources.*



TITLE **ICT KENNEDY FOUNDATION**

PLACE & DATE OF IMPLEMENTATION
FRIULI VENEZIA GIULIA AND
VENETO REGIONS, ITALY,
FROM 2010 ONWARDS
(BASED ON NATIONAL REGULATIONS -
SEE THE PRIME MINISTER'S DECREE OF
25 JANUARY 2008)

INVOLVED PARTIES FROM PARTNERS

The coordinating body of the ITS courses is a Foundation which includes schools, training institutions, companies, universities and research centres thus creating an authentic integration between teaching and work. The Foundation involves 19 business partners, 12 education partners, 3 science partners and a public administration.

FUNDING OF THE PRACTICE

Public Funding: FSE and Ministry of Education, University and Research

Private Funding: The support of partner is also economic, as in the case of Friuli Foundation, an organization with the purpose of promoting economic development and social utility, based on the principle of subsidiarity.

CONTEXT BEHIND THE INITIATIVE (E.G. LAUNCHED IN THE FRAMEWORK OF A NATIONAL OR REGIONAL STRATEGY/ PART OF CORPORATE OBJECTIVES/ PART OF A PUBLICLY FUNDED PROGRAMME)

There are about 200 companies and organizations that collaborate with ITS Kennedy: they ensure ample opportunities for internships, teaching, planning, updating on specific ICT topics, sharing of projects and networking.

The ITS were the first experience in Italy of a professionalizing post-secondary non-university training offer similar to some European realities, such as the German Fachhochschule or the Brevet Technicien Supérieur of French superior technician, united by the characteristic of: favoring direct insertion into the world of work; responding to companies' s request for personnel with non-university tertiary training, with practical experience; continuing from a previous training course carried out in alternation between school and work; allowing the continuing education of adults.

ITS courses have a duration of at least 4 semesters, about 1800/2000 hours, but courses of 6 semesters can be set up in agreement with universities. The ITS trainings meet the demand of companies for figures with technical and practical skills that can be directly spent and provides for: laboratory activities; compulsory internships (including abroad) for at least 30% of the total number of hours; at least 50% of the teaching staff comes from the world of work and professions.

The degree has European significance as it is associated with a EUROPASS diploma supplement. To those who have attended at least 80% of the course and passed the final examination, the ITS body issues a "higher technical diploma", which is placed at the 5th level of the European Qualifications Framework [EQF].

According to art. 7 of the Prime Ministerial Decree of 25 January 2008, 6 technological areas are envisaged: sustainable mobility, new technologies for life, new technologies for Made in Italy, innovative technologies for cultural-tourism assets and activities, information and communication technologies, energy efficiency.

To access this type of training, candidates must have an upper secondary education diploma or a four-year diploma of vocational education and training supplemented by an annual course of higher technical education and training [IFTS]. The courses allow those wishing to continue with university studies later on to acquire university credits for the purpose of obtaining a degree. The Kennedy Foundation offers curricular paths in the area of "Information and Communication Technologies"



ACHIEVED BENEFITS

QUALITATIVE

- Connecting students at the beginning of their professional careers with leading industries
- Highlighting the importance of networking with industry

QUANTITATIVE

- 83% of graduates find work one year after graduation
- 11.4% become “off-site” nationally but also internationally
- 5% of ITS members have already graduated but are looking for a more sectoral and practical experience.
- compulsory internships [including abroad] for at least 30% of the total number of hours;
- that at least 50% of the teaching staff comes from the world of work and professions;

LESSONS LEARNED AND SUCCESS FACTORS

Schools, training institutions, companies, universities and research centres, other bodies and institutions can give life to a reality with stable legal personality. Companies, training organizations of all levels, research centres and public bodies can work together to detect employment needs [knowledge and skills], provide for their training, with the support of policy makers.

LEVEL OF TRANSFERABILITY (IN OTHER COUNTRIES / OTHER FACETS OF THE VALUE CHAIN)

YES