Thrive!
How future proof is the creative industry?

The “Thrive! Entrepreneurial skills as solid base for a future in the Creative Industry” project has as central aim to support the (young) (female) entrepreneurs and companies and its employees in the creative sector to go through a transformation and innovation process that is necessary to survive the present times and to become a company with a sustainable business case.

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PART I

How future-proof are the creative industries?

In considering the entrepreneurial competences needed in the creative industries it was decided that a forward view of industry was needed to plot the probable changes in the industry and the consequential changes needed in individuals working in the industry, be that as individual or as corporate entrepreneurs.

What are the "creative industries"?

At the project's first meeting we concluded the following broad definition - "The Creative industries will be mainly focussed on communication and information activities"
This was arrived at by much research where we had to delve deeper and wider before we focussed.
For example we considered the following:

- EU Commission definition "those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. This classification includes architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising".

- The 'creative industries' is also referred to as the '**creative and cultural industries**'or the '**creative and digital industries**' or the '**creative industry**' within the '**creative economy**'. Most recently they have been called the '**Orange Economy**' (La Economía Naranja) in Latin America and the Caribbean

- The creative industries **definition** from the UK Government's Department for Culture, Media and Sport (DCMS) is: 'Those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. There are thirteen **sub-sectors** under the term 'creative industries' and these are: advertising; architecture; the art and antiques market; crafts; design; designer fashion; film and video; interactive leisure software; music; the performing arts; publishing; software and computer games; and television and radio.

- The cultural industries are defined by UNESCO as 'industries that combine the creation, production and commercialisation of contents which are intangible and cultural in nature; these contents are typically protected by copyright and they can take the form of a good or a service.'

- Increasingly, the term **'Creative and Digital Industries'** is used in the UK because of the importance of digital content and online services within the creative sector of the economy.

- But we cannot, even with narrowing down the definition by the elimination of eg performing arts, hope to encompass all of what remains so it is suggested that we cover the most important sub-sectors ie ones that will be around most likely in 10 years and therefore worth preparing for training in entrepreneurship. These are suggested as:

a. Print companies that offer integrated marketing solutions
b. Digital marketing companies
c. Packaging companies
d. Point of sale companies

Internationally, the creative industries are one of the fastest growing sectors in OECD economies, employing on average 3-5% of the workforce according to the United Nations Conference on Trade and Development. The global value of creative industries was expected to increase in the years from 2000 to 2005 from US$ 831 billion to US$ 1.3 trillion, a compound annual growth of over 7%.

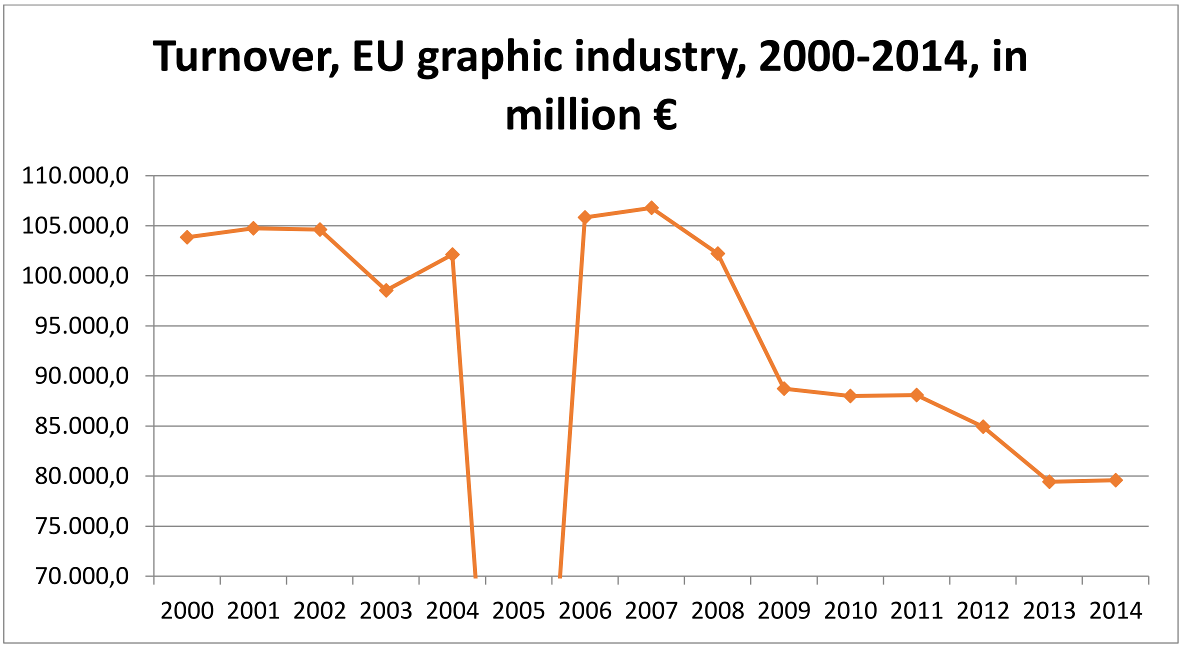
- **UNESCO**. The United Nations Educational, Scientific and Cultural Organisation works through its Global Alliance for Cultural Diversity and Creative Cities Network to strengthen cultural industries internationally by encouraging knowledge-sharing, capacity building, good practice and mentoring between its members. The Global Alliance promotes cultural diversity by strengthening the capacity of cultural industries to produce and distribute goods and services and help them gain access to national and international markets.

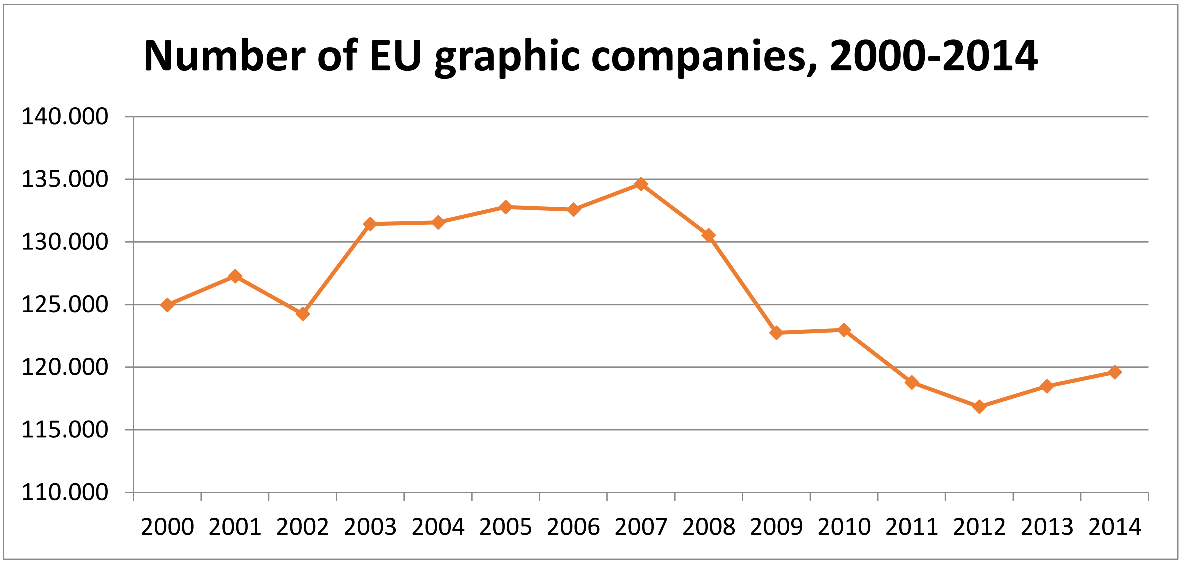
- **UNCTAD**. The United Nations Conference on Trade and Development has introduced the topic of the "creative economy" in the world economic and development agenda. The creative economy is an emerging concept dealing with the interface between creativity, culture, economics and technology in a contemporary world dominated by images, sounds, texts and symbols. Today, the creative industries are among the most dynamic sectors in the world economy providing new opportunities for developing countries to leapfrog into emerging high-growth areas of the world economy. In implementing its mandate, UNCTAD has been proactive in promoting international action in the area of the creative industries, and hence, the creative economy, emphasizing their development dimension. The creative industries are at the crossroads of the arts, culture, business and technology. All these activities are intensive in creative skills and can generate income through trade and intellectual property rights

A full statistical analysis is provided in Appendix 1

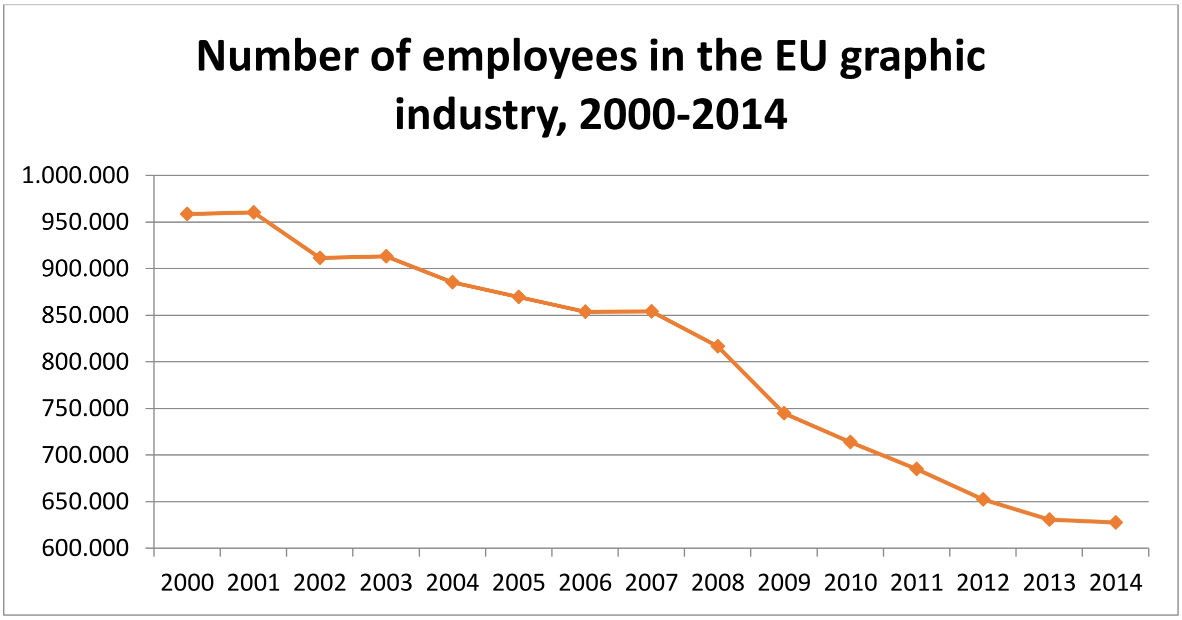
Structure of the industry
The astounding figures of growth and economic contribution are achieved by creative businesses, most of which are **small or medium sized enterprises** (SMEs) and in reality are very small or 'micro-enterprises', including individual practitioners. The British Council points out that this scenario is typical internationally and works to support international co-operation since creative businesses move more quickly to international markets than many other forms of enterprise, often using the Internet.

Figures from **Intergraf**, the European trade association for the industries, show that the graphic industry in the 28 European Member States comprises some 120,000 companies and employs around 630,000 people for a turnover of about €80 billion. The industry throughout Europe consists mainly of small enterprises, as more than 90% of the graphic companies employ fewer than 20 persons.
The following charts illustrate the recent decline and diversity of the industry (source Eurostat):

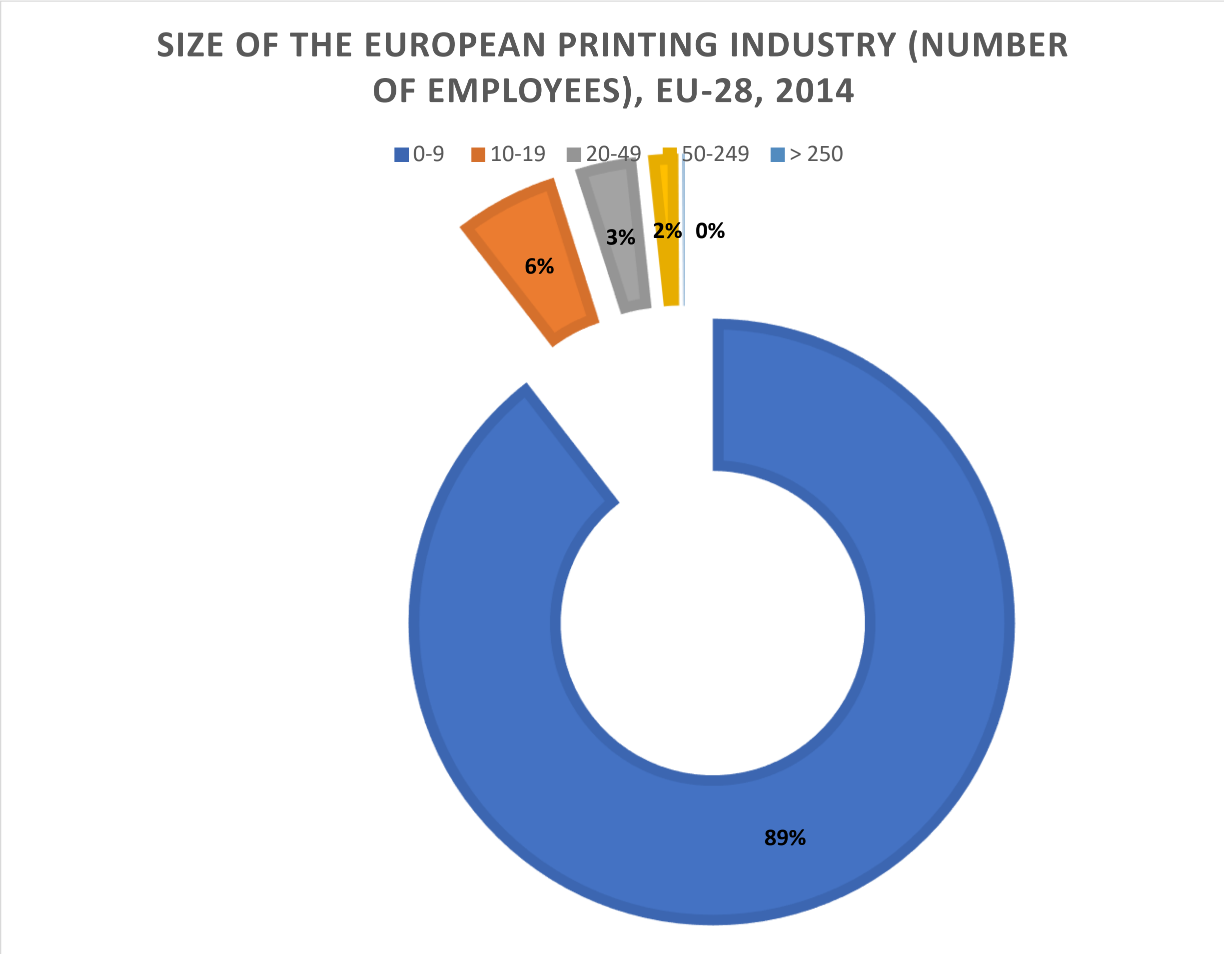


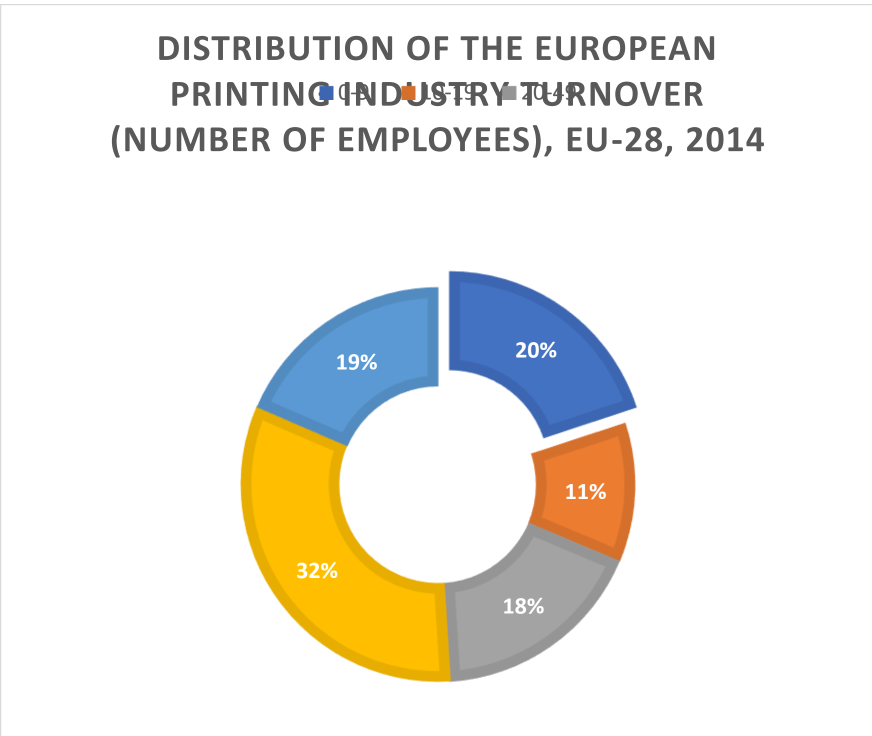


Number of EU graphic companies, 2000-2014
140.000
135.000
130.000
125.000
120.000
115.000
110.000
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

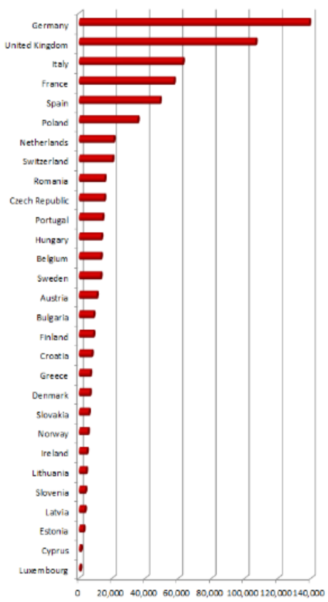


Number of employees in the EU graphic industry, 2000-2014
1.000.000
950.000
900.000
850.000
800.000
750.000
700.000
650.000
600.000
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

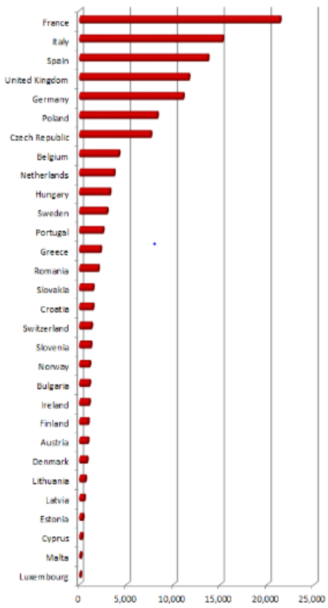

SIZE OF THE EUROPEAN PRINTING INDUSTRY (NUMBER OF EMPLOYEES), EU-28, 2014
0-9
10-19
20-49
50-249
> 250
6%
3%
2%
0%
89%


DISTRIBUTION OF THE EUROPEAN PRINTING INDUSTRY TURNOVER (NUMBER OF EMPLOYEES), EU-28, 2014
20%
19%
11%
32%
18%

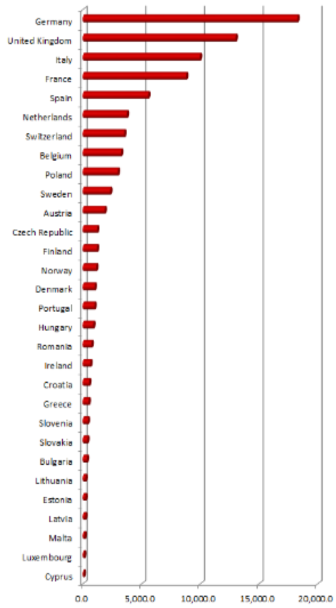
Employment in the graphic industry, EU-28 + NO + CH, 2014



Number of graphic companies, EU-28 + NO + CH, 2014



Turnover in the graphic industry, EU-28 + NO + CH, 2014, in million €



Conclusions on definition and structure

- The “creative industries” sometimes defies definition and in its widest form involved sub sectors outside the scope of this project
- The definition the project (see above) has chosen is both focussed and recognisable yet significant in scope to make an impact
- There is very little difference in the structure of the industry in all five partner countries, with the dominance of SMEs and indeed micro SMEs
- The challenges to the industry are also common across all partner countries and in Intergraf, in its 2014 report “Future skills in the Graphical Industry”, said: “It is more than likely that the successful company in the next decade needs to focus on creating new added value services for customers and offering full communication services”; and in response to the question of the cause and direction of change, said: “The answer is unfortunately not simple and there is not one answer but rather a complex interaction of technology, people, education, politics, economics, generational culture change and others and at certain times in history each of those causes has taken the lead to speed up or slow down the pace and direction of change”

The company profile – now and in the future

What is a typical creative industries company like?

- In reality there isn't a "typical" company due to the diverse nature of the industry
- There are some important sectors which have a degree of certainty and will have a better future such as:
    - Print companies that offer integrated marketing solutions
    - Digital marketing companies
    - Packaging companies
    - Point of sale companies
- So we would do well to look at successful businesses in those sectors, or are there overarching characteristics?

- In order to discern the successful characteristics we should look at the "Leaders", not the "Laggards" or "Lost" with the prospect of cascading those key entrepreneurial characteristics down to others. We can extrapolate those characteristics from the challenges into a company profile and the job profiles will follow.
- One perspective on the company challenges, and a way of defining the successful companies as being those that respond to the challenges, is the work of **Michael Porter (Harvard Business School)** and his "five forces" as follows:

    - Existing competitive rivalry between suppliers.
        - Competition can be both good and destructive – it can result in a race for innovation and good customer service practices or a race to the bottom through price cutting
        - The successful business will characteristically seek the former route with on and offline innovation, collaboration and a marketing plan

    - Threat of new market entrants.
        - As the price of technology falls and the power of processors increase new rivals with new ways to your customers' markets will emerge
        - Government policy may indeed encourage such rivals – "the new digital economy"
        - Successful companies nurture relationships (customers, suppliers, educational) and are always early adopters and ahead of new entrants in investment in equipment and talent
        - Product and service differentiation will be key and successful companies will develop their own "brand" which will act as a "wall" to be scaled by new entrants
        - Networking at a senior level will be important
    - Bargaining power of buyers.
        - The successful companies will NOT sell on price but on the trilogy of:
            - Service (multi-level relationship)
            - Innovation
            - Value added (customer ROI)
        - The aim will be to eliminate buyer leverage by constant contact and development

- Power of suppliers.
    - Similarly to working with buyers, relationship with suppliers will not be confrontational but mutually supportive
    - Building relationships is important for successful companies and will be done at all levels – operator through to CEO
    - The aim will be to deliver a price/service differentiation which will flow through to customers

- Threat of substitute products (including technology change)
    - This is perhaps the most challenging to companies and the successful ones will have multiple ears to the ground!
    - Market intelligence will emerge from relationships and networks at all levels in a company
    - The plan will to always be one step ahead of the buyer/customer and be ready to learn/innovate/collaborate

- In order to understand the effect of the above on businesses and to ensure that we encompass all types of businesses we have conducted research in all partner countries to bring forward case study examples of companies at different stages of development. The stages we have identified are as follows:
- One ‘laggard’ which is not focused on the future
- One established business that recognises needs to change but has not taken action
- One which has just started in the change process
- One which has changed already ‘future proof company’
- One start-up begun by a female

- We have conducted detailed interviews with such businesses with a common template (see below) to allow cross country comparisons and also so that we have used the results to track a journey that businesses will have to embark on to survive and thrive. Alongside company profiles we also understood the key job profiles and training which enable success. Further, the analysis of the research allows us to isolate the entrepreneurial characteristics to be incorporated into training modules.

Typical company environments today and tomorrow

- Frank Romano (Professor Emiritus at Rochester Institute of Technology, USA) in "**Transforming Today's Print Businessfor Tomorrow's Marketplace—The View From 2020" described the current state of the industry in these terms:**

- "As digital printing technology has evolved and improved, it has enabled more and more
- unique "high-value" applications. So in the past decade we have seen a shift away from long-run "commodity printing" toward shorter-run "specialty printing. And carrying on "Think of things like limited- edition photobooks, on-demand books, one-off items, garment printing, and so on"
- So, there is a much faster moving industry with the heart and engine in IT.

The industry in 2020 he describes as: "…it's vitally important that printers have much greater interaction with their customers than they traditionally have had, and keep a close eye on what products are falling in and out of favour." And: "It is also becoming more and more imperative that printing companies step outside their comfort zones and consider offering, in some way, complementary and supplementary non-print products and services, like email marketing, social media marketing, mobile app development, database management, and so on."

Another study **(Innovation leadership: it's not what you think. Every company can realise the benefits of innovation" IDC January 2016**) concluded that the key to future success in the industry was innovation:
"The companies IDC determined to be most advanced in innovation — which we call innovation Leaders — significantly outperform those at the bottom of the innovation scale (innovation Laggards) across every business metric studied." Furthermore the white paper shows the benefits of employee involvement in that: "IDC analysis indicates that bottom-up innovators have 24% higher average annual revenue growth, 13% higher average revenue growth in their fastest-growing product line, and 17% higher profit margins than top-down innovators."

There emerges therefore a picture of the sort of business which, in the future, will be successful and this picture is in complete parallel with the UK and Netherland's case studies which focus on companies recognising the need to change or having made that change. A typical company of the future will:

- Be focussed on developing **partnerships** with employees, customers and suppliers;
- Have the employees with the **skills to seek out and understand the needs of their customers** now and in the future;
- Will be au fait with the technology providers whose equipment may enable those customer objectives to be met and have an "**innovation focus**";
- Give their employees the "room" to develop their talents and use their judgement in decision making ("**entrepreneurship**"?)
- Have **IT** (equipment and skills) at the heart of the business

Job profiles

It is useful first to examine the relationship between future job profiles and the definition of an entrepreneur.
The definition provided by the UK national training standards for an Apprentice Entrepreneur is as follows:

“An entrepreneur is someone who spots an opportunity and starts a venture – a product, service or process that aims to generate income and/or create value/ positive change while solving a problem, meeting a need or providing a benefit to a specific target group.

As part of this role, the entrepreneur finds an **innovative** solution to an existing problem, identifies the resources needed to develop the solution, plans a series of **strategic** actions and collaborates with relevant **stakeholders** to develop and launch a sustainable venture.
The entrepreneur has the specialist knowledge and skills needed to start a venture, and will then delegate and/or **engage** with others where appropriate during its development to ensure it is fully established and successfully maintained
“An entrepreneur will not be constrained by the limitations of existing resources”

Amongst the skills identified are:
- Leadership and management
- Networking and relationship building
- Data management
- Managing risk
- Problem solving

Our case studies show that the key jobs of the future will be:
1. Leader
2. IT professional
3. Customer service professional

Female entrepreneurs – are girls different to boys?

One of our target groups in female entrepreneurs so in order to understand the different needs (if any). To do so we noted the report by Global Entrepreneurship Monitor - “Future potential – a GEM* perspective on youth entrepreneurship in 2015”.

In the above report the issues of female entrepreneurship are summarised as follows:

“Young women are often doubly disadvantaged in their attempts to integrate into the work force – by their gender as well as by their age. An encouraging finding in this report is that there is no difference in the educational levels of young women and men from a global perspective. The gender parity in terms of post-secondary and graduate level education is particularly positive.

Although there is also no significant difference in the exposure to business training at school, young men are 1.2 times more likely to pursue business training after school. Although, for both genders, training after school is more strongly linked to entrepreneurial behaviour, this is particularly the case for young women. For youth who pursued post-school business training, males are 1.5 times and females 1.8 times more likely to be entrepreneurs.

Compared to young women, young men have more favourable perceptions with regards to entrepreneurial competencies. The discrepancies are most significant in terms of self-efficacy and access to entrepreneurial role models. Males are 1.2 times more likely to have confidence in their own ability to run a business – perhaps linked to their higher exposure to business training, particularly after school. They are 1.3 times more likely than their female counterparts to personally know a start-up entrepreneur. In line with these findings, the rates for young women in all stages of entrepreneurial activity are lower than the male rates. Young men are 1.3 times more likely to be engaged in early stage entrepreneurial activity and 1.6 times more likely to be established entrepreneurs.”

We agree with these and the other conclusions of the report which will be taken into account.

Summary

All of the above point clearly to the key future job profiles in the industry going forward and the skills of an entrepreneur being at one and it is these that the project will take forward into the training modules. We will of course take into account the needs of both female run and early-years businesses.

Part II

Entrepreneurial education related to the company profiles

1. Introduction

This document is part of an overall desk research activity of the Thrive! project. It aims to describe the development of entrepreneurial skills and competences in Europe in general and for the printing and media industry specifically. In the following pages of the report the abbreviation EE will be used for **E**ntrepreneurial **E**ducation.

The information has been collected from a variety of sources which mainly have a relation with education and training, social affairs, innovation and development of companies. Where available also national sources and relevant literature has been consulted if applicable been used in the deceptions and analyses.
The focus is on Europe of course, but this does not prevent one from also taking the global developments and activities into account when describing the major changes and challenges for sustainable growth of companies.
For this reason the following quote from the World Economic Forum[1] finds its way into this report: ‘Entrepreneurship has never been more important than it is today in this time of financial crisis. At the same time, society faces massive global challenges that extend well beyond the economy.
Innovation and entrepreneurship provide a way forward for solving the global challenges of the 21st century, building sustainable development, creating jobs, generating renewed economic growth and advancing human welfare.’

The key issues in the Thrive! project are the ways and means businesses have to apply in order to thrive in a sustainable way in future. From all research and business cases that have been reviewed over the last 3 tot 4 years it is apparent that the flexibility and strength to adapt developments, innovations, market trends and customer’s demands is of paramount importance. Companies have to monitor the developments, and implement the changes in technology, new ways of customer relations management and marketing rapidly. A flexible, well-educated and trained workforce is of the utmost importance.

Entrepreneurial skills and competences, entrepreneurial education and training go far beyond the traditional boarders of ‘learning how to manage a company’ or ‘education of employers.’
The European Commission published the ‘New Skills agenda for Europe’ in June 2016. Amongst the 10 actions in the Action Plan, the Commissions announced a review of ‘ The Recommendation on key Competences[2]’ to help more people acquire the core set of ‘Skills to work and live in the 21st century. One of the competences is formulated as; ‘Sense of initiative and entrepreneurship**:** ability to turn ideas into action through creativity, innovation and risk taking as well as ability to plan and manage projects.’

[1] Educating the Next Wave of Entrepreneurs
Unlocking entrepreneurial capabilities to meet the global challenges of the 21st Century
[2] Recommendation of the European Parliament and of the council of 18 December 2006 on key competences for lifelong learning (2006/962/EC)

2 Entrepreneurial education in general

Entrepreneurial education are described in many different ways, largely depending on the angle which is taken by the ‘definer’ in order to prove a certain vision, find clever solutions for problems, try to influence the decision processes of politicians or whatever the reader can think of.
In the Thrive! project the entrepreneurial skills and competences serve as a tool and as the foundation to base the aims and goals of the project. Trying to identify the key elements businesses have to be aware of and work on in order to safeguard their existence for the future.The Thrive! project is based on the conviction that entrepreneurial competences are key elements to contribute to the development of and description of company profiles. In order to use the entrepreneurial competences to serve as this basis it is necessary to have a clear vision on what the key elements of the competences are and how these are described.

The desk research that forms the basis for this report, has been conducted to find these pillars for the project and make them into a solid foundation. It is important to also recognise and respect the differences that exist between the EU member states and more so between the countries that participate in the Thrive! project. The research shows a variety in ways how entrepreneurial competences are integrated in education, if at all. There is no single strategy for that in EU member states, the European Commission itself has developed an overall concept for entrepreneurial education and agreed upon the following definition in 2012: *'Entrepreneurship education is about learners developing the skills and mind-set to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal) which contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective.’*

This definition makes it possible for the Thrive! project to further define the specific competences the project will need, of which skills and attitudes will be the predominant elements to be considered.
The importance of this definition is the dual focus it shows: on the one contains the entrepreneurial skills and competences a persons will need to turn ideas into action. This creativity, in a combination with specific skills needed, will enable a person to create a business or business like organization, but also on the other hand stresses that entrepreneurial skills are not only needed to be become a good employer. They are also important to for the broader spectrum of ‘normal’ life and society, not only for economic activities.

In a survey conducted by the European Commission in 2014, two main approaches with regards to EE in the member states were shown: the broad based understanding as described in the EU key competence (as quoted above in this chapter).

The second vision more or less limits entrepreneurial education to entrepreneurs’ training and economic activities. This is not the view Thrive! has and the project will work from the broader approach.

3. Entrepreneurial education a bird's eye view

This chapter will focus on the strategies and funding regimes of the EU members with regards to EE**.**

The information about EE in the EU countries varies to a large extent. The availability also is not standard. The researchers have not been able to gather a lot of information about Germany. The report largely used information from a Eurydice study 'Entrepreneurship Education at School in Europe'.[3]

To show which EU countries adapt the EU description and which countries have their own way of describing EE or none at all figure 1 will give the details.

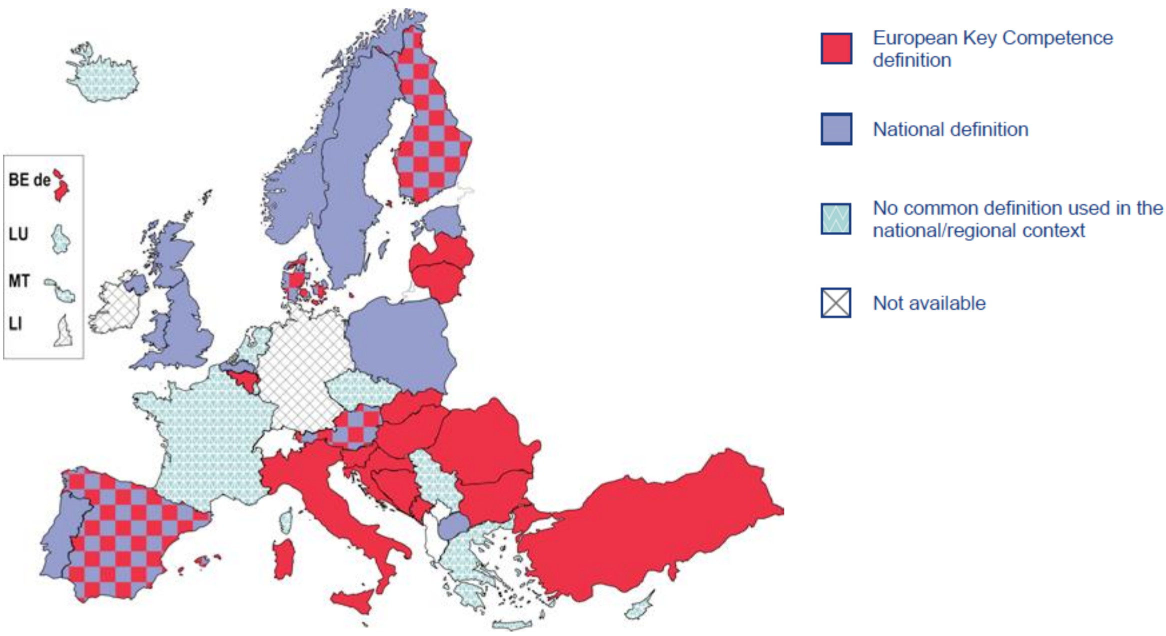


Figure 1: Definitions of entrepreneurship education used, shared and agreed by most stakeholdersat central level, 2014/15. Source: Eurydice.

A country specific remark should be made by Figure 1 about the Netherlands: There is a common understanding of entrepreneurship education rather than a commonly accepted definition, which is understood in the context of general education to mean the development of pupils' sense of responsibility, autonomy, creativity, curiosity, and initiative.

[3] European Commission/EACEA/Eurydice, 2016. Entrepreneurship Education at School in Europe. Eurydice Report. Luxembourg: Publications Office of the European Union. 2016

The figure clearly marks the difference between groups of countries. The purple/red spotted areas have a mixed approach between a national- and European approach. As said before, for Germany no information is available.

Figure 2 shows the strategies of 38 countries that have been surveyed in 2014/2015.

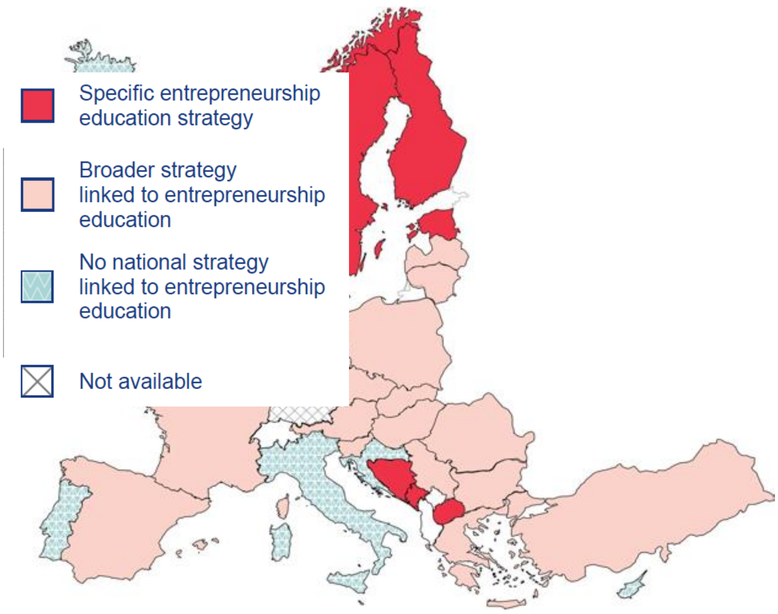


Figure 2: Definitions of entrepreneurship education used, shared and agreed by most stakeholders at central level, 2014/15 Source: Eurydice.

Out of these 38 countries 11 have their own specific strategy regarding EE(marked red). Then 18 countries (marked peach) have the broader perspective with regards to EE, so not only linked to entrepreneur's education. In the blue spotted countries there are no relevant specific strategies that could be distinguished.

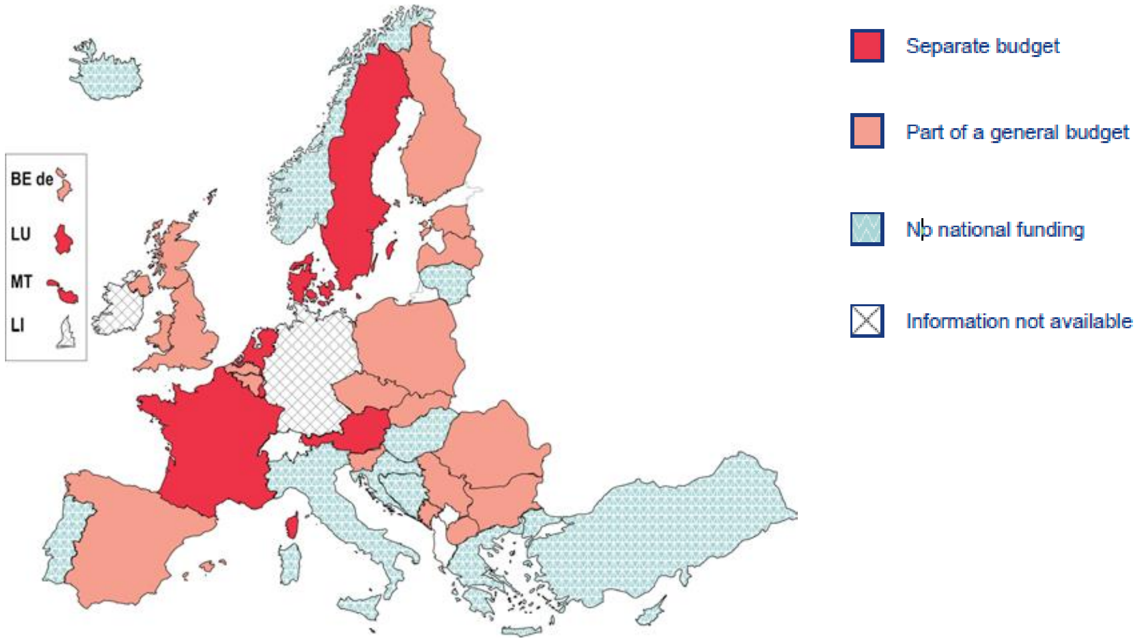


Figure 3: National funding for entrepreneurship education in 2014 Source: Eurydice

Figure 3 shows the funding regimes over the 38 countries. As can be seen only a limited amount of countries allocates a separate budget to EE. A much larger amount has sources of co-funding for EE that can come from various sources, European funding (ESF) of c0-financing from other sources (autonomous regions is a possibility.

To also show the funding schemes for the past and future years, Figure 4 is important. In the red marked countries EU funds are applied to fund the promotion of EE,

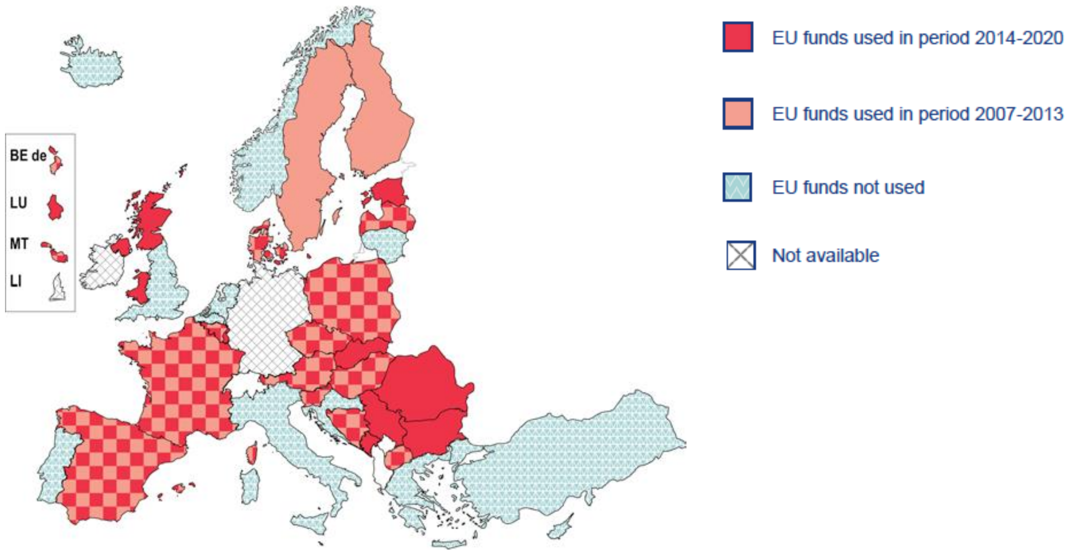


Figure 4: Use of EU funding to promote entrepreneurship education, over 2007-2013 and 2014-2020 Source: Eurydice.

It is a good sign that a large number of countries is funding the activities related to EE in some way or another and with own funding or co-funding. It may mean the development is continuing.

The Figures displayed in this part of the report, in addition to the comments and explanation in the accompanying texts give an overview of the strategies and funding regimes in the various EU countries. Of course it is not the aim of this report to only make these statements and draw a number of conclusions. The information and the analysis if it are of vital importance to underpin the basic idea of the Thrive! project that working on the company profiles, with an in depth focus on entrepreneurial skills and competences is a valid approach, will be possible to support sustainable growth in the EU countries. It shows that the differences in the countries call for an approach as promoted in this project and secondly the information gives ample proof that the possibility to implement to concepts on EE and the courses that will be developed during this project can be tested and evaluated in a large number of countries.
The next chapter will deal with a more detailed description of the position, status and possibilities EE has in the participating countries in this project.

4. A more detailed picture of EE in participating countries.

As stated in the text above, this chapter will deal with more detailed information about the position of EE in the participating countries.
To get a clearer idea about the position of EE in the overall educational system in Europe the following figures are incorporated in this chapter.

Primary education

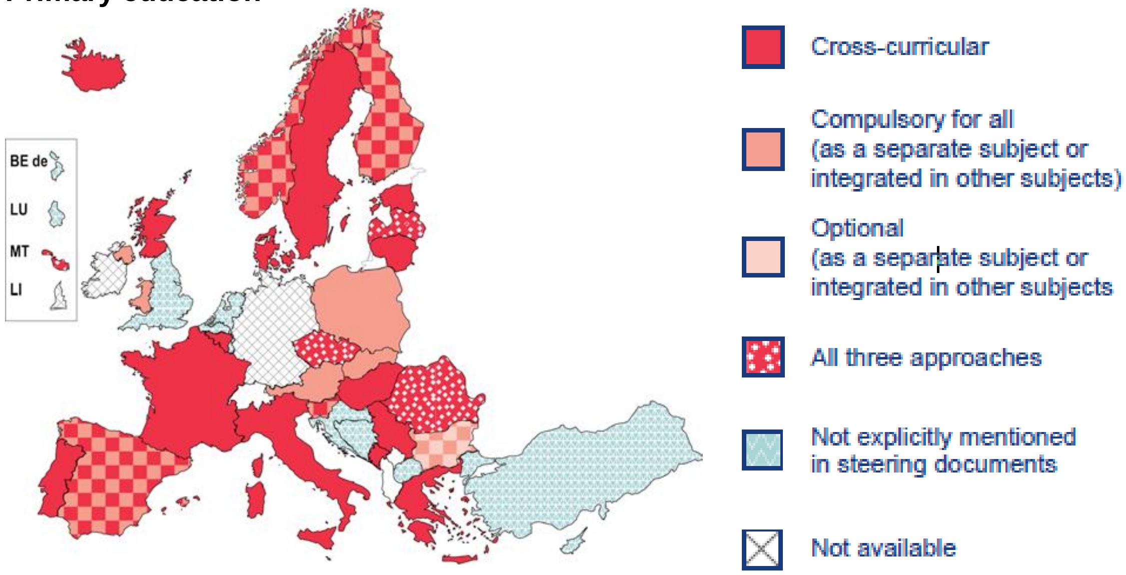


Figure 5 Curricular approaches to entrepreneurship education, 2014/15 Source: Eurydice.

Lower secondary education

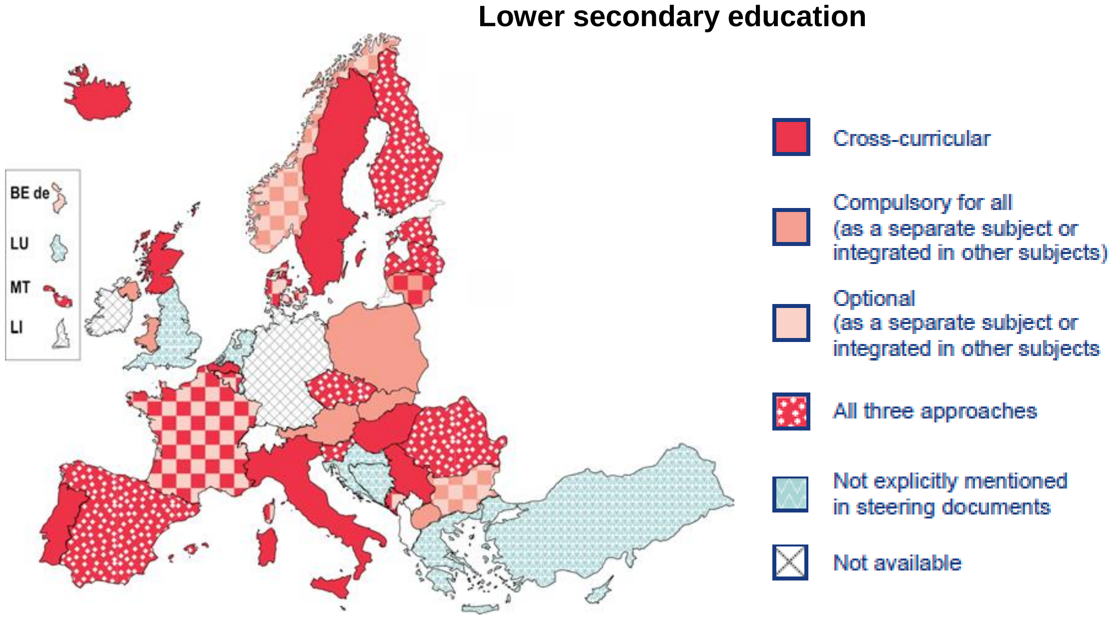


Figure 6 Curricular approaches to entrepreneurship education, 2014/15 Source: Eurydice.

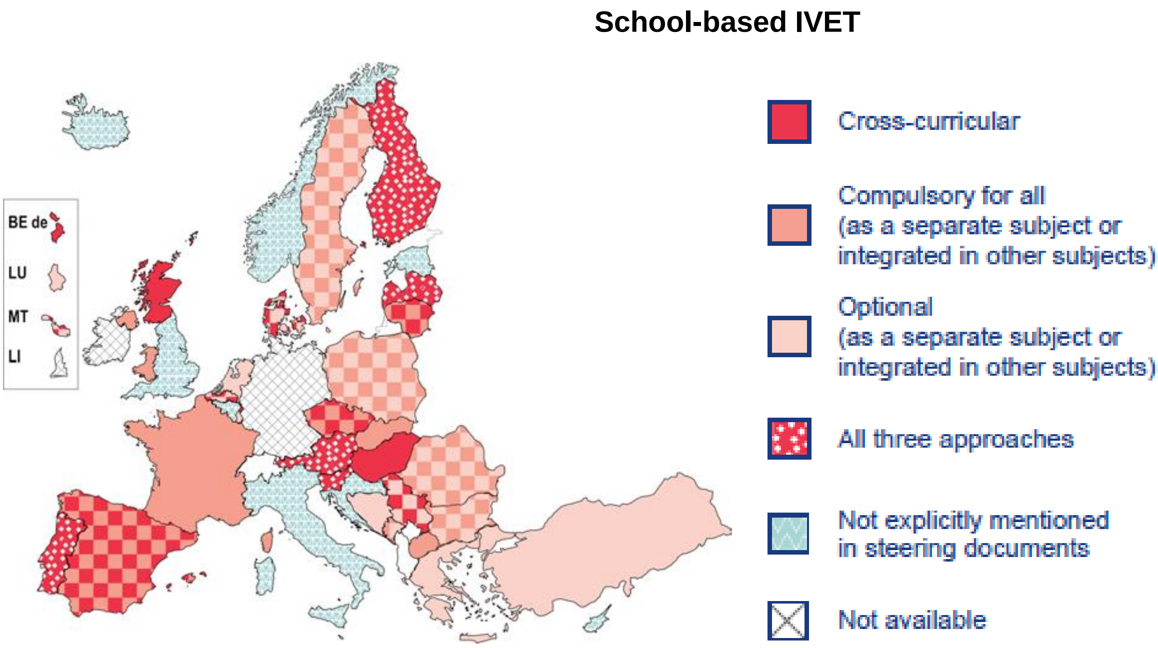


Figure 7 Curricular approaches to entrepreneurship education, 2014/15 Source: Eurydice.

The figures 4, 5, 6 and 7 are based on the analysis of central steering documents of the countries that are part of the Eurydice area. It does not have to imply that in all areas of education the activities or the curricula bear the name or label entrepreneurial education. They however are part of the skills and components that are labeled as transversal or have a general bearing recognized as creative education problem solving activities and so on.

It should be mentioned that the research was based on the three specific areas that are recognized as entrepreneurial education:

- Attitudes (self-confidence and sense of initiative);
- Skills (creativity, planning, financial literacy, managing resources, managing uncertainty/risk, teamwork); and
- Knowledge (knowing how to assess opportunities, understanding the role of entrepreneurs in society and awareness of entrepreneurial career options.

This explanation should also clarify the fact that also in primary education one can find traces of clear EE. It could be specifically in those countries where a more ‘modern’ approach to educating pupils in the age group of 5 to 12 years can be found. They specifically focus on cross boarder projects, encompassing multi subjects. In these modern curricula the self exploration of younger children is emphasized, even models of problem solving, teamwork, taking responsibility get a considerable amount of attention.

Unfortunately the areas of higher professional education and specializations have not been included in the studies of Eurydice. The project will have to find out how to cover these parts in its further development of the professional profiles that will be included in the company profiles.

From the figures the message can be learned that about half of the countries have no real specific strategy or curricula for entrepreneurial education and training. However there seems to be an understanding about the (very) broad approach for EE.

5. Country specific information

Belgium Flanders
In general the Flemish part of Belgium recognizes the importance of the board description of EE and traces are to be found in all areas of education. In the types education that have been researched by Eurydice ISCED 1-2 (primary education and lower vocational education at secondary level age groups 4 to 15/16) and ISCED 3 IVET (individual vocational education and training in upper secondary education age group16/17 and up, mostly after compulsory education).

Belgium Flanders does have a specific strategy for EE, laid out in the Entrepreneurs Education Plan, which covers ICED levels 1-8, comprising all levels that are known in this international standard and in education. The plan has been updated and prolonged in 2015 and now runs till 2020.
Main objectives are:

- pupils, students and course participants have the necessary entrepreneurial spirit when leaving education;
- before leaving education, pupils, students and course participants have had the opportunity to prepare themselves for entrepreneurship;
- pupils, students and course participants are motivated to become entrepreneurs;
- teachers show entrepreneurial spirit and have a balanced view of entrepreneurship.

The main stakeholders are represented and participating in this action plan; government, trade organizations, employment agencies, education etc. etc..

In the ISCED2-3 levels EE is recognized as a cross curricular objective and is included as a separate subject.

There is no specific support for teachers or teacher's training. There are however two organizations that provide specialist training courses for teachers involved in EE.

United Kingdom, England
England has a special approach to EE. It is intended to to help young people to be creative and innovative, to take risk and manage them with determination. EE is divided in:

- enterprise capability – enterprise skills and a can-do attitude;
- financial capability – understanding and managing basic finances;
- Economic and business understanding – understanding the business context.

There are however no specific national strategies in vogue for EE, although the former government had formulated some loose end to stimulate youngsters to become entrepreneurs.

EE is not a part of the English national curriculum. The only part in the curriculum that could be recognized if so wanted as EE is financial literacy.

Entrepreneurship Education is not mentioned explicitly in the teacher's standards which define the minimum levels for teachers.

Spain

Spain does have a national definition for EE, adapted from the description in the European Reference Framework for key competences in Life Long Learning. Several national "order" are in place to further narrow the EE contents down to:
'To turn ideas into action. This requires awareness of the situation to be solved, as well as the capacity to select, plan and manage the knowledge, skills, abilities and attitudes required to attain the intended goals'.
An other Order states: 'entrepreneurship education must include knowledge and skills related to career and job opportunities, together with financial education, awareness of business organisation and processes, entrepreneurial attitudes and mind-set, the ability to think creatively as well as to manage risk and uncertainty'.

Although these orders have been made, there is no national strategy for the implementation of EE. This does however not mean that there are no activities on the contents of EE and implementing it in education. The overall objective is generally understood as: 'to improve the employability of young people, increase the quality and stability of youth employment, promote equal opportunities and promote entrepreneurship'.

Strangely enough there is a firm system of teacher training with regards to EE. At initial teacher training level and further training levels it is compulsory to acquire a certain amount of credits for EE related competences.

Also the Autonomous Communities have a grip on the level and contents of EE.
Initial and further training possibilities are also available in the regions. How they view EE is different, a broad based approach in one region and a much more narrow approach in another, adjacent region may well be the case.

The Netherlands

The Netherlands, does have a national agreement about the definition and description of what EE entails although there is no current national strategy: 'Entrepreneurship education is about learners developing the skills and mindset to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal) which contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective'.

The Netherlands has a wider strategy related to entrepreneurship and innovation, and the need to improve education and training are explicitly highlighted such as increased collaboration between education and business while linking to previous and ongoing EE activities.

The term EE is not specifically mentioned in the central documents of the Dutch Government. The educational organization however have the possibility to use national support programs to facilitate EE, in primary, VET and University levels.

Especially in primary education the focus is on enterprising behavior, encouraging determination, creativity, solution-oriented thinking and developing social skills.

In the Netherlands teacher training colleges are autonomous and are therefor not required to teach EE. In recent years a couple of projects were initiated to support EE for initial training of teachers.

In Education especially in VET EQF level 3 and 4 schools have taken organizational initiatives to have various elements of EE implemented in their curriculum. There are no real figures of the success of these programs.

Germany

The economic success in Germany is still based on a traditional understanding respective model of innovation. Innovation is mostly understood as a result of a systematic process of research and development - dominated by engineers. Most of the innovations are improvements of existing products or services (so-called incremental innovations) – disruptive innovations are seldom. Against this background entrepreneurial spirit is of secondary relevance in the German innovation system. Job security and reliable frame conditions of work (e.g. well-regulated work schedule) are held dear. Even the younger people prefer to work in a status as employee in well-established structures – often in well-known big companies like BMW or Siemens. Consequentially school and university education are focused on preparing scholars/students for a career as a salaried employee. There are of course political discussions about teaching economics as a compulsory subject at school, but it is not a standard in the curricula so far.

A second aspect has to be kept in mind: in Germany "entrepreneurship" is mainly associated with "starting a business".

Germany doesn't have something like a "(national) strategy for entrepreneurship" – less than ever a well-defined curriculum for entrepreneurship education.

Nonetheless there is a special approach to entrepreneurship in Germany that is mainly targeted at assistance measures for people who want to found a company. These measures include

- Supply in infrastructure like science parks, business accelerators etc.
- Offers for consultancy e.g. assistance in developing a business plan.
  There are specialised consultants working e.g. at the chambers of commerce or at innovation and technology parks.
- Special programs for financing startups.
- Websites delivering information, addresses up to guidelines or learning modules around the central topics of entrepreneurship
  (see the business start-up portal of the Federal Ministry of Economic Affairs and Energy http://www.existenzgruender.de/EN/Home/inhalt.html).

Since the end of the nineties entrepreneurship was introduced as a field of study at German universities (in 1998 the first professorship for entrepreneurship was established at the European Business School in Oestrich-Winkel (university with private funding body)). Meanwhile there are about 135 professorships for entrepreneurship in Germany.

To establish a culture of entrepreneurship and to stimulate university-based start-ups the Federal Ministry of Economic Affairs and Energy also executes a special program called EXIST (http://www.exist.de/EN/Home/home_node.html).
The program started in 1998 and consists of three elements

- EXIST Culture of Entrepreneurship:
  implementing a university-wide strategy for entrepreneurial culture.
- EXIST Business Start-up Grant:
  preparing innovative technology and knowledge based start-up projects
  (target groups: students, graduates and scientists).
- EXIST Transfer of Research:
  funding the resource development necessary to prove the technical feasibility of start-up ideas based on research and the preparation necessary to launch a business.

Furthermore there are several initiatives in Germany to place entrepreneurial knowledge on the school stage. They are merged on the website “Unternehmergeist-in Schulen” (entrepreneurial spirit at school) (http://www.unternehmergeist-macht-schule.de/DE/Startseite/home_node.html;jsessionid=98DC3D755702013AFCBA07D1EDFD0149 – in German language only).
Examples for activities on the school level are e.g.

- Management games.
- Internships in companies.
- “Business at school” (Schülerfirmen).
- Projects.

(for details see above-mentioned website)

The current Global Entrepreneurship Monitor (GEM) delivers information about the quality and success of the activities for supporting entrepreneurship in Germany:

On the basis of the analyses of 65 countries Germany achieves quite a positive track record on some key-aspects for entrepreneurship:

- Government entrepreneurship programs (rank 3 out of 65).
- Internal market burdens or entry regulation (rank 7 out of 65).
- Entrepreneurial finance (rank 10 out of 65).
- Commercial and legal infrastructure (rank 10 out of 65).

On the other hand the report discloses profound weaknesses in the German entrepreneurial ecosystem:

- Entrepreneurship education at school stage (rank 46 out of 65)
- Entrepreneurship education at post school stage (rank 47 out of 65)

In their Country Report for Germany (part of the GEM) the Federal Ministry of Economic Affairs and Energy reasons that “The main challenges now are to improve training in entrepreneurship both inside and outside the classroom (…).” (July 2017).

6 Entrepreneurial skills and competences

In the previous chapters the term entrepreneurial skills and competences have been used a lot and in a couple of different settings. In this last chapter 5, this all has to boil down into a specific direction the Thrive! project will go or wants to go with entrepreneurial skills and competences and entrepreneurial profiles.

Decisions have to be taken wether the project will focus on the narrow approach of the concept of EE or the broad based concept of EE.
In short, the narrow based concept or strategy can be described as: a set of skills and competences that enable a person to manage an be responsible for a company and thus can be called employers education and training or employer's skills and competences. Focus will be on financial literacy, managerial matters, leadership and the like. The word **narrow** should not be interpreted as 'inferior' or 'not to be favoured'.
In the broad based approach entrepreneurship is seen as an overall competence, described as: 'entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social'. With this description the term entrepreneurial is lifted up above the level of 'fit for employers only'. It implies activities of people in all spheres of personal and working life.
Although the Thrive! project has its focus on companies and specifically the development of companies to be sustainable for the future, the project bases its work and development on this broad perception of entrepreneurial.

The Joint Research Committee of the EU has produced very valuable research and development work on especially this approach of the EE development.

The work of JSC originated amongst others from the Commission's initiative to launch the New Skills Agenda for Europe in 2016, working together to strengthen human capital, employability and competiveness, to actively participate in society, to re-entering the job market as an employees or self -employed person and also to to starting up enterprises.

The way of thinking in the JRC to describe entrepreneurship as a competence subsequently leading to developing a very clever model of describing the all-over concept of entrepreneurship in skills, competences and groups, all interrelated. This enables users to apply sort of a holistic approach, being able to use all of the system or parts of it, without losing the overall strength of the principle.

Within the project it needs further study how it can be applied best, but the project will certainly draw from the models and descriptions produced.

On page 28 the full model is shown and described briefly.

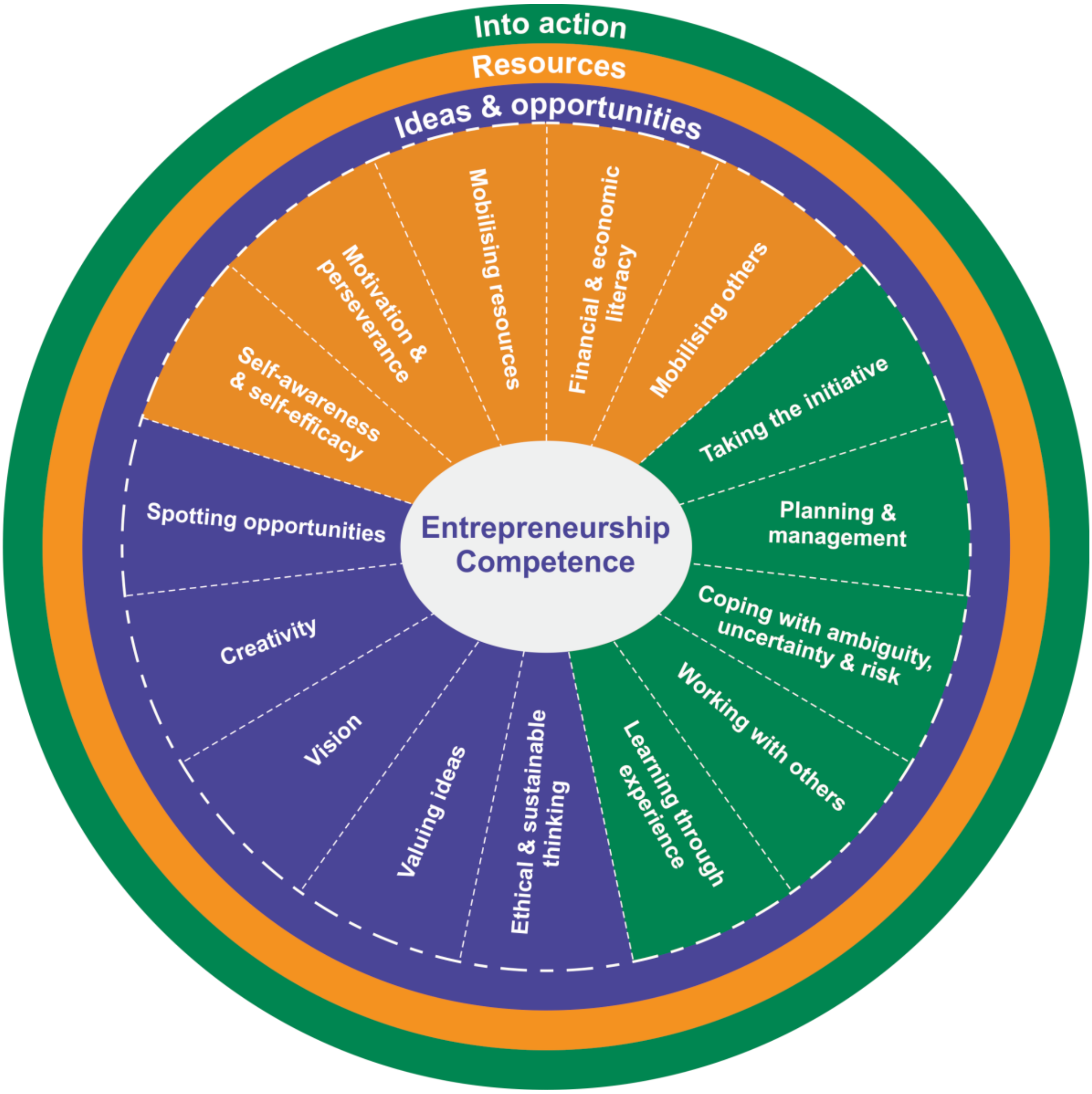


Figure 8 The EntreComp model

The three rings represent the three competence areas, within the circles the 15 competences are situated, each group corresponding with the colour of the ring of the competence area. By representing the method in this way, the whole system is integrated and interrelated.
The purple inner ring **Ideas and opportunities** with the belonging competences:

1. Spotting opportunities, Creativity, Vision, Valuing ideas, Ethnical & sustainable thinking.
2. The second orange more inner ring **Resources** with the belonging competences:
3. Self-awareness, Motivation and perseverance, Mobilising resources, Financial and economic literacy, Mobilising others.

EntreComp can be used as a reference for the design of curricula in the formal education and training sector. It can also be used for activities and programs in non-formal learning contexts (for instance, to foster intrapreneurship with existing organizations). It aims to establish a bridge between the worlds of education and work as regards entrepreneurship as a competence.
Intrapreneurship has been introduced in the paragraph above. It simply refers to entrepreneurship within the company. This term is still debated, the project may start using it again to possibly differentiate between internal and external activities.

Within the project also choices need to be made to what extend all 15 competences will be elaborated or possibly some competences described in learning outcomes by JRC, can be applied.

On this page and the following page the overview of the respective parts of the EntrComp conceptual model is shown. The description of it will be given on the next pages.

Areas	Competences	Hints	Descriptors
1. Ideas and opportunities	**1.1 Spotting opportunities**	Use your[5] imagination and abilities to identify opportunities for creating value	• Identify and seize opportunities to create value by exploring the social, cultural and economic landscape • Identify needs and challenges that need to be met • Establish new connections and bring together scattered elements of the landscape to create opportunities to create value
	1.2 Creativity	Develop creative and purposeful ideas	• Develop several ideas and opportunities to create value, including better solutions to existing and new challenges • Explore and experiment with innovative approaches • Combine knowledge and resources to achieve valuable effects
	1.3. Vision	Work towards your vision of the future	• Imagine the future • Develop a vision to turn ideas into action • Visualise future scenarios to help guide effort and action
	1.4 Valuing ideas	Make the most of ideas and opportunities	• Judge what value is in social, cultural and economic terms • Recognise the potential an idea has for creating value and identify suitable ways of making the most out of it
	1.5 Ethical and sustainable thinking	Assess the consequences and impact of ideas, opportunities and actions	• Assess the consequences of ideas that bring value and the effect of entrepreneurial action on the target community, the market, society and the environment • Reflect on how sustainable long-term social, cultural and economic goals are, and the course of action chosen • Act responsibly

Tabel 1, EntreComp conceptual model

2. Resources	**2.1 Self-awareness and self-efficacy**	Believe in yourself and keep developing	• Reflect on your needs, aspirations and wants in the short, medium and long term • Identify and assess your individual and group strengths and weaknesses • Believe in your ability to influence the course of events, despite uncertainty, setbacks and temporary failures
	2.2 Motivation and perseverance	Stay focused and don't give up	• Be determined to turn ideas into action and satisfy your need to achieve • Be prepared to be patient and keep trying to achieve your long-term individual or group aims • Be resilient under pressure, adversity, and temporary failure
	2.3 Mobilizing resources	Gather and manage the resources you need	• Get and manage the material, non-material and digital resources needed to turn ideas into action • Make the most of limited resources • Get and manage the competences needed at any stage, including technical, legal, tax and digital competences
	2.4 Financial and economic literacy	Develop financial and economic know how	• Estimate the cost of turning an idea into a value-creating activity • Plan, put in place and evaluate financial decisions over time • Manage financing to make sure my value-creating activity can last over the long term
	2.5. Mobilizing others	Inspire, enthuse and get others on board	• Inspire and enthuse relevant stakeholders • Get the support needed to achieve valuable outcomes • Demonstrate effective communication, persuasion, negotiation and leadership
3. Into action	**3.1 Taking the initiative**	Go for it	• Initiate processes that create value • Take up challenges • Act and work independently to achieve goals, stick to intentions and carry out planned tasks
	3.2 Planning and management	Prioritize, organize and follow-up	• Set long-, medium- and short-term goals • Define priorities and action plans • Adapt to unforeseen changes
	3.3 Coping with uncertainty, ambiguity and risk	Make decisions dealing with uncertainty, ambiguity and risk	• Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes • Within the value-creating process, include structured ways of testing ideas and prototypes from the early stages, to reduce risks of failing • Handle fast-moving situations promptly and flexibly
	3.4 Working with others	Team up, collaborate and network	• Work together and co-operate with others to develop ideas and turn them into action • Network • Solve conflicts and face up to competition positively when necessary
	3.5. Learning through experience	Learn by doing	• Use any initiative for value creation as a learning opportunity • Learn with others, including peers and mentors • Reflect and learn from both success and failure (your own and other people's)

Tabel 1, EntreComp conceptual model

Table 1 gives an overview of the EntreComp conceptual model, showing how the entrepreneurship competence has been broken down into different parts within the framework. Competences are numbered for reference issues, the order in which they are presented does not imply a sequence in the acquisition process or a hierarchy: no one element comes first, and none of them is more important than the others. There are no core competences and enabling competences in the EntreComp conceptualization. Depending on the context of take-up, it is reasonable to expect that more emphasis may be put on some of the competences and less on others, or else that competences are streamlined to mirror an entrepreneurial process created to foster learning through entrepreneurship. In other words, the EntreComp Framework can be seen as a starting point for the interpretation of the entrepreneurship competence, which over time will be further elaborated and refined to address the particular needs of specific target groups.

On the next page the EntreComp progression model will be shown. The brief description is here: Entrepreneurship as a competence is developed through action by individuals or collective entities to create value for others. The progression in entrepreneurial learning is made up of two aspects:

1. Developing increasing autonomy and responsibility in acting upon ideas and opportunities to create value;
2. Developing the capacity to generate value from simple and predictable contexts up to complex, constantly changing environments.

Foundation		Intermediate		Advanced		Expert	
Relying on support[6] from others		**Building independence**		**Taking responsibility**		**Driving transformation, innovation and growth**	
Under direct supervision.	With reduced support from others, some autonomy and together with my peers.	On my own and together with my peers.	Taking and sharing some responsibilities.	With some guidance and together with others.	Taking responsibility for making decisions and working with others.	Taking responsibility for contributing to complex developments in a specific field.	Contributing substantially to the development of a specific field.
Discover	Explore	Experiment	Dare	Improve	Reinforce	Expand	Transform
Level 1 focuses mainly on discovering your qualities, potential, interests and wishes. It also focuses on recognising different types of problems and needs that can be solved creatively, and on developing individual skills and attitudes.	Level 2 focuses on exploring different approaches to problems, concentrating on diversity and developing social skills and attitudes.	Level 3 focuses on critical thinking and on experimenting with creating value, for instance through practical entrepreneurial experiences.	Level 4 focuses on turning ideas into action in 'real life' and on taking responsibility for this.	Level 5 focuses on improving your skills for turning ideas into action, taking increasing responsibility for creating value, and developing knowledge about entrepreneurship.	Level 6 focuses on working with others, using the knowledge you have to generate value, dealing with increasingly complex challenges.	Level 7 focuses on the competences needed to deal with complex challenges, handling a constantly changing environment where the degree of uncertainty is high.	Level 8 focuses on emerging challenges by developing new knowledge, through research and development and innovation capabilities to achieve excellence and transform the ways things are done.

Table 2 EntreComp progression model

The EntreComp overview table, shown on the next pages depicts the 3 areas and all the 15 competences, but develops them only on the three levels of proficiency that apply to all citizens: the foundation, intermediate and advanced levels. The expert level by definition captures a level of expertise that is beyond average, and more context-dependent and, as a result, it is not detailed in the overview table.

		Levels of proficiency		
Area	**Competence**	**Foundation**	**Intermediate**	**Advanced**
Ideas and opportunities	**Spotting opportu-nities**	Learners[8] can find opportunities to generate value for others.	Learners can recognise opportunities to address needs that have not been met.	Learners can seize and shape oppor-tunities to respond to challenges and create value for others.
	Creativity	Learners can develop multiple ideas that create value for others.	Learners can test and refine ideas that create value for others.	Learners can transform ideas into solutions that create value for others.
	Vision	Learners can imagine a desirable future.	Learners can build an inspiring vision that engages others.	Learners can use their vision to guide strategic decision-making.
	Valuing ideas	Learners can understand and appreci-ate the value of ideas.	Learners understand that ideas can have different types of value, which can be used in different ways.	Learners can develop strategies to make the most of the value generated by ideas.
	Ethical and sus-tainable thinking	Learners can recognise the impact of their choices and behaviours, both within the community and the envi-ronment.	Learners are driven by ethics and sustainability when making decisions.	Learners act to make sure that their ethical and sustainability goals are met.
Resources	**Self-awareness and self-efficacy**	Learners trust their own ability to generate value for others.	Learners can make the most of their strengths and weaknesses.	Learners can compensate for their weaknesses by teaming up with oth-ers and by further developing their strengths.
	Motivation and perseverance	Learners want to follow their passion and create value for others.	Learners are willing to put effort and resources into following their passion and create value for others.	Learners can stay focused on their passion and keep creating value de-spite setbacks.

	Mobilising resources	Learners can find and use resources responsibly.	Learners can gather and manage different types of resources to create value for others.	Learners can define strategies to mobilise the resources they need to generate value for others.
	Financial and economic literacy	Learners can draw up the budget for a simple activity.	Learners can find funding options and manage a budget for their value-creating activity.	Learners can make a plan for the financial sustainability of a value-creating activity.
	Mobilising others	Learners can communicate their ideas clearly and with enthusiasm.	Learners can persuade, involve and inspire others in value-creating activities.	Learners can inspire others and get them on board for value-creating activities.
Into action	**Taking the initiative**	Learners are willing to have a go at solving problems that affect their communities.	Learners can initiate value-creating activities.	Learners can look for opportunities to take the initiative to add or create value.
	Planning and management	Learners can define the goals for a simple value-creating activity.	Learners can create an action plan, which identifies the priorities and milestones to achieve their goals.	Learners can refine priorities and plans to adjust to changing circumstances.
	Coping with uncertainty, ambiguity and risk	Learners are not afraid of making mistakes while trying new things.	Learners can evaluate the benefits and risks of alternative options and make choices that reflect their preferences.	Learners can weigh up risks and make decisions despite uncertainty and ambiguity.
	Working with others	Learners can work in a team to create value.	Learners can work together with a wide range of individuals and groups to create value.	Learners can build a team and networks based on the needs of their value-creating activity.
	Learning through experience	Learners can recognise what they have learnt through taking part in value-creating activities.	Learners can reflect and judge their achievements and failures and learn from these.	Learners can improve their abilities to create value by building on their previous experiences and interactions with others.

Tabel 3 EntreComp Overview

In summary
The report shows that the area of entrepreneurial education in Europe is diverse to say the least. Also in the participating countries in this project, Germany, Belgium - Flanders, the United Kingdom - England, Spain and the Netherlands this diversity is apparent. Unfortunately for Germany no information is available as was for the other four countries. In all countries entrepreneurial education or at least concepts of it can be found.

The European Commission has published a ‘ working definition’ for entrepreneurship and - education, basically the Thrive! project adapts this definition also as guidance for the project: ‘entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social’.

The project can use this broad concept of entrepreneurship in many ways. The EntreComp concepts and more detailed descriptions will be very helpful in the next stages of the project.
It will at least give support to the innovative descriptions of the company profiles and will largely be decisive in outlining the content of the various learning modules that will be developed.

Appendix 1

The statistical shape of the industry

The European Commission in their section on "Growth – internal market, industry, entrepreneurship and SMEs: Sector reports" describe the industry as follows:
Printing industry

The printing industry has a long tradition in Europe. The sector is interconnected with other forest-based industries such as wood-working, pulp, and paper. It is an important employer, providing jobs for highly skilled and qualified staff. The sector is currently facing challenges related to changing habits, shifts to digital communication, and competition from non-EU countries.

Why the printing industry is important

- **Employment** - the EU printing sector includes about 120,000 companies that employ around 770,000 workers. The industry is dominated by family-owned, small and micro companies that operate mainly on domestic markets.
- **EU economy** – printing enterprises generate an annual turnover of around EUR 88 billion from printing on paper, plastics, or textiles.
- **Demand** – the sector reacts to niche markets and local needs. Modern technologies have increased the sector's productivity and its ability to provide a complete range of services. At the same time, process automation has resulted in a change of the main workforce from craftsmen to technicians.

They go on to describe the challenges and opportunities of the industry as follows:
Challenges faced by the printing industry

- **Changing habits** - changes in reading habits and the shift toward web-based media and e-solutions have significantly reduced the demand for print and the revenue from paper-based advertising. The growth in printing output is mainly restricted to printed packaging and digital print.
- **Competition** - competitors from low-cost countries, notably in Asia, are capable of fulfilling European consumer standards and are putting strong pressure on prices. Imports from China have increased more than fourfold over a decade.
- **Declining demand** - the economic crisis has worsened the decline in demand for printed products and increased financial institutions' reluctance to provide loans to small and medium-sized enterprises (SMEs).
- **Production costs** - the increasing costs of energy, raw materials, and labour in Europe have further decreased profit margins.
- **Workforce** – the risk of unemployment is intensified by the workforce's low mobility, partly due to its specialised and non-transferable skills. At the same time, opportunities arising from technological developments change the industry's skill requirements, making the longer-term replacement of its ageing workforce and traditional skills necessary.
- **Environment** - the EU printing sector operates under strict environmental requirements and undertakes ambitious voluntary initiatives to demonstrate its commitment to sustainability.

Opportunities for the printing sector

- **New services and products** - the emergence of new technologies encourages the building of closer relationships with customers and creating more added value through diversified services. New services can include offering printing with database management, while innovative processes such as 3D printing, intelligent labels, and flexographic printing offer potential for new services.
- **Image** – the sector can benefit from increased consumer awareness toward sustainability as it has an excellent track record of environmental and social performance. This differentiates EU manufacturers from non-EU low-cost competitors. Furthermore, integrating multimedia communication services widens the product range and can increase the attractiveness of the sector to new employees.
- **Research and innovation** - new paper-based products with added functionality such as paper-printed electronics are needed. These new can open new markets and bring higher added value for the printing industry.

Smithers PIRA in their report "The future of European Printing to 2021" in 2016 say that the turnover of the industry will grow from €156bn to €160bn by 2021 but that volumes will decline by 1.6% each year. Within this there are winners and losers with packaging's share of the market growing from 44.7% to 56.6% whilst "publications" decline from 22.2% to 14.4%. These seismic changes have significant implications for companies who must navigate their way to the future through the dynamic changes going on in the market bringing the "Opportunities for the printing sector" above into sharp focus as a blueprint for success.

The shape and size of the industry in all partner countries is very similar so a look at the UK will provide a snapshot of all partner countries. The UK looks as follows:

Source: BPIF Research analysis of ONS data

UK Printing		March 2010	March 2011	March 2012	March 2013	March 2014	March 2015*	March 2016*
	Count	**10,540**	**9,916**	**9,652**	**9,105**	**8,907**	**8,895**	**8,599**
	Employment	**138,867**	**132,656**	**129,194**	**125,585**	**123,648**	**122,242**	**118,311**
	Turnover (£000s)	**13,652,302**	**13,715,565**	**14,130,780**	**13,762,799**	**13,630,299**	**13,964,953**	**13,813,676**

Size by employees	Employees	2010	2011	2012	2013	2014	2015	2016
	2-9	7,622	7,311	6,854	6,479	6,497	6,277	6,090
	10-19	1,329	1,215	1,193	1,193	1,184	1,160	1,142
	20-49	855	794	759	774	766	730	722
	50-99	299	284	250	258	249	247	260
	100-249	134	137	139	143	151	136	135
	250+	61	59	55	53	53	50	51
		10,300	**9,800**	**9,250**	**8,900**	**8,900**	**8,600**	**8,400**

Turnover Size £	Turnover (£000s)		2010	2011	2012	2013	2014	2015	2016
	<£99		3,975	3,773	3,570	3,329	3,382	3,242	3,116
	£100-£249		2,513	2,391	2,238	2,127	2,189	2,150	2,134
	£250-£499		1,463	1,392	1,286	1,201	1,139	1,118	1,067
	£500-£999		979	931	870	881	846	791	781
	£1,000-£4,999		1,082	1,039	1,018	1,024	1,006	972	958
	£5,000+		288	274	268	338	338	327	344
			10,300	**9,800**	**9,250**	**8,900**	**8,900**	**8,600**	**8,400**

Age of Business	Age		2010	2011	2012	2013	2014	2015	2016
	<2 years		1,051	980	841	810	N/A	N/A	890
	2-3 years		1,040	853	843	765	N/A	N/A	756
	4-9 years		2,802	2,607	2,294	2,003	N/A	N/A	1,563
	10+ years		5,407	5,360	5,272	5,322	N/A	N/A	5,191
			10,300	**9,800**	**9,250**	**8,900**	N/A	N/A	**8,400**

Employment by gender	Gender	2013	2015
	Male	89,280	82,954
	Female	34,720	35,046
		124,000	**118,000**

Employment by age	Age	2013	2015
	16-24	10,540	9,912
	25-34	23,560	21,122
	35-44	29,140	32,568
	45-54	38,440	32,096
	55-64	17,980	18,408
	65+	4,340	3,894
	Total	**124,000**	**118,000**

Appendix 2

Case Studies

In our research in developing case studies we focussed on companies at different stages of development and therefore point to the “journey” that companies will have to make in the next few years in order to be successful and Thrive!
The case studies are as follows:

- One ‘laggard’ who is not focused on the future – **Belgium** (stage 2)
- One established business and recognises needs to change – t**he Netherlands**
- One who is just started in the change process – **Germany** (stage 2)
- One who has changed already ‘future proof company’- **United Kingdom**
- One focused on a female start-up – **Spain** (stage 2)

Case study - Belgium

Company information

This is a private limited company founded in 1996. The company has only two employees who are the owners. Financially the company is stable, but with little scope for investment expenditure. Their current equipment is suitable for their current workload and customer needs but a lack of finance and the skills to make the “next step” is keeping them from moving forward to new markets/customers.

The owners were educated in a traditional way for the industry – ie mostly technical with limited commercial/financial content.

Markets – now and in the future

In the last three years they see a shift from quality and service towards price. Customers used to appreciate service, but currently price is the decisive factor in deciding who to grant the order to. They still give good service to those who want it, but they also responded to the market by offering a cheaper minimum-service option. They created this by cutting the service costs; they didn’t make additional efforts to make their operational processes cheaper.

A second shift they see is that orders they receive are more amateurish. Some years ago, most orders from private customers and SMEs came via small agencies, but these days ‘everyone things they can design it themselves on their computer’. As a result, not all files are always directly suitable to print, which might lead to extra costs.

They realise they cannot cater to the big clients. Therefore, they have the following four customer groups:

1. Private individuals (e.g. wedding invitations, birth cards)
2. Small SMEs (e.g., flyers, posters, stationery)

3. Design agencies (who prepared orders for 1 and 2)

4. Bigger printers, who subcontract smaller batches they are not equipped for. The problem is that they do this via subcontracting, so the company cannot try to keep the customer for the future, and they remain dependent on their bigger competitors for these jobs.

For the future markets they feel they cannot address that yet as it is difficult to predict or anticipate it.

They hope they will keep on getting the smaller batches from the bigger printers, but they fear there might come innovations that might make the smaller batches for the big ones cheaper too, e.g., making offset better suited for small batches.

Next to that, they see local small SMEs as their most interesting market. However, they have not taken any specific marketing actions to target this group. They hope mouth-to-mouth marketing in the region will work well enough.

Change

In general the company is not changing much. They have an idea about which customer groups are more interesting, but they don't do specific marketing to them, nor have they changed their general marketing messages to reflect this. Technical innovations are generally too expensive for them. Mostly, their innovation is limited to reacting to changing demands they see from their *current* clients.
Not much change is happening, and they are not using outside help. They are trying to figure it out on the go.

The biggest changes they see are technology and market demands. But they are a bit fatalistic about both: they don't have the resources to keep up, so they hope change doesn't go too fast.

Training and development

There are no resources to do training. They keep their knowledge up to date by reading professional news when time allows it, e.g., Grafisch Nieuws, a monthly magazine about the Flemish graphic sector. Most innovations mentioned there are beyond their reach, but when they see something potentially interesting they try to investigate it themselves by finding more articles about it. They don't go to fairs like Drupa. Training is not a usual topic for discussion and certainly not in the field of entrepreneurship, marketing, etc.

What would they wish they had known 5 years ago?

There is nothing big they would like to tell to their 5-years-ago-selves. They have limited resources, so they could not have jumped on big innovations even if they wanted to.
It's a capital-intensive sector, and since their resources are limited, they can't do much.

Case Study - The Netherlands

“We don’t look for customers, we look for partners.”

Company background

The title of this case description is a direct quote from the CEO and owner of the company. It is an SME company in the sign and plotting industry, part of the printing and communication industry in the Netherlands.
This ‘quote’ could well serve as the motto for the company, which is now: ‘We know how to impress’. To make the lead motto of the company complete the following expression will serve: “We are partners with our main suppliers”.

The company operates in the signage industry, originating from an screen-printing company that was established in the early eighties of the former century. In 2004 CEO took over the shares of the company and had worked for more than 10 years for the company at the time of the takeover (which was with the full consent of the then main shareholder). Having started as the youngest employee, the present owner had made a career in becoming technical director by then.

The company still has the status of a limited company, the director being the only shareholder.
Over the last three years the company has gone through a period of growth in turnover from 3,9 million Euro in 2014 to 4,7 million in 2016, with a real high of 4,9 million in 2015. In fact the increase in 2015 appeared to be too much, was difficult to handle then. Now the company tries to stabilise the turnover for the time being. Along with this boost in turnover also the amount of employees grew from 27 to 37 in 2017. Due to changes in the structures of a couple of limited parts of the overall company, it is quite hard to give exact figures about the profitability. There was a substantial profit over the years 2014 - 2016.
The company had about 1,3 million euros of capital investments, with approximately 1/3 of the total being spent in each year.

Training and consultancy expenditures amounted to a total of 50.000 euros over the years 2014, 2015 and 2016. The company does not allocate a fixed budget for these activities. When training, support and consultancy is needed, it will be financed in one way or another. The company believes a fixed budget may limit the possibilities or may have to be spent all of a sudden at the end of a fiscal year.
In outline the overall budget for training and consultancy would divide as follows: training and support for employees 30.000 euros and for management (including consultancy) 20.000.

Change

The company realised that change was necessary in 2004. The company then gradually started to change into a different organisation, staying in the same building, with basically the same staff. In the last 5 to 6 years the internal organisation had been changed considerably, workflows and production processes have been altered to guarantee on

time delivery and, even more important, to produce with predictable output of high quality.
These operations of change in the company structure lead to the realisation that a different approach to the variety of services and products the company renders to the market was needed.

Another reason for the relentless changes is caused by the technological changes in digital areas of the sign/digital printing and plotting equipment and most certainly even so the demand of the customers.

Market

At this moment the company recognises the following 6 customer groups:
- Public transport, commercials by means of self-adhesive film;
- Fleet owners, car wrapping, house styles and others;
- The so called ‘square meter customers’, large suppliers as sign makers, advertising agencies and the like;
- Industrial market, direct delivery / production for the producers / manufacturers of industrial products. An example is “Porch”: an adhesive foil was developed for certain areas of cars to avoid visible damage caused by road stone chippings
- Web shops: pictures, other small stuff.[4]
- Projects: combinations of 2 or more segments mentioned above. This segment is growing and becomes more and more interesting. Product innovation can be seen as a spontaneous offspring. If needed and desired, project management can also be supplied by the company.

These segments have paramount significance in the company. The CEO is convinced each segment demands a specific approach and thus a different marketing strategy and marketing tools. This area will to be developed in the coming period with the following changes:
- A commercial manager will be added to the management team shortly to initiate and supervise this element in the company.

- The integral management information system / product information system / order information system will be developed, extended and fine-tuned to accommodate production, quality and other essential features for each segment in the most optimal way

The motivation and inspiration to be continually innovative is part of the DNA of the company, its owner, managers and employees. They can only have a sustainable future and “Thrive!” if they are constantly in the forefront of industry developments. For that reason the company sees the need to partner with its main suppliers. If there is a win-win situation between the company and, for example HP, in product and production innovation, both parties gain from that.

[4] This segment is bound to be discontinue, because of too low margins and to much handling costs.

The main areas of change have been:

- The organisational structure of the company;
- Technological innovation;
- Internal production innovation for the benefit of customers;
- Becoming a full service company
- Problem solving for customers

The company has very strong relations with the employees. The company has eschewed modern developments in the labour market such as flex working, flex and short/zero hours contracts the company and has 37 staff, all with a fixed contract. They don't believe in 'cheap' workers for a company that wants to have sustainable future. They do use agencies for temporary personnel when needed, but is a person has been with the company for a while and has shown to be of value, a fixed contract will be possible.
The salaries are based on the official collective labour market agreement of the Dutch Graphic-Media sector, all primary and secondary arrangements are part of the fixed contract of each employee.

Finally the company has decided not to grow much bigger than it is now with regards to the amount of employees (It could possibly grow to max 50) as the owner is convinced that the way they run things now with this size of team, with this kind of constant change, with these short communication lines, with this amount of trust, with this amount of individual responsibility (entrepreneurial skills and competences as described in ….) will not be possible with a much larger team.

Case Study - United Kingdom

Introduction

The first thing to establish is that there is no such thing as a "future proof company". There is the company that is aware of the challenges that the future will throw up and works hard and intelligently to minimise the risk to the business and to stay ahead of the competition. This case study focuses on one such business.
Company background

The company has been in business in its present form for 25 years. During that time the driving force behind the change in the business has been the current owner and Group CEO. It is a private limited company employing 140 people, a number that has doubled in the last ten years but has remained substantially constant in the last three. During those three years turnover has grown slightly and profits have grown by nearly two thirds, in spite of a doubling of capital investment. One interesting development in the last two years in to begin to charge separately for "services" rather than the supply of print output (more later)
Whilst some of the directors are graduates/MBAs/professionally qualified, the majority of the employees are craft/NVQ 3 or 4 level.

What has changed/been the driver of change in recent years?

In spite of being technically advanced, well invested and IT literate many of the products and services are becoming commoditised – more orders but less value. In very recent times their data handling experience and skills was market leading but that too is suffering from competition fuelled by the wider availability of technology and the willingness of customers to buy at the cheapest price. So the need for change in the business is driven by technology and its exploitation by customers.
The response of the business is to automate the simple and to be a "problem solver" to the customer for the complex.
The process of change

The transition to problem solver is being achieved by:

- A detailed analysis of the individual customer jobs that the company does
- Applying a workflow solution wherever possible to the low margin jobs
- Focus on the difficult, higher margin, jobs and being the customer's expert on those
- The result is that the customer , who will invariably want both types of job, get their jobs but with a resultant margin for the business and retention of the relationship

This increased focus on the complex or "difficult" jobs and the use of employee expertise to problem solve for the customer has led to the ability, in the last two years, of the company to charge for some of the services. This marks the beginning of the next stage in the continuing transition of the company from a purely print company through to a marketing services company. Print will always, for the present, be the primary medium for those marketing services but with an eye on the future the company acquired a marketing and communications company and has integrated it into its own business.
Is this the way to go?
Employment and training at the company

Some 85% of the employees are from traditional industry backgrounds with the remainder being from backgrounds and with skills that the business needs to go forward – eg customer service, IT, marketing.
This does not mean that the company is neglecting the majority – in the last 12 months it has opened an on-site learning academy which it uses to educate both staff and customers. The approach with new staff was originally to teach them what they needed to know to do their jobs. But that has changed to reflect the change in customer demand and the need to focus on the complex jobs and be that "problem solver". That means that new employees in a customer facing role are getting grounding in the science and technology of the industry in general, not just "what they need to know". This is turning out more rounded, better informed employees better able to work with customers to get the best solution and the best return on investment for the customer and the company.
The same learning academy is also proving successful with customers who become more knowledgeable about the techniques employed by the company and the levels of skill and knowledge needed to fulfil their orders.
The nature of employment will continue to change within the company with a workforce more knowledgeable across the business as a whole. The role of Chief Information or Chief Technical Officer will become crucial to a successful business in the future as well as the hybrid job of Marketing Technologist.
In summary

In the introduction it was said that there was no such thing as a "future proof company" and that is not true just because companies are not changing, moreover it is because the future is changing. Companies therefore have to:

- Keep their customers close
- Keep their competitors closer
- Keep their ears close to the ground on technology developments
- Ensure their employees are “fit for the future”

Case study - Germany

Company information

A “traditional” family owned printing company, founded in 1889. In 1995 they started a new business division dealing with Direct Mail. Their turnover in the last three years has been stable at just of €8m and in the same period the number of employees has fallen over 10% to 133.
As far as the background and training within the company, the owners are either technically or commercially trained within the industry and employees are craft or commercially trained as appropriate.

Markets

The company, whilst not completely, has begun the move from its traditional base to dialogue and multi-channel offerings. Data, and its use to help customers better target mailings, is the focus for the future. From data mining, through machine learning and artificial learning, to the secure use and protection of data are all important to the company’s future.
The motivation for accepting the need for change comes from customers and competition. Customers demand new ways of attracting and retaining their customers and at the same time require the use of fewer resources by virtue of better targeted mailing and the reduction of wastage. Communications still tends to be subject to disruptive change with new players on the scene, new technologies – but this itself is both threat and opportunity with new products, services and markets opening up.
But to deliver these changes, change had to take place in the company – new competences had to be employed and external assistance had to be sought. The company worked with their local university and trade association to address the needs for a fast changing business. One of the biggest lessons to learn was that of co-operation. This meant both internal co-operation between departments and colleagues but also with external partners and most of all – with customers.

Training

Although no specific training relating to change has yet taken place, the company does have a plan beginning later in 2017 to change this.
Of high importance however, is the company’s “culture of innovation” which is fostered by two initiatives:

1. “Creativity workshops” – these occur every month and involve employees from R&D, production, sales & marketing and distribution and have the task of reviewing new trends and demands
2. “Innovation team” – taking their lead from the creativity workshops, this multi-disciplinary team work on new ideas from concept through to delivery.

Case study - Spain

Company background

This is a small freelance sole trader who has been in business for three years. Growth has been substantial at over 25% for the last three years, with a growth in profits to match. The business spends approximately 5% each year in keeping equipment up to date and a further 12% on training adding to the owner’s degree level education in areas like quality, audit and environmental matters.

Markets

Markets originally were graphic arts companies, in particular small ones but now branching into and becoming expert in sector based companies such as the chemical and food sectors. In future the business intends to focus on providing consultancy services in quality and environment to companies with high value products.

Change

The owner was personally inspired to enter this area and continues to base future decisions on the needs expressed by customers. And the direction of change is and will continue to be directed by customers and this will be backed up by specific advice and training on, for example, new areas of regulation.

Training and development

The business owner recognised the need for professionalism to make a success of her business – to have clear goals, resources and competent work administration. In addition to specific technical training as mentioned above, the owner has undertaken a course in entrepreneurial skills including self-organisation, finance etc. The results appear to be a confident owner and a successful business.

In terms of what the owner would like to have known earlier, she highlights administration/ business regulation and market research and assessment to avoid unprofitable ventures.

Appendix 3

Structured Country Information
In order to also get a more specific and detailed impression of the situation in the participating countries in the priority areas of this project, the partners have performed country research.
The guidelines for what data were needed are stated in the document in Appendix 3. 1 of this report.

The results of this part of the research are very diverse and therefore it will be very hard to come to general conclusions and recommendations to put forward in the on-going development of the project.
Having stated this, also marks an important point for the project. The fact that it has been hard to find / gather valid information implies to a certain extent, that the development of entrepreneurial education is scattered in Europe. See also part II of this chapter. Not only entrepreneurial education but also the description of the sector, the figures over the years are quite hard to compare. This will have its effects on the development of further materials and the validation of it in the countries. Special attention is needed here.

The presentation of the results will be done per country, per ‘section’ of the guideline.

- Belgium
- The Netherlands
- The United Kingdom
- Germany
- Spain

1. Information about the industry

Ad 1. In this first area we are looking for both statistical data and information about trends. If you can add conclusions supported by / based on facts that would be very welcome

Ad 1.2. As agreed we focus on the Graphic-media / communication and information industries.

The amount of companies per sector / segment according to size

1 - <25; 25 - <50; 50 - <100; 100 - <250; >250>

If size is not available, maybe turnover will be, please use that. Both is perfect

Give figures of 2010 and 2015/2016 for both amount of companies and amount of people employed;

Please also state the sources you acquired the figures from

If you have, or can produce yourself, please add short analyses of the figures and statements you have found.

2. Information about entrepreneurship in education

2.1 Information about specific entrepreneurial courses, modules, chunks of education and training in formal education with main focus on VET.

Ad 2.1. For the project the most relevant areas of education will be the equivalent of EQF level 3/4 and 5/6, 7, so higher education

Try to group your findings in the mainstream of education, the most important clusters;

Indicate type of school, type of students, amounts of students, duration of the course;

We are looking for existing information in the countries / regions, if available also state the key learning outcomes / areas that are covered.

2.2 Describe the situation of 2 also for the commercial education and training sector (many times called non-formal education), related to the graphic-media / communication and information industries. This could also be courses delivered by trade organisation with a certain ‘industry/sector recognition’ or ‘certificates’

Try to group your findings in the mainstream of trainings, the most important areas or themes;

Indicate type of supplier of this training, type of participants, amounts of participants, duration of the course;

We are looking for existing information in the countries / regions, if available also state the key learning outcomes / areas that are covered.

2.3 Describe the obvious trends you are able to find in the on-going development of entrepreneurial education and training.

If you come across research / presentations in relation with this subject, please include some statements from it. If there is an English summary, please add that.

If there is a need to have materials translated, indicate that in your results. We are especially looking for ideas / materials / information that is t**ransferable** (**transversal**) and can thus be applied to the communication and information industry.

3. Specific information about company profiles / company descriptions/ characteristics till 2016. So look back what you can find about now, back to 2010 or 2012

Strategic papers / reports describing company development and demands for entrepreneurs,
Sector development papers (chambers of commerce, industrial organisations)
Labour market issues / papers

4. Information about educational profiles from formal and non-formal sources (ref. §2.1 and §2.2 with regards to entrepreneurial education and training.

From VET education (please indicate EQF and National levels)
From General higher education (please indicate EQF and National levels)
From University,/ academic education
Other fields or areas where you found interesting and transferable profiles.

5. Information about newbies, start-ups, new entries in the industry

newly established companies between 2010/2012 - 2016, per segment;
what kind of companies are pre-dominant;
are / were there supporting measures / programmes for start-ups

- From the sector
- From the region
- From the national government

Are there figures about success and failure

5.1 If there is any information about female entrepreneurs and start-ups, can you provide the relevant data for this research?

Country results

Belgium

1. Information about the industry

The data used in the following paragraphs will deal with Flanders only. It would complicate the amount of information too much if we would have to include also the Wallonian (French) part, the German part and the various regional areas and the federal arrangements.

Like in all countries, there are various institutions and organisations that provide statistical material for Flanders. As stated in the first pages of this report, there are many different 'creative industries. This project deals with mainly the information and communication industries as defined on page 1 of this paper.

For Flanders the figures about companies have been taken from the database (website) of the Antwerp Management School, who performs research on the dynamic statistical data for the creative industry, commissioned by the Flanders DC.
For further information please check the table on page 45.
The main conclusions for the table and the development of the sector are given on this page 43 and page 44:

Notes:

- Where possible, the study calculates numbers in two types of ways: bottom-up and top-down. When both were available, we used the average of the two.
- Columns marked with an asterix are not explicitly in the report, but have been calculated with by us with these data.
- For the total employability, we summed self-employed, employers and employees. This assumes that all employers are owned by one individual working in the sector, which is inaccurate.
- For the average company size, we divided employability by the business, with is inaccurate when it comes that people who are not employed for VTE.
- For 'Written media – Books', we did not consider resellers and libraries.
- For 'Written media – Press', we did not consider distribution, wholesale and retail.
- For 'Communication and Advertisement', we did not consider market research and media planning.

The report also indicates the trends.

- For the book sector, from 2010 to 2013, we see a decrease in the number of employers (between 1 and 12%) and employees (between 1 and 6%). The number of freelancers and the total turnover is stable.
- For the press sector, from 2010 to 2013, all numbers are dropping. The number of freelancers is only going down with 2%, but the number of employers is shrinking with 12% to 14%. The number of VTE of employability is also declining with 8 to 11%. Turnover is down with 5 to 7%.
- In communication and advertising, the number of freelancers is rising significantly: around 23% between 2010 and 2013. The number of employers is going down with 7%, and the number of employees is also shrinking (between 2% and 8%).

The turnover, ambiguously, is shrinking with 8% in the bottom-up numbers, but rising with 26% in the top-down numbers.

- For design, from 2010 to 2013, the number of freelancers has decreased with 3%. On the other hand, there is a growth of 19% resp. 18% for the number of employers and employees. Turnover has increased with 19%. As such, the trend is growth, with a small shift from freelance towards employability.

4. Information about educational profiles from formal and non-formal sources (ref. §2.1 and §2.2 with regards to entrepreneurial education and training.

No further information available

5. Information about newbies, start-ups, new entries in the industry

No further information available.

	Self-employed (#)	Employers (#)	Employees (VTE)	Total employability *	Businesses *	Average company size *	Turnover (€)	Turnover / business *	Turnover / employee *
Written Media - Books	**2984**	**98**	**4370**	**7452**	**3082**	**2.4**	**€ 734,079,521.50**	**€ 238,182.84**	**€ 98,507.72**
Authors	2643	0	0	2643	2643	1.0	€ 92,908,480.00	€ 35,152.66	€ 35,152.66
Publishers and importers	241	66	1911	2218	307	7.2	€ 454,474,511.50	€ 1,480,373.00	€ 204,902.85
Printers	99	27	2069	2195	126	17.4	€ 92,332,044.00	€ 732,794.00	€ 42,064.71
Binders	1	5	390	396	6	66.0	€ 94,364,486.00	€ 15,727,414.33	€ 238,294.16
Written Media - Press	**923**	**101**	**4132**	**5156**	**1024**	**5.0**	**€ 1,391,955,860.50**	**€ 1,359,331.90**	**€ 269,968.17**
Freelance journalists	271	0	0	271	271	1.0	€ 16,574,255.00	€ 61,159.61	€ 61,159.61
Press agencies	310	11	93	414	321	1.3	€ 30,097,855.50	€ 93,762.79	€ 72,700.13
Press photographers	208	1	1	210	209	1.0	€ 13,022,320.00	€ 62,307.75	€ 62,011.05
Publishers	134	89	4038	4261	223	19.1	€ 1,332,261,430.00	€ 5,974,266.50	€ 312,664.03
Communication & Advertisement	**5575**	**654**	**5740**	**11969**	**6229**	**1.9**	**2268517833**	**€ 364,186.52**	**€ 189,532.78**
Advertisement, comm. and PR	5479	632	5601	11712	6111	1.9	€ 2,224,497,287.50	€ 364,015.27	€ 189,933.17
Production houses	96	22	139	257	118	2.2	€ 44,020,545.00	€ 373,055.47	€ 171,286.17
Design	**4916**	**283**	**988**	**6187**	**5199**	**1.2**	**€ 594,916,608.00**	**€ 114,429.05**	**€ 96,155.91**
Total	**14398**	**1136**	**15230**	**30764**	**15534**	**2.0**	**€ 4,989,469,822.50**	**€ 321,196.72**	**€ 162,185.34**

2 Information about entrepreneurship education
The information about entrepreneurship is very diverse and dispersed in Flanders that it would be a very hard task to get all of it in a legible overview.

The basic information we provide here contains a project-based organisation to bring together all entrepreneurial innovative initiatives in Europe.
Practice into Policy: Entrepreneurial Learning! #PiPEnt creates a database for all kinds of projects.
A spotlight on entrepreneurial learning projects supported by EU funding
From active citizenship to life skills, from social innovation to start-up… #PiPEnt is about showcasing the diversity of entrepreneurial learning from projects from across Europe – finding out what EU projects have achieved and what they learned in the process.
Through this initiative, we want to show the value and learning from these projects, disseminate the good work happening across Europe and make sure further projects can learn from what has gone before.
#PiPEnt is happening in three phases
Join: **2017 Call for Innovative Projects** (March-April 2017) resulted in projects summaries from 32 EU funded projects shared from organisations across Europe.
Meet: **Practice into Policy Live! Entrepreneurial Learning event**
On 11 May 2017, we brought together practitioners and policy makers to hear more about some of the practices shared through the call for innovative projects. You can find them in our database and filter according to your needs:

Learn: **Practice into Policy Online: Entrepreneurial Learning** (launch September 2017)
All projects submitted are being reviewed and will be collated into an online library of practice, identifying the crucial learning for both future project and policy development. This will be promoted to a European audience including fellow practitioners and policy makers at all levels.
What is entrepreneurship education?
In a nutshell? Entrepreneurship education is about learning by doing. PiPEnt is not just about business start-up – but any type of ideas into action learning process, different ways of creating value for others. This could be about anything from citizenship to agriculture, from social innovation to community actions, from mini-companies to creative ways of developing literacy.
As a guide, we work with the EntreComp framework definition of entrepreneurship as 'a transversal key competence across all spheres of life' – being entrepreneurial is about 'when you act upon opportunities and ideas and transform them into value for others… financial, cultural, or social'.

Who is helping to make this happening:
Organising partners are crucial to lead and coordinate:
Bantani Education asbl – Bantani Education is a non-profit based in Belgium, working collaboratively to drive entrepreneurial and creative learning.
EARLALL – The European Association of Regional and Local Authorities for Lifelong Learning is an international non-profit association registered in Belgium and involved in designing and implementing strategies on Lifelong Learning.
Lifelong Learning Platform – The Lifelong Learning Platform is an umbrella for 40 European organisations active in the field of education, training and youth. Their members reach out to several million beneficiaries.
Vleva – Vleva is the Liaison agency between Flanders and Europe. It opens up European policy to Flemish governments and civil society to share and promote best practices.
University of Wales Trinity Saint David – UWTSD is widely recognised as one of the world's foremost institutions in creativity-based entrepreneurship education through its International Institute for Creative Entrepreneurial Development.

3 Specific information about company profiles / company descriptions/ characteristics till 2016. So look back what you can find about now, back to 2010 or 2012

The most important report that describes the situation of the print-media Industry and its development until 2020 is: '2020 start vandaag! Competenties voor de toekomst in de
printmedia. Vlaams Arbeidsmarktonderzoek voor de Toekomst in de printmediasector' by Grafoc (2014). The main conclusions form that report are stated below.

- Compared to other sectors, more small and micro-sized firms.
- Amount of companies and jobs is decreasing. Since 2006, 120 companies have shut down their business (13%). Between 2006 and 2010, there was a 15,2% decrease of jobs.
- Trend of a decreasing sector is projected to continue in the coming years.
- The labour force is old compared to other sectors. Only 5,9% of employees are younger than 25. A fifth of the workforce is to retire in the coming years, and despite the decreasing sector, the influx of young workforce is not sufficient to compensate this. This leads to a quantitative problem: short-term need for staff, in a sector that is decreasing and thus offers less long-term perspective.
- Two jobs ('print finisher' and 'printer') are officially listed as so called 'bottleneck jobs' by the government, which means that there is a quantitative shortage of people with the right qualitative skills (education).

- The sector itself is investing less in training and education of its staff (life-long learning), which might be explained by declining profits and margins, leaving less room for long-term investments like staff development.
- Despite competition for digital, print is stabilising itself. Some niche markets (like art books) are seemingly unaffected by digital, whereas other submarkets grow, e.g., textile printing, food package printing, and personalised printing for consumers.
- Environmental awareness and sustainability is an increasingly important topic for the sector, partly because of customer demand.
- Change in demand: print jobs are less professionally prepared (consumer market), or come in smaller quantities (trend in the b2b market). Clients request shorter delivery times.
- Delocalisation: being close to your client is seen as less of an advantage – competition has extended to the wider region or became national; in case of B2B even international.

The Netherlands
In the Netherland the creative industry has known a vivid change-over in recent years. On the one hand there has been a tremendous decrease in the amount of companies and consequently in the amount of people working in the sector of print related activities.
From the year 2000 till 2017 the amount of member companies of the Printing Association KVGO decreased from about 3,200 to about 1.300. A fast amount of people has been made redundant during the crises. Especially the 'old' companies, who have not made changes to other products, other target groups, other markets, have suffered heavily and still do.

The figures we show down here come from the Knowledge centre GOC, who performs labour market research and data gathering for the whole sector.

(graphic design and web design) gaming (design area and technical area) and the audio-visual industry including the technical parts of the performance industry.
It is again rather difficult to represent

1 Information about the industry

In 2016 there was a light increase in volume in the graphic industry in the Netherlands. One of the reasons of this increase is that there is a lot of dynamism in the development of new products, services and companies that arise in the work field of print, media, communications, marketing and other services.

If a print / graphic company wants to change successfully to a company with another business model, it is important that (potential) clients recognize their 'new' services. Especially when they transform into a full service graphic company. A lot of customers divide their budget for ads and marketing not only into print, but into all cross-media expressions.

Entrepreneurship is key
To be able to maintain this development, graphic companies have to stay focussed on their distinctiveness in relation to customer needs, for example in ICT and other (online) services like design, web-to-print, printing on demand of delivering a complete media strategy.
Cross-media and more personal communication are vital. Graphic companies could work together but they could also develop new business models with foreign branches, like ICT companies, logistics entrepreneurs or communications agencies. These crossovers offer opportunities for graphic companies, but selling it requires solid and flexible entrepreneurship.

Critical success factor
What is vital to succeed is having and implementing a transition strategy and a management team with the skills to implement the transition.

Trends (Rabobank and UWV Grafische industrie Arbeidsmarktupdate)

- Increasing need for cross-media communication leads to new products and services
- Not the press or print system, but the customer is central. ICT, smart data and online applications play an increasingly important role;
- Competences and know-how of entrepreneurs and employees match the desired business model;
- Increase in scale (through acquisitions and mergers) lead to further professionalization of the industry and improvement of productivity (lean production).
- Upgrading; There are few young people working in the industry, many men and middle school to VET trained workers. The level of education in the sector increases: there is less demand for printers and more demand for graphic designers, who are often more educated. This increases the level of education in the sector. But for printers there is also a higher demands in education due to technological developments and the greater importance of, for example, commercial skills.
- The sector is characterized by personal surpluses.
- Education in graphic industry, is mainly at VET-3/4 level, being training in print media and dtp.
- Labor market perspectives for sector related unemployed are below average.

Opportunities and threats

- The development of new technologies such as 'print intelligence’
- Offering additional services such as design, marketing, media activities, ICT support and distribution;
- Export of graphics products and services;
- A balanced workflow management, lean and mean production device and the optimum utilization of press and (digital) printing systems using ICT;
- New entrants (mostly from other industries) with a lead in online and cross-media services.

Industry description
The industry can be characterised as small scale. Over 85% of the companies count less than 10 employees.
Source: Rabobank cijfers en trends 2016/2017;

The development of the amount of companies

The figures in this part of the report represent the situation of the companies that are a member of the employer's association of the Royal KVGO. These companies don't of course represent the total amount of companies of the print-media sector. However, the trends they show can be projected to the total industry, to a certain extent.

Year	Amount of companies
2010	2109
2011	2080
2012	1976
2013	1833
2014	1708
2015	1594
2016	1520

First conclusions:

- The absolute total number of companies has decreased with 15% between 2010 and 2016.
- The absolute total number of self-employed remained stable / the same, but relatively increased with 8% from 2010 to 2016, so an average increase of 1,33% per year.
- Conclusively the number of companies with 2 or more employees (so self-employed excluded) has gone down with 28%, which is a decrease of almost one third (!).
- The number of employees has in 6 years gone down with the same percentage of 30.

Trends (Monitor Creatieve industrie 2016):

- The creative industries and ICT sectors contribute significantly to the economic recovery of the Dutch economy.
- There is a doubling of business locations and share of self-employed professionals (40%) in the creative industry
- There is a strong concentration of creative industry in Amsterdam; The significance of the capital for the Dutch creative industry has further increased.
- Scale reduction and flexibility, new industries and embedded creatives; There is an important task for the companies and the sector. Innovation in these areas is necessary to improve the creative industry's earnings potential.

Companies classified for size and segment, including the amount of self employed persons

	Companies ranked according size (amount of employees 2016)								
Main activity	**Self-empl**	**2 >5**	**5 <10**	**10 <20**	**20 <50**	**50 <100**	**100+**	**N**	**%**
prepress	355	95	20	15	15	5	0	150	9,9
printing	1000	615	280	155	100	35	20	1205	79,8
afterpress	370	95	25	20	15	0	0	155	10,3
Total	**1725**	**805**	**325**	**190**	**130**	**40**	**20**	**1510**	**100**

Changes in the amount of companies
Starters, closures, mergers / take-overs and bankruptcies

	2010	2011	2012	2013	2014	2015
Starters						
Self empl.	155	150	145	110	100	120
2-9 empl	30	55	30	25	20	15
10-49 empl.	5	5	5	0	0	5
not known	0	0	0	5	0	0
Total	190	210	180	140	120	140
Closures						
Self empl.	175	160	145	170	165	140
2-9 empl.	65	65	70	75	40	45
10-49 empl	10	15	15	15	15	20
50+ empl.	5	0	0	5	5	0
not known	0	5	5	0	0	0
Total	255	245	235	265	225	205

	2010	2011	2012	2013	2014	2015
Mergers/Take-overs						
Self empl.	5	5	5	0	5	5
2-9 empl	15	5	10	10	15	5
10-49 empl.	20	20	20	15	10	10
50+ empl.	5	5	5	5	0	5
not known	5	5	0	0	5	5
Total	50	40	40	30	25	30
Bankruptcies						
Self empl.	5	4	5	6	5	3
companies	134	129	97	88	71	58
Total	139	133	102	94	76	61

2. Information about entrepreneurship education on (VET) schools

For the project the most relevant areas of education will be the equivalent of EQF level 3/4 and 5/6, 7, so higher education

Entrepreneurship in education – in VET – EQF levels 2,3,4 (,5)
In the Netherlands there are in total 5 schools offering print and media related education on VET levels 2, 3 and 4. Some of them offer – as part of the course of study – subjects on entrepreneurial skills, but most of them still don't. Or at least it is hard to discover if they do.

There is one school from the ROC (regional education centre) offering the VET level 4 education for Media designer including a total lesson plan / modules and learning goals on entrepreneurship. https://ondernemersvaardigheden.wordpress.com/

On the next page is an overview of these 6 schools and what they offer related to entrepreneurship courses of study in their educatio

School	Type of education	Total nr of students	VET levels	Course of study	EQF level	NR of students	Nr of years	Relevant subject / course
GLR – Graphic School of Rotterdam	- Design - Print techn. - Media mgt.&ICT - Sign	3.105	2,3,4	Graphic & Visual Design	3 or 4	1.993 (level 4) 115 (level 3)	3 (level 4) 2 (level 3)	Entrepreneurial skills
GLR				Audio-visual media and Photography	4			Entrepreneurial skills, Marketing and project management
GLR				Media management	4	383	3	management, business admin., economics, planning & logistics, project management, quality control and marketing
GLU – Graphic School of Utrecht	- Design - Print techn. - Media mgt.&ICT - Sign	1.926	2,3,4	General remark: Entrepreneurial skills are taught at all courses. But more extensive in the course:				
GLU				Media management & Marketing	4	145	3	Entrepreneurial skills & Marketing
Mediacollege Amsterdam	- Design - Media mgt.&ICT	1.481	2,3,4	No specific information available on subjects or courses on entrepreneurship.				
Sint Lucas (Eindhoven)	- Design - Print techn. - Media mgt.&ICT - Sign	1.312	2,3,4	No specific information available on subjects or courses on entrepreneurship.				
CIBAB (Zwolle)	- Design - Sign	740	3,4,5	Creative business developer	5 (pre-bachelor)	???	5	During this bilingual education the student is part of the school's 'company', learning on entrepreneurship.
Alfa College	VET school general	11.530	2,3,4	Media designer	4	???	3	During the 2nd year students get 4 months a module of 10 lessons on entrepreneurship called project 'Kiemkracht': https://ondernemersvaardigheden.wordpress.com/

Entrepreneurship in education – in HE – EQF levels 6 & 7 (BA & MA)

Willem de Koning Academy - Master Design study
As one of the institutes of the Rotterdam University of Applied Sciences; They describe the following developments in the design profession and how to obtain the necessary competences.

The professionalism of designers is changing due to the following developments:
- Technological innovations expects designers to continue to develop with ongoing changes;
- Many existing knowledge and skills of designers do not match changing demands of clients;
- Democratization of design tools, a saturated design market and reduced budgets of clients demand an active attitude of designers in finding their own place;
- Social developments ask designers to take a stand and contribute to public debate or solutions through their work.

Also the designers themselves develop and change their professional practice:
- They have outgrown the designing and are redefining the questions posed to them, using strategic thinking methods and developing innovative and creative solutions;
- They develop new practices like open design, service design, design thinking and data design;
- They exploit new markets and develop new business models.

The Master Design is developed from the conviction that the new designer designs his own field of study and plays an active and directing role in determining his own professional career. This professional works from a mix of knowledge and skills (skills) and competencies (mentality and behavior) in order to play a meaningful role in social contexts.

Candidates description:
- has an eye for opportunities,
- enterprising
- alert to movements or developments in society, the market or the creative industry itself
- is used to develop goals and find solutions
- have empathetic ability (for (the customer, the citizen, the user, the community or the public)
- be a teamplayer
- reflects, examines assumptions, is critical of himself and others, asks new questions, improves, unlocks and builds
- At best, is a (creative) leader who advises and guides others
- works from the various core values such as artistic mentality, conceptuality, visuality and takes social responsibility.

Competences description:
The Master Design has seven competencies. The student starts with a nil-assessment and after his studies (2 years) has an end-assessment. See the (Dutch) attachment http://www.wdka.nl/wp-content/uploads/sites/4/2015/01/MD-COMPETENTIES.pdf

HKU University of the Arts Utrecht
Offers preparatory courses, bachelor and master programmes and research degrees in fine art, design, media, games and interaction, music, theatre and arts management. Over 3.900 students.
Is one of the largest art and culture-oriented institutes in Europe.

No online information available on competences or learning outcomes.

2.2 Commercial education

Stivako
Stivako is the VET-institute for management and leadership in the print media and creative industries.
Stivako offers the Staff officer & middle management course which is described below.
Entrepreneurial skills is the core of this education, which takes about one year.
Related subjects are:
Management / Social Skills, Outdoor Training (personal skills), Creativity, Project management Business management, Marketing / Sales, and a graduation assignment / thesis.

GOC
Consultancy, training and research for the creative sector.
http://www.goc.nl/overzicht-cursusaanbod/cursusaanbod gives an overview of all courses.
There is not really a specific course which contains the entrepreneurial skills as part of the educational program.

2.3 Obvious trends in entrepreneurial education

Describe the trends you are able to find in the on-going development of entrepreneurial education and training in all industries eg separate or integrated modules, compulsory or voluntary etc.
It was difficult to distinguish specific trends in entrepreneurial education, but there are some institutes that teach the subject(s).

General entrepreneurial education in all industries:

- The Dutch Chambre of Commerce offers tools for starting entrepreneurs. https://www.kvk.nl/advies-en-informatie/bedrijf-starten-of-overnemen/ondernemersvaardigheden/
- How strong are you in being an entrepreneur? https://www.kvk.nl/krachtmeting/
- The Dutch government has a special website with information and online learning for entrepreneurs including self-employed professionals. https://www.ondernemersplein.nl/
- Lancelots http://www.lancelots.nl informs and inspires entrepreneurial self-employed and helps to develop and train knowledge skills and competences like: Motivation, Assertiveness, Intuition, Dare to take risks, Perseverance and discipline, Flexibility, Independence, Decision-making, Confidence, Responsibility, Creativity and originality.

But also: specific knowledge, Administrative knowledge, how to be practical, Ability to work together, Organizational talent, Written and oral skills, Presentation skills, social skills, how to cope with work pressure, Commercial insight, Knowledge of the market, Financial insight and Sales talent.

- I AM College is the vocational school for motivated young people who are looking for challenging entrepreneurship education. http://www.iamcollege.nl/programma/ ;

Core subjects are : Marketing, Communication, Commerce, Business Management, Entrepreneurship, Leadership, Digital skills
Choice subjects are : innovation, Lean and creativity, leadership, Sustainable entrepreneurship, Intercultural diversity
General subjects are : Dutch, English, German, Calculation / math

- http://www.kizo.nl/ = knowledge institute for self-employed professionals. This institute performed a research: Which training questions and needs does an independent professional have to be able to continue to function 'normally' in their social life:

http://www.kizo.nl/wp-content/uploads/2015/11/KIZO_Opleiding-20151024_hires-pags.pdf

- https://dwvdo.nl/ = de wereld van de ondernemer ; the entrepreneur's world. A commercial consultancy agency training on entrepreneurial skills. Their website says:

Education plays an important role in developing entrepreneurial behavior. Students, teachers and managers support us in developing entrepreneurship. We do this in a modern and inspiring way.

3 Specific information about Company profiles

The Intergraf report gives perfect information about this part of the questionnaire. The report’s outcomes reflect very well what the situation was in 2010 and how companies should respond to that. The project can use the main descriptions in the report to possibly develop the accurate profiles for the companies in this new, after crisis decade.

4 Information about profiles from formal and non-formal sources

The main issues for this question have been dealt with in the former paragraphs.

5. Information about new businesses

The information about new trends partially has to come from the latest surveys conducted by EU organisations and from the activities of the local key players.
From the Economic report 2016 published by Intergraph we learn that the Netherlands has most innovative investments in the digital printing area. For the ‘old’ analogue printers this could mean they are try to diversify their businesses at last. This will have an impact on their business but not so much that we can draw conclusions from that with regards to this project.

5.1 Information about female entrepreneurs.

This information will be completed at a later stage. Not enough data is available at this moment.

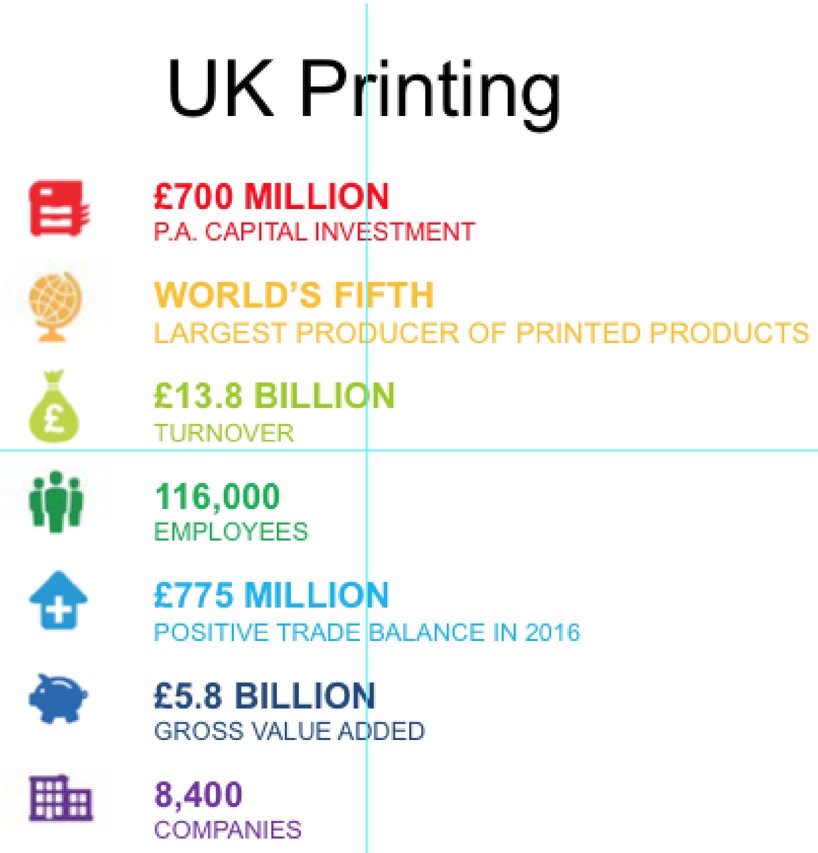
UK - England

England / The United Kingdom

1 Information about the industry
Statistical information shown in this comes from research either performed by BPIF (employer's federation) or commissioned by BPIF.

The illustrations come from a presentation about the situation in the Printing Industry of England, The Uk and all belonging countries.
The decline of the traditional printing industries in the UK has not been unlike the rest of Europe. To a certain extent this has been offset by opportunities in the creative/digital sector as printers try to extend their traditional offerings. However, they are in intense competition in this area from advertising agencies/marketing professionals etc.

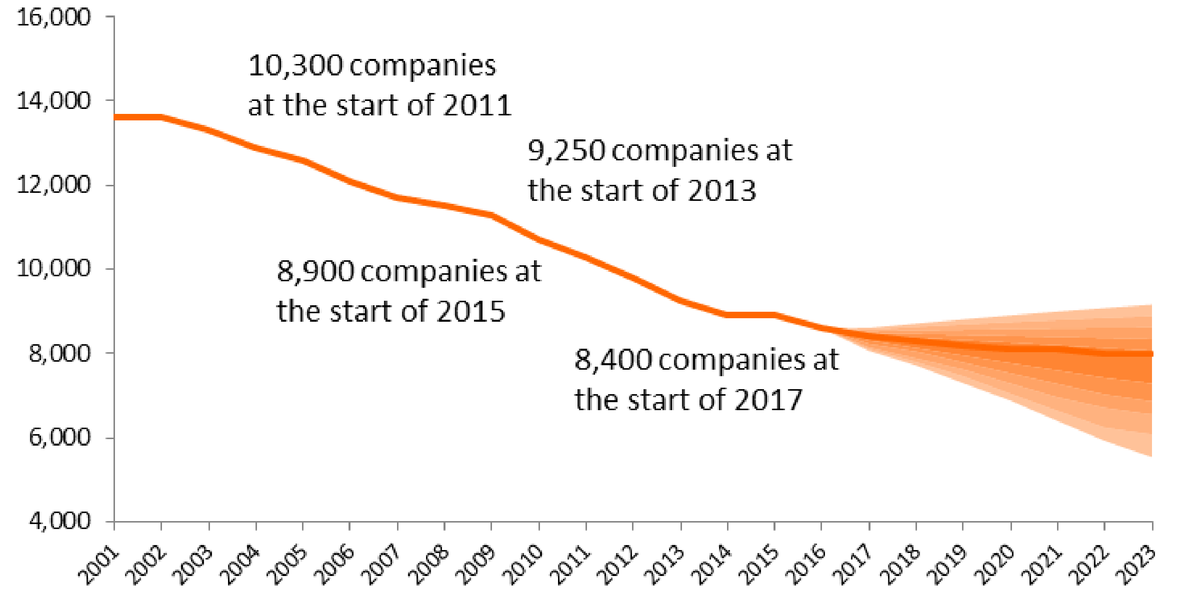
Overall figures:



With a turnover of £13.8 billion (2016), Gross Values Added of £5.8 billion and employing around 116,000 people in 8,400 companies the UK Printing sector is an important economic contributor and employer in all UK regions.
The UK is the fifth largest printing county in the world (after USA, China, Japan and Germany).
Printed matter contributed £775 million to the UK's balance of trade in 2016.

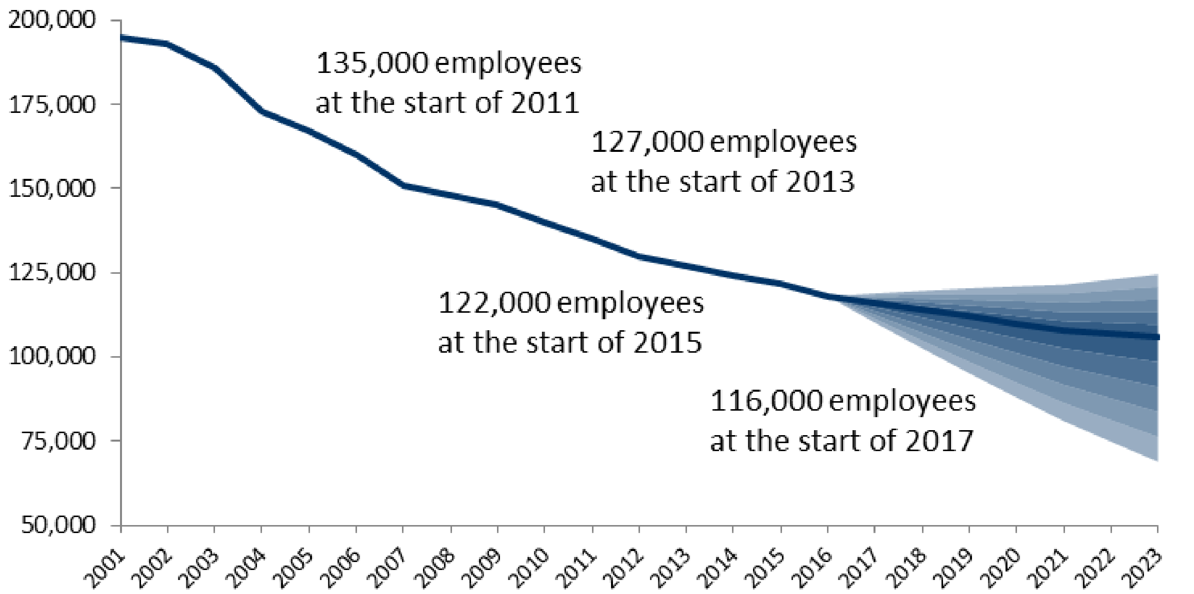
(50% of exports are to the EU - £1.4bn of £2.9bn. 35% of imports are from EU - £0.8bn of £2.2bn. Almost all of the positive trade balance is as a result of EU trade.)

UK Printing Industry - number of companies 2001-2023



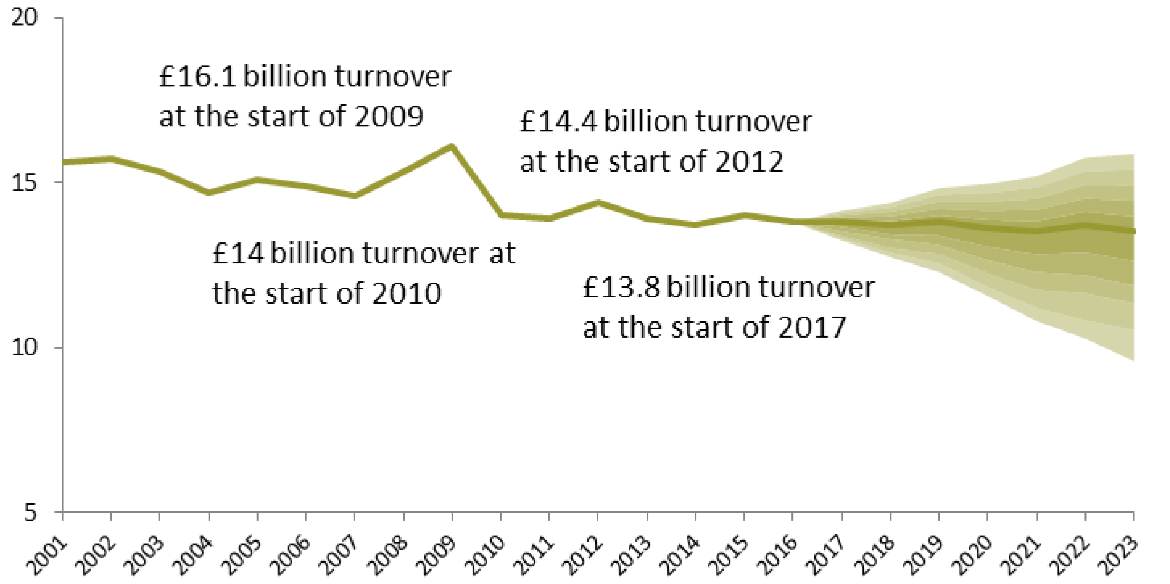
Source: BPIF Research; 2017 - 2023 forecast estimates

UK Printing Industry - number of employees 2001-2023



Source: BPIF Research; 2017 - 2023 forecast estimates

UK Printing Industry - turnover (£bn) 2001-2023

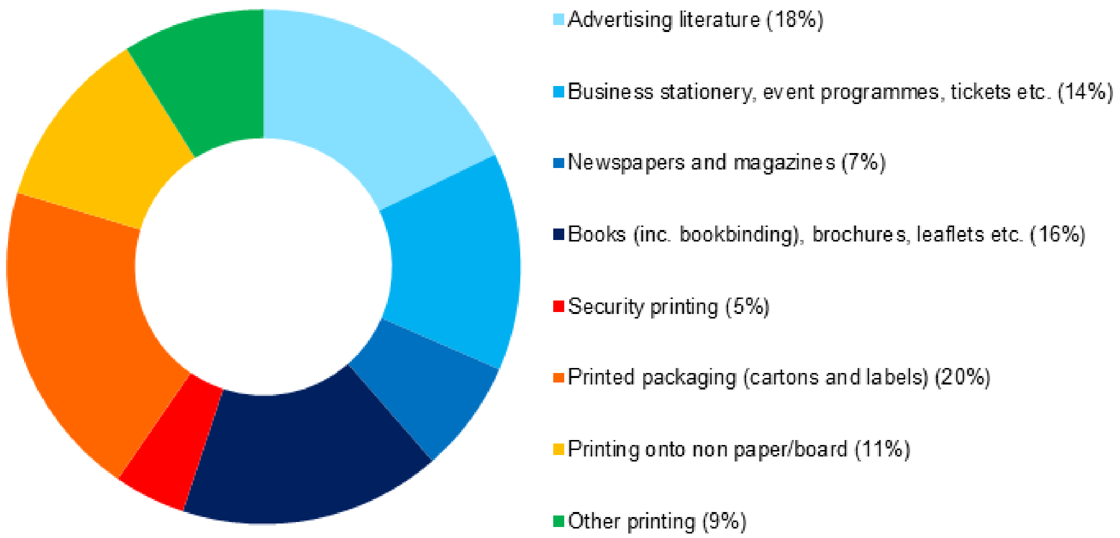


Source: BPIF Research; 2017 - 2023 forecast estimates

On the following page these overall figures will be provided in a table showing UK and England separately.

Below in this page figures of the share per sector of the printing Industry are shown

UK Printing - sector share



Source: BPIF Research analysis of ONS data

		2010	2011	2012	2013	2014	2015	2016
England	**Count**	9.521	8.955	8.688	8.202	8.029	7.989	7.709
	Employment	125.694	119.800	117.180	114.336	112.080	109.781	105.810
	Turnover (£000s)	12.467.333	12.425.215	12.951.567	12.672.196	12.499.614	12.540.367	12.418.383

UK	**Count**	**10.540**	**9.916**	**9.652**	**9.105**	**8.907**	**8.895**	**8.599**
	Employment	**138.867**	**132.656**	**129.194**	**125.585**	**123.648**	**122.242**	**118.311**
	Turnover (£000s)	**13.652.302**	**13.715.565**	**14.130.780**	**13.762.799**	**13.630.299**	**13.964.953**	**13.813.676**

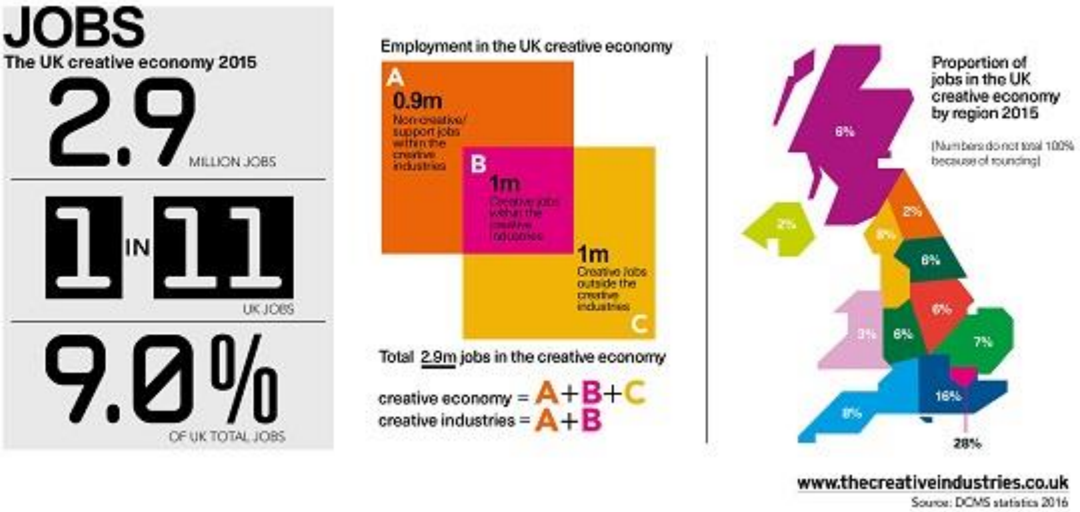
Source: BPIF Research analysis of ONS data

Turnover Size Breakdown	**Turnover (£000s)**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
UK	<£99	3.975	3.773	3.570	3.329	3.382	3.242	3.116
	£100-£249	2.513	2.391	2.238	2.127	2.189	2.150	2.134
	£250-£499	1.463	1.392	1.286	1.201	1.139	1.118	1.067
	£500-£999	979	931	870	881	846	791	781
	£1,000-£4,999	1.082	1.039	1.018	1.024	1.006	972	958
	£5,000+	288	274	268	338	338	327	344
		10.300	**9.800**	**9.250**	**8.900**	**8.900**	**8.600**	**8.400**

Age of Business	Age	2010	2011	2012	2013
	<2 years	1.051	980	841	810
	2-3 years	1.040	853	843	765
	4-9 years	2.802	2.607	2.294	2.003
	10+ years	5.407	5.360	5.272	5.322
		10.300	**9.800**	**9.250**	**8.900**

Employment by gender	Gender	2013	2015
UK	Male	89.280	82.954
	Female	34.720	35.046
		124.000	**118.000**

Employment by age	Age	2013	2015
UK	16-24	10.540	9.912
	25-34	23.560	21.122
	35-44	29.140	32.568
	45-54	38.440	32.096
	55-64	17.980	18.408
	65+	4.340	3.894
		124.000	**118.000**



Seven key statistics:

1. **Creative employment continues to grow faster than the workforce as a whole.** Employment in the Creative Industries (Creative Economy) [3] grew by 3.2% (5.1%) between 2014 and 2015 and now accounts for 1.9 (2.9) million jobs. This is a 19.5% (19.6%) increase since 2011. By contrast the wider UK workforce grew by 2% (2014-15) and 6.3% (2015-2011).[4]

2. **The fastest growing area of creative industry employment since 2011 has been Music, Performing and Visual Arts followed by IT, software and computer services.** Between 2015-2011 the fastest growing industry by employment was music, Performing and Visual Arts which grew by 34.7% followed by IT, Software and Computer Services (32.6%). The fastest growing creative industry employment between 2015-2014 was in Museums, Galleries and Libraries which grew by 14.6%.[5]

3. **Creative Industry employment has been growing rapidly in a number of regions around the country.** Between 2011 and 2015, there were increases in Creative Industries employment of more than 25% in Yorkshire and the Humber (26.9%), East Midlands (52.5%), West Midlands (38.7%) and the South West (32.5%). In London, which accounts for the largest share of Creative Industry employment (30.8%), the growth over the same period was 15.6%.[6]

4. **There is significant variation across Creative Industries in how representative their employment is of the workforce as a whole**

In 2015:

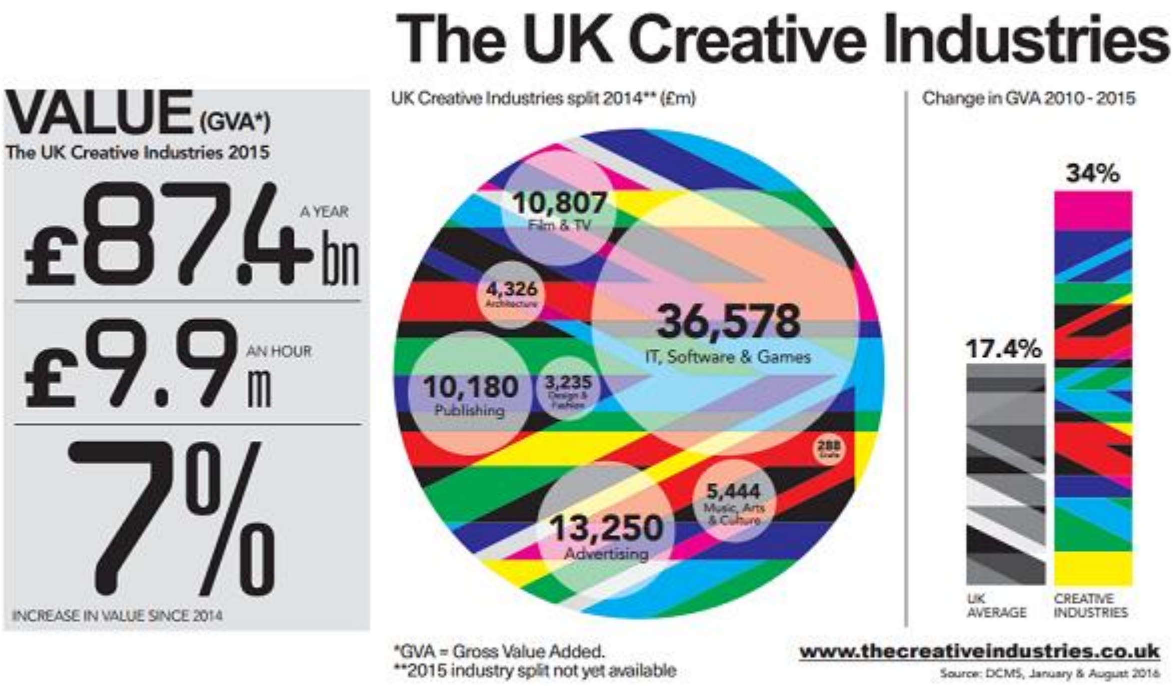
- 37.2% of Creative Industry jobs were filled by women compared to 47.1% of the UK workforce. One of the drivers of this is the small share of employment that women constitute of IT, Software and Computer Services (21.4%), by contrast in Museums Galleries and Libraries their share is 65.9%.[7]
- Black and Minority Ethnic (BAME) groups' share of Creative Industry employment was 11.4%, close to their share of UK workforce employment (11.3%). There is though

considerable variation across creative industries. For example in IT, Software or Computer Services 16.7% of employment was from the BAME group, compared to 5.9% of jobs in Architecture.[8]

5. **Creative Industry service exports are growing rapidly and are a significant share of all UK exports of services.** In 2014 the UK's creative industries exported services worth £19.8bn, a 10.9% increase from 2013. This accounts for 9% of UK services exports.[9]

6. **IT, Software and Computer Services accounts for the largest share of Creative Industry services exports followed by Film, TV, Video, Radio and Photography.** Exports of services from the IT, Software and Computer services accounted for the greatest share of Creative Industry service exports (44.6%), followed by Film, TV, Video, Radio and Photography industry were the second largest proportion in 2014 (23.8%).[10]

7. **Europe was the continent accounting for the largest share of UK Creative Industry service exports and the US was the largest country by service export share.** In 2014 the majority (57.3% , £11.4bn) of UK Creative Industries exports of services were to the European Union. The USA was the country that received the largest of UK Creative Industry service exports accounting for 25.3% (£5bn) of the total services exports.[11]



Entrepreneurship in education

INTRODUCTION

In the process of researching this section it became clear that the development of entrepreneurship in education is generally not industry specific – there are very few examples of this type of education that is specific to the graphic-media / communication and information industries.
It is essential that we recognise that there is an over-arching attention being given to 'Digital Industries'. Digital industries are pervasive and cover a wide spectrum from creative through to digital technology such as programming and coding. The media / communication and information industries is a subset of digital industries and can benefit from the entrepreneurship and enterprise education more broadly aimed at the over-arching digital industries. However, the digital technology skills are also a specific requirement within the graphic-media / communication and information industries. For example, Communisis plc, albeit one of the largest companies in the media / communication and information industries has identified its challenge in recruitment and retention is with digital technicians.

There is a distinction between the study of entrepreneurship and the use of that study to create the associated activities required to convert that study into business opportunities. The distinction is made between the study of the subject and the application of that study in order to create enterprise. As a consequence there are frequent examples of courses titled "Entrepreneurship and Enterprise" that include separate consideration. The investigation of entrepreneurship includes reference to case studies and exemplars whereas the investigation of enterprise focuses on the practicalities of implementation such as developing a business plan, making a proposal to a bank/investor for financial support and the practical skills required to establish and run a business.

In education there is an expectation that the principles of entrepreneurship will be applied by the individual student to the industry sector of their choice and specific interest.

In industry one of the trade associations made the point that training for employers is focused on the elements of entrepreneurship but they are studied for the purpose of in-company behaviour as opposed to the usual expectation of the creation of a new company start-up.

1.1 Information about **industry specific** entrepreneurial courses, modules, segments of courses and training in formal education with main focus on VET.
Increasingly the skill sets demanded within the media / communication and information industries are those of the broader digital industries and this holds true for entrepreneurship and enterprise where SME opportunities for start-up and growth are

technology driven. For this reason the UK Government, Tech Nation National Digital Report, http://www.techcityuk.com/ is referenced in Section 2.1

The industry specific examples are few, in the main they are found in ‘on the job’ training where companies have chosen to develop an enterprise culture within their own organisation. An excellent example of this is SPARK project developed by ProCo, Sheffield, UK where a range of support resources has been created to enable managers to develop their own in-company enterprise success. This is achieved by using those resources to grow the business opportunities of their customers and potential customers – encouraging enterprise in the customers’ companies .

On-line non-accredited courses are also available and an example is provided. Certificate In Entrepreneurship Online Course

1.2 Describe the trends you are able to find in the on-going development of entrepreneurial education and training in **all industries** eg separate or integrated modules, compulsory or voluntary etc.

The all industries trends are summarised in 2.3 in the UK government, Department for Business Innovation and Skills, “Enterprise Education Impact in Higher Education and Further Education”.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/208715/bis-13-904-enterprise-education-impact-in-higher-education-and-further-education.pdf

Entrepreneurship is important for future economic growth. The Government therefore needs to understand what enterprise and entrepreneurship education is in place in Further Education (FE) and Higher Education (HE); what difference it makes to entrepreneurship and the growth of businesses; how could the impact be enhanced; and what difference it can make to the offer and its impact. ICF GHK was commissioned by the Department for Business, Innovation and Skills (BIS

The University of Leeds has been recognised as an outstanding exemplar and its Centre for Enterprise and Entrepreneurship Studies (CEES) by the UK Government Quality Assurance Agency (QAA) who are considering using it as a model of best practice to roll out. http://cees.leeds.ac.uk/

The University of York has embarked on a blended approach across all courses with close liaison with Digital Creativity Labs to provide additional focus on sector specific interests.

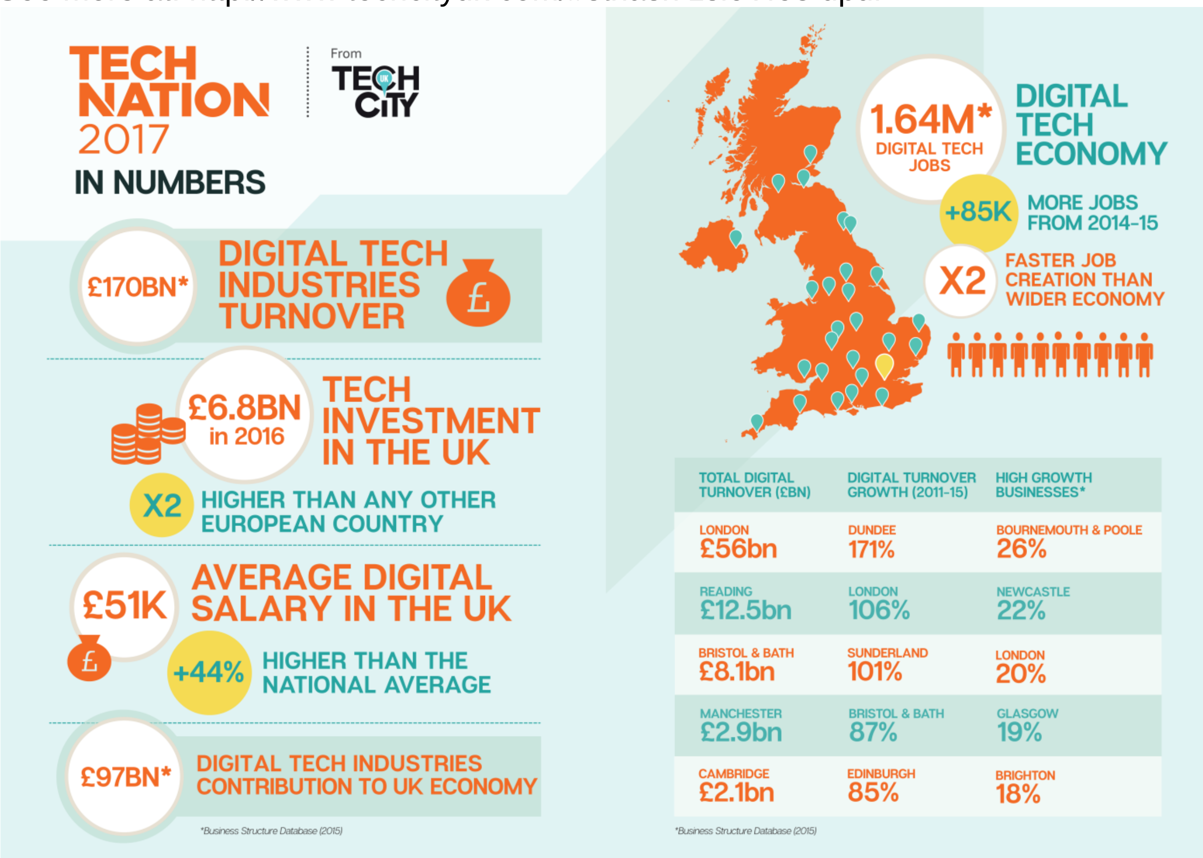
2.1 NON INSTITUTIONAL PROVISION
1.TECH NATION REPORT - NATIONAL DIGITAL REPORT
2. SME Enterprise. ProCo SPARK
3.PRIVATE SECTOR ON-LINE LEARNING - Certificate In Entrepreneurship

1. Tech Nation Report

http://www.techcityuk.com/

SUMMARY

The UK's digital tech industry turned over an estimated £170 billion in 2015, is growing at twice the rate of the wider economy and is key to boosting the UK's wider economy, with a contribution of £97 billion in 2015.
The digital tech industry generated a further 85,000 jobs over the past year from 1.56 million in 2014 to 1.64 million in 2015, creating jobs at double the rate of the rest of the economy.
Similarly, since 2012 there has been a 13% increase in the advertised salaries of digital tech posts, compared with only a 4% rise in those of non-digital jobs.
Tech investment in the UK reached £6.8bn in 2016, more than two times higher than any other European country and significantly more than its closest rival, France, which secured £2.4bn.
Tech Nation 2017 shows that the average advertised salary for digital-tech jobs has now reached £50,663 a year, compared with £35,155 for the average non-digital salary, making it 44% higher than the national average. –
See more at: http://www.techcityuk.com/#sthash.zsieVfe3.dpuf



http://technation.techcityuk.com/
Welcome to Tech Nation 2017, the most comprehensive analysis of the UK Digital Tech Ecosystem. At Tech City UK, we believe great tech companies are built from strong ecosystems. Our mission is to help nurture them.
https://technorthhq.com/programmes/
Putting Northern tech on the map
Tech North is a government-backed initiative charged with accelerating the growth of the digital business sector in the North of England.
We do this through a series of programmes, events, research and editorial focusing on startups, investment, people, skills and the digital ecosystem.
There's a thriving digital tech scene in the North of England. We're here to shine a light on it and help it grow.
Digital Business Academy
Size up your Idea
'Size up your Idea' will help you decide if your idea has potential as a new business. The course gives you the skills to compare your ideas and discard the nonstarters.
Set up a Digital Business
'Set up a Digital Business' will guide you through the basics of setting your own business. The course gives you the skills to form a business, hire your first employees and start growing.
Develop and Manage a Digital Product
'Develop and Manage a Digital Product' will help you get to grips with developing your own product. Whether you are looking at websites, apps or anything else, the course will give you the skills.
Make a Marketing Plan
'Make a marketing plan' will guide you through the creation of a marketing plan for your business. You will learn the skills to attract and retain customers, maintain an edge over competitors.
Build a Brand
'Build a Brand' will help you create a strong and meaningful brand that sets you apart from competitors. The course will give you the skills to develop brand equity for your business.
Understand Digital Marketing Channels
'Understand Digital Marketing Channels' will give you a crash course in finding your customers online. The course will give you the skills to pick the right marketing channels, write better messages.
Run a Digital Marketing Campaign
'Run a Digital Marketing Campaign' will get you ready to make money from an online campaign. The course will give you the skills to manage multiple channels, set strategy and drive results.
Master Finance for your Business
'Master Finance for your Business' will develop your ability to get a grip on the finances of your business. The course will give you the skills to handle cash flow forecasts, raising capital etc.
How to Track Performance in Early Stage Startups
'How to Track Performance in Early Stage Startups' will enable you to accurately how your business is performing. The course will give you the skills to select the right measurements, treat data etc.
How to Manage Customers

‘How to Manage Customers’ will equip you to oversee all the different ways a customer can interact with your business. The course will give you the skills to understand the customer.

How to Use Social Media for Business

‘How to use Social Media for Business’ will allow you to discover the approaches and social media platforms that successful businesses use to earn attention. The course will give you the skills.

2. SME Enterprise. ProCo SPARK

ProCo is an SME, the Sheffield-based litho, digital and cross-media communications group.

www.proco.com

Igniting the SPARK of innovation

www.procospark.com

ProCo has officially opened the doors to its education and innovation centre, ProCo SPARK. Located in its Stansted site, the initiative looks to address the need to bring new talent into the industry, upskill people who already work in print and support customers to develop their knowledge to improve process efficiency and communication.

ProCo SPARK encompasses all ProCo’s education activities, and provides customers, partners and the ProCo team with an inspiring environment to learn, collaborate and generate new ideas.

At a December launch among industry friends and colleagues, Jon Bailey (CEO) urged the crowd to get involved in the initiative, to support growth and advancing skills in the print space. He said: “It’s a great thing to learn together, building rapport and laying the foundations for some great business relationships. The people I learned from and with are still part of my network now – it’s time to recreate that for the next generation. For customers, employees, partners, schools…anyone who’s interested in print. We just need to get some momentum now.”

The SPARK initiative is primarily based at ProCo’s Stansted site, but will find its way up north to Sheffield over the next few months. Bailey has put together a team of experts, headed by Print Research International’s John Charnock, who have developed a ‘box set’ approach to their education delivery, taking attendees from the basics of print right through to the capabilities of modern technology and what we can expect in the future. Designed to be taken either as a full course of four episodes, or individual bite sized chunks, they were well received at the launch event.

The environment prompts visitors to think a little differently, inspiring with brilliant examples of printed electronics, cardboard engineering and some thought provoking décor – all geared towards triggering a SPARK of creativity.

Lyle Rainey from HP said, “It’s been a brilliant day. The first course, ‘Know Your Sh*et’, reminded me of the training I was given that simply isn’t readily available or just doesn’t seem important anymore. But it really is, and there were things in there that I learned too! This will be a great initiative for people who are new to the print industry, and to those who want to expand their knowledge. ProCo SPARK will help keep print relevant to both brands and the next generation of marketers.”

Charles Jarrold CEO of the BPIF said, “It’s a brilliant initiative from ProCo. I’m looking forward to being involved in ProCo SPARK’s progress and supporting however we can.”

Bailey added: "I'm so pleased our peers are excited by what we're doing with ProCo SPARK, and it's collaboration with others in the industry that will make it work and really start to deliver added value. We have a strong partner programme already in place, but there's always room for more."
If you're interested in getting involved in ProCo SPARK, visit procospark.com to find out more from:.
http://www.imagereportsmag.co.uk/features/business/innovators/7906-blazing-a-trail

3. Certificate In Entrepreneurship Online Course
http://www.coursesforsuccess.co.uk/products/personal-success-training-program
If you want to break into entrepreneurship? Well that's great, but know that it is no easy feat. There are many steps you must take just to prepare yourself to embark on the journey, and once you have started your business, many more steps to maintain the business. This course is designed to give you the tools you need to start, run, and grow a business you can be proud of!
Would you to be your own boss? Have you ever dreamed of starting your own business? Don't know what to do about your great business idea? If you have ever thought about these situations then you need our entrepreneurship course.
Let our Entrepreneurship Online Short Course help you achieve your dreams. Being an entrepreneur can be full of risks. These risks are minimized through drafting a business plan, knowing your competition, and successful marketing. All these and more can be found in our Entrepreneurship course.
By the end of this Entrepreneurship Online Short Course, you will be able to:

- Understand how to start a business
- Develop a business plan
- Get financing for your business
- Hire and train employees
- Run your business
- Grow your business

Course Fast Facts:

1. Easy to follow and understand
2. Only 6 to 8 hours of study is required
3. 12 months access to course
4. Delivered 100% on-line and accessible 24/7 from any computer or smartphone
5. You can study from home or at work, at your own pace, in your own time
6. Download printer friendly course content
7. Certificate (IAOTS Accredited)

Course Delivery
Courses are accessed online via our learning management system by any device including PC, MAC, tablet or Smart Phone.

Recognition & Accreditation
This course is internationally recognized and accredited by the International Association of Online Training Standards (IAOTS).
Module One: Getting Started
By the end of this course, you will be able to:

- Understand how to start a business
- Develop a business plan
- Get financing for your business

- Hire and train employees
- Run your business
- Grow your business

Module Two: Decide on the Type of Business

- Lesson One: Is It Feasible?
- Lesson Two: What Are Your Interests?
- Lesson Three: Do You Have the Experience?
- Lesson Four: Are You an Expert?
- Lesson Five: Case Study

Module Three: What Is the Market/Competition Like?

- Lesson One: Is the Venture Lucrative?
- Lesson Two: Is There Competition?
- Lesson Three: How Can You Set Yourself Apart from the Competition?
- Lesson Four: How Is the Customer Prospect?
- Lesson Five: Case Study

Module Four: Basics of Starting a Business

- Lesson One: Decide on a Name
- Lesson Two: Legal Structure of the Business
- Lesson Three: Register the Business
- Lesson Four: Choose the Location
- Lesson Five: Hire an Accountant
- Lesson Six: Case Study

Module Five: Create a Business Plan

- Lesson One: What Should Be Included in the Business Plan
- Lesson Two: Gather Documentation
- Lesson Three: Develop a Business Plan Outline
- Lesson Four: Draft a Business Plan
- Lesson Five: Case Study

Module Six: Get Financing

- Lesson One: Contact Organizations for Guidance
- Lesson Two: Decide the Type of Financing
- Lesson Three: Shop Around
- Lesson Four: What to Do Once Approved
- Lesson Five: Case Study

Module Seven: Hire Employees

- Lesson One: Develop Job Descriptions
- Lesson Two: Advertise Positions
- Lesson Three: Interview Candidates
- Lesson Four: Select Candidates
- Lesson Five: Case Study

Module Eight: Training Employees

- Lesson One: Teach Company Culture
- Lesson Two: Implement Actual Training for the Position
- Lesson Three: Provide Feedback
- Lesson Four: Offer Additional Training, If Necessary
- Lesson Five: Case Study

Module Nine: Market the Business

- Lesson One: Traditional Marketing
- Lesson Two: Create a Website

- Lesson Three: Social Media
- Lesson Four: Networking Groups
- Lesson Five: Case Study

Module Ten: Run the Business

- Lesson One: Procurement
- Lesson Two: Sell! Sell! Sell!
- Lesson Three: How to Manage Cash Flow
- Lesson Four: Budgeting
- Lesson Five: Case Study

Module Eleven: Grow the Business

- Lesson One: Offer More Products/ Services
- Lesson Two: Open Another Location
- Lesson Three: Franchise Opportunitites
- Lesson Four: Scoring Large Contracts
- Lesson Five: Case Study

Module Twelve: Wrapping Up

Enterprise and Entrepreneurship in Schools

EQF 3/4
http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/00228-2010BKT-EN.pdf

A guide to Enterprise Education For Enterprise Coordinators, teachers and leaders at schools

An introduction to Enterprise Education
What do we mean by "Enterprise Education"?
Enterprise education consists of enterprise capability supported by better financial capability and economic and business understanding.

Enterprise capability
Enterprise capability is the ability to be innovative, to be creative, to take risks and to manage them, to have a can-do attitude and the drive to make ideas happen.

Enterprise capability is supported by:
• financial capability which is the ability to manage one's own finances and to become questioning and informed consumers of financial services.
• business and economic understanding which is the ability to understand the business context and make informed choices between alternative uses of scarce resources.

These descriptions underline how much Enterprise Education can give to students. They add up to confident, financially mature and self-sufficient young people who can progress through to adulthood able to recognise and grasp any opportunity that comes their way. Your role as a practitioner in bringing this to life for your students cannot be underestimated.

“ Teachers see the benefi ts as they get into it. Kids that don’t excel academically, excel in enterprise. Staff see the impact on the lower achieving pupils.” Coordinator, South West, Languages, Science, Applied

Employers tell us that they need these skills and aptitudes in those they recruit. And our economy and society will benefit from a workforce that is self-starting, confident and able to apply what they have learnt in the classroom to their lives of work, family and community.

Enterprise Education is not a standalone subject: it underpins, and is supported by the 14-19 reforms. There is a clear link to Apprenticeships, which see young people learning in the workplace, to Diplomas which focus on applied learning and to Functional Skills which teach young people how to apply core skills to real life. There are also clear links to Citizenship, PSHE and work-related learning. If you can see a natural fit with qualifications already being delivered in your school, this will make the job of integrating Enterprise Education that much easier.

http://enablingenterprise.org/wp-content/uploads/2015/03/EE-Secondary-School-Brochure-2015-vFinal.pdf

The Impact In 2014, we tracked a sample of 3,078 students across the year. Over the year, our students showed that they could hit or exceed their target skills level with an EE programme – 85% were on track by the end of the year, and 69% were working above target: Above 69% On 16% Below 15% Above 33% On 30% Below 37% Start of the year against year group target End of the year against year group target This is reinforced by their teachers’ view of their progress: 88%of teachers saw progress in all eight skill areas 97%of teachers saw progress in at least six skill areas And EE students significantly out-performed skills development of students not following EE programmes across all skill areas: 117% extra progress for EE students vs. control group Extra progress by EE students Progress by control group Page 8

Foundation Part 2: Staff Training Core support includes: • Initial teacher training: Introducing effective enterprise education and the EE Programmes. • Embedding the skills: Exploring your students’ skills, with practical application for how to develop them in the classroom • Learning walks: Supporting teachers delivering programmes in the classroom, providing specific feedback and ideas. • Building on the skills: Reflecting with teachers to analyse the progress their students have made and future development. Page 9 Wider support includes: • Modelling and feedback: Modelling programme delivery, to get the most out of EE resources, with an opportunity to reflect. • Curriculum planning: Supporting teachers to plan their projects effectively to specific school curriculums. • Skill focus: Maximising progression in a particular Challenge Skill (e.g. staying positive or leading).

Our Challenge Days provide an exciting and engaging way for students across a class, a year group or even the whole school to work together and use their enterprise skills. The challenges include everything you need to make the day a success, with videos to launch each section, as well as support from EE on the day. They are also linked to curriculum outcomes.

Part 2: Challenge Days

Justice in Action: Students turn around a failing legal firm by bidding for cases and exploring how the law and morals interact.

Greetings Cards: Students work in teams to set up and run a greetings card production line, including making and selling.

Social Entrepreneur: Students identify a need or challenge in their school or community, and develop ideas to solve them.

A Day in Politics: Students learn about democracy and politics through games, including setting up their own political parties.

Chocolate Challenge: Students set up a new chocolate brand using market research, financial modelling and 3D design.

Moon Base: Students explore the world of work by having to create a new community on the moon from scratch.

Business in a Day: Students create a souvenirs company, with a focus on finance and business basics.

World Trade Challenge: Students explore the world economy through a sophisticated trading game.

Putting it into Action Part 3: Trips to Businesses

Our business trips help students to make the link between the enterprise skills they are developing in the classroom and how they are used in the working world. The trips include the chance to work with volunteers from the business, as well as taking part in a game to give a flavour of the industry. We run trips to over 80 businesses and employers.

Some examples are:
Société Générale International Business
Students visiting the offices of French investment bank Société Générale are quickly immersed in the world of international business. Meeting a variety of volunteers from across the world, a trading game explores how the global economy functions.

Birmingham Airport Transport Students learn about Birmingham Airport and the huge range of different roles that people have at an airport. They apply their learning by designing new branding for one of the airlines they meet.

London Business School Careers in Business Students visiting London Business School are spoilt with the range of business professionals that they are able to talk to. The day gives students the chance to explore different industries, from advertising to engineering, before working with MBA students to create “career maps”

HE University Courses in Enterprise and Entrepreneurship - EQF 6/7 and above

EQF 6 First Degrees

https://www.bachelorsportal.com/search/#q=ci-30|di-86|lv-bachelor,preparation|!dg-premaster,language&order=relevance

37 B**achelor's degrees**
Ranging from Enterprise and Entrepreneurship B.A. – dedicated entrepreneurs' course – to Biological Sciences (Biotechnology with Enterprise, B.Sc.)

B.A. Coventry University - Enterprise and Entrepreneurship
Most students will focus on business start-up and this course is designed to enable you to gain the necessary theoretical and practical skills to manage a small business. However, you may want to use your entrepreneurial skills in another organisation. Most private sector businesses (99.9%) fall into the small, medium sized enterprise (SME) sector* and your skills could be highly desirable to employers operating this type of business. You will have the opportunity to enhance your skills through placements or by working with entrepreneurs internationally.

Programme Structure
- The course will provide you with both knowledge of small business management and the opportunity to apply that knowledge to a private business venture or to a venture operated through the programme.
- Through the three years of the degree, the focus will progressively move from knowledge needed to set up a company, to practical aspects, such as registering your business, protecting your intellectual property and professional advice on how to manage a business – essential for your company's day-to-day operations.
- Core themes include: creativity and idea development, innovation, business start-up and management (feasibility testing and planning), marketing, finance management, human resource management, business development and growth, and personal entrepreneurial development.

B.Sc. Biological Sciences (Biotechnology with Enterprise) degree at the University of Leeds provides a comprehensive knowledge on the applications of biotechnology in the modern world, both commercially and clinically. The degree is designed for science students with a strong leaning towards business and commerce, providing a combination of technical knowledge in both business and biotechnology to give graduates strong career prospects.

Programme Structure
In year one you will begin with the core themes of biotechnology alongside an introduction to strategic business planning and management. Themes including cell biology and genetics will be delivered together with a skills development module involving weekly tutorials and laboratory sessions.

Year two will see you build on your skills and knowledge from year one, continuing to study biological processes at molecular and cellular levels. Business modules including ‘Entrepreneurship in Theory and Practice’ and ‘New Business Planning’ will complement modules in genetic engineering and human diseases to ensure that you develop a broad knowledge and skillset.
Year three is your chance to integrate both your knowledge of Biotechnology and your understanding of commerce and enterprise, with a year-long project that is supported by tutors from the Business School as well as the Faculty of Biological Sciences. You will study advanced level topics that represent the cutting-edge of research within the area of biotechnology, and the skills you have developed throughout your previous years will continue to be honed to an even more advanced level.

EQF 7 Masters Degrees

http://www.mastersportal.eu/study-options/268927062/entrepreneurship-united-kingdom.html

A selection of the available study options in United Kingdom. If you're interested in studying Entrepreneurship in United Kingdom you can view all 92 Masters programmes. You can also read more about the Entrepreneurship discipline in general, or about studying in United Kingdom. Many universities in United Kingdom offer study programmes taught in English. Before starting a programme, you need to have a basic knowledge of the English language. Assess your level of English by taking the IELTS language test.

M.Sc. Management (Entrepreneurship) Durham University
Core and elective modules
You will study:

- Entrepreneurship and the Entrepreneurial Process
- The Entrepreneur's Environment
- Organisational Behaviour
- Strategy
- Strategic Marketing Management **OR** Business Economics and Accounting
- New Venture Creation
- Research Methods and Dissertation

You will then choose two elective modules. The list of modules may vary from year to year, but has typically included Business Dynamics, Global Marketing, Innovation and Technology Management, Competitive Strategies and Organisational Fitness and Contemporary Issues in Entrepreneurship.
Dissertation or business project
During term 3 you will complete a final project under the supervision of a faculty member, either in the UK or abroad through an international partner institution. Designed to develop your business insight and research skills, and help you to present your analysis and ideas in a rigorous, systematic and professional manner, it takes one of two forms:

- business project (sourced by you or the School), you will apply the knowledge and skills you have acquired in terms 1 and 2 to address a real organisational problem, or

- research project, you will apply advanced techniques to analyse a topic of your choice, relevant to your course.

http://www.phdportal.com/search/#q=ci-30|di-86|lv-phd&order=relevance

EQF Above Level 7
Ph.D./M.Phil. Creative & Cultural Entrepreneurship
This MPhil is delivered in partnership between Trinity College Dublin and the Institute for Creative and Cultural Entrepreneurship at Goldsmiths.Integrating entrepreneurship within the development of creative practices in order to develop new business/career ideas within the creative sector and to establish the infrastructure required to support new creative enterprises.

2.3 Describe the trends you are able to find in the on-going development of entrepreneurial education and training in **all industries** eg separate or integrated modules, compulsory or voluntary etc.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/208715/bis-13-904-enterprise-education-impact-in-higher-education-and-further-education.pdf

Entrepreneurship is important for future economic growth. The Government therefore needs to understand what enterprise and entrepreneurship education is in place in Further Education (FE) and Higher Education (HE); what difference it makes to entrepreneurship and the growth of businesses; how could the impact be enhanced; and what difference it can make to the offer and its impact. ICF GHK was commissioned by the Department for Business, Innovation and Skills (BIS) to:

- review and critically assess available international literature on economic impacts of enterprise and entrepreneurship education initiatives aimed at HE and FE;

- carry out a comparative analysis of initiatives (impact, payback, context, transferability); and

- map the landscape of the provision of enterprise and entrepreneurship education initiatives in FE and HE in England.

Method

The study initially defined enterprise and entrepreneurship education and its expected outcomes and impacts in a logic model together with the indicators that would show they had been achieved. A wide literature search identified 155 documents from which 77 were selected for detailed review (see Annex 1). At the same time, provision was mapped from website checks for all HEIs and FE providers, web searches and follow-up interviews. Stakeholders and providers were interviewed.

Evidence of outputs, outcomes and impacts of enterprise education

In relation to outcomes and impacts the literature analysis indicates that:

- participation does lead to students acquiring relevant business related knowledge, skills and competences for enterprise and entrepreneurship;
- participants are more likely to change attitudes, such as risk taking, and intentions, such as around being self-employed or being entrepreneurial, than non-participants;
- studies have mixed results about whether such courses increase students' perception of feasibility; it is greater in Wales where enterprise and entrepreneurship education appears to be more embedded in school and FE than in England;
- there is no evidence that students are more likely to take steps as a result of courses towards the development stage of a new business or using the skills gained to develop new business opportunities in an existing small or large business; 6 Enterprise Education Impact in HE and FE - Final Report
- there are however positive statistical relationships between various enterprise and entrepreneurship education learning activities in school and tertiary education and economic impacts including starting a new business (strong evidence for entrepreneurship course graduates); increasing employability and earnings; and contributing to the growth of businesses (especially for graduates entering small businesses). These suggest that enterprise and entrepreneurship education is a positive stimulus;
- one study suggests a net positive impact on GVA of enterprise and entrepreneurship education in HE.

As a consequence, while the evidence suggests that enterprise and entrepreneurship education generally has positive benefits that should be expected to lead to some students starting new businesses and making contributions to the growth of existing businesses, for example, the evidence does not conclusively show the attribution of this to enterprise and entrepreneurship education in either FE or HE. However, the effects of enterprise and entrepreneurship education on learners' knowledge, skills and competences and their intentions and ambitions support the evidence from the studies showing statistical relationships between participation in enterprise and entrepreneurship education and economic impacts which have been found.

In relation to effective practice the literature analysis suggests in one study that students who participated in student enterprises report more business related knowledge, skills and competences than students who have participated in enterprise courses; in another study that active content (seminars, simulations, group projects) in enterprise and entrepreneurship education has a more positive effect on students' intentions than non-active learning; and in another study that graduates are more likely to gain knowledge, skills and competences and positive intentions towards starting a new business from their experience in HE from courses and placements; non-graduates only from placements and experience.

As a consequence we can say little about changing practice but the findings support greater availability of enterprise and entrepreneurship education to students, especially for those on vocational courses, and opportunities for practical learning.

Quality of evidence

The assessment of research approaches and methods used in the literature indicate that initiatives in HE are more commonly assessed than in FE. It also shows that:

- course specific evaluations tend to measure immediate outputs (knowledge, skills and competences) and short term outcomes (attitudes and intentions) only. Ambitions and actions (both short and medium term outcomes) are not generally being measured;
- the length and nature of courses and the initiatives undertaken are often not distinguished in studies showing statistical relationships; the GEM 2008 study is an exception; 7 Enterprise Education Impact in HE and FE - Final Report
- comparative analysis is limited because of the paucity of studies of similar initiatives with similar groups and studies of the same initiative in multiple locations to test the significance of context; • evaluative studies of programmes are hampered by not measuring inputs and describing the activities and participants;
- a few studies measure outputs some using tests (ESCAN and IOEAB), surveys, experiments and qualitative interviews. Many are using case studies without any purposive sampling and appropriate analysis;
- a few studies measure change in intention (planned behaviour) which can indicate whether entrepreneurial actions are likely to follow education and training compared to a control group; one study measures change in effective thinking as a predictor; otherwise few studies measure any outcomes arising from enterprise and entrepreneurship education;
- no studies effectively measure the value and scale of economic impacts; and
- Charney and Libecap's study of the Berger Entrepreneurship Program stresses the value of longitudinal studies and comparative control groups to produce robust results. This demonstrates how a database of alumni networks can enable such studies to be carried out.

As a consequence there is evidence that enterprise and entrepreneurship education initiatives lead to the some of the outputs, outcomes and economic impacts that they are expected to generate for students in FE and HE but this cannot be tracked from the education and training provided. There is also not evaluative evidence about the full range of enterprise and entrepreneurship education activities found in FE and HE in England. Nor is there much evaluative evidence which contextualises the nature and extent of the enterprise and entrepreneurship education activities giving rise to the outcomes measured. To be effective in testing the economic impacts and the value of enterprise and entrepreneurship education, evaluations would have to be longitudinal, recruit control groups and test/survey sufficient samples of participants and non-participants.

Extent of provision in FE and HEIs

The mapping has found that formal provision is better established than previous studies have indicated. It can be found in nearly three quarters of HEIs and FE colleges. Around 30% of both FE and HEIs have some formal full courses and around 60% have units in some vocational courses. Few providers have a wide range of departments offering formal learning, the majority only have enterprise and entrepreneurship education offered in Business and Management departments.

Non-formal provision is well established in HEIs (over 60%), less well in FE Colleges (around 30%); around 10% of providers only offer non-formal provision. HEIs appear to benefit more from external funding for non-formal provision than FE colleges. Non-formal learning is very diverse in nature and offered by a large range of 'other' organisations.

Slightly more FE colleges (14%) than HEIs (9%) offer no provision; there is no pattern to provide any explanation. Most units are restricted to learners on full courses within the same faculty.

Practical learning can be found in both HEIs and FE colleges but appears to be more frequently found in FE although passive approaches to learning predominate.

Some providers have highlighted that blockages to increasing availability include gaining 'buy in' because the benefits of enterprise education are not widely understood.

As a consequence while enterprise and entrepreneurship education appears to be strengthening it is not yet widely embedded in the full range of vocational learning where students are likely to be working in SMEs or self employed, since there are many such courses which do not appear to have any embedded enterprise and entrepreneurship education.

Conclusions and next steps

The research appears to support a policy of encouraging and enabling students in FE and HE to participate in enterprise and entrepreneurship education which is both formal and informal learning to provide relevant attributes (knowledge, skills and competences) as well as relevant attitudes and intentions. It suggests that learning by doing (such as projects, placements and learning enterprises) should be included in all enterprise and entrepreneurship education courses since these seem to increase the outcomes and impacts for students, especially those in FE. This may be achieved in non-formal learning but it can also be achieved through embedding this in the curriculum.

Questions remain about whether it should be largely available only to those who are predisposed (through their choice of a full qualification or course with enterprise and entrepreneurship education or participation in non-formal learning activities), since not all students are exposed at school or have their intentions firmed up by the time they are in tertiary education. Comparisons with Wales suggest that the Welsh Government's Youth Enterprise Strategy which makes enterprise education an entitlement for every student and is building the capacity to provide enterprise and entrepreneurship education in schools is effective in increasing positive attitudes to entrepreneurial activities.

The gaps in the literature suggest that the priorities for research are studies of:

- enterprise education in FE as well as HE;
- different levels and types of enterprise education (significant component of full-time course, embedded, non-formal) to distinguish and compare outcomes;
- pathways which build up knowledge, skills and competences; and
 the links between enterprise and entrepreneurship education, starting and growing SMEs and economic growth.

While BIS, stakeholders and providers can take some steps to increase the evidence base to meet these priorities, it requires a financial commitment to shape and support evaluations which would have to be longitudinal, recruit control groups and test/survey sufficient samples of participants and non-participants at regular intervals.

As a consequence it is recommended that BIS:
- considers with partners how current research and research funds could be focused on comparative studies of enterprise education and tracking the links between enterprise education and economic outcomes;
- considers how data collection could be enhanced to support this research;
- considers some opportunities to undertake longer term research; and
- develops the scale and scope of a quasi-experimental longitudinal study which could fill gaps in understanding to guide policy and curriculum development in FE and HE.

The answers for question 3 have been included in the descriptions in 2.
The Information for the questions 4 and 5 can be found in the statistical information provided in the answer for question 1.

Germany
Information about the industry

Preliminary remark:
In Germany there is quite a different definition and categorisation within the creative industry than in other (European) countries. Here it is connected with the cultural industry (“Cultural and creative industries”). Hence the statistics follow this classification.

Subsequent the statistical data and also the information on trends are given for the two major sectors

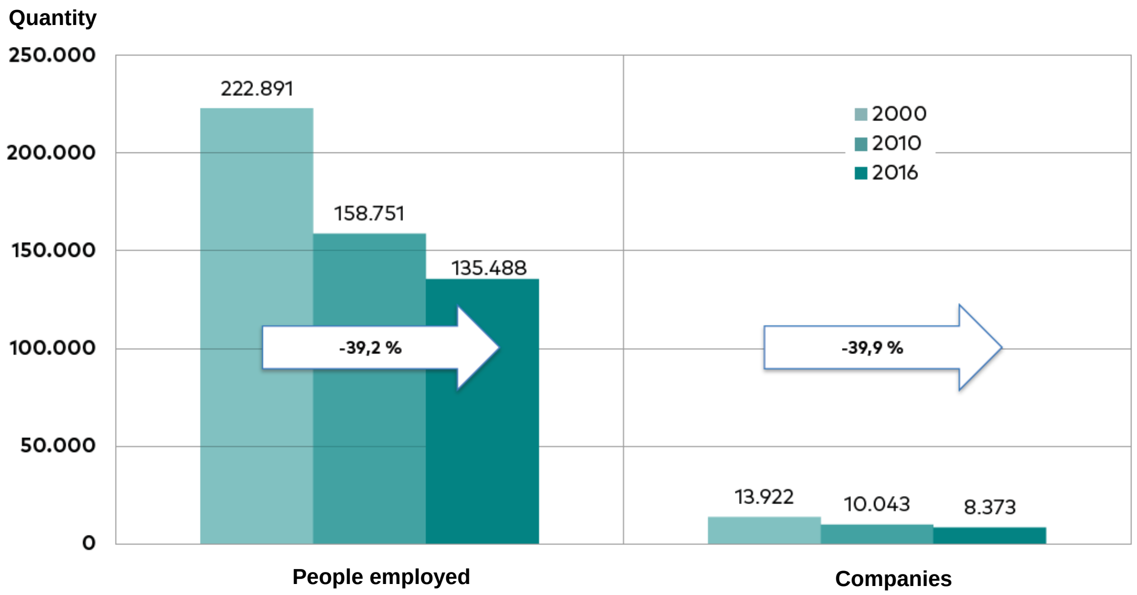
- Printing industry
- Cultural and creative industries

Amount of companies and amount of people employed

Printing industry

In the space of time from 2000 to 2016 the number of companies in the German printing industry decreased at about 40% (2000: ca. 14.000 – 2016: ca. 8.600).

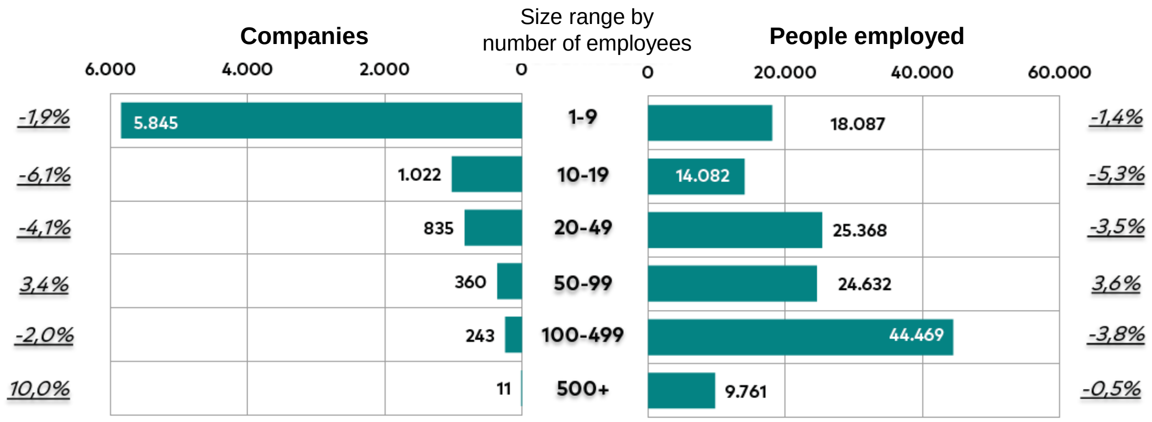
In the same period of time the amount of people employed in the German printing industry has decreased also at about 40 % (2000: ca. 223.000 – 2016: ca. 135.500).



Note: Due date 30.06.
Source: bvdm: Aktuelle Branchenzahlen (03. Juli 2017)

Figure 1: Amount of people employed and companies in the German printing industry

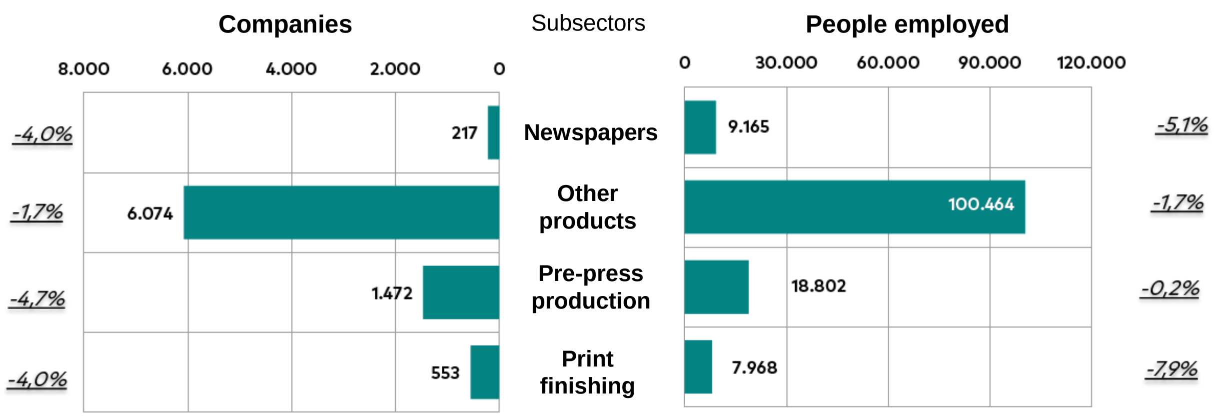
Figure 2 and 3 show the structure of the printing industry in Germany – according to size (fig. 2) and subsectors (fig. 3).



Note: Due date 30.09.2016
Source: bvdm: Aktuelle Branchenzahlen (03. Juli 2017)

Figure 2: Structure of the printing industry in Germany by number of employees

The German printing industry is dominated by very small enterprises – 70% of the companies occupy less than 10 employees (average: 3 employees/enterprise). One third of the people employed work in enterprises that occupy between 100 and 499 employees.



Note: Due date 30.09.2016
Source: bvdm: Aktuelle Branchenzahlen (03. Juli 2017)

Figure 3: Structure of the printing industry in Germany by subsectors

Comparing the subsectors shows that about 75% of the companies and also nearly 75% of the people employed are among the subsector “printing of other products”.

Further information on the German printing industry is also listed in the paper “Aktuelle Branchenzahlen” (bvdm, 03. Juli 2017; http://www.verband-druck-bw.de/assets/Uploads/news/Dateien/bvdm-Aktuelle-Branchenzahlen2017-07-03.pdf).

Trends

Experts assume that the reduction in number of companies as well as in people employed in the German printing industry will continue over the next years (there are no detailed/concrete data available).

The future prospects for the development of the turnover in the printing industry also assume a further decrease of 800 million € from 2015 (12,4 milliard €) to 2020 (11,6 milliard €).

More detailed information about

- Projections of turnover until 2020 for the printing industry in Great Britain, France, Spain and Italy

as well as about

- Turnover
- Output value
- Capital expenditures
- Research and development and innovation rates

can be found in the report "Dossier Druckindustrie" (Statista, 2017; https://de.statista.com/themen/2248/druckindustrie/).

Cultural and creative industries

The statistical data for the German cultural and creative industry deliver a bit more information relating to the questions of the study on hand.

To be able to value the data figure 4 shows the definition of the culture and creative industries underlying the statistic.

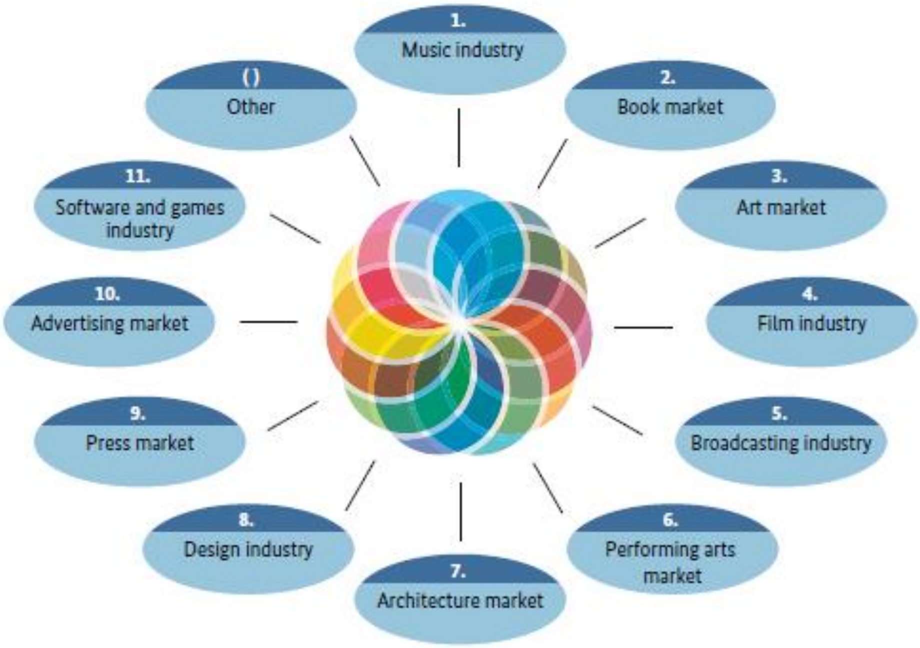
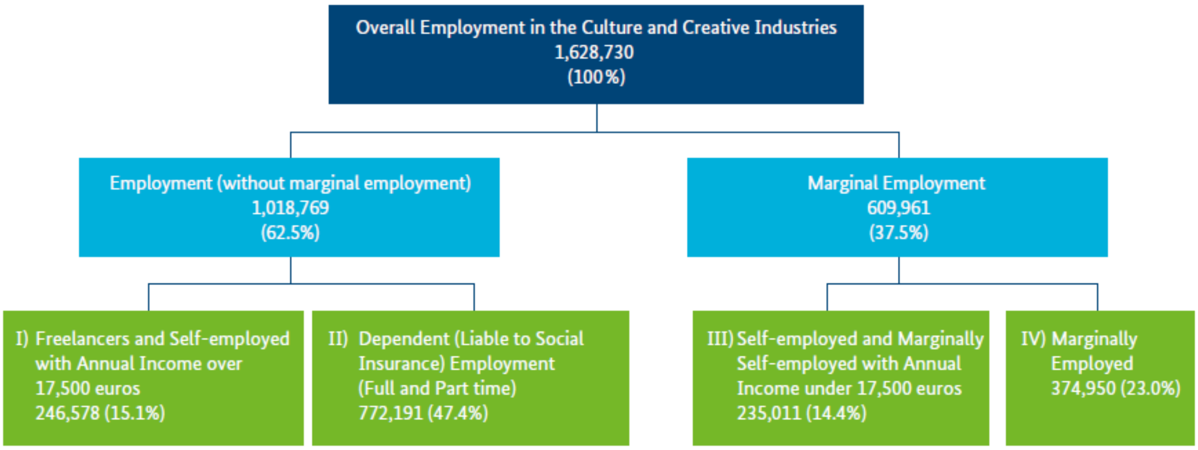


Figure 4: The segments of the culture and creative industries in Germany (Source: Federal Ministry for Economic Affairs and Energy (BMWi): Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2012, Berlin 2014, p. 3)

Definition:
“The culture and creative industries comprise all cultural and creative enterprises that are mainly market-oriented and deal with the creation, production and/or dissemination through the media of cultural/creative goods and services. The main criterion for the definition is the commercial character of the company.”
(Conference of Economic Ministers)

Figure 5 shows the structure of employment in the culture and creative industries in the year 2012:



Note: *Data estimated. The number of self-employed people corresponds to the number of taxable entrepreneurs with an annual income of at least 17,500 euros.
Source: Turnover tax statistics 2011, Destatis 2013; employment statistics, Federal Employment Agency; own computations ZEW.

Figure 5: Structure of employment in the culture and creative industries 2012 (Source: Federal Ministry for Economic Affairs and Energy (BMWi): Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2012, Berlin 2014, p. 5)

Two aspects are of high interest for the project Thrive!

- More than one third of the people employed in the German cultural and creative industry are marginally employed. Their income is very low (in Germany: regular income/month lower than 450 €) or their employment is limited to a maximum of 2 months/year.
- The share of self-employed people and freelancers is quite high.

Table 1 shows the structure of total employment in the culture and creative industries from 2009 to 2012.

Category	2009 Number	2009 Share (in %)	2010 Number	2010 Share (in %)	2011 Number	2011 Share (in %)	2012* Number	2012* Share (in %)
Type of employment								
I) Freelancers and self-employed[1] (with annual income of at least 17.500 euros)	238,479	15.4	239,534	15.3	244,290	15.4	246,578	15.1
II) Dependent employment[2] (liable to social insurance)	723,289	46.8	720,402	46.1	739,841	46.6	772,191	47.4
Employees not including marginal employment	**961,768**	**62.3**	**959,936**	**61.5**	**984,131**	**62.0**	**1,018,769**	**62.5**
Additionally: marginal employment								
III) Marginally self-employed persons[3]	197,081	12.8	214,042	13.7	224,790	14.2	235,011	14.4
IV) Marginally employed persons[4]	384,991	24.9	387,295	24.8	377,759	23.8	374,950	23.0
Marginal employment in total	**582,072**	**37.7**	**601,337**	**38.5**	**602,550**	**38.0**	**609,961**	**37.5**
Employment in total	**1,543,841**	**100.0**	**1,561,273**	**100.0**	**1,586,681**	**100.0**	**1,628,730**	**100.0**

Note: *Data for 2012 is based partly on own estimations and preliminary official results.

1 Taxable entrepreneurs with an annual income of at least 17.500 euros.

2 Employees liable to social insurance contributions in full and part time employment. but not marginally employed persons.

3 Marginal self-employment includes freelancers and self-employed persons with an annual income of less than 17.500 euros based on the microcensus.

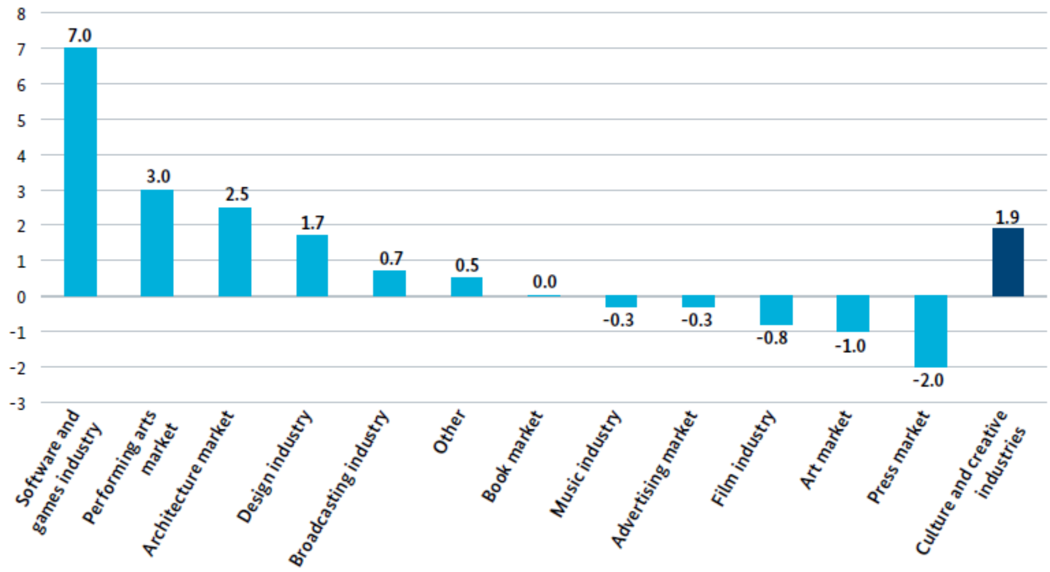
4 Marginally employed persons (marginal low-paid and temporary employment) based on employment statistics from the Federal Employment Agency (cut-off date: 30.06.).

Source: Destatis 2013; Federal Employment Agency 2013; own computations ZEW.

Table 1: Structure of total employment in the culture and creative industries from 2009 to 2012
(Source: Federal Ministry for Economic Affairs and Energy (BMWi): Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2012, Berlin 2014, p. 17)

The number of freelancers and self-employed people increased from 2009 to 2012, while the share of this group is quite stable at about 15%.

Table 2 shows that the subsector “Software and games industry” increased by 7%/year in the period of time from 2009 to 2012 while more “traditional” submarkets of the creative industry like advertising market or the press market decreased in that period.



Note: *Values for 2012 are partly based (concerning the turnover tax statistics) on estimations.
Source: Turnover tax statistics, Destatis 2013; Employment statistics, Federal Employment Agency 2013; own computations ZEW.

Reading aid: Employment in the design industry submarket increased by 1.7 percent per year in the period from 2009 to 2012.

Table 2: Development of employment (self-employed and workers liable to social insurance contributions) in the submarkets of the culture and creative industries from 2009 to 2012 (average annual change 2009–2012 in percentages)
(Source: Federal Ministry for Economic Affairs and Energy (BMWi): Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2012, Berlin 2014, p. 14)

More information in detail can be found in the report of the Federal Ministry for Economic Affairs and Energy (BMWi): Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2012, Berlin 2014.
(http://ftp.zew.de/pub/zew-docs/gutachten/KKW_Monitoring2012_Kurzfassung_EN.pdf)

Relating to the topic “entrepreneurship/start-ups” in the German cultural and creative industry the report “Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2014” (Federal Ministry for Economic Affairs and Energy (BMWi), Berlin 2015) states, that “Start-up activity in the culture and creative industries is heavily concentrated in three submarkets: 55% of all company start-ups in 2014 were in the design industry (21%), the software and games industry (17%) and in the advertising market (also 17%) (Federal Ministry for Economic Affairs and Energy (BMWi), Berlin 2015, p. 8).

For further information see
http://ftp.zew.de/pub/zew-docs/gutachten/KKW_Monitoring2014_Kurzfassung_EN.pdf

2. Information about entrepreneurship in education

2.1 Information about specific entrepreneurial courses, modules, chunks of education and training in formal education with main focus on VET.

In Germany there is a manifold offer of supporting services in entrepreneurship – mostly concentrating on consulting and financial support.
Since 1998 supporting structures and offers were established at universities – meanwhile there are more than 130 professorships for entrepreneurship.
Beyond that there are seminars, workshops in entrepreneurship etc. offered by e.g. chambers of commerce – and there are different entrepreneurship initiatives (in part private) nationwide or on a regional level (e.g. so-called “Gründerstammtisch”; that is a group of regulars (entrepreneurs) who meet e.g. once a month).

It would go far beyond the scope of this desk research activity to analyse and evaluate all the different courses, seminars etc. in Germany / at German universities. Therefore the subsequent description concentrates on a selection of programs and courses – with a certain reference to the creative industry respective entrepreneurial competences in the “philosophy” of the Thrive!-project.
The following offers will be looked at and presented a bit more in detail:

- the 5 universities with study courses in print and media in Germany
- the Website “Existenzgründungsportal” of the Federal Ministry of Economic Affairs and Energy
- the Cultural and Creative Industries Initiative of the Federal Government

The BVDM (Bundesverband Druck und Medien, the association for the print and media industry in Germany) and the affiliated associations on the regional level do not offer special courses for entrepreneurship.
Also the associations for the information- and communication- respective the digital industry, bitcom and BVDW, have no special offer for entrepreneurs.

The “Akademie der deutschen Medien” is a not-for-profit organisation with the target to support companies in the media sector to successfully manage the structural as well as the digital change in the media sector. It offers courses/trainings in “Personal competencies”. The motivation is that competencies like self-organisation, professional project-management and negotiation skills are necessary for success in modern companies in the media industry.
There are courses in

- Leadership
- Project-management
- Creativity tools
- Self- and time-management
- Communication and negotiation
- Prevention / dealing with stress

(see https://www.medien-akademie.de/seminarkategorie/seminare/persoenliche-kompetenzen/)

With interest for the Thrive!-project is the course “How to develop innovative business models” that teaches methods like Design Thinking or Business Model Generation / CANVAS.
Target groups are managers, project-managers in business development, strategic planning, product management, marketing, sales and distribution.
(https://www.medien-akademie.de/seminarangebot/innovative-geschaeftsmodelle-entwickeln/)

The chambers of commerce e.g. also offer courses/seminars in entrepreneurship – the program is “traditional” and covers – due to the mission of chambers of commerce - topics like “From idea to business concept”, “Legal forms of organisations”, “Entrepreneurship and taxes”, “Marketing” (see exemplary the flyer of a seminar (https://www.sihk.de/blob/haihk24/starthilfe/downloads/Starthilfe_Unternehmensfoerderung/807500/2aa85388a3774bf8cbbf12b8821d7065/Flyer_Kompaktseminar-data.pdf).
Beside the old-fashioned topics of the seminars there is no specialisation e.g. for different industrial sectors.

Universities with study courses in print and media in Germany

There are 5 universities in Germany that offer study courses in print and media. All of them have offers in entrepreneurship – but rarely specialised for students in the print and media sector.

Beuth Hochschule für Technik Berlin

In the degree program “print and media” (B.Eng.; M.Eng.) economic aspects like “media economics” or “businessplan” are integral part of the study. Beyond this on the technical side digital media is also a field of study.

Against the background of the digital change – also in the print and media industry - the Beuth Hochschule offers in their department of economics a new degree program “Digital Economy”. Part of this study is a module “innovation management and eEntrepreneurship”. eEntrepreneurship includes the basics for entrepreneurship in the net economy. Subjects are e.g. agile project-management and methods/tools like business model generation and lean-startup.

Hochschule für Technik, Wirtschaft und Kultur Leipzig

The Hochschule für Technik, Wirtschaft und Kultur Leipzig offers study programs in “print” (B.Eng.), “book and media production” (B.Eng.), “print and packaging” (M.Eng.) and “crossmedia management”. Integral part of the studies are basics in economics and project-management; “crossmedia management” also contains “agile project-management” and “digital business models”.

Hochschule für angewandte Wissenschaften München

The Hochschule für angewandte Wissenschaften München has a degree study in “print and media” (B.Eng.). Part of the study is technological as well as know-how in economics. The latter contains subjects like accounting and marketing - no courses with a deeper reference to entrepreneurial skills.

In cooperation with the Strascheg Center for Entrepreneurship (SCE) the Hochschule München is a so-called “Gründerhochschule” (supported by the EXIST-program of the Federal Ministry of Economics and Energy”).
Hochschule München/SCE offers a broad program for entrepreneurs – with an emphasis on qualification. Topics are innovation management, leadership, self-development and competences to bring ideas and projects to market.

The courses are open for students of the Hochschule München as well as for employed persons. The programs are interdisciplinary and close related to practice. For further details see http://www.sce.de/lehrveranstaltungen.html

In cooperation with the Goethe-Institut the Strascheg Center for Entrepreneurship/Hochschule München establishes 5 so-called Cultural Entrepreneurship Hubs worldwide.
“A hub in the entrepreneurial sense is a kind of greenhouse for start-ups. In this protected environment, teams with innovative business ideas can be consulted and trained. Hubs are contact points for entrepreneurial thinking and acting people, in which they share, network and mutually benefit from one another. The Cultural Entrepreneurship Hubs of the Goethe-Institut will become centers for creative industry activities in which the start-up consultants will advise teams from the cultural and creative industries scene and work with them on their respective start-up ideas.” (http://cultural-entrepreneurship.org/).
The hubs are mostly focused on arts and cultural organisations.

Hochschule der Medien Stuttgart

The Hochschule der Medien Stuttgart offers a new study “Print Media Technologies” (B.Eng) in English language (Start: spring/summer 2018; https://www.hdm-stuttgart.de/pmt). It contains modules on strategic planning, strategic problem solving, business management, international management and law (https://www.hdm-stuttgart.de/pmt/pmt_flyer.pdf).

For students who are interested in entrepreneurship the Hochschule der Medien has a startup center (https://startupcenter-stuttgart.de/) with a manifold portfolio of consulting, qualification, projects, etc.
The startup center offers apprenticeship training (so-called “Kontaktstudium”) for entrepreneurs who want to found a startup as well as for executive managers and

skilled employees who want to develop a new business segment or have to manage an innovation project in their company.
The courses can be taken individual or they can be combined to a "Master of Entrepreneurship"

The modules of the program "Intra- and Entrepreneurship" are

- From idea to business model – design thinking and business model generation
- System dynamics
- Entrepreneurship (among other things "business plan", "lean-startup")
- Management of IT companies
- Intellectual property management for entrepreneurs
- Product-development
- Technology management
- Advanced Finance
- Business development

For further information see https://innovative-entrepreneurship.de/kontaktstudium/ueberblick/.

Bergische Universität Wuppertal

The degree studies in print and media at the Bergische Universität Wuppertal are in change – due to the structural changes in the print and media industry and on the background of the digital transformation.
The B.A in media technology and economy and the M.Sc. in print and media technology both contain modules in strategic management and innovation management. A new module called "Management and innovation in the media industry" (starting spring/summer 2018) will include methods like design thinking and business model generation. It will also sensitise for entrepreneurship as a job option and will also teach and train methods like lean start-up.

In connection with the establishment of new professorships for u.a. "Digital media" and "Digital Transformation" new degree studies will be developed and offered. This offers the opportunity to integrate entrepreneurial skills as an integral part of the new studies…

At the Wuppertal University the Jackstädt-Zentrum offers courses and seminars on entrepreneurship (exemplary see https://www.jackstaedt.uni-wuppertal.de/lehre.html).

The Schumpeter School of Economics offers a Master in "Entrepreneurship and Innovation" (https://www.wiwi.uni-wuppertal.de/de/studium-und-lehre/wirtschaftswissenschaftliche-masterstudiengaenge-m-sc/entrepreneurship-und-innovation-m-sc.html). It prepares entrepreneurs, managers of small and medium-sized enterprises, technology managers in big companies and project managers.

The competence network "bizeps" (http://www.bizeps.de/ueber-bizeps.html) offers a manifold portfolio for entrepreneurs. Since winter 2017/2018 the bizeps Startup

Academy offers courses in design thinking, business model CANVAS, finance etc. (http://www.bizeps.de/bizeps-startup-academy.html).
The courses are open for students and scientists from all faculties.

“Existenzgründungsportal” of the Federal Ministry of Economic Affairs and Energy

A central element of the supporting activities for entrepreneurs / entrepreneurship the Federal Ministry of Economic Affairs and Energy has established the webpage “Existenzgründungsportal” (http://www.existenzgruender.de/EN/Home/inhalt.html).

The German version of the portal contains a great many of information concerning entrepreneurship. Of great interest for the Thrive!-project are the

- Checklists (http://www.existenzgruender.de/DE/Planer-Hilfen/Checklisten-Uebersichten/inhalt.html)
- Guidelines und booklets (http://www.existenzgruender.de/DE/Planer-Hilfen/Praxishilfen/inhalt.html)
- Online training modules (http://www.existenzgruender.de/DE/Planer-Hilfen/Online-Training/inhalt.html)

The online training modules deal with

- Financing
- Legal forms of organisations
- Cooperation
- Negotiation with banks
- Marketing
- Liberal professions
- Female entrepreneurs

Some of the materials are also available in english language (http://www.existenzgruender.de/EN/Checklisten-Uebersichten/inhalt.html)

Particular for entrepreneurs in universities there is the webseite of the Program EXIST of the Federal Ministry of Economic Affairs and Energy (http://www.exist.de/DE/Home/inhalt.html).

Note:
An evaluation of the material offered by these websites is neither reasonable nor possible at this stage of the desk research. It should be evaluated in detail when developing the learning material in Thrive!

Cultural and Creative Industries Initiative of the Federal Government

The Cultural and Creative Industries Initiative of the Federal Government was launched in 2007. Its central objective is to strengthen the competitive ability of the cultural and creative industries in Germany.

An important element of the initiative is the support for entrepreneurs in the sector - that means supporting in financing and an offer for qualification.
The initiative's website provides a broad spectrum of detailed information about the sector (e.g. key data) and functions as a guide to the services, advice and support programmes available to professionals in the cultural and creative industries. Main target groups are startups and so-called young talents.

A special (printed) guidance for entrepreneurship in the creative industries deals with the specifics of the industry and its subsectors (http://www.kultur-kreativ-wirtschaft.de/KUK/Redaktion/DE/Publikationen/2016/alles-nur-kein-unternehmer.pdf?__blob=publicationFile&v=10).
The section "Business-know-how" on the initiative's website delivers additional and current information and material for entrepeneurs (http://www.kultur-kreativ-wirtschaft.de/KUK/Navigation/DE/Praxistipps/BusinessKnowhow/business-know-how.htm).
For example there you can find a vivid "manual" for the approach "Lean Startup" with testimonials from people in the creative and cultural industries. (http://www.kultur-kreativ-wirtschaft.de/KUK/Redaktion/DE/Top-Themen/2017-11-15-topthema-lean-start-up.html).

In connection with the development of the learning material for Thrive! it should be checked out, whether parts of the information booklets or "manuals" can be integrated.

Note:
Because the Federal Ministry of Economic Affairs is the "principal supporter" of the initiative the website is logically linked with the "Existenzgründungsportal" (http://www.existenzgruender.de/EN/Home/inhalt.html).

2.2 Describe the situation of 2 also for the commercial education and training sector (many times called non-formal education), related to the graphic-media / communication and information industries. This could also be courses delivered by trade organisation with a certain 'industry/sector recognition' or 'certificates'

We didn't find courses for entrepreneurship offered by commercial providers in our desk research.
The reasons may be that

- on the one hand the support offered on websites like www.existenzgründer.de (see above) is free for everyone and most of the courses at universities are free of charge too and

- on the other hand in Germany there is a broad portfolio of government-funded consultancy for entrepreneurs – so an expert helps developing a business plan, choosing the right legal form of the organisation etc.

Therefore there is little motivation for private companies to offer special seminars and courses for entrepreneurs.

2.3 Describe the obvious trends you are able to find in the on-going development of entrepreneurial education and training.

We didn't identify any "trends" in entrepreneurial education and training in our desk research. What we noticed is that topics and methods like "design thinking", "lean startup", "business model generation" or "digital business models" seem to evolve as somewhat like a "standard" in activities to support or qualify entrepreneurs and startups.

Here we should monitor which material can be integrated into Thrive!
Because most of the material available on websites like "Existenzgründer" were developed in government-funded projects and transfer/diffusion of the project results is part of the support programs it should be quite easy to use it…

3. Specific information about company profiles / company descriptions/ characteristics till 2016. So look back what you can find about now, back to 2010 or 2012

Beyond the statistical data on company size e.g. by amount of employees, turnover, innovation rate (see 1. above) there is no special (quantitative) information available.

One can get a good (qualitative) “impression” on company profiles from a lot of examples that are described in professional journals like “Deutscher Drucker” or that are documented in (scientific) books e.g. on entrepreneurship.

BUW has collected several of such sources and will integrate proper examples in the Thrive!-report on company profiles (in progress).

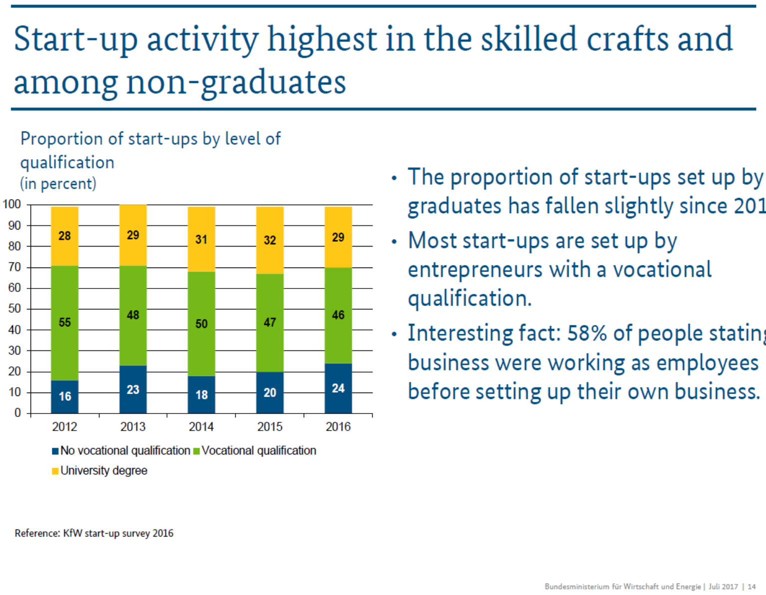
4. Information about educational profiles from formal and non-formal sources (ref. §2.1 and §2.2 with regards to entrepreneurial education and training.

In the paragraphs above we have dealt with this topic (on the level of listing subjects).

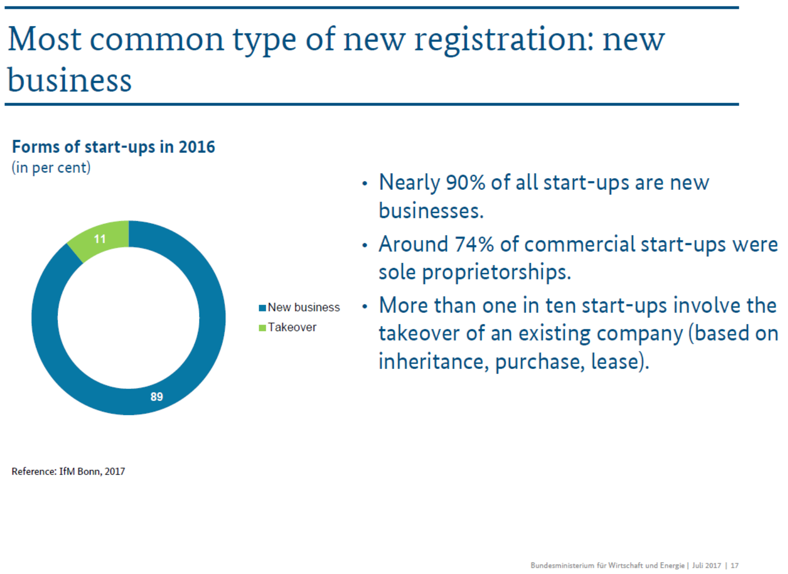
5. Information about newbies, start-ups, new entries in the industry

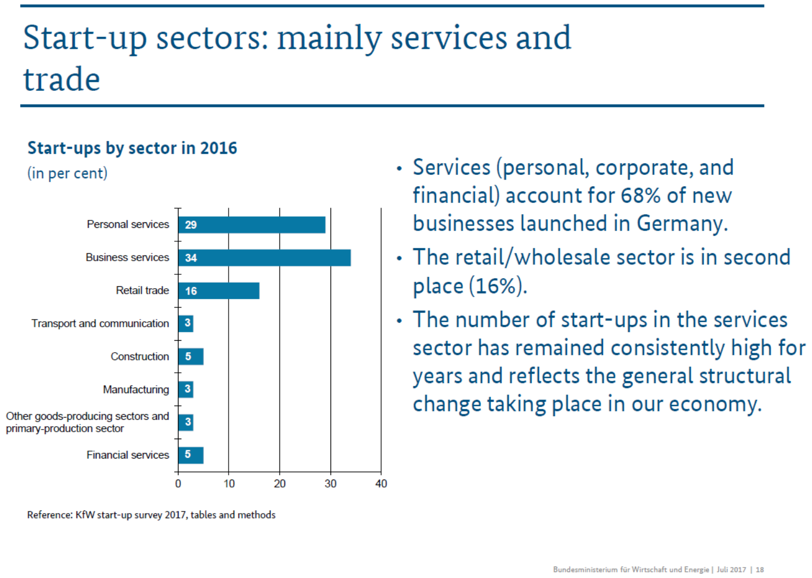
There is little detailed information about newbies etc. (in the creative industry).
The facts and figures “Start-ups and entrepreneurial spirit in Germany” (published by the Federal Ministry of Economic Affairs and Energy in July 2017) show some major findings (see copy of figures from the report below):

Attention!
Data is on entrepreneurship in gene



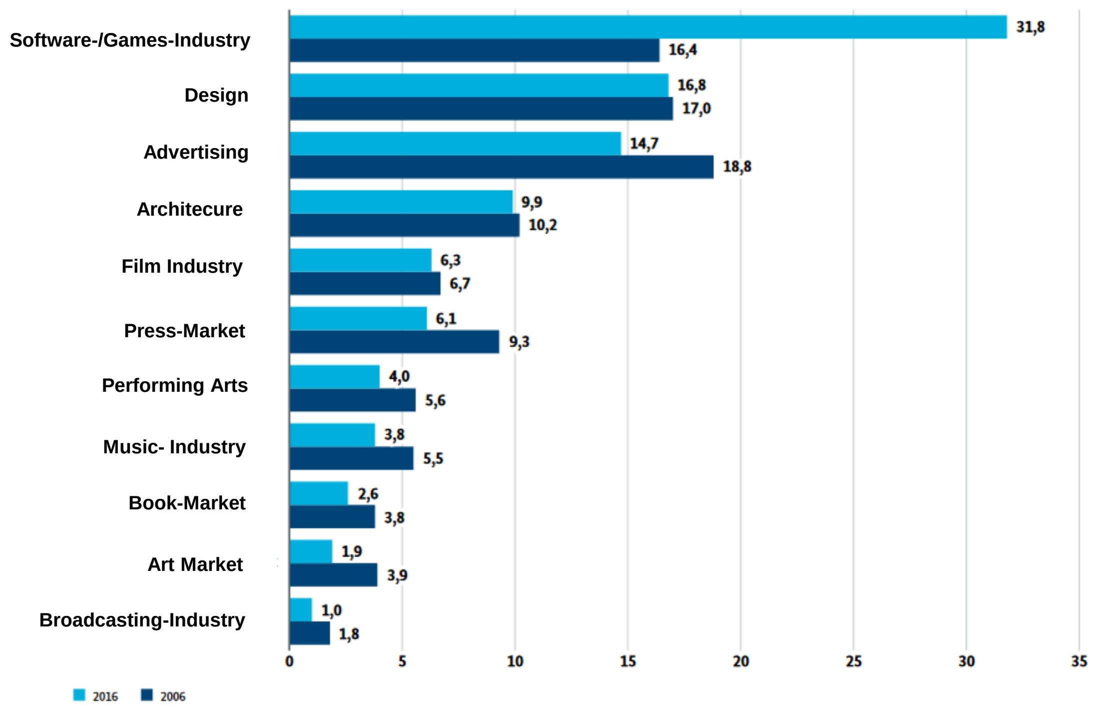
ral – no differentiation in industries or subsectors!





The newest monitoring report “Monitoringbericht Kultur und Kreativwirtschaft 2017” of the Federal Ministry of Economic Affairs and Energy (Dec. 2017) delivers an overview of the startups in the cultural and creative industries per sector:

Figure 6 shows that the share of the software- and games industry is dominating with nearly one third of the foundations in the creative industries in Germany. This sector has doubled its share during the last ten years.



Source: Mannheimer Unternehmenspanel, ZEW, 2017

Figure 6: Share of the subsectors in all foundations of an enterprise in the cultural and creative industries in Germany 2006 and 2016 (data in %) (Source: Federal Ministry for Economic Affairs and Energy (BMWi): Monitoring of Selected Economic Key Data on the Culture and Creative Industries 2016, Berlin 2017, p. 22)

Note:
For this issue it can be helpful to look at documented examples of innovative startups in professional magazines or textbooks – and use them to deviate company profiles as well as competence profiles.

5.1 If there is any information about female entrepreneurs and start-ups, can you provide the relevant data for this research?

We didn't find detailed information on female entrepreneurship and start-ups in the creative industries in Germany.

Among the supporting structures for entrepreneurship there are networks for female entrepreneurs – with specialised websites:
(http://www.existenzgruenderinnen.de/DE/Home/home_node.html)

- National Agency for Women Start-ups Activities and Services (bga)

  The project goal is to mobilise the potential of women and support the entrepreneurial self-employment of women.

  Activities:
  - information
  - advisory services
  - regional networks
  - regional offices
  - projects

  The project is jointly funded by German Federal Ministry for Education and Research, the Federal Ministry for Family, Senior Citizens, Women and Youth and the Federal Ministry of Economy and Technology.

  For further information see
  (http://www.existenzgruenderinnen.de/EN/Home/home_node.html)

- Initiative "FRAUEN unternehmen"

  The example of successful female entrepreneurs shall motivate women to reflect start-up as an option for a career.

  For further information see
  (http://www.existenzgruenderinnen.de/DE/Vernetzung/Frauen-unternehmen/frauen-unternehmen_node.html)

Spain

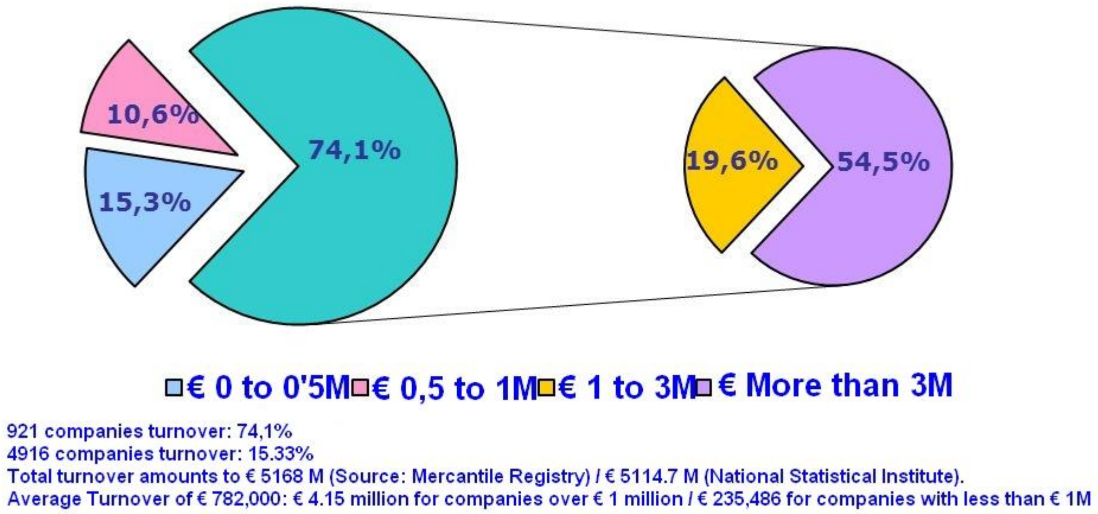
1. Information about the industry in Spain

Sector: Paper, graphic arts and reproduction of recorded media

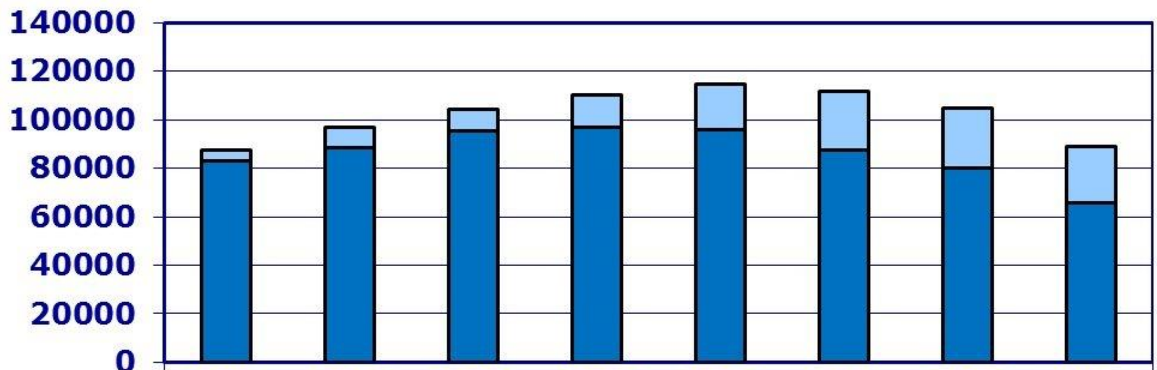
Basic variables	Value (2014)	% Total Industries	
Number of companies	15.587	8,27	
Turnover	17.698.829.000 €	3,09	
Production	17.302.406.000 €	3,27	
Added Value (AV)	5.028.671.000€	3,94	
Employment	101.674	5,26	
Average Size	6,5	0,64	(*)
Compensation per employee	36.400	0,95	(*)
Productivity (AV/employees)	49.500	0,75	(*)
Unit Labour cost	73,5%	1,26	(*)
Investing Intensity	12,0%	1,12	(*)
Exports	4.022,8 M€	1,74	
Imports	4.068,4 M€	1,65	
Business Balance (BB=Exp-Imp)	-45,7 M€	--	
Comparative Advantage Index	-0,01	--	

Employment in the graphic sector
Nearly 40,000 less people work in the graphic sector than before the global crisis. In 2014 101,674 people were affiliated at the spanish social security. The destruction of employment has been geographically distributed in the usual way: one third in Madrid, one in Catalonia and the other in the rest of Spain.
It means that the fall has slowed, as evidenced by the fact that since December 2013 the sector has not lost jobs. The estimation is that it will take some time to create new jobs because companies have room for growth with the current workforce.
According to data from the Mercantile Registry, in Spain there were 6,607 active companies in the CNAE 181 (Graphic arts) and 738 in the CNAE 172 (Paper and Cardboard Conversion) in Spain at the end of 2014. ‘Active companies’ meaning that they are not in liquidation, bankruptcy or affected by any other similar procedure. We are talking about a reduction of approximately 50% on the figures that were handled just a decade ago.

Graph 1. Turnover of the sector in Spain. Data for 2013 (in millions of euros).



Graph 2. Evolution of the Book edition. Source: Ministry of Culture.



	2006	2007	2008	2009	2010	2011	2012	2013
Others	4500	8091	8715	13250	18500	24241	24630	23188
Paper	82940	88679	95508	96955	95959	87666	80094	65942

Financial status of the graphic sector

In the financial order, the economic profitability, the results and the indebtedness of the companies allow us to observe the existing gap in the sector. 54% of companies declare profitability and positive results and accumulate 68% of the income of the sector.

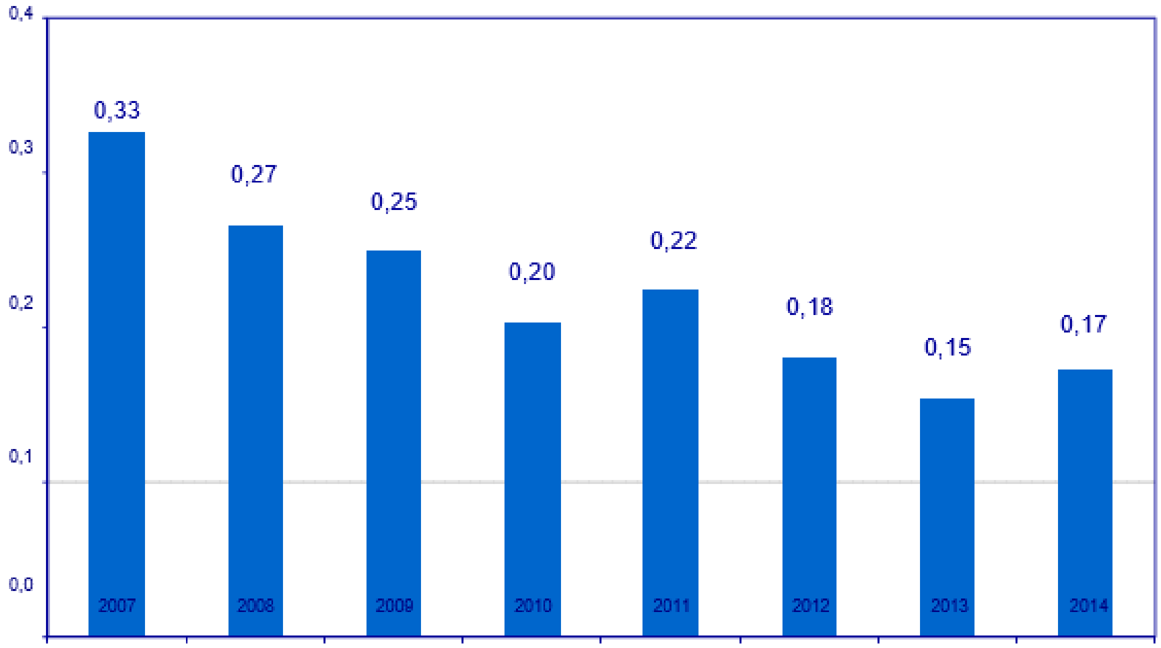
At the other hand, there are 1,826 companies, 27.64%, which, in addition to obtaining negative results, have a debt ratio above 75%. These last ones are very committed to its continuity, although they represent 13.9% of the income of the sector.

Profit and loss account of companies in the sector

		2000	2005	2013	2014
Gross operating margin (%)	Paper Industry	17,8	11,6	10,0	9,4
	Graphic arts and reproduction on recorded media	14,1	12,4	7,4	9,5
Ordinary return on net assets (1)	Paper Industry	21,2	9,6	7,0	5,6
	Graphic arts and reproduction on recorded media	11,6	7,7	2,2	3,8
Ordinary profitability of own resources (1)	Paper Industry	28,3	11,0	8,4	6,1
	Graphic arts and reproduction on recorded media	15,5	10,3	0,7	3,5

Source: Ministry of Industry, from the Central Balance Sheet of the Bank of Spain. Sectoral scope. CNAE-2009 Divisions 17 and 18 (1) Book values. Final balances

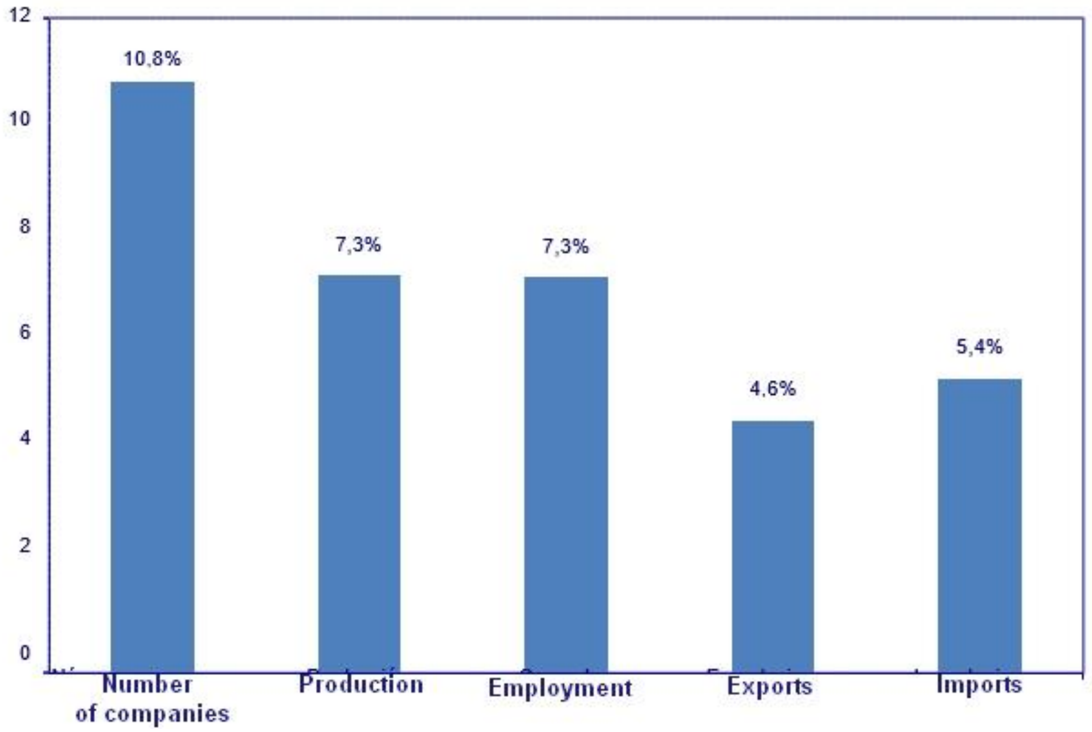
Expenses in R & D in the Paper Sector, graphic arts and reproduction of recorded media



Source: National Institute of Statistics. Survey on innovation in companies

Weight of the Spanish Graphic Industry in the European Union

(percentage that represents Spain over the community total in 2014)



Source: EUROSTAT, CHELEM 2016

Analysis by subsectors

By subsectors, we find that **commercial printing** is the least concentrated segment although the decrease in the number of companies, other than turnover, is expected.

The sector of **label manufacturing** obtains the best ratios: Its average indebtedness has decreased twenty points to the average of the whole sector, its results after taxes reaches the 5.1% of the income and its percentage of own funds are the highest of all subsectors analysed.

Special mention deserves the sector of **book printing**. First of all, we must demystify for the moment the impact of the book published on different media other than paper. The number of titles in other media has begun to decline. We must understand that the book is a graphic product closely linked to consumption and that its demand will grow as the economy recovers. What is also true is that this sub-sector may need more concentration. The size of its customers, the negative results of the collective and its excess of productive capacity could advise it.

Regardless of the economic analysis, there are several issues that we must not ignore:

The first is that **the sector is losing its limits**. There are jobs that are no longer exclusive to companies in our industry. Agencies, IT service providers, publishers or marketers and freelancers often interact in the graphic communication market.

The second is that everything can be printed and personalized independently of the stand, which greatly increases the square meters of surface that can be printed.

Importance of Entrepreneurship

The **sector opportunity for entrepreneurs is always set in communication**. Artificially created needs tend to correspond to fashions, but communication is consubstantial to our own existence. The human being will always need to communicate. The point is that it does not always do it in the same way or with the same means. We only need to take a look at the recent history and we would observe how communication has been in constant evolution.

Now it is up to us to decide whether we evolve towards other communication products or if we stick to the traditional ones. At least for the moment, both are necessary.

<u>Information about entrepreneurship in education</u>

2.1 Information about industry specific entrepreneurial courses, modules, segments of courses and training in formal education with main focus on VET.

<u>Entrepreneurship in education – in VET – EQF levels</u>

ENTREPRENEURSHIP CONTENTS IN VET – EQF 4 (INTERMEDIATE VET) AND EQF 5 (HIGHER VET)

The learning module "Companies and entrepreneurial initiative" is a transversal module which is studied in all professional VET Courses.

"Companies and entrepreneurial initiative" is a transversal learning module that guides the students to access the active working life by means of the development of their entrepreneurial spirit, their initiative and creativity. The knowledge of the entrepreneurial world and the economic environment will help the students among the creation of their own work places through the entrepreneurial activity

The study of this module will help the student to develop their entrepreneurial initiative with the accomplishment of a business project adapted to the professional profile of each cycle, and will also help and guide him in the assumption of responsibilities and functions in your work for someone else's.

To achieve this objective, business concepts will be studied, such as the organizational functions and structures of the company, the business plan, the appropriate legal form for each type of company and the procedures to create and launch a small business; and basic economic and financial concepts, such as the main taxes that affect small business, administrative documents and the introduction to financial and management accounting.

In the "Introduction to the world of business" unit, the students will study the current concept of business and business, and also the relationship of the company with its environment.

In the "Creating a company" unit the students will study how a business project is prepared and presented to later create a company, as well as the different legal forms of a company and the necessary procedures to create one.

In the unit "Business management and taxation" there is a small introduction to financial accounting and economic and financial analysis. The students will also study the main documents that are used in the business field and the fiscal obligations of companies.

These Entrepeneurships contents are offered all over Spain VET Graphic Schools:

	Students	**% Female Students**
Intermediate VET Technician (EQF 4)	3290	37,4%
Higher VET Technician (EQF 5)	1.978	47,60%

EQF 4

INTERMEDIATE VET Technician							
PREPRESS		**PRINTING**		**POSTPRESS**			
Public VET Schools	Private VET Schools	Public VET Schools	Private VET Schools	Public VET Schools	Private VET Schools	**TOTAL VET SCHOOLS OFFER**	**TOTAL STUDENTS**
31	14	22	7	1	1	**76**	**3290**

Intermediate VET Technician PRINTING

City	VET School	Nature
Cordoba	El Tablero	Public VET School
Malaga	La Rosaleda	Public VET School
Sevilla	Llanes	Public VET School
Zaragoza	PILAR LORENGAR	Public VET School
Oviedo	I.E.S. "Pando"	Public VET School

Santa Cruz de Tenerife	VIRGEN DE CANDELARIA	Public VET School
Sant Just Desvern	Antoni Algueró	Private VET School
Girona	Santa Eugènia	Public VET School
Tarragona	Pere Martell	Public VET School
A Coruña	Calvo Sotelo	Public VET School
Ferrol	Leixa	Public VET School
Santiago de Compostela	Compostela	Public VET School
Pontevedra	Montecelo	Public VET School
Vigo	Colegio Hogar Afundación	Private VET School
Lardero	LA LABORAL	Public VET School
Madrid	SALESIANOS ATOCHA	Private VET School
Madrid	TAJAMAR	Private VET School
Madrid	ISLAS FILIPINAS	Public VET School
Madrid	PUERTA BONITA	Public VET School
Madrid	VIRGEN DE LA PALOMA	Public VET School
Molina de Segura	CAÑADA DE LAS ERAS	Public VET School
Pamplona/Iruña	POLITÉCNICO SALESIANOS	Private VET School
Elche/Elx	CARRÚS	Public VET School
Valencia	CIUTAT DE L'APRENENT	Public VET School
Vitoria-Gasteiz	MENDIZABALA	Public VET School
Bilbao	EMILIO CAMPUZANO	Public VET School
Urnieta	SALESIANOS URNIETA	Private VET School

Intermediate VET Technician POSTPRESS

City	VET School	Nature
Sant Just Desvern	Antoni Algueró	Private VET School
Madrid	ISLAS FILIPINAS	Public VET School

Intermediate VET Technician PREPRESS

City	VET School	Nature
San Fernando	Jorge Juan	Public VET School
Cordoba	El Tablero	Public VET School
Granada	Ave María-San Cristóbal	Private VET School
Granada	Ángel Ganivet	Public VET School
Huelva	Diego de Guzmán y Quesada	Public VET School
Torredonjimeno	Santo Reino	Public VET School
Malaga	La Rosaleda	Public VET School
Mairena del Aljarafe	Esama I. Escuela Superior Andaluza de Medios Audiovisuales I	Private VET School
Sevilla	Llanes	Public VET School
Zaragoza	PILAR LORENGAR	Public VET School
Oviedo	I.E.S. "Pando"	Public VET School

Las Palmas de Gran Canaria	LOS TARAHALES	Public VET School
Santa Cruz de Tenerife	VIRGEN DE CANDELARIA	Public VET School
Santander	LA ALBERICIA	Public VET School
Alovera	CARMEN BURGOS DE SEGUÍ	Public VET School
Barcelona	Escola del Treball	Public VET School
Barcelona	Escola Professional Salesiana	Private VET School
Cornella de Llobregat	Esteve Terradas i Illa	Public VET School
Sabadell	Agustí Serra i Fontanet	Public VET School
Sant Just Desvern	Antoni Algueró	Private VET School
Lleida	Caparrella	Public VET School
Tarragona	Pere Martell	Public VET School
Tortosa	de l'Ebre	Public VET School
A Coruña	Calvo Sotelo	Public VET School
Ferrol	Leixa	Public VET School
Santiago de Compostela	Compostela	Public VET School
Pontevedra	Montecelo	Public VET School
Vigo	Colegio Hogar Afundación	Private VET School
Guadarrama	GSD GUADARRAMA	Private VET School
Madrid	CENTRO EDUCATIVO PONCE DE LEON	Private VET School
Madrid	LA SALLE-SAGRADO CORAZON	Private VET School
Madrid	SALESIANOS ATOCHA	Private VET School

Madrid	TAJAMAR	Private VET School
Madrid	INFANTA MARIA TERESA	Private VET School
Madrid	ISLAS FILIPINAS	Public VET School
Madrid	PUERTA BONITA	Public VET School
Madrid	VIRGEN DE LA PALOMA	Public VET School
Mostoles	LUIS BUÑUEL	Public VET School
Molina de Segura	CAÑADA DE LAS ERAS	Public VET School
Pamplona/Iruña	POLITÉCNICO SALESIANOS	Private VET School
Elche/Elx	CARRÚS	Public VET School
Beniarjo	LA SAFOR, COOP. VALENCIANA	Private VET School
Valencia	CIUTAT DE L'APRENENT	Public VET School
Bilbao	EMILIO CAMPUZANO	Public VET School
Donostia/San Sebastián	CEINPRO	Private VET School

EQF 5

HIGHER VET Technician					
Design and Edition of Printed and Multimedia Publications		**Design and management of graphic production**			
Public VET Schools	Private VET Schools	Public VET Schools	Private VET Schools	**TOTAL VET SCHOOLS OFFER**	**TOTAL STUDENTS**
20	9	9	2	**40**	**1978**

2.2 Describe the situation of 2 also for the commercial education and training sector (sometimes called “non-formal” education), related to the graphic-media / communication and information industries. This could also be courses delivered by trade organisation either accredited or non-accredited.

The most complete Entrepeneurship oriented Programme is the one offered by the Catalan Print Industry and Graphic Communication Guild at the Escola Antoni Algueró.
Master's Degree (Private) in Industry Management and Graphic Communication
http://www.escolaalguero.com/cursos/master-en-gestio-de-la-industria-i-la-comunicacio-grafica/

It contains 9 specifical Courses/Modules:

BLOCK A
CURRENT SECTOR:
TECHNOLOGY AND TRENDS
Module 1
New technology and trends in the graphic communication industry
BLOCK B
ECONOMIC AND FINANCIAL MANAGEMENT AND CONTROL
Module 2
Economic and financial function in the graphic sector
Module 3
Evaluation of costs and budgets for graphic production
Module 4 Management control and operations management in the printing industry
BLOCK C
MARKETING
Module 5
Commercial function, Digital Marketing
Module 6
Branding
BLOCK D
HUMAN RESOURCES
Module 7
Human resources in organizations (human behaviour and labour legislation)
Module 8
Business coaching
BLOCK E
MANAGEMENT AND PRODUCTION ORGANIZATION
Module 9
Management and organization of graphic processes

2.3 Describe the trends you are able to find in the on-going development of entrepreneurial education and training in all industries eg separate or integrated modules, compulsory or voluntary etc.

The trends that the Guild has detected have the following development:

-Technology and trends: New technology and trends in the industry and graphic communication industry. To visualize the impact of modern technology on the processes of the printing industry and to treat new areas of business that are possible.

- ECONOMIC AND FINANCIAL MANAGEMENT AND CONTROL: Economic and financial functions in the graphic sector. Its purpose is to provide knowledge in accounting and financial analysis to executives that normally have oriented his professional career to the production or the commercial function having important deficiencies in this area.

- Evaluation of costs and budgets for graphic production. To introduce the basic concepts of Cost Accounting and develop and analyze the logical phases that are necessary to continue to know the behaviour and calculation of the industrial budget. Development of case studies. Margins Pricing. Analysis of the different alternatives and computer applications. The module is structured and designed by professional in the graphic industries sector that has to make decisions on costs and budgets.

- Management control and direction of operations in the printing industry. Management control as a figure for improvement in all areas of the company, be it processes as support in the making of strategic decisions. It is intended not only to understand how the company's results are calculated but to analyse. Because of the results from an integrated business vision in order to make the necessary decisions in the achievement of the goals set.

-MARKETING. Commercial function and digital marketing. It has a threefold purpose. Provide the basic concepts that move the commercial and marketing function to the attendees that come from production and administration. Deepen in the knowledge of the commercial function and marketing by the professionals who already have experience in these areas. Establish a debate between both groups of attendees.
-Branding. The purpose is that the student once receives the concepts of digital marketing and works on the development of the commercial function, take a step further, and once you have determined the commercial tools that will be used, the objective of Branding is to optimize these tools as much as possible.

-HUMAN RESOURCES. Human resources in organizations (human behaviour and labour legislation)
Business coaching. To understand and improve leadership style to manage work teams. Improve involvement and participation of all to take advantage of the synergy of teamwork and professional meetings. Promote assertive communication and listening Empathy and relationship with the team. Understand the selection process in order to detect the best candidates to the profile and competencies required by the workplace. Understand coaching to apply it as a tool Development and follow-up of people.
-MANAGEMENT AND PRODUCTION ORGANIZATION
Process management and organization. To visualize the production processes of the existing printing systems, emphasizing the management of its different areas.

3. Specific information about typical company profiles/descriptions/characteristics from 2010 to 2016.

- The future of the European Print industry – in our own hands (Intergraf report; attached)

4. Information about profiles from formal and non-formal sources (ref. §2.1 and §2.2 with regards to entrepreneurial chararacteristics.
Previous answers
5. Information about new businesses (<5 years), start-ups, new entries in the industry

http://www.empleo.gob.es/es/destacados/HOME/INFORME_AUTONOMO.pdf
(attached)
REPORT ON ENTREPRENEURS AND AUTONOMOUS
Ministry of Employment and Social Security

1. Background
2. Betting on self-employment
3. Results
4. New impulse to autonomous work

1. Background

Between 2008 and 2012:
 606,200 jobs of self-employed workers were destroyed.
 220,000 companies had to close.
• In December 2011:
 The bills unpaid by the Public Administrations amounted to 42,000 million euros and the late payments of the Administration became one of the first causes of destruction of self-employment.
2. Betting on self-employment
Supporting and helping those who have already undertaken
 Returning to pay the bills. The Supplier Payment Plan has managed to reduce the commercial debt of the Territorial Administrations in 70%. 47% of the funds (more than 25,000 million euros), has been allocated to pay SME and self-employed bills and the average period of

payment to suppliers has been reduced by six.
- With less taxes as soon as we could. The tax reform has resulted in a decrease in the withholding rate to 15% for the self-employed.

Promoting entrepreneurship
- Allowing the capitalization of 100% of the benefit for unemployment (first for young people and subsequently for everybody).
- Allowing the payment of the benefit to be compatible unemployment with the start of an entrepreneurial activity.
- Establishing the flat rate of 50 euros for new self-employed workers has favored 1,176,000
self-employed have started a project on their own.

Other measures
- Indefinite contract to support entrepreneurs: 662,000 indefinite contracts have been signed to support entrepreneurs since February 2012.
- Flexibility of the requirements for access to the benefit due to cessation of activity.
- Second opportunity: extrajudicial negotiation of debts for individuals and limitation of patrimonial responsibility.

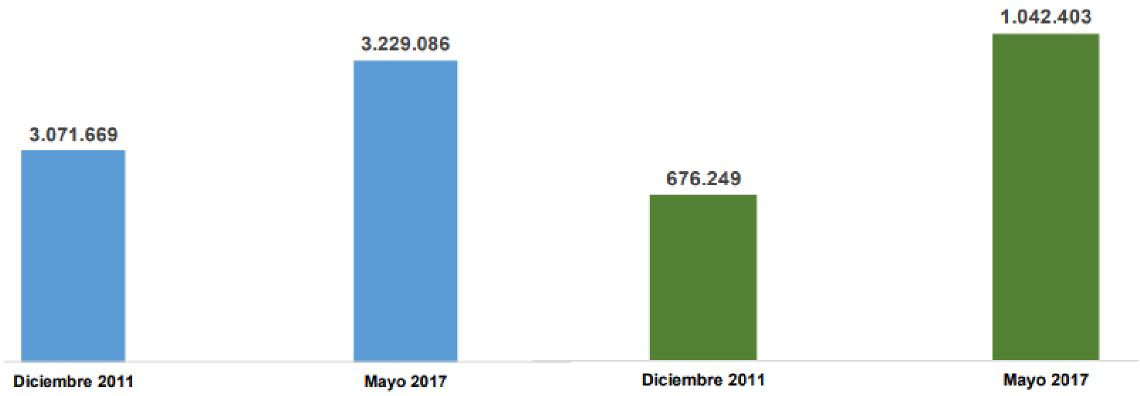
More autonomous

(Annual change of affiliation of self-employed workers)

- The self-employed were the first to begin to recover employment (in October 2013); there are 44 consecutive months of increases in membership and 312,000 of the autonomous jobs destroyed by the crisis have already recovered.

RESULTS

AFFILIATES TO THE AUTONOMOUS SPECIAL REGIME **EMPLOYEES HIRED BY SELF-EMPLOYED**



Increase of 157,417 freelancers — Increase of 366,154 employees by self employed

Self-employment boosts recovery

- There are already more than 1,040,000 salaried employees hired by a autonomy and hiring by self-employed grows at a of 5%.
- 430,000 young people have started a project on their own own since 2013.
- 2 out of 3 new entrepreneurs in Spain are women.

4. New steps: Pact for the self-employed

Less economic and administrative burdens

- The self-employed may change up to four times a year their contribution base to adapt it better to income.
- They will only pay for the periods effectively worked. (3 high and 3 low per year allowed).
- Reduction by half of the surcharges for delay in the first month and evolution of the company base dissociates from SMI.
- Subcommittee will study the concept of habituality and the part-time quote.

Impulse to the flat rate of 50 euros

- The validity period is doubled. The flat rate of 50 euros from 6 months to a year. (more than 350,000 freelancers already existing will benefit)
- The term is reduced to more than half (from 5 years to 2) to resume benefiting from it. (more than 180,000 self-employed will benefit)
- It will also apply to women who resume after the maternity. (25,000 potential beneficiaries)

More rights

- Work is compatible with the perception of 100% of the pension (since 2013, 50%) if the self-employed person has hired at least one worker. (40,000 potential beneficiaries).
- Recognition of the "in-itinere" accident for the self-employed. (more than 590,000 potential beneficiaries).
- Subcommittee will study access to partial retirement of self-employed workers.

More conciliation

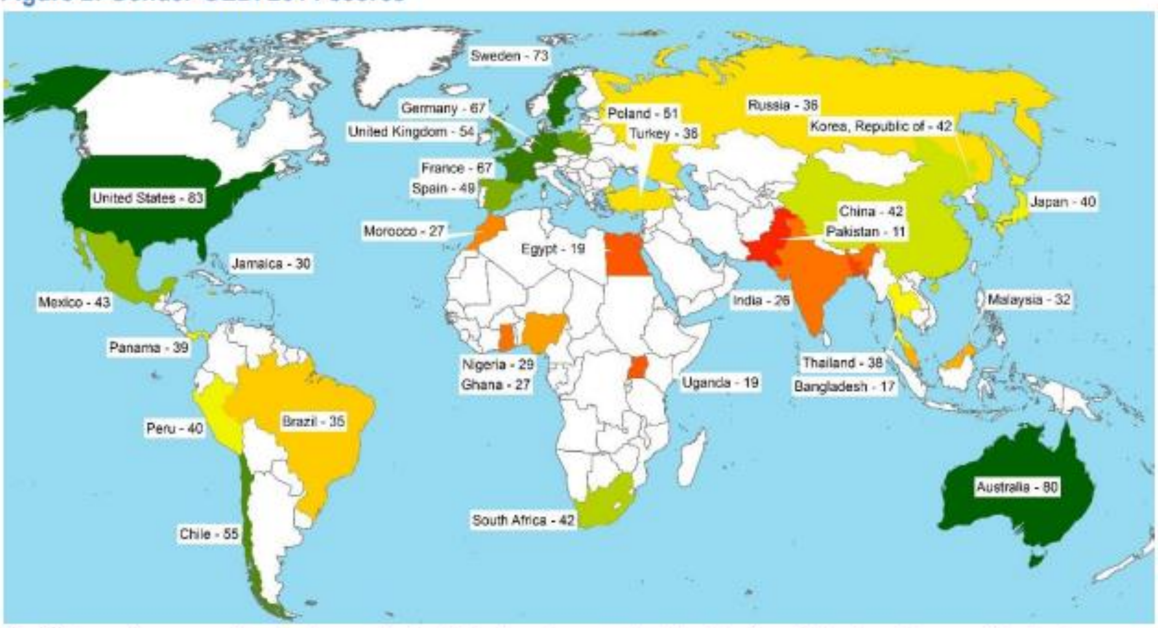
- 100% bonus for Social Security contributions for self-employed workers during maternity leave, paternity, adoption, etc.
- Up to 12 years old (previously 7) is the age of dependent minors that gives the right to recognition of the reconciliation bonus.
- Exemption of 100% of the self-employed quota for 12 months for the care of minors or dependents.

5.2 Information, if available, about female entrepreneurs and start-ups

Table 1: Gender-GEDI 2014 Ranks and Scores

Rank	Country	Score	Rank	Country	Score
1	United States	83	16	Panama	39
2	Australia	80	17	Thailand	38
3	Sweden	73	18-19	Turkey	36
4-5	France	67	18-19	Russia	36
4-5	Germany	67	20	Brazil	35
6	Chile	55	21	Malaysia	32
7	United Kingdom	54	22	Jamaica	30
8	Poland	51	23	Nigeria	29
9	Spain	49	24-25	Morocco	27
10	Mexico	43	24-25	Ghana	27
11-13	South Africa	42	26	India	26
11-13	South Korea	42	27-28	Uganda	19
11-13	China	42	27-28	Egypt	19
14-15	Peru	40	29	Bangladesh	17
14-15	Japan	40	30	Pakistan	11

Figure 2: Gender-GEDI 2014 scores



Key: Color coding ranges from dark green for the highest scoring countries to yellow for mid level scoring countries to deep orange for the lowest scoring countries.

Table 2: The Gender-GEDI 2014 results divided into three tiers

Top Performers

Rank	Country	Score
1	United States	83
2	Australia	80
3	Sweden	73
4-5	France	67
4-5	Germany	67
6	Chile	55
7	United Kingdom	54
8	Poland	51

Moderate Performers

Rank	Country	Score
9	Spain	49
10	Mexico	43
11-13	South Africa	42
11-13	South Korea	42
11-13	China	42
14-15	Peru	40
14-15	Japan	40
16	Panama	39
17	Thailand	38
18-19	Turkey	36
18-19	Russia	36
20	Brazil	35
21	Malaysia	32
22	Jamaica	30

Low Performers

Rank	Country	Score
23	Nigeria	29
24-25	Morocco	27
24-25	Ghana	27
26	India	26
27-28	Uganda	19
27-28	Egypt	19
29	Bangladesh	17
30	Pakistan	11