

# Innovative Tools and Strategies for the Implementation of Food Professional Skills and Expertise - the TRACKFAST project

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# Training Requirements And Careers for Knowledge-based Food Science and Technology in Europe

**TRACK\_FAST**  
FP7 KBBE 227220

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Porto Portugal

track\_fast 

Europe's Food Science and Technology  
on a Fast Track



>>> **INTRODUCTION**

# Program

**F**ood, **A**griculture and **F**isheries, and **B**iotechnology

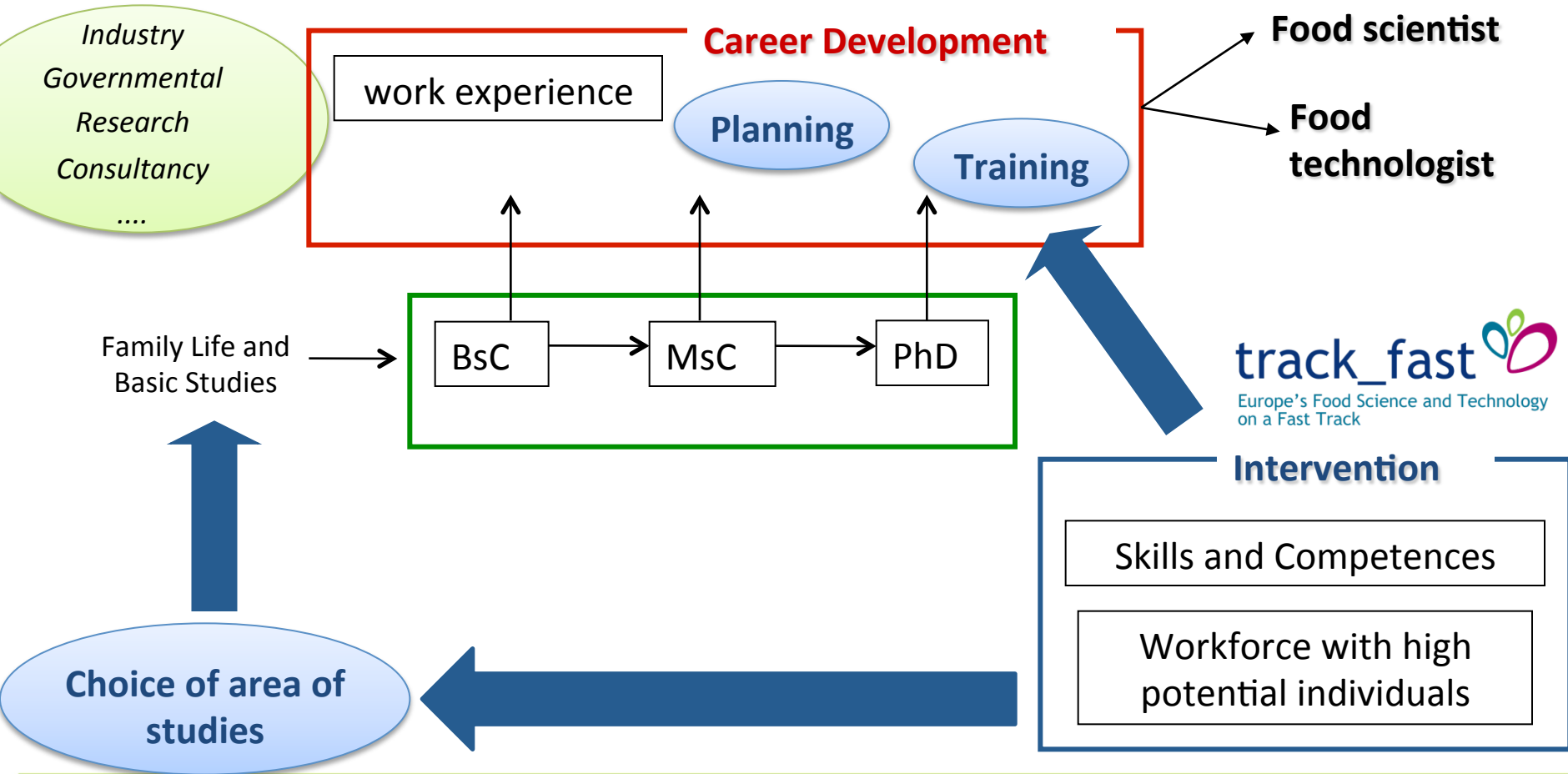
K n o w l e d g e - B a s e d B i o - E c o n o m y ( K B B E )

Call FP7-2008-KBBE-2B

Area 2.2.3  
Food Processing

KBBE-2008-2-3-03  
Training and career development  
for future food scientists

# “Life cycle” of a Food Professional



# Consortium



TRACK\_FAST provides main stakeholders with a forum within which their main needs are considered

- ❖ representatives of European and national professional organisations,
- ❖ research centres,
- ❖ academic bodies,
- ❖ multinational companies,
- ❖ SME associations,
- ❖ associations specialized in training members for the food industry,
- ❖ quality assurance experts.

# Consortium



# Logical Framework

Update education/training based on actual and future food job market needs

Promotion of FST to attract students

Establishment of a framework for continual professional training and career development for the FST professionals

Regulation of FST professions in Europe



>>> **Outcomes**

>>> Identification and definition of personal skills  
requirements in food job market

# Organization of Brainstorming Workshops

*“... 16 workshops were organized, one in each of the 16 partner countries...”*

***Aiming to answer the questions:***

1) *Which competencies should a FST have to be competitive in the job market and to provide the skills needed by employers?*

**&**

2) *How and when should these competencies be acquired?*





# Ideas for ideal skills from workshops

- A total of **4273 ideas for ideal skills** were provided by 315 workshop participants.
- 22 % were excluded from analysis because they either did not contain all required information (60 skill ideas) or agreement was not reached on the code (865 skill ideas).



**3348 skill ideas for the analysis**

Central	East	North	South
Austria	Hungary	Belgium	Greece
France	Lithuania	Netherlands	Italy
Germany	Romania	Sweden	Portugal
Slovenia	Turkey	UK	Spain



# Skill groups from WP3 document

## Section I. Non-sector specific skills

### **1. Fundamental Skills**

- 1.1. Communicating
- 1.2. Managing Information and computer literacy
- 1.3. Using Numbers
- 1.4. Thinking & Solving Problems
- 1.5. Providing Leadership
- 1.6. Managing Personnel

### **2. Personal Management Skills**

- 2.1. Demonstrating Positive Attitudes & Behaviours
- 2.2. Being Responsible
- 2.3. Being Adaptable
- 2.4. Learning Continuously
- 2.5. Working Safely
- 2.6. Improving own performance

### **3. Teamworking and interpersonal Skills**

- 3.1. Working with Others
- 3.2. Participating in Projects & Tasks
- 3.3. Communicating with Others

### **4. Business skills**

- 4.1. Business Planning and strategic management
- 4.2. Sales and Marketing
- 4.3. Finance and resource management
- 4.4. Customer Service
- 4.5. Corporate social responsibility CSR
- 4.6. Entrepreneurship

### **5. Pedagogical skills**

- 5.1. Learning & Assessment

## Section II. Sector non-specific skills

### **6. Skills for food quality and food safety**

- 6.1. Quality management, quality assurance and quality control
- 6.2. Food safety management, food hygiene and food safety control
- 6.3. Food legislation and control

### **7. Skills for Research and development (R&D)**

- 7.1. Product Development
- 7.2. Research
- 7.3. Consumer and nutritional sciences

### **8. Skills for Food Production and manufacturing**

- 8.1. Engineering Maintenance
- 8.2. Health, Safety and the Environment
- 8.3. Production Management
- 8.4. Production Operations
- 8.5. Cleaning and Preparation
- 8.6. Control Operations
- 8.7. Waste Disposal

### **9. Skills for food retail and the supply chain**

- 9.1. Food Retail
- 9.2. Goods Received and Storage
- 9.3. Supply to Production
- 9.4. Pick and Pack
- 9.5. Livestock Droving
- 9.6. Food service
- 9.7. Health and nutrition

### **10. Skills for Logistics**

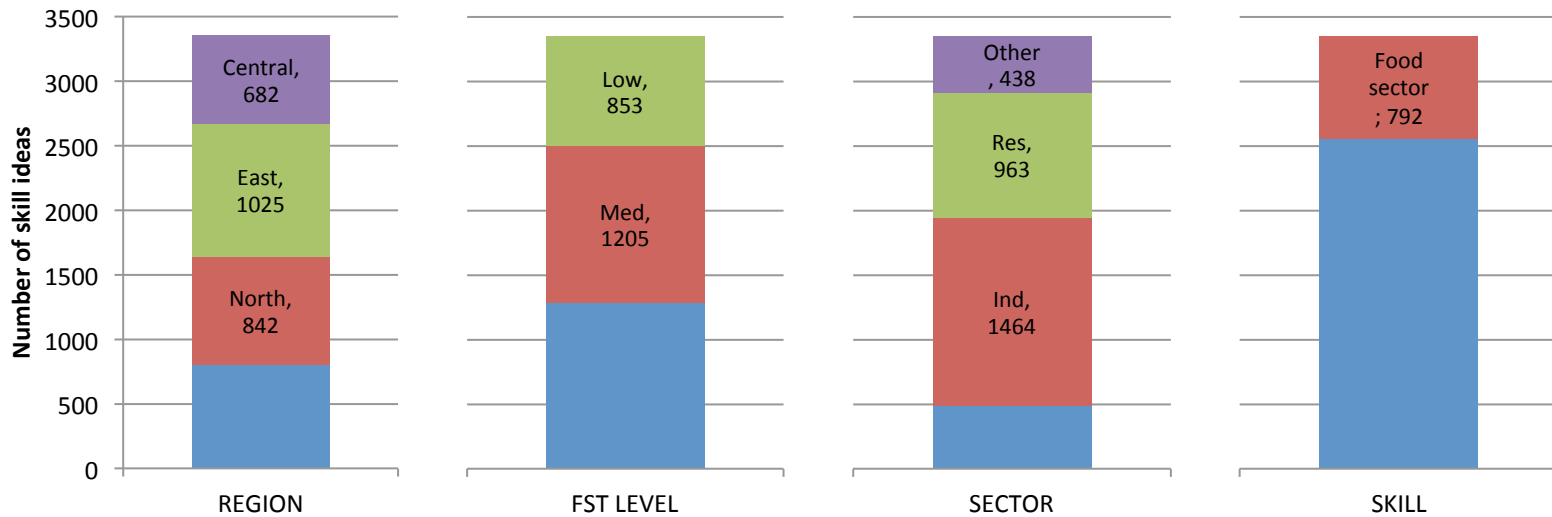
10. 1. Transportation

## Section III. Sector specific skills

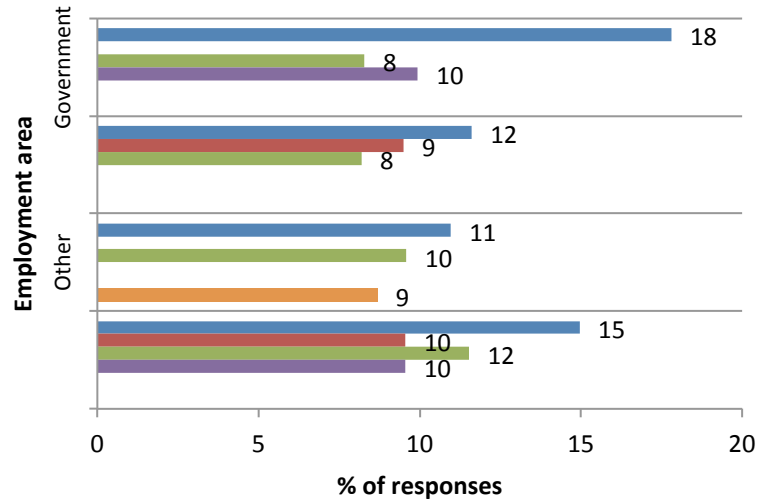
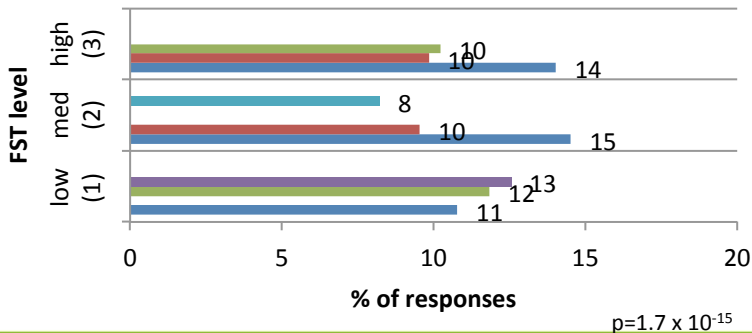
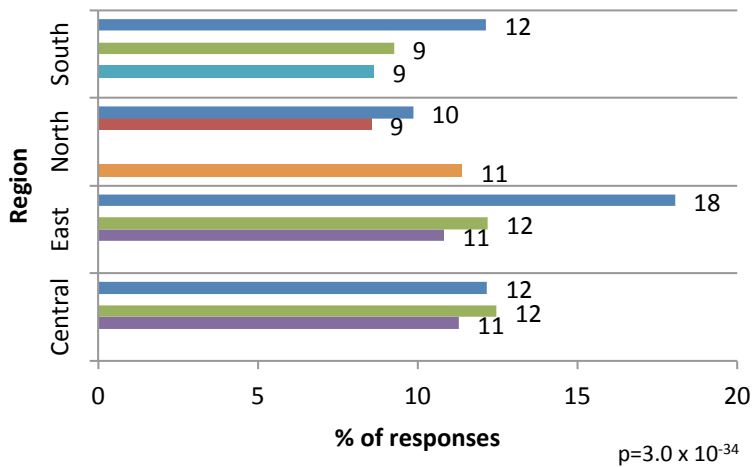
### **11. Skills for food processing sectors**

- 11.1. Meat and Poultry Processing - Preparation and Abattoirs
- 11.2. Meat and Poultry Processing - Production Butchery
- 11.3. Meat and Poultry Processing - Retail Butchery
- 11.4. Fish and Shellfish Processing
- 11.5. Dairy products
- 11.6. Brewing Production
- 11.7. Beer Packaging
- 11.8. Milling and Cereals
- 11.9. Dough and Dough Products
- 11.10. Flour Confectionery
- 11.11. Chocolate
- 11.12. Sugar Confectionery
- 11.13. Winemaking
- 11.14. Canned Fruit and Vegetables
- 11.15. Crisps, Snacks and Nuts
- 11.16. Dietetic Food
- 11.17. Desserts
- 11.18. Frozen Food
- 11.19. Seasonings and Spice
- 11.20. Soft Drinks and Fruit Juices
- 11.21. Soups
- 11.22. Jams and marmalade
- 11.23. Tea and Coffee
- 11.24. Vegetarian food
- 11.25. Ready-to-eat meals

# Distribution of skill ideas



# Top three ideal skill ideas

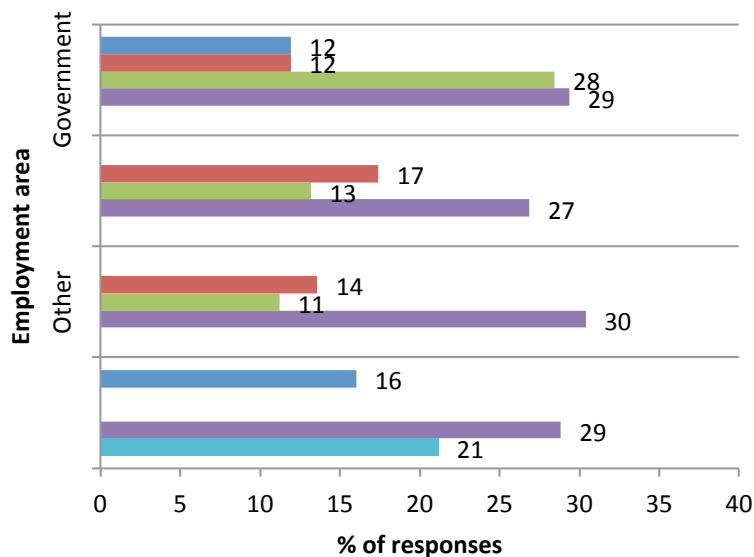
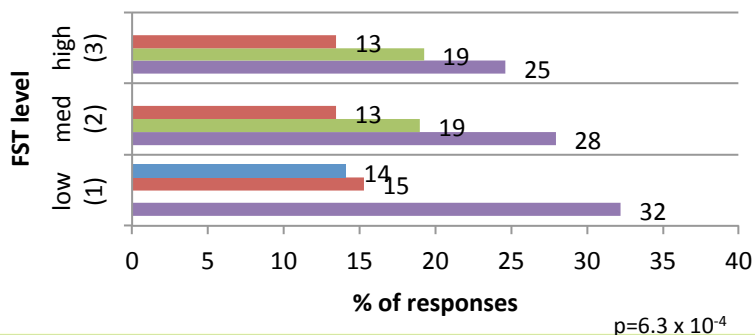
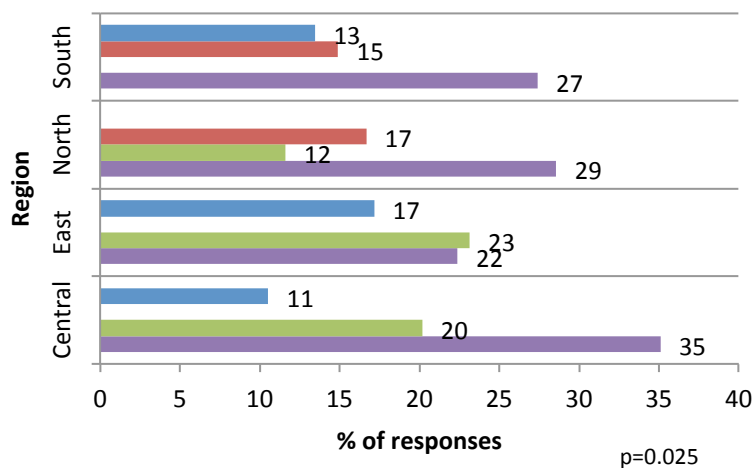


- Communicating
- Thinking & Solving Problems
- Demonstrating Positive Attitudes & Behaviours
- Being Responsible
- Working with Others
- Product Development

**Chi square test**  
*Null hypothesis:*  
 The most desired FST skills are independent of employment area, region and FST level.

Strongly rejected.

# Top three ideal food skill ideas



- Quality management, quality assurance and quality control
- Food safety management, food hygiene and food safety control
- Food legislation and control
- Product Development
- Research

p=1.8 x 10<sup>-10</sup>

**Chi square test**  
*Null hypothesis:*  
 The most desired FST skills are independent of employment area, region and FST level.

Strongly rejected.

# Highlights

- Employers of food scientists & technologists (FSTs) told us which skills they desire
- “Communicating” was the no. 1 skill desired by all FST employers
- Overall, “soft” skills are more in demand than food sector specific skills
- “Product Development” was the no. 1 food sector specific skill
- Desired skills varied by geographical region, FST level and employment area

>>> Developments for the regulation of food science  
and technology professions in Europe



UNIVERSITÀ  
DEGLI STUDI  
DI MILANO



## ISEKI Food Association Workshop Food Professional Regulation in EU

Wednesday 31st August 2011  
Great Hall of the University of Milan,  
via Festa del Perdono 7, Milan, Italy

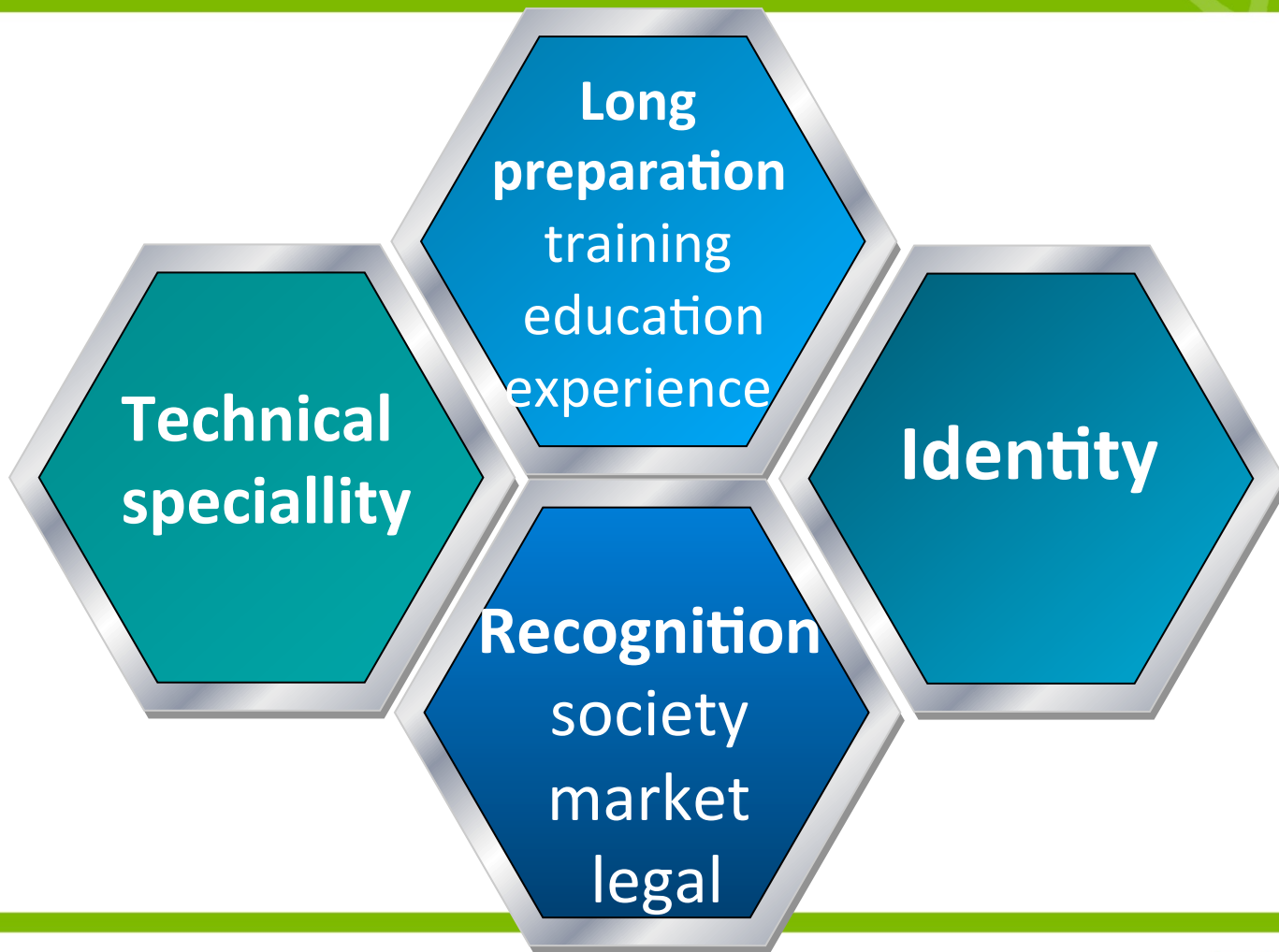
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track\_fast

Europe's Food Science and Technology  
on a Fast Track





# Groups related to the profession

- **Education/training institutions** that prepare technically and are the first socialization environment of the respective professionals
- **Professional associations** that promote values, autonomy and authority of the professionals
- **Licensing system** that protects authority and prestige of professionals and assures the social control

Browser address bar: <https://www.iseki-food.net/node/2869>

Page title: WEBINAR: Regulation of th...

Navigation: Pagina, Sicurezza, Strumenti, Search

ISEKI Food Association

Members only

- Dissemination Materials
- Proposed events
- Forums
  - SIG 1: Food Structure
  - SIG 2: Bionanotechnology
  - SIG 3: Scientific Networking
  - SIG 4: Bioactive Compounds
  - Social Networking
- IFA-Meetings
  - Board Meetings
  - General Assemblies

General information

- About us
- Members
- Membership application
  - Sign up
- News
- Events
- Special Interest Groups
  - SIG 1: Food Structure
  - SIG 2: Bionanotechnology

Home » WEBINAR: Regulation of the Food professions in Europe

**WEBINAR: Regulation of the Food professions in Europe**

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Posted in IFA eNews

## Regulation of the food professions in Europe

Join us for a Webinar on June 8

**REGISTER NOW**

Space is limited.  
Reserve your Webinar Seat Now at:  
<https://www3.gotomeeting.com/register/300426838>

Food professions are not attractive. That is claimed by the food and drink industry and in general by the European higher education that has been unable to attract the best students to food science and technology programmes. To understand this problem and to propose solutions, the current status of the food professions in Europe was analysed. Few countries were found to have completely regulated professions, some others possess the regulation of the title of the profession only and the rest has no such requirement for designation of professions but usually have professional associations. The heterogeneous picture in Europe is an indicator of the difficulty to characterize the identity of the food professional, that can also be explained due to the fact that, depending on the country, the same jobs, the same functions, are frequently performed by graduates from

12:45  
06/05/2012

>>> Establishment of a framework for continual professional training and career development for the FST professional

# TRACK\_FAST Project

✓ Establishment of a framework for career development for the FST professionals

[www.foodcareers.eu](http://www.foodcareers.eu)

✓ Motivation of young people to study science and technology in Europe .

[www.foodgalaxy.eu](http://www.foodgalaxy.eu)

Better prepared  
**PROFESSIONALS**

**MORE  
PROFESSIONALS**



**Better  
PROFESSIONALS**



## foodcareers

European network for continual professional training and career development for the Food Professional

Join us!



Members



Networks



Profession Development



Training Courses

### latest news

**Publication of Knowledge and Skills draft document version 2.0**  
03.2012

### upcoming events

**PAS 220 : 2008 & FSSC 2200**  
[Read More](#)

### who's on-line

There are currently *0 users* and *2 guests* online.

## AIMS:

bringing together graduates and professionals working in the food sector, both in industry and academia

creation of an online network for continual professional training and career development for Food Scientists and Technologists in Europe

social networking and providing the guidance and tools for creating and maintaining a continual professional development portfolio

## How does it help the food professional?

- The on-line Continuing Professional Development Portfolio
- Information on training
- Social Networking



# Registration process

Home About Foodcareers **Members** Profession Development Tra

Individuals sign-up Application form for institutions/companies

You are here: Home > Members > Individuals sign-up

## Individuals sign-up

To apply for membership as an individual person, please fill in the form below.

**Membership: \***

- Regular member
- Regular member (Student)
- Associated member

Select the kind of membership you want to sign-up for

▼ Personal data

**Salutation: \***

- Mr.
- Mrs.

# Registration process

- Implementation of social network functions (connection to facebook etc.) in order to attract more visitors

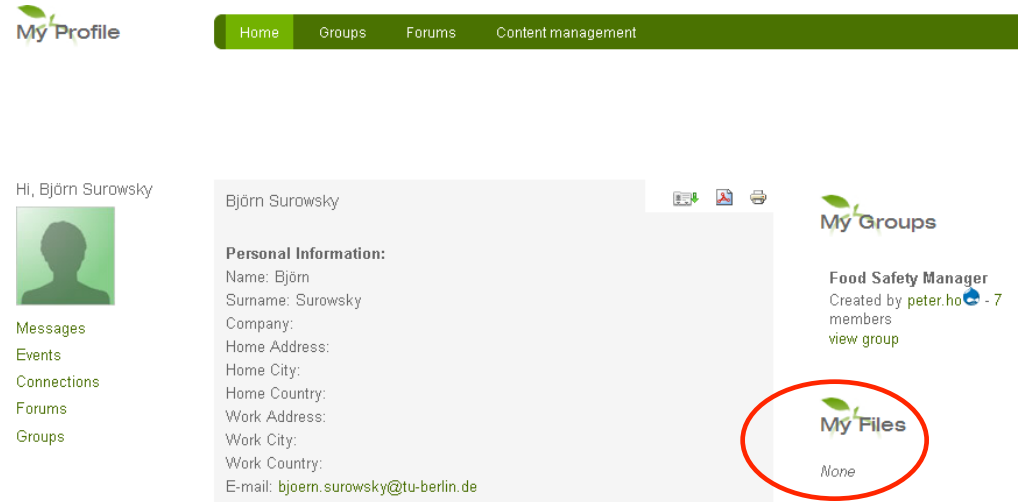
facebook

LinkedIn

twitter

# My profile page

- Create a CPD portfolio
- Update an existing CPD portfolio
- Possibility to upload documents (proofs, certificates) and to collect them in the “my files” area



The screenshot shows the 'My Profile' page for a user named Björn Surowsky. The page has a green header with navigation links: Home, Groups, Forums, and Content management. On the left, there is a profile picture placeholder and a list of links: Messages, Events, Connections, Forums, and Groups. The main content area displays the user's name, 'Björn Surowsky', and a 'Personal Information' section with the following details: Name: Björn, Surname: Surowsky, Company: (blank), Home Address: (blank), Home City: (blank), Home Country: (blank), Work Address: (blank), Work City: (blank), Work Country: (blank), and E-mail: bjoern.surowsky@tu-berlin.de. To the right, there is a 'My Groups' section showing the user is a 'Food Safety Manager' created by peter.ho - 7 members, with a 'view group' link. Below this, the 'My Files' section is circled in red and shows 'None'.

# Networking

This section will contain information concerning the groups and it will be possible to

- create a group post
- invite a friend
- list all members
- get information about the group manager
- see who's online

# Training Courses



Das eintägige Seminar vermittelt in kompakter Form umfangreiche Kenntnisse zur HACCP-Analyse auf Basis des Codex Alimentarius. Sie erfahren, wie Sie ein schlankes und effizientes HACCP-System aufbauen. Sie trainieren die Erstellung einer HACCP-Studie und das Definieren von CCPs. Durch die Anwendung des erworbenen Wissens verbessern Sie die Lebensmittelsicherheit in Ihrem Betrieb, wehren gesundheitliche Gefahren ab und erfüllen die verschärften Verpflichtungen des Gesetzgebers.

When January 1st, 2013 12:00 AM

Location Germany

Event Fee(s) zzgl. MwSt. € 490.00

▼ Details

Learning outcomes

Course provider TQM Training & Consulting GmbH

Link of provider [www.tqm.com](http://www.tqm.com)

Name of contact person

Email of contact person

Language German

Prerequisites keine

Online No

Duration 1 day

# Training

Fundamental Skills	
Personal Management Skills	Demonstrating Positive Attitudes & Behaviours, Being Responsible
Team working and Interpersonal Skills	Working with Others
Business Skills	
Pedagogical skills	Learning & Assessment
Skills for food quality and food safety	Food safety management, food hygiene and food safety control
Skills for Research and development (R&D)	
Skills for Food Production and manufacturing	Health, Safety and the Environment, Cleaning and Preparation, Control Operations
Skills for food retail, food service and the supply chain	
Skills for Logistics	
Skills for food processing sectors	
Certificate	No
Certifying body	
Link of certifying body	

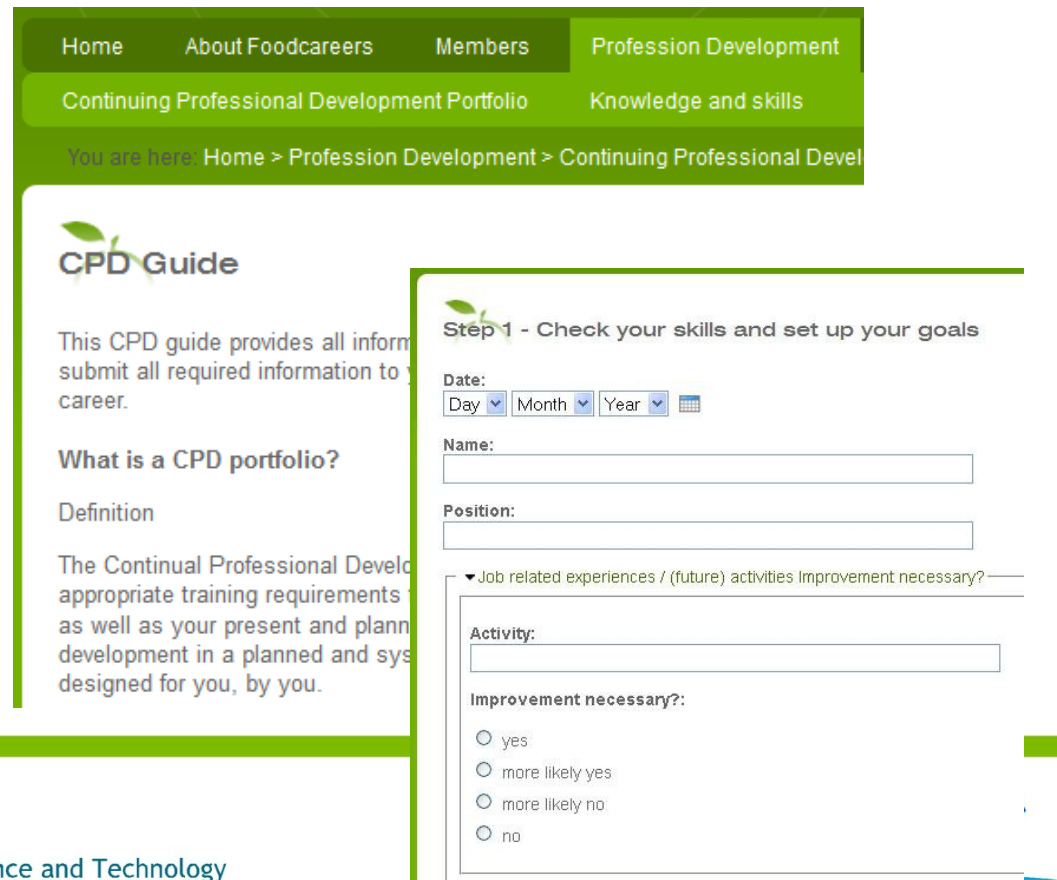
# Training C

Fundamental Skills	
Personal Management Skills	Demonstrating Positive Attitudes & Behaviours, Being Responsible
Team working and Interpersonal Skills	Working with Others
Business Skills	
Pedagogical skills	Learning & Assessment
Skills for food quality and food safety	Food safety management, food hygiene and food safety control
Skills for Research and development (R&D)	
Skills for Food Production and manufacturing	Health, Safety and the Environment, Cleaning and Preparation, Control Operations
Skills for food retail, food service and the supply chain	
Skills for Logistics	
Skills for food processing sectors	
Certificate	No
Certifying body	
Link of certifying body	

# CPD online implementation

## Two main parts:

- **CPD guide** which helps to create a CPD portfolio; visible for all visitors
- **CPD online portfolio**; accessible for registered members



The screenshot shows the website's navigation menu with 'Home', 'About Foodcareers', 'Members', and 'Profession Development'. Under 'Profession Development', there are links for 'Continuing Professional Development Portfolio' and 'Knowledge and skills'. A breadcrumb trail reads: 'You are here: Home > Profession Development > Continuing Professional Development Portfolio > CPD Guide'.

The main content area is titled 'CPD Guide' and includes the following text: 'This CPD guide provides all information on how to create and submit all required information to your CPD portfolio for your career.' Below this, it asks 'What is a CPD portfolio?' and provides a definition: 'The Continual Professional Development process involves identifying appropriate training requirements for your career as well as your present and planned development in a planned and systematic way designed for you, by you.'

On the right, there is a form titled 'Step 1 - Check your skills and set up your goals'. The form includes:
 

- Date: Day, Month, Year dropdown menus and a calendar icon.
- Name: A text input field.
- Position: A text input field.
- A dropdown menu for 'Job related experiences / (future) activities Improvement necessary?'.
- Activity: A text input field.
- Improvement necessary?: Radio buttons for 'yes', 'more likely yes', 'more likely no', and 'no'.

# CPD online implementation

## CPD guide

### The CPD guide

- defines, what a CPD portfolio is
- describes the principles, aims and benefits of a CPD portfolio
- explains the different steps needed to create a CPD portfolio including detailed examples

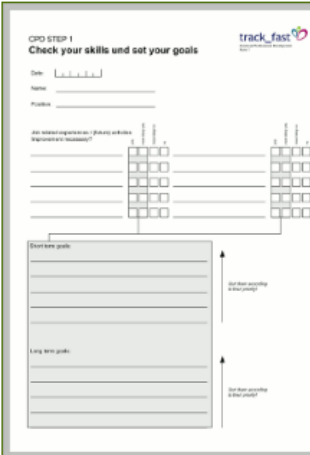
Step 1 Step 2 Step 3 Step 4 Step 5

Check your skills and set your goals

First you need to do some analysis – write down your job related activities and the experiences you gained during your whole professional life. Take into consideration already finished training courses (privately organized or company based), literature, daily challenges and other gained experiences.

Then think about the goals to be achieved. Do you want to undertake the CPD for advancement, or to keep yourself up to date? Consider the needs of your employer, or prospective employer, and identify any known developments with which you may need to be familiar.

Once you have identified and set your goals, consider the relative priorities for each one, since some may be very long term and it could be too soon to take specific action on these (see figure 1). Nevertheless they need to be kept in mind, because your short or medium term goals may be linked to their ultimate achievement.



The form includes a header with the 'track\_fast' logo and the title 'CPD STEP 1 Check your skills and set your goals'. It has fields for 'Date', 'Name', and 'Position'. Below this is a table with columns for 'An interesting activity (challenge) undertaken recently?' and 'Frequency' (with sub-columns for 'times per week' and 'times per month'). The table has three rows for recording activities. At the bottom, there are two sections: 'Short term goals' and 'Long term goals', each with a vertical arrow pointing upwards and the text 'Set your priority (short/long term)'.

Fig. 1 Checking skills and setting goals.

People change over time, and it is therefore to be expected that your goals may change also, especially the longer term goals. Therefore longer term goals may be less specific than those identified for short term action.

## CPD online implementation

# Creating a CPD portfolio (1)

- Interactive online forms which allow the creation of a CPD portfolio
- will be linked to a database which contains skills, training courses etc. for the selected job
- possibility to submit proofs, certificates, etc. (→ my files)
- final result after submitting the forms is a learning plan

**Step 1 - Check your skills and set up your goals**

Date:  Day  Month  Year

Name:

Position:

▼ Job related experiences / (future)

Activity:

Improvement necessary?:

yes

more likely yes

more likely no

no

**Step 2 - Identify your learning needs**

▼ Short term goal 1

Short term goal:

Target skill level:

0

1

2

3

4

Existing skill level:

0

1

2

3

4


Gap:

## CPD online implementation

# Creating a CPD portfolio (2)

• The learning plan finally includes the following information:

- Desired job/position
- Skills which need to be improved
- titles of the courses which have been selected
- Dates/periods of the courses
- Course providers

  
Continued Professional Development  
Part 3a

**CPD STEP 3**  
**Learning plan (short term)**

gap	activity to fill the gap	activity title	activity no.	date / period
_____	<input type="checkbox"/> workshop <input type="checkbox"/> case presentation	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> seminar <input type="checkbox"/> _____	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> workshop <input type="checkbox"/> case presentation	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> seminar <input type="checkbox"/> _____	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> workshop <input type="checkbox"/> case presentation	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> seminar <input type="checkbox"/> _____	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> workshop <input type="checkbox"/> case presentation	_____	_____	from [ ] to [ ]
_____	<input type="checkbox"/> seminar <input type="checkbox"/> _____	_____	_____	from [ ] to [ ]

## CPD online implementation

# Creating a CPD portfolio (3)

- all CPD portfolio information (learning plan), will be stored at the „my profile“ page
- Possibility to update an existing portfolio
- An „assessment committee“ (tba) will have the possibility to view and to assess the data (certification of competences)

**Step 1 - Check your skills and set up your goals**

Date:  Day  Month  Year

Name:

Position:

▼ Job related experiences / (future) activities Improvement necessary? \_\_\_\_\_

Activity:

Improvement necessary?:

Home Groups Forums Content management

My Profile

Hi, Björn Surowsky



Messages  
Events  
Connections  
Forums  
Groups

Björn Surowsky

**Personal Information:**

Name: Björn  
Surname: Surowsky  
Company:  
Home Address:  
Home City:  
Home Country:  
Work Address:  
Work City:  
Work Country:  
E-mail: bjoern.surowsky@tu-berlin.de

My Groups

**Food Safety Manager**  
Created by peter.ho - 7 members  
[view group](#)

My Files

None

## *Sustainability after project ending*





Motivation of young people to enter and pursue of a  
career in food science and technology in Europe



[Have an account?](#)

Once upon a time...

The Taste of Life

I eat therefore I am

To eat or not to eat

Mission Possible

I am the king of the kitchen

Brave new food

A small product for the consumer - a giant process for the producer

MY FOOD CAREER

## Food production and processing

Nutrition

Experiments with food

## Studying food science

Food science, engineering and technology

## Highlights

### Food & Religion

Wed, 21 Mar 2012



Lifestyle and food habits have been encoded and regulated by belief and religion for centuries. This choices might have a biological base, but

## MAIN AIM:

Show prospective students

Food Science is a **real science with real challenges**

**Careers** in Food Science and Technology






## Food Science is a **real science with real challenges**



- **The taste of life** (Sensorial, Colours)
- **To eat or not to eat** (Allergies, E-numbers, GMOs, Toxins)
- **Once upon a time** (History of Food Processing)
- **I eat therefore I am** (Nutrition)
- **I am the king of the kitchen!** (Gastronomy, House Experiments)
- **Brave new food** (Emerging Technologies, Innovative Food)
- **A small product for the consumer – a giant process for the producer**

## Food Science is a fun – targeting a “younger” audience

**House Experiments**

		
Bouncy Ball made of Egg	Fountain made of Cola Light	Fruity 'Coking' of Fish
		
Magic Red Cabbage Juice		Multi Colour Juice

A career in Food Science is a **challenging and rewarding**



A career in Food Science is a **challenging and rewarding**



*Sustainability after project ending*



# track\_fast



Europe's Food Science and Technology  
on a Fast Track



EUROPEAN  
COMMISSION



be a part of it !

# Website

[www.trackfast.eu/](http://www.trackfast.eu/)



# Communication

→ emails:

[trackfast@porto.ucp.pt](mailto:trackfast@porto.ucp.pt)

[clsilva@porto.ucp.pt](mailto:clsilva@porto.ucp.pt)

→ Phone:

+ 351 22 5580058

**Thank you !!**

