



Financial and Institutional Reforms for Entrepreneurial Society



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1. Excellence

1.1 Objectives

In this project we will analyse the **broader contexts of smart, inclusive and sustainable growth** in Europe to support implementation of the Commission’s 'Europe 2020' growth strategy and to restore Europe’s **ability to innovate, grow and create jobs** over the coming decades. In this proposal we argue that entrepreneurship¹ must play a central role in that effort. 'Entrepreneurship' tends to make people think of the US and its model of high growth and high-tech start-ups in Silicon Valley. We are keenly aware, however, that a European growth agenda requires a focus on European entrepreneurship. US recipes and models will not fit the European context and do not deliver the results Europe wants. Our project's objective is therefore to thoroughly analyse European institutional arrangements and their current (in)ability to mobilise Europe’s human, financial and knowledge resources for entrepreneurial activity. This will help us formulate an effective reform strategy to reinvigorate European economies. The current diversity of institutional arrangements in Europe has long and common historical roots that must first be recognised and understood. Based on common global trends in technology and competition, we then establish the urgency and desirability for making the transition to a more entrepreneurial economy throughout Europe.² Once this has been established, our project will develop and provide the tools for policy makers to assess the quality of national and regional entrepreneurial ecosystems and to identify the main strengths and weaknesses with regard to making the transition. Based on this assessment we will formulate specific proposals to enhance the allocation of talent, finance and knowledge to new value creation and we will conclude our project with a legal analysis to see where competencies currently lie and what action could be taken. Table 1 summarises the project's objectives, approaches and actions:

Table 1: Project Objectives

<i>Objective</i>	<i>Approach</i>	<i>Actions</i>
Characterise Europe’s trajectories of national development in institutional	History and Institutional	Focus on institutions governing the creation and allocation of financial, human and knowledge

¹ We will define our key concepts more precisely below. Entrepreneurship here refers to introducing change into the economy by firms (new and old) creating and engaging in new value creation propositions.

² We will use the terms entrepreneurial society and entrepreneurial economy more or less interchangeably, although strictly speaking the latter should be considered a part of the former, more encompassing concept. The focus in our project is on the economy.

arrangements	Economics	capital Identify and distinguish those that are deeply embedded from more superficial (and easily changeable) institutions Identify and distinguish common roots and national/regional divergence in institutional development
Urgency and desirability of the transition towards a more entrepreneurial economy	International Economics, Economics of Innovation and Labour Economics	Collect data and analyse trends in specialisation patterns over global value chains Analyse strategies for smart specialisation at the task-level for European nations and regions Analyse job growth and opportunities through entrepreneurial activity
Tools to assess the current state of the entrepreneurial economy in Europe	Entrepreneurship Studies	Collect and analyse data on institutional quality and entrepreneurial activity at a national and regional level Focus on institutions governing the supply and allocation of financial, human and knowledge capital Develop entrepreneurship scoreboard to identify opportunities, bottlenecks and urgent reform strategies.
Tailoring reform strategies to European member states and regions	Institutional Economics, Policy Design and Evaluation	Focus on institutions governing the supply and allocation of financial, human and knowledge capital Distinguish strategies as short, medium and long run driven by institutional embeddedness Distinguish strategies by their most appropriate level as regional, national and European
Legal action and reforms required to implement the strategy effectively	Administrative Law and International Law	Translate proposals into specific policy actions for specific actors given current EU legal frameworks (treaties, national competencies and regional autonomy) Identify opportunities, problems and obstacles to implementing the proposed reforms in the current legal framework Propose required changes to European, national and regional legal frameworks where needed

It is within this context that we propose a multi-partner and multi-disciplinary project, which will unveil the significance of entrepreneurship to innovative growth in Europe. Our proposal involves nine partners that represent Europe's leading centres for research on entrepreneurship, many of which also have strong links to research in finance, innovation and labour market institutions. Moreover, we will involve scientists from such diverse disciplinary backgrounds as history, economics, geography, law, political science and business

management. We perceive that there are five essential steps in formulating a sound institutional reform strategy to accommodate the transition to a more entrepreneurial society and have therefore designed our project to consolidate understanding and then advance research in each of these steps. The project will also contribute by building research capacity, and research management capabilities (including amongst women and disadvantaged groups) by offering ample opportunities for junior researchers to engage in challenging research questions.

Our project will therefore take an innovative, multidisciplinary (history, economics, geography, management, political science and law) approach to the call, zooming in on entrepreneurship as a core concept in analysing the **broader context of smart, sustainable and inclusive growth** in Europe. Moreover, our multidisciplinary approach allows us to develop a strategy that is built on Europe's diverse, but historically deeply rooted institutional foundations, while also introducing the legal reality check that ambitious reform proposals often lack. The resulting realistic and feasible reform strategy FIRES up Europe's economic engine for the 21st century.

1.2 Relation to the work programme

This project addresses work programme Topic **13. Europe in a changing world – inclusive, innovative and reflective societies** call for proposals under **EURO-2-2014: The European growth agenda**. The specific challenge stated in that call reads: “The impacts of the economic crisis have been far reaching on the **ability of the EU economy to innovate, grow and create jobs**. In response, the EU has proposed a new growth strategy ‘Europe 2020’ which aims at tackling common European challenges and **boosting economic growth and quality employment through smart, sustainable and inclusive growth**. However, to ensure conditions for a successful economic recovery we need to better **understand the broader contexts of growth** in Europe”. In our project we focus on the “**ability of the EU economy to innovate, grow and create jobs**” by focusing on the entrepreneurial process. The Commission has already recognised the importance of entrepreneurship in other publications (European Commission 2011, 2013). We argue that mobilising and directing more human, financial and knowledge resources towards new value creation in Europe can boost “**economic growth and employment through smart, sustainable and inclusive growth**”. We explicitly propose a holistic, multidisciplinary approach to this challenge to help “**understand the broader contexts of growth in Europe**” theoretically, empirically and practically.

The call then recognises that national systems of institutional arrangements have evolved historically and performed very differently in response to the crisis. Also the call stresses the pressure on Europe's competitiveness arising from globalisation, trade and technological change, and calls for research to help understand the conditions that stimulate innovation, that foster growth, create jobs and reduce inequality.

In our project we will therefore start with an economic-historical analysis of the evolution of Europe's institutions. We will focus on the institutions that drive the mobilisation and allocation of human, financial and knowledge resources to entrepreneurial activity. The aim is here to uncover the institutional foundations on which any successful reform strategy has to build. European economies' comparative advantages seem to be shifting away from mature, routine, large-scale industrial activities, products and tasks. Instead Europe's new growth is founded on innovative, non-routine, small-scaled entrepreneurial tasks in the increasingly globalised and fragmented value chains. This establishes the need to mobilise Europe's entrepreneurial potential. In addition to this push factor, however, there are also important pull factors for developing an entrepreneurial growth strategy. For example, new job creation is increasingly concentrated in young firms and the jobs created in new ventures are typically available to all educational levels and occupations. In addition, corporate entrepreneurship or intrapreneurship creates more challenging, satisfying and sustainable jobs, whereas independent entrepreneurship provides a flexible and often high-quality alternative to formal employment that is also open to disadvantaged groups on the labour market (e.g. migrants and the older unemployed)(Coad et al. 2014). Importantly, however, the entrepreneurial ecosystems in Europe have features that set them apart from their US counterparts. However, the (institutional) conditions under which entrepreneurship and innovation therefore benefit society at large, need to be explored. In our project we will show that the transition to an entrepreneurial economy is urgent, desirable and feasible.

The scope of the call has therefore been limited to four topics: **Reform management for recovery, Innovation-based growth strategy for Europe, Global production and innovation networks – costs and benefits for Europe and Migration, prosperity and growth**. Table 2 below lists the four topics, key words for that topic from the call text and the corresponding work packages and deliverables in our proposal that address them. The work packages and deliverables are described in more detail in the work plan in Section 3.

Table 2: Scope, Work Packages and Deliverables

<i>Scope of Call</i>	<i>Key Words in Topic</i>	<i>Work package</i>	<i>Deliverable(s)</i>
Reform management for recovery	Explanatory framework for politico-socio-economic models	WP2	2.1
	Trajectories of national development	WP2	2.2-2.4
	Assessment of policy responses to the crisis	NA	NA
	Reasons for perseverance of long-term structural problems	WP2	2.2-2.4
	Assessment of policy proposals to overcome these	WP5	5.3-5.5
	Benchmarking socio-economic competitiveness	WP4	4.1-4.5
Innovation-based growth strategy for Europe	Effectiveness of Europe 2020 growth strategy	WP4	4.5
	Need for supporting policies	WP5	5.5
	Differences across sectors	WP3/5	3.1-3.3, 5.3
	Trade-offs between growth, employment and inequality	WP3	3.4-3.5
	Improving and creating better comparative data	WP3/4/5	3.1, 4.1, 5.1
Global production and innovation networks – costs and benefits for Europe	Analyse the costs and benefits of globalisation	WP3	3.2-3.5
	Global value chain analysis	WP3	3.2-3.3
	Corporate social responsibility	WP3	3.6
	Coordinated EU industrial policy	WP5/6	5.5, 6.1-6.4
	Scenarios for smart specialisation	WP3	3.2-3.3
	Asses feasible steps taking variation between sectors and geographical areas into account	WP3/5	3.2-3.3
	Tools for cooperation	WP6	6.1-6.4
Migration, prosperity and growth	Analysis of how migrants can contribute	WP5	5.3
	Analysis of link between migration and innovation	WP3	5.3
	Making Europe more attractive to productive immigrants	WP3/5	3.4, 5.5
		WP3/5	3.4, 3.7, 5.5
	While protecting European workers		

This proposal is based on the notion that any strategy that aims to invigorate the **ability of the EU economy to innovate, grow and create jobs** should carefully consider Europe's entrepreneurial ecosystem(s). Empirical evidence (Audretsch and Lehman 2005; Acs et al. 2009; Braunerhjelm et al. 2010; Fritsch 2013; Wilson and Silva 2013; Estrin et al. 2014) strongly suggests that entrepreneurship is the missing link between innovation, economic growth and job creation, and it is new, young, entrepreneurial firms that innovate, grow and create jobs. In line with the call's encouragement "**to include additional aspects that are relevant to the specific challenge**" we will therefore include entrepreneurship and in fact centre our proposal around (re)designing institutions to mobilise and allocate more of Europe's human, financial and knowledge resources towards entrepreneurship in the future.

1.3 Concept and approach

Our Overall Approach

An entrepreneurial growth and innovation strategy for Europe cannot be a one-size-fits-all copy-paste of policies that proved successful in other contexts, notably the US. The very diverse institutional preconditions and national or even regional histories in Europe make such an attempt futile from the outset. In addition, it would not necessarily yield the inclusive and sustainable growth the EU is aiming for. But this call is not nearly broad enough to attempt tailor reform strategies to all 28 EU member states, let alone its multitude of economic regions. The overall goal of this project is therefore to investigate the necessary steps and develop the tools to formulate effective reform strategies. Given the importance of institutions to growth in general and entrepreneurship in particular we will start our project with a careful historical analysis of the most important institutional arrangements for entrepreneurial venturing: those that allocate finance, talent and knowledge to new ventures. Then we will establish the need for a transition to a more entrepreneurial economy in Europe and analyse the institutional prerequisites to also make this transition desirable. Then we will provide a quick scan of the strengths and weaknesses of the entire Europe Union's entrepreneurial ecosystems. To illustrate the practical usefulness of our approach we then deal with the UK, Germany and Italy in depth, as they arguably belong to different institutional families and in the Varieties of Capitalism terminology represent European examples of a liberal market, a coordinated market and a mixed market system, respectively. As a final step we will also provide a careful legal analysis of how and at which levels of legislation an effective reform strategy must be formulated in these different institutional contexts. The remainder of this proposal will elaborate on the concepts, theories and literature that the various steps in the project are founded on.

A Schumpeterian Perspective on Entrepreneurial Society

The overall idea underpinning this proposal is nicely framed in Audretsch (2007) by what he refers to as the Entrepreneurial Society. Audretsch (2007) argues that the days of the managed, industrial economy of the post-war years are over and advanced countries are now moving towards a creative, innovative, small-scale, entrepreneurial economy and identified two major trends that caused (parts of) the US to develop into this Entrepreneurial Society. First external competition (from Europe and Japan) destroyed US supremacy (and jobs) in the very industrial complexes that had propelled it to global economic dominance in the decades before. The steel belt had turned into the rust belt long before the 2008 crisis. Second, information and communications technology (ICT) provided the general-purpose technology that fostered and facilitated a period of entrepreneurial venturing and experimenting last seen at the turn of the 19th century.

In this project we will show that this pattern is now repeating itself in Europe. External competition from emerging and industrialising countries is rapidly destroying jobs in the old, mature, managed economy that relied on economies of scale and cost reduction to maintain global competitiveness. Evidence in for example OECD (2013b) suggests that new value and job creation primarily arise in young firms in Europe too. Firms of less than 50 employees and younger than 3 years account for only 11% of employment, but create 33% of new jobs in the OECD. The net job destruction during the current crisis, which amounted to 2% on average (and was up to 8% in countries such as Spain, Greece, Ireland and Estonia between 2008-2011) was mostly caused by the downsizing of large, mature firms that experienced fierce competition from emerging global competitors. As a consequence, the jobs and industries lost are not likely to return to Europe. This is a good example of Schumpeter's 'creative destruction' in action. And it seems to hurt the managed economy most. But instead of competing with the BRIICs for the sectors, industries, products, jobs and tasks of the past it makes more sense for Europe to join the US at the global technology frontier, creating new value and jobs for the future. There (Aghion and Howitt 2006) European firms can find their new niches and develop new strengths. Having been at the global technology frontier for centuries, Europe has the legacy and the history. Moreover, we do not believe, as Acemoglu et al. (2012) seem to suggest, that this inevitably requires

accepting high inequality and adopting the US model lock, stock and barrel. However, for Europe to regain its capacity to generate new jobs and replace the jobs that have been lost, it will have to make the transition to a more entrepreneurial economy grafted on Europe's diverse institutional foundations.

We arrive at this conclusion building on Schumpeter's (1911, 1934) evolutionary perspective on economic growth and development. The selection environment and the processes of variety generation and replication should be considered from an evolutionary perspective (Nelson and Winter 1982). In Schumpeter's view markets provide the selection environment in capitalist economies. In the market environment a variety of firms compete for a market share with their products and practices. Profitability in these markets then attracts competitors and motivates new variety generation. Globalisation, ICT and rising incomes have increased the size of markets, but at the same time allowed demand to become much more sophisticated and heterogeneous. These trends on the demand side determine the selection environment for European firms. And these trends increase the need for experimentation and smart specialisation. Schumpeter envisioned such experimentation to be the role of entrepreneurs, but this obviously also changes the environment for incumbent firms. Entrepreneurship, here defined as introducing new combinations to markets, is required across the board and making the transition to a more entrepreneurial economy is urgently needed.

Europe is also well positioned to do so. Europeans are inherently no less entrepreneurial, creative or talented than e.g. Americans. Building on the institutional ideas of North (1990), Baumol (1990) proposed instead that current institutional arrangements might limit or obstruct the allocation of resources to productive entrepreneurship. But institutions can be changed, although this may take quite some time and effort. Europe has already embraced the idea to boost entrepreneurship and promote smart specialisation through institutional reform as a way out of the current economic crisis. To date, however, policies aimed at stimulating entrepreneurship - like the provision of matching venture capital, incubators or platforms for entrepreneurial networking events (European Commission 2011, 2013) – have only shown limited effectiveness. While some high-tech industries, such as Italy's biotech industry, have developed without governmental support (Hermann 2008), high-quality entrepreneurial activity remains underdeveloped in regions such as Southern Italy or East Germany despite massive subsidies for entrepreneurship (Muffatto et al. 2012; Sternberg et al. 2012; OECD 2013b). Arguably, this is because US inspired entrepreneurship policies are not well adapted to the European institutional context. Designing a successful entrepreneurship policy that works in Europe therefore has to go beyond copying successful American programmes and recipes. Europe cannot hope to become Silicon Valley and should not aspire to, as it needs to build a European entrepreneurial society on very different institutional foundations. The Commission has correctly observed that institutional reform is required to boost innovation in Europe. We argue here that this requires a tailored and coordinated institutional reform strategy that considers the broader context of Europe's entrepreneurial economy.

From Schumpeter we take our proposition that a successful venture requires (at least) a dedicated entrepreneur with an idea and the ability to bring together a team and resources to start and grow the venture.³ The institutions we therefore need to focus on are those that drive the creation and circulation of knowledge, the (re)allocation of human capital and the flows of finance. This provides our general framework for analysis with three institutional legs supporting the process of entrepreneurship as envisioned by Schumpeter (1911, 1934) and illustrated in Figure 1. Moreover, these institutions should be considered together, as knowledge, human and financial capital are complements, not substitutes in creating innovation. This requires a broad, multidisciplinary approach to the challenge that is detailed below.

³ This is where we got the acronym for this project. Feldman et al. (2005) refer to 'entrepreneurial sparks at the root of cluster development' and this reminds us of the 'triangle of fire' i.e. to start FIRES you need a spark (knowledge), fuel (motivated and talented co-workers) and oxygen (finance). The fire will not burn if one of the elements is missing.

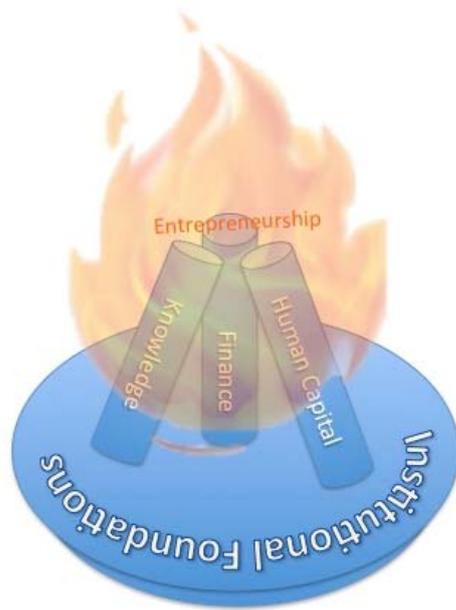


Figure 1: Three institutional legs fuelling entrepreneurship.

Institutional Arrangements and Varieties of Capitalism (VoC)

In **characterising Europe's trajectories of national development in institutional arrangements** the Varieties of Capitalism (VoC) (Hall and Soskice 2001) literature takes a useful holistic institutional approach. In this literature, institutional arrangements are considered to have evolved historically into complex systems of interdependent and complementary institutions. Its traditional focus on labour market institutions allows us to immediately analyse the ability of new, young firms to attract workers to grow their venture. Moreover, financial market institutions, albeit with a strong focus on governance, were also explicitly considered in this literature and a clear link to the earlier National Systems of Innovation literature is also present (Hermann 2008). To date, the VoC literature makes the most clear-cut propositions on how national institutions constitute the basis of country-specific business interaction. This approach is easily combined with the newly emerging literature on national and regional systems of entrepreneurship (Qian et al. 2013), and the more popularised policy concept of entrepreneurial ecosystems (WEF 2013; Feld 2012).

Contemporary Europe's institutions were shaped by history and inherited from a different time. The post-war period of reconstruction and convergence has left its mark on Europe's institutional arrangements. This period called for a disciplined, well-educated and specialised workforce to operate the rapidly rebuilt, state-of-the-art, large-scale industrial complexes that were intended to efficiently produce high-quality manufactures for international markets. Europe's national systems of innovation were geared towards basic research aimed at maximising absorptive capacity and incremental innovation in industrial R&D. Meanwhile Europe's private, universal bank-dominated financial sector efficiently channelled the highly institutionalised savings (pensions and insurance) in the expanding welfare state into secure, collateralised loans for the physical capital of stable and large multinationals and national champions. These institutional arrangements allowed Europe to rebuild and quickly catch up with the US. But as Aghion et al. (2013, p. 21) put it: 'policies and institutions that are appropriate for countries close to the global technology frontier are often different from those that are appropriate for non-frontier countries, because those policies and institutions that help a country to copy, adapt and implement leading-edge technologies are not necessarily the same as those that help it to make leading-edge innovations'.

Our institutional strengths of the past have become a weakness. Entrepreneurship calls for small-scale experimentation (Kerr et al. 2014; Rosenberg and Birzell 1986) by creative jacks-of-all-trades (Lazear 2004) employing a flexible workforce in a dynamic housing market that rapidly distinguishes success from failure and can therefore serve as a global launch pad for new products and services. European universities still push scientific boundaries, but struggle to catalyse new business propositions, whereas corporate R&D typically will not cannibalise existing core activities (Akcigit and Kerr; 2010). As for the financial sector, even before the crisis universal banks and institutional investors channelled Europe's financial resources into marketable assets (e.g. real estate, government bonds and interbank deposits at home or abroad) that were deemed to be more secure and profitable than small loans to experimenting entrepreneurs and young firms without a track record or collateral. Inevitable post-crisis efforts to strengthen bank balance sheets are likely to only aggravate this trend.

Making the transition to an entrepreneurial economy in Europe, however, cannot involve copying the institutional arrangements in the US. The VoC approach suggests that American and European financial markets, labour institutions and knowledge infrastructure have evolved into distinct systems of internally consistent and complementary institutions. Moreover, these institutions have deep historical and cultural roots that, following Williamson (2000)'s hierarchy of institutions, cannot all be reformed within a relevant time scale. Finally, Europe has developed a rich variety of national and regional institutional arrangements that defy a one-size-fit-all approach to reform. We therefore face the challenge to reform European institutions in such a way that they continue to suit Europe's deeply rooted cultural heritage while accommodating the historically evolved diversity of national institutional systems yet simultaneously move decisively towards a *European Entrepreneurial Society*.

Schumpeterian Entrepreneurship, Specialisation and the Product Life Cycle

The **urgency and desirability of the transition towards a more entrepreneurial economy** follows from our proposition that smart, sustainable and inclusive growth at the global productivity frontier requires a more entrepreneurial economy. At the leading edge of the economics of growth (e.g. Acemoglu 2009) it has been firmly established that technical change, the implementation of new, useful knowledge in products and processes in the economy, is the engine of economic growth in advanced economies. Importantly, growth theory (Romer 1986, 1990; Aghion and Howitt 1992; Jones 2006) focuses on understanding the creation of new knowledge and ideas, taking the implementation of such inventions to be a trivial and automatic process. And this can perhaps even be justified for the analysis of fundamental sources of long-term, steady state economic growth. Because why, in a market economy, would any valuable idea be left idle? But entrepreneurship is far from trivial. It requires significant resources and rewards, and may in fact be the main bottleneck in the innovation process (Acs and Sanders 2012). This idea goes back to the work of Joseph Schumpeter (1934), who wrote:

“Economic leadership in particular must hence be distinguished from ‘invention’. As long as they are not carried into practice, inventions are economically irrelevant. And to carry any improvement into effect is a task entirely different from the inventing of it, and a task, moreover, requiring entirely different kinds of aptitudes...it is, therefore, not advisable, and it may be downright misleading, to stress the element of invention as much as many writers do.” Schumpeter, 1934 pp.88-89

In this project we heed Schumpeter's (1911) warning and focus on entrepreneurship, here defined as introducing 'innovations' i.e. new goods, new methods, new markets, new sources of intermediate goods or new organisational structures. Moreover, we subscribe to Knight's (1921) approach to entrepreneurship, who proposed that the role of entrepreneurs in the economy is to turn the ex-ante uncertainty related to such innovation into ex-post calculable risks that investors can deal with.

This links our approach to the product and industry life-cycle approaches in industrial organisation as proposed by for instance Vernon (1966) and Klepper (1997). Case studies and empirical evidence in this literature have shown that the introduction of new ideas typically follows a stable pattern. That pattern involves an experimentation and exploration stage in which many, small, new firms and entrepreneurs enter an emerging industry. Once all the elements for success have been discovered and are brought together by one or more of these entrepreneurial firms, a dominant design may establish itself and typically a shake out occurs in the industry (Klepper and Miller 1995). Many of the pioneering firms then flounder, but their employees

and owners often find new employment with the rapidly growing new industry leaders. As the industry matures the emphasis in innovation switches from quality improvement to cost reduction (REFS), production is rationalised and excess labour is shed (Klepper 1996). In fact, as production becomes routine, the industry may well move manufacturing to low cost regions elsewhere or succumb to competition from such regions (Audretsch and Sanders 2011).

This pattern can be found for individual products and firms, industries, sectors, regions and countries as these all produce a more or less diversified portfolio of products at any given point in time. For firms it is standard practise to actively and strategically manage this portfolio (e.g. Boston Consulting Group Portfolio analysis). This approach can of course not be directly applied to industries, sectors, regions or countries. First there is no single manager in charge and second, the product portfolio cannot be managed so directly. In addition, there is increasing fragmentation of global value chains across countries and regions. This means that tasks, not products become the relevant units of analysis. But the portfolio approach is still useful for characterising important trends (Audretsch et al.; 2012). As global trade integration and competition from emerging economies put pressure on European market shares in mature markets, more emphasis should be placed on Europe's stars and question marks; this involves smart specialisation in the products and tasks in the early stages of product and industry life cycles. And those tasks are the more entrepreneurial ones.

The European portfolio of tasks in global value chains is a canary in the coalmine in this respect. Evidence on trends in international trade (OECD; 2013) suggests that European jobs and competitiveness increasingly depend on global final demand and that the share of foreign value added in European exports is increasing (see Figures 2 and 3).



Figure 2: Foreign value added content of exports 1995

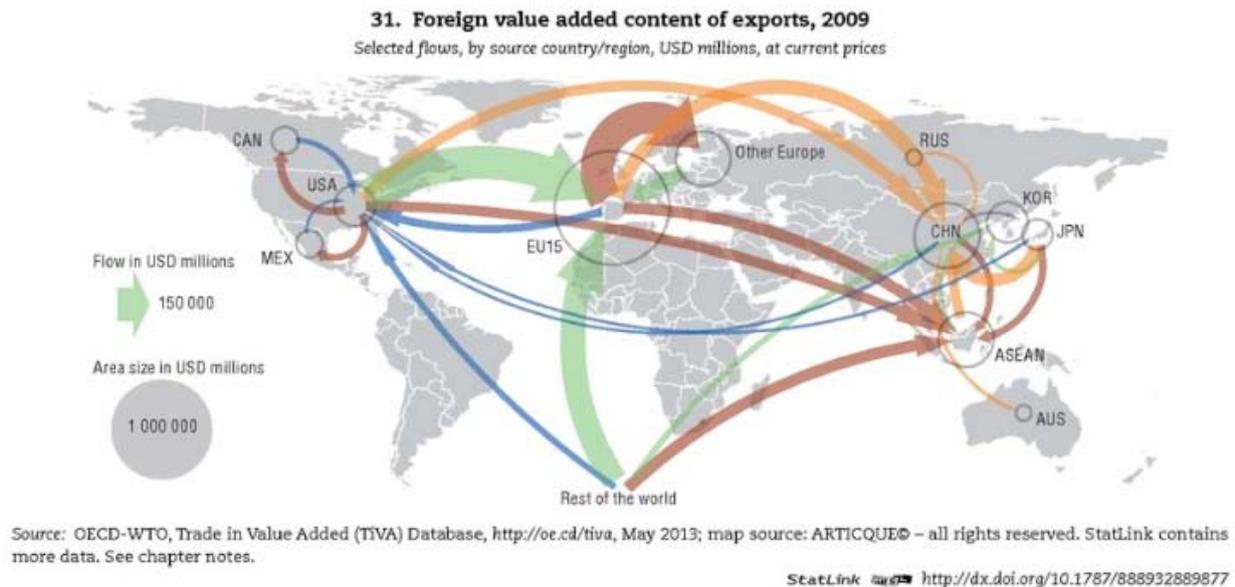


Figure 3: Foreign value added content of exports 2009

It is important to remember that global trade statistics, although indicative, hide a lot of relevant detail at sub-national level. The globalisation of value chains connects nodes in many countries, but this does not imply that 'the world is flat' (Friedman, 2006) and all compete on an equal footing. Instead, economic activity is increasingly concentrated in urban centres that act as hubs in globalised production networks. It is in these urban centres, these global hubs, that entrepreneurship typically flourishes. Richard Florida (2005) refers to this trend as the 'spiky world' and stresses the importance of an open and tolerant culture to facilitate the circulation of knowledge and to support creativity and experimentation, not only in the economic sphere (Bosma et al. 2009). This suggests that entrepreneurship must be considered a local or regional phenomenon (Feldman 2001), even if most data and formal institutions are typically national or even supranational in Europe. A clear positive link between regional development and entrepreneurship supports this proposition (Van Oort and Bosma 2013; Fritsch and Storey 2014; Glaeser et al. 2014) and stresses the importance of going beyond the national level where the data allows such detail. The mismatch between national institutional arrangements and regional or local entrepreneurial ecosystems at any rate requires careful consideration of aggregation biases (Stam and Bosma 2014).

The Commission's policies aimed at furthering smart specialisation propose that European member states and regions manage their portfolio of tasks.⁴ That is, European regions should not try to copy or build entirely new industries and competitive advantages ex nihilo. Empirical evidence (e.g. Dalum et al. 1998) shows that specialisation patterns remain rather stable over time. Dynamics and growth come from discovering and building on related variety that builds on the existing knowledge and support infrastructures (Frenken et al. 2007). What distinguishes smart specialisation from traditional industrial and innovation policies is mainly the process defined as 'entrepreneurial self-discovery', an interactive process in which entrepreneurs in a market discover and produce information about new activities and the government assesses the outcomes and empowers those actors most capable of achieving the potential (Foray and Coeraga, 2013; Hausmann and Rodrik 2003). Smart specialisation therefore stresses the universal importance of entrepreneurship in discovering related variety. Every region in Europe can accelerate the development of a smart specialisation by focusing on institutional reform to support entrepreneurship.

The transition to a more entrepreneurial Europe should therefore be driven by the need to maintain international competitiveness and to promote smart specialisation strategies to ensure sustainable growth. In

⁴ http://ec.europa.eu/research/regions/index_en.cfm?pg=smart_specialisation

addition we argue that an entrepreneurial society would make growth in Europe more inclusive. The economic crisis has affected less skilled, intensive sectors such as construction hard in recent years. However, skill biased technical change and global competition have put increasing pressure on many people's labor market position in Europe. It is, however, not the least educated manual workers that suffer most from these long-term trends. Instead it is the lower middle class that is hit hard by the downsizing of the large, mature corporates that the economic crisis sparked (Goos et al. 2009). Using public data (OECD 2013b) on job creation in the EU we will demonstrate that experimental, new, young firms create jobs across the board and typically offer more opportunities for traditional labour-market outsiders as well as the former insiders released from mature industries.

Assessing the quality of entrepreneurial ecosystems using the Global Entrepreneurship and Development Index

From the push and pull factors we move on to diagnostics. **Tools for assessing the current state of the entrepreneurial economy in Europe** are currently in their infancy. If we want to know how Europe is doing when it comes to its transition to an entrepreneurial economy, we need to collect data, but more importantly we need to combine that information into informative indicators. For this purpose we use the Global Entrepreneurship and Development Indicator (GEDI), developed by Acs and Szerb (2011). The GEDI is a methodological and statistical tool for understanding how *individuals* and *institutions* interact to create economic growth. GEDI is a so-called composite index. By reducing a number of variables down to basically one, composite indices are appropriate tools for providing summary information about multi-dimensional phenomena. The GEDI index uses a unique 'penalty for bottleneck' methodology. The key principle of this approach lies in the assumption that system performance is determined mainly by the weakest performing variable.

The penalty for bottleneck methodology has direct policy relevance as it identifies the weakest links in a country both at an institutional level as well as at an individual level and highlights the changes needed. This results in a multidimensional assessment of the entrepreneurial eco-system as illustrated for four European Member States in Figure 4. Figure 4 provides a comparison between four European member states for 15 dimensions, relevant to entrepreneurial growth. This picture reveals that in Mediterranean countries opportunity perception and risk acceptance are particularly low and reforming the institutional arrangements to enhance their scores for these dimensions is likely to generate high returns in terms of impact. The scores for these dimensions combine multiple indicators for relevant institutional qualities and entrepreneurial activities. Behind these so-called pillars in GEDI lies a broad set of indicators taken from public sources and adult population surveys of the Global Entrepreneurship Monitor. For our purposes, the GEDI methodology and data can be extended in various directions. Additional variables and pillars may need to be added to put more emphasis on the three key institutional legs: finance, labour and knowledge that we identified above. Moreover, in this project we will extend the analysis from the national level snapshot analysis into a time series analysis at national level to uncover relevant trends and at regional level to zoom in on the geographic units that matter most to entrepreneurial activity. The GEDI methodology has already been adapted to and data is available to us at a European regional level. The methodology has been applied to the regional level for European NUTS-1 and NUTS-2 regions in a project for the European Commission (DG REGIO) in REDI. With our extensions the index can be used to identify weaknesses to formulate a strategy and assess and track changes over time to see the impact of policy modification.

The Comparison of Greece, Italy, Portugal, and Spain

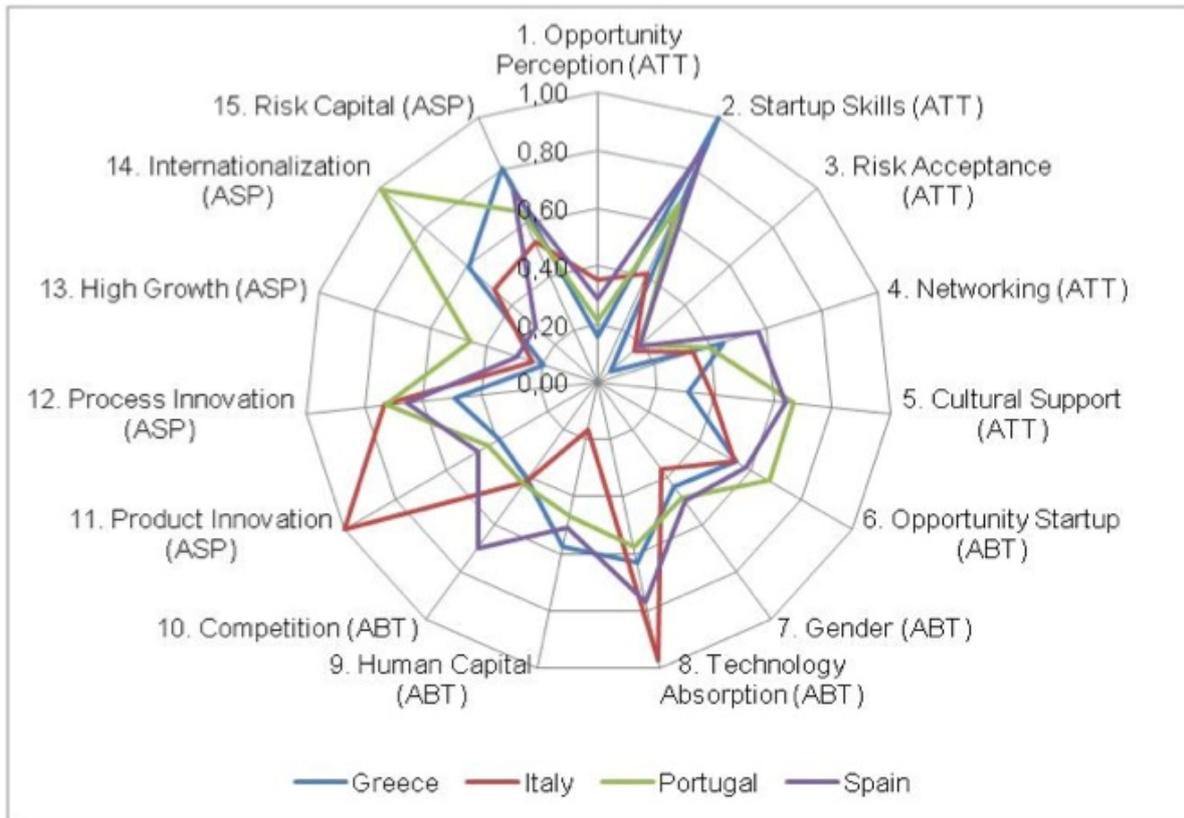


Figure 4: GEDI spider diagram

Moreover, in order to better understand the impact of entrepreneurship on economic growth we will build GEDI/REDI scores into a GMR ('Geographic Macro and Regional') model (Varga 2007). GMR models provide ex-ante and ex-post evaluation of development policies such as the promotion of R&D activities, human capital advancement or improved physical accessibility. The GMR research programme intends to develop efficient, relatively simple model structures, which fit the generally weak quality of regional data. The first example of the GMR approach was the EcoRET model built for the Hungarian government for ex-ante and ex-post evaluation of the Cohesion policy. This was followed by the GMR Hungary model, which is currently used by the Hungarian government for Cohesion policy impact analyses. GMR Europe was built in the IAREG FP7 project and was recently extended and policy simulations for DG Regional Policy have been applied.

The GEDI-REDI composite index approach is well suited to scanning the quality of entrepreneurial ecosystems across Europe and quickly diagnosing where which bottlenecks should urgently be addressed. Given that a lot of work has already been done in earlier projects, we can now perform such a systematic analysis for the entire European Union. However, to develop actual institutional reform strategies we need to complement this data driven analysis with more detailed information about institutional conditions and how they inhibit or promote the process of entrepreneurial venture creation over time.

Sequence Analysis of Start-up Processes to Identify Institutional Barriers to Entrepreneurship

Tailoring reform strategies to European member states and regions requires focusing our attention on specific case studies in this part of the project. Case studies are a useful tool for quickly collecting information on specific institutional contexts for entrepreneurial activity and drawing inspiration for specific policy programmes against the backdrop of our general theoretical and conceptual framework. But drafting tailored reform strategies for Member States involves collecting more in-depth data on the institutional arrangements affecting entrepreneurship. As part of the project we will therefore collect data in a survey among start-ups. A Marie Curie project (Hermann 2010) has provided a sound basis for this data collection effort. As a data

collection effort cannot be made within the scope of this call for all 28 Members States of the European Union, we will focus our analysis on Germany, Italy and the UK (and include the US, for which data is already available, as a reference point). In this way, we will illustrate the usefulness of our approach for a coordinated, liberal and mixed market economy in the traditional VoC classification.

We will study the resulting dataset with sequence analyses, a novel method in the social sciences that was originally developed to decode the human genome (Aisenbrey and Fasang 2010). Using this innovative method will allow us to reveal which institutional conditions foster or hinder start-up processes and how these conditions differ between the institutional environments of Germany, Italy, the UK and the US. Most importantly, the analysis will allow us to identify those entrepreneurship measures that are successful in each country and those that are ineffective. In combination with the more quantitative indicator approach described above, we can subsequently identify reforms in finance, labour markets and knowledge institutions that might be useful to adopt in the specific German, Italian and UK contexts. The historical-institutional VoC approach, however, reminds us to always consider such reforms in the broader context of interlinked and complementary institutions. This means that, to build a sound reform strategy, we will also have to refer back to the historical analysis that distinguishes malleable superficial from deeply rooted institutions. When this has been achieved we will turn to the practical implementation of the resulting reform strategy.

Finally, we will use a legal competencies and instruments analysis that links the proposed, desired reforms to the appropriate policy and decision-making bodies and agencies. To conclude this stage of the project we will actually present and discuss our analysis and proposals with responsible policy makers to involve these stakeholders directly. By concluding the entire reform strategy design process for Italy, Germany and the UK we can illustrate the practicality of our general approach.

Positioning

This project has elements throughout the spectrum from fundamental research to policy action. Proposals have been developed up to the point of indicating who should take which action, but these proposals are firmly founded on empirical and theoretical scientific research on the interrelation between entrepreneurship and growth that would qualify as fundamental research that is of interest in its own right. The work in the early stages of our project, investigating the institutional foundations and structures currently promoting or inhibiting entrepreneurial activity in Europe, connects historical research to the urgent modern day challenges Europe faces. The empirical research we propose on establishing the need and desirability of moving towards a more entrepreneurial Europe involves state-of-the-art empirical research into trade dynamics and job creation. Moreover it brings us to the question of how entrepreneurship creates new, sustainable value when more material consumption is facing diminishing returns in the creation of well-being. This too might be considered an urgent, rather fundamental question, with clear policy implications. Our project becomes more applied in nature when we turn to investigating the strengths and weaknesses of regional entrepreneurial ecosystems in Europe. We will develop a plug-and-play assessment tool that can scan for urgent bottlenecks using publicly available data and will validate this tool extensively. Results from this analysis can be used to identify structural weaknesses relative to other EU regions, but designing a complete reform strategy requires more in-depth analysis of start-up processes in the jurisdiction under study. We will collect data on start-up processes and provide a tool for analysing such data. The results of these in-depth analyses will then be fed into a reform agenda that can be operationalised by performing a final, legal analysis to determine who should do what at which level and in which sequence to bring the entrepreneurial economy in Europe to life.

Context

Our project will build on prior research projects in various instances. The importance of entrepreneurship for (regional) growth and development was already established in the FP7 IAREG project (http://www.iareg.org/fileadmin/iareg/media/papers/IAREG_Deliverable_3.3.pdf), while the FP7 AEGIS project focused on knowledge-intensive entrepreneurship (<http://www.aegis-fp7.eu>). The FP7 FINNOV-project (http://ec.europa.eu/research/social-sciences/pdf/policy-briefs-finnov-022012_en.pdf) demonstrated that financial flows to new, real value creation lag behind in Europe. What is missing in these projects is the historical-institutional perspective we propose to apply to this question. In our historical analysis we will build on research conducted by Gerarda Westerhuis and funded by the Netherlands Organisation for Scientific research (NWO). That project developed and illustrated a framework for analysing the historical evolution of financial institutions for the Netherlands. We aim to expand this research into labour and knowledge

institutions, focus it on entrepreneurial venturing and apply this in the European context. Obviously there is also a close link to, and our project will benefit from work carried out as part of the FP7-VICO project (http://ec.europa.eu/research/social-sciences/projects/443_en.html).

On the basis of the results of the FP7 EFIGE project (http://ec.europa.eu/research/social-sciences/pdf/policy-briefs-efige01-june-2012_en.pdf) we feel it is fair to argue that European firms can only maintain or expand their global competitive position through innovation and smart specialisation. This we will demonstrate by carefully analysing global trade data to uncover changing specialisation, job creation and destruction patterns. In our empirical work we will build on the vast literature and data collected in international research projects on trade, global value chains and structural change. Our data sources include:

- UN Comtrade database (<http://comtrade.un.org/>)
- World import/export data (NBER) Centre for International Data, UCDAVIS University of California (<http://cid.econ.ucdavis.edu/>)
- International Trade (<http://epp.eurostat.ec.europa.eu>)
- World input output tables. University of Groningen (http://www.wiod.org/new_site/home.htm)
- Eurostat: Structural Business Statistics (including the recently published regional statistics on business dynamics), ProdCom (manufactured goods), Annual National Accounts (<http://epp.eurostat.ec.europa.eu>)
- UNIDO (INDSTAT4 - 2013 edition CD ROM, see <http://www.unido.org/en/resources/statistics/statistical-databases/indstat4-2013-edition.html>)
- OECD Stan Structural Analysis Database (<http://www.oecd.org/industry/ind/stanstructuralanalysisdatabase.htm>)
- OECD Science, Technology and R&D Statistics (http://www.oecd-ilibrary.org/science-and-technology/data/oecd-science-technology-and-r-d-statistics_strd-data-en)
- Regions, Metropolitan regions and Cities (<http://epp.eurostat.ec.europa.eu>)

The innovation in our approach is to analyse this data through the lenses of the product life-cycle and Europe's transition to a global frontier economy.

Our data analysis in the assessment of Europe's entrepreneurial ecosystems is drawn from the Global Entrepreneurship and Development Indicator (<http://www.thegedi.org>) and this data has already been used for such analyses by the World Bank (Acs and Correa, 2014), the EU (DG-REGION) and others. The expansion, building the GEDI-index into a geographic-macro-regional (GMR) model provides a link to work for the Hungarian government in (http://www.gkk.ktk.pte.hu/files/tiny_mce/File/Muhelytanulmanyok/GKK0405.pdf) and <http://krti-en.ktk.pte.hu/pec/pdf/200704.pdf>).

Our in-depth analysis of start-up processes in Europe builds on data, data collection and analysis methods developed in the Marie Curie project Herrmann (2010). Assessing the compatibility of our proposed institutional reform agenda with extant legislation and identifying policy action to make the reform strategy legally feasible involves adding a strong legal dimension to our project. This is uncommon in this type of research, but we believe this adds a valuable step in making our results more practical.

Conclusion

Our project will develop a framework for understanding Europe's common institutional foundations (WP2) and the changing global and technological environment (WP3). We will subsequently a tool for analysing the institutional framework for the entrepreneurial ecosystem as to its key dimensions and provide a quick scan for the union (WP4), while developing more in-depth analysis resulting in tailored proposals for selected cases to illustrate the value of our approach (WP5) and will conclude with a practical analysis of how and where in the European legal framework the various types of interventions can be put into effect (WP6). In doing so we will provide the building blocks for designing coherent growth and recovery strategies for Europe. To ensure that we achieve our goal of developing a feasible and practical reform strategy, we will involve stakeholders in the process both at the beginning and the end. A large, professionally organised stakeholder consultation event will kick-off the project and we aim to keep our stakeholders explicitly involved throughout the project to ensure practical results and effective dissemination.

1.4 *Ambition*

The unique character and main innovation of our project lies not only in its individual components but also, and specifically, in the combination of methods, approaches and insights brought together around its central theme. We will use a multi-disciplinary approach to demonstrate that and how entrepreneurship is shaped by, and therefore differs according to, national and regional institutions. The ground-breaking ambition behind our project is therefore to illustrate that similar policy measures do not necessarily lead to similar entrepreneurial outcomes, but affect entrepreneurs differently – depending on the respective institutional environments.

In addition, we will be taking highly innovative research approaches and undertaking cutting-edge research in the project's various WPs. For example, the empirical analysis of specialisation patterns in terms of tasks and the time series analysis of the GEDI index have not been made. Similarly, the sequence analyses underlying WP5 constitute a genuinely new methodological approach in entrepreneurship research. Our work will therefore add to scientific literature. The resulting reports and academic publications will contribute to the so far, rather limited literature on the link between institutions, entrepreneurship and entrepreneurial policies.

The uniqueness and main ambition of this project lies in attempting to bring all the theories, concepts, tools and approaches together in addressing the broader societal challenge the European Commission has set. It is our conviction that this is key to doing successful multidisciplinary research. That is, we can productively work across disciplinary boundaries if it is clear which real world problem we are addressing. If Europe wants innovative, smart, inclusive and sustainable growth we will use this project to show that it will have to invent a European variety of the Entrepreneurial Society.

Accordingly, it is a further overarching ambition of our project to first make concrete suggestions towards that future. Based on sound scientific foundations we will develop a sensible and realistic institutional reform strategy for making three specific European member states more entrepreneurial. In the process of doing so we will bring our wide range of expertise to bear on as well as develop and test the tools needed to repeat such an exercise for all 28 European member states and its multiplicity of regions and cities.

Our proposal will enable European, national, regional and local policy makers to develop an institutional reform strategy to strengthen the entrepreneurial ecosystem in their constituencies. Different institutions will have to be reformed at different levels and speeds to suit local needs and opportunities. Given that this will often involve a complex, multilayer legislative and political process of decision-making and implementing policy programmes, it is imperative that all the parties involved have a common framework to work with. Once our project has been completed, the tools for developing such a strategy on the basis of a sound framework will be available and ready for use. The first step in our analysis provides the distinction between deeply embedded (e.g. cultural) and more superficial (e.g. legislative) elements in the institutional framework, essential for determining the type of and time frame for reforms to be considered. The third step identifies the most urgent bottlenecks and the appropriate geographic level at which reforms are likely to be most effective. Step 4 then allows those directly involved in start-up processes to identify the most urgent bottlenecks in a more qualitative survey-based method, providing an essential validation and elaboration on the data based diagnosis in Step 3. The final step in our approach identifies the appropriate administrative levels and legal instruments to be used in effectuating the reforms. Table 3 below provides a systematic overview of where the policies should be situated in a tailor-made reform strategy. Proposal X could, for example, refer to a coordinated policy action at EU, national and regional levels to promote a return to relationship banking in the EU. Given that a change of banking culture is required here, a longer timeframe and a different set of policy actions will need to be designed.

Table 3: Policy Proposals Matrix

	<i>Finance</i>		<i>Labour</i>		<i>Knowledge</i>	
	High	Low	High	Low	High	Low
Institutional Embeddedness						
EU	X					
National	X			Y	Z	
Regional	X					
Local					Z	

Policy Y could be a policy that provides the self-employed with access to affordable disability insurance in the Netherlands. This can quickly be implemented, as extending such an insurance would be compatible with existing general Dutch attitudes towards social security and the welfare state. Moreover, this policy requires very little coordination at the various levels of legislation and government. Policy Z might be a policy experiment promoting open innovation and patent pooling in the High Tech Cluster around Eindhoven (Netherlands), requiring a paradigm shift in thinking about intellectual property and perhaps involving national laws as well as local attitudes.

This matrix represents an innovative approach to policy making, very much complementary with, but perhaps more practical and comprehensive than alternative mono-disciplinary approaches. To this end, we will combine sound economic modelling and rigorous econometric analyses to establish the need and desirability of making the transition to a more entrepreneurial Europe. Our historical and institutional embedding prevents us from disregarding path dependency and making seemingly rational proposals of the one-size-fit-all type that economists tend to make. On the other hand, our legal checks will prevent us from addressing our proposals to the wrong decision-making levels or proposing changes that are impractical within current European legal frameworks.

2. Impact

2.1 *Expected impacts*

The starting point in this project is the realisation that it is entrepreneurial firms, old and new, that introduce innovation into the economy. Furthermore it is institutions that determine the supply and allocation of scarce resources to such Schumpeterian entrepreneurship. Our project will achieve five major goals in line with the intentions formulated in the call (bold face citations are taken from the call text).

First of all it will analyse how current institutions have evolved and as a consequence have developed both deep historical roots and complicated interactions with contemporary institutions. This research is thereby: **“expected to contribute to the scientific base for policies aimed at successful economic recovery in line with the objectives of the ‘Europe 2020’ growth strategy”**.

Secondly, it will establish empirically that global competition pushes and sophisticated consumer demand pulls European member states and regions into a specialisation pattern in which new value creation involves more entrepreneurial activity. We will thereby establish the economic need and desirability of reforming institutional frameworks to promote entrepreneurship. Our project will thus: **“provide insights into establishing durable foundations for growth and employment through more effective forms of governance at national and European level. In particular, it will contribute to a better understanding of the policy instruments designed to tackle the challenges facing the EU in the era of globalisation and will provide new ideas for fostering its international competitiveness”**. Our project will **“close important knowledge gaps”** in the economic foundations exactly by taking a distinctly historical and institutional approach. In our understanding of Europe’s global competitiveness we will take a distinctly dynamic approach to comparative advantage and trade. We view specialisation and trade not as the mere exchange of goods and services, but as European firms and workers creating value for a changing global market. This requires a task-based approach to specialisation and our empirical work will prominently feature the product life cycle as a way to interpret trade and specialisation dynamics. By confirming that European economies are close to or at the global technology frontier we will establish the need to shift gears. By explicitising the benefits in terms of more inclusive job growth and opportunity creation we will also provide policy makers with the scientific foundations for their reform agendas.

Thirdly, based on the idea that it is the interplay of institutions and entrepreneurial activity that drives economic development, we will provide a plug-and-play assessment tool to measure and compare the quality of European entrepreneurial ecosystems. We will expand the existing GEDI index back in time for member states to identify trends and to the NUTS-2 level to compare across European regions. Panel data and multilevel, cross-sectional analysis will then provide us with a state-of-the-art impression of Europe’s entrepreneurial strengths and weaknesses. Activities under this proposal will therefore: **“also develop tools for a better assessment of the socio-economic evolution of national economies in general as well as for the analysis of policy options and decision making mechanisms to overcome the current economic and financial crisis”**.

Fourth, by collecting additional data on start-up activity in three member states and developing tailored reform strategies for them, we will demonstrate that: “**this new knowledge will help to improve the effectiveness of the European growth and employment strategy both in individual Member States and at the EU level**”. These economic and econometric efforts will provide sound scientific and economic foundations for the reform proposals.

Fifth, however, by also adopting a legal perspective, our reform strategies will also be subject to a legal and political feasibility test. This final step is indispensable to ensure that our project: “**will contribute to an effective implementation of the Innovation Union**”.

To be successful, the FIRES project aims to make an impact at several different levels.

Impact scientific (academic) level

Based on an overarching conceptual framework aimed at characterising institutional arrangements, in-depth analyses of various datasets for country-specific trade and job creation patterns, entrepreneurial characteristics and start-up processes this project will provide in-depth insight into the strengths and weaknesses of Europe’s institutional preconditions for entrepreneurship. Recent and future developments regarding the notion of entrepreneurship, most notably as a result of the coming into force of the Lisbon Treaty, will also be taken into account. We will corroborate our theoretical models and quantitative cross-country studies with case studies that will look at the more specific circumstances for entrepreneurship in the various member states. The project provides cross-national scientific knowledge about how to further enhance and expand EU entrepreneurship, thereby building on past and ongoing research. Over the course of the second year, individual studies will be assembled and combined into an academic conference with all the partners and scholars from outside the consortium. A specific impact will be to boost academic research on European entrepreneurship by focusing on the interplay between institutions and innovation, which will be presented in academic journals, at seminars and conferences.

Impact policymakers

The second level of intended impact is that of entrepreneurship policies at European, national, regional and local levels. Our empirical approach to specialisation and entrepreneurship will establish a sense of urgency among politicians and policymakers, while our focus on job creation, inclusiveness and sustainable value creation may provide them with much needed comfort that entrepreneurship, when embedded in the correct institutional framework is a potent driver of economic development and wellbeing. The historical approach to institutions aims to provide a long-term perspective on the challenges facing modern policymakers in relation to channelling more of Europe’s available resources into entrepreneurship. Our regional approach will allow us to compare various entrepreneurial ecosystems and to connect their characteristics to economic performance and overall wellbeing. Finally, this project will also take into account the complex multi-layered legal environment that connects cities, regions and member states in the European Union with a view to streamlining the adoption, implementation and monitoring of our policy recommendations.

Impact on financiers, employees and would-be entrepreneurs

A further crucial aspect of the project will be to encourage more people in Europe to invest in, work for and consider undertaking entrepreneurial ventures themselves. As institutions in the member states will be analysed from the finance, labour and knowledge perspective, further knowledge will be gained with regard to the institutional obstacles that exist for EU citizens to engage in entrepreneurial activity. Importantly, we will highlight how these obstacles can be removed and how citizens may be encouraged to commit their resources. To this end, a project website will be set up and old and new social media will be used to maximise the effective communication and impact of ‘FIRES’ and to animate and support publication of knowledge accumulated by the programme. Working papers will be published on the website and the stakeholders will be actively involved in the dissemination of our research results.

Methodology

This project also aims to have a methodological impact. The research into institutional barriers to entrepreneurship and formulating an effective institutional reform strategy to promote smart, inclusive, sustainable and innovative growth requires a multidisciplinary and multidimensional approach. By combining history, economics and law, FIRES also combines and integrates a variety of methodological paradigms, tools and instruments. Taking into consideration that entrepreneurship is a social practice as well as a historical process, the programme's methodological challenge is to raise mutual understanding on the multidisciplinary

character of entrepreneurship, to formulate linguistic and conceptual principles that enforce this mutual understanding and to exchange and share methodological approaches that improve it.

The research will be carried out in work packages identifying the following approaches:

- The historical approach: to identify key institutions and distinguish them by degree of embeddedness and malleability;
- The empirical approach: to establish the need and desirability for the transition to a more entrepreneurial union;
- The composite index approach: to provide the tools for a comprehensive assessment of the quality of entrepreneurial ecosystems across the European Union;
- The sequence analysis and case study approach: to uncover country and context specificities to be considered in drafting a tailored reform strategy for three European member states;
- The legal and political reality check: to ensure practical & political feasibility and to translate the strategy into concrete policy actions;
- Together, the various impacts we plan to achieve will provide a scientifically sound, evidence-based and policy-oriented foundation to further enhance and expand the European entrepreneurial economy, not only as a necessity from the past, but as an opportunity for the future.
- The consortium and its advisory board will have the critical mass for research on EU entrepreneurship during the project and beyond to influence academia, policymakers and the media.

2.2 Measures to maximise impact

Consultation with stakeholders before, during and after the project

During the initial months of our project we will organise a kick-off conference in Berlin with the help of a professional organisation specialized in organizing such stakeholder engagement processes, to which we will invite a broad range of entrepreneurial society stakeholders. Most important of all, we will invite representatives of SMEs, the financial sector, labour organisations, knowledge institutes and policy makers. But our list should definitely go beyond these groups, as the stakeholders in Europe's entrepreneurial future also include students, minority and female entrepreneurs, intrapreneurs, impact investors, private equity financiers, the solo self-employed, artists, freelancers and employees at start-ups. Of course, the current beneficiaries of institutional arrangements that would require reform are also stakeholders in this project, although they will be asked to support a transition that they may not necessarily consider in their (short-term) interests. Labour unions, bankers' associations and large incumbent firms can all be considered to have a stake in the managed economy we propose to reform. We aim to bring in these stakeholders in the later stages of our project, when the foundations of our approach and diagnosis are strong and we can discuss how our proposals may address concerns they have.

The consultation event, as can be seen in the list of deliverables, will consist of a series of workshops and round table discussions at which we will present our project and proposed directions for research and explicitly aim to receive valuable feedback before the actual research is embarked upon. We feel such an elaborate and professionally-organised stakeholder consultation will strengthen our project and ensure a more effective dissemination of the results. We will create a stakeholder committee at this kick-off event that will be asked to participate in all the project's subsequent events to comment on key deliverables over the course of the project. In doing so we aim to keep our project firmly founded in practice.

To ensure the effective dissemination of our scientific results we will obviously aim for high-quality peer reviewed publications. However, as a lot of the actual work for this project will be carried out by junior researchers, we also feel it is imperative to organise early feedback and support. Obviously this is first and foremostly the responsibility of the respective supervisors and the partner institutes have excellent support infrastructures in place, but the project will organise a scientific conference at which all the intermediate research results will be presented to and discussed with the senior consortium partners and, more importantly,

with scholars in various fields from outside our consortium. Our outstanding advisory board and consortium partners will ensure that such a conference will attract scholars from around the world to Hydra, in Greece around Month 18 of the project. At that conference our junior researchers will receive invaluable feedback on their work and we aim to interest at least one academic journal or publisher in publishing a special issue or edited volume on this event.

We will conclude our project with a policymakers' workshop in Brussels. At that event we will not focus on the academic output of this project, but will conversely zoom in on the tools we have developed and provide hands-on training and guidance on how to use them to formulate effective multi-level institutional reform strategies towards a more entrepreneurial Europe. The target audience for this event are naturally policymakers and people involved in preparing policy proposals at the EU, member states, regional and local levels as we believe that implementing a strategy will involve all these levels of decision making and all will benefit from learning to work from the platform our project will create.

Dissemination and exploitation of results

The FIRES consortium recognises that the ongoing involvement of the relevant target groups in the project as well as the timely dissemination of its findings among policy and decision makers at all levels, is an essential goal of the project. We will create a dissemination plan to maximise impact and dissemination. As the project and the consortium encompass nine countries, the dissemination plan will establish regional structures for dissemination. In each of the relevant countries a local consortium partner will act as a regional dissemination officer collaborating with the central office, thereby creating a virtual regional dissemination team. The regional dissemination team's task will be to adapt and translate the project results for dissemination - as prepared by the central office - to the communication environment of their respective country. Impact and dissemination are an integral part of the work in all WPs, as should be evident from the listed deliverables with that explicit aim. Policy questions developed at the outset of the research will be monitored throughout the dissemination process and adapted to the national policy environments.

The objectives of this project are: to maximise internal and external communication, to publish research results in the academic field, to translate and communicate results to policymakers, practitioners and professionals, and to train young researchers in such a way that they will transfer the aims and knowledge of the 'FIRES' project. In order for these objectives to have real impact, the dissemination plan will focus on:

- The development and stimulation of further academic research on this topic
- Communicating the objectives of FIRES in order to put these on the agendas of policymakers, practitioners and professionals at a European, national, regional and local level
- Involving and engaging relevant stakeholders, including entrepreneurs and relevant associations in industry, finance, labour unions and at knowledge institutes.
- Training young researchers
- Raising public awareness of the programme's core concepts.

The dissemination plan will be presented for discussion and verification at a dissemination planning workshop held during the kick-off meeting in Month 3. The dissemination planning workshop will involve a wide range of parties, including the project partners and a broad range of potential end users, including policymakers, civil society representatives and opinion leaders. The resulting plan will detail the dissemination activities to be developed over the course of the project and their timing, also in relation to the deliverables of the various WPs.

Target groups

The dissemination plan will identify four major target groups in order to introduce the findings of the project into a productive cycle of evaluation, discussion and implementation:

Academia: We will address researchers and academics globally, at various institutions and in various research settings, to spur further investigation into the topic, to enforce an international academic debate on European

entrepreneurship and to make them ambassadors of change and progress. This target group will be reached through publications and an open academic conference to be held in or around Month 18 of the project, whereby intermediate results will be presented and valuable feedback will be solicited from academics in, but more importantly also from outside our consortium.

Policymakers: We will target policymakers at a European level (European institutions, such as the European Commission, the European Council, the Council of EU, the European Parliament, the Committee of the Regions, the European Economic and Social Committee), at a national level (ministries, governmental agencies) and at a regional and local level. We will present them with our policy formulations and the policy recommendations derived from our scientific research, engage them in an open exchange of views to understand their needs for evidence-based conclusions in their decision making and use that input as feedback for our continuing research. The main channel for this will be our concluding policymakers event in Month 36, but we will organise smaller 'round table' discussions based on the policy briefs our project produces as they are published.

Stakeholders: including representatives of various organisations. We will build up our project in close and permanent contact with the key stakeholders who are closely involved and interested in the process of innovative entrepreneurship in Europe. We will involve these stakeholders in our project from the kick-off meeting in Month 3 and throughout our project using web surveys and active engagement in the aforementioned round tables.

Public and opinion leaders: We will address the public, as European entrepreneurship and innovation are also of public interest. To implement the transition to a more entrepreneurial economy in Europe successfully, we will need to organise a broad base of general public as well as policymaker support.

Dissemination Agents

The multidisciplinary character of the 'FIRES' consortium and its high-level, International Scientific and Policy Advisory Board will provide an excellent opportunity to embed the project in the wide and diverse network of expertise that surrounds the project.

Members of the International Scientific and Policy Advisory Board:

Members of the International Scientific and Policy Advisory Board have been chosen based on their outstanding knowledge of and expertise related to the programme's various dimensions and issues. They will provide permanent guidance to the programme partners, but at the same time they represent important resources in view of their own standing in the academic and policy communities for disseminating outputs and outcomes of the project to policymakers and colleagues at national and European/international levels. The International Scientific and Policy Advisory Board members will be mobilised in several specific ways for the dissemination of the project, its activities and results:

- They will be invited to the kick-off meeting. It is expected that several renowned individuals will actively participate in this initiation phase i.e. by guiding the beneficiaries to plan actions that will enable the achievement of the objectives of the project, thereby demonstrating the importance they attach to the project and their commitment to contribute to it. Their views and advice will be integrated into the various activities that will be undertaken by the various work packages.
- They will also be invited as keynote speakers to the conferences that will be organised during the project.
- Special press conferences will be organised in relation to the main events, which members of the scientific and policy boards may take part in, thereby increasing the programme's visibility as well as underlining the general importance attached to entrepreneurship and its institutional context.
- They will be invited to be signatories for policy briefs and other publications, and/or to write the prefaces to these.
- In accordance with their scientific background and main policy interest, a number of the board members will be invited to specific workshops and seminars that will be undertaken at the conferences at the invitation of the cluster coordinators.

- At regular intervals, individual board members will be asked to advise on specific activities in various work packages. In this context, they will also be asked to contribute to scientific and/or policy relevant publications e.g. by hosting them, writing the preface to them or otherwise.

Key stakeholders:

Exchange and discussion with key stakeholders is important to keep the project activities in line with timely developments with regard to European entrepreneurship and foci it may or should have.

Key stakeholders can initially be identified at different territorial levels: local, regional, national, European and worldwide. Secondly, they are different in nature; relevant DGs of the Commission of the European Communities, members of the European and national parliaments, social partners, women's organisations, business, European NGOs, etc. Thirdly, our stakeholders will have different foci of interest. These issues should be kept in mind with regard to the requests for their participation and engagement. We will invite entrepreneurial economy stakeholders to take part early on in the project, leaving the engagement of managed economy stakeholders for the later stages, when the reform strategies will be more mature.

A database of stakeholders will be set up at the project's outset. A first version of this database will be ready before the kick-off in Month 3 and will be continuously updated throughout the project. All significant stakeholders will be approached directly, with information on the project goals and activities as well as how to obtain ongoing information on the project (website, newsletter, etc.). Furthermore, the project will review which stakeholders are appropriate for which events.

International cooperation and outreach:

The project intends to involve researchers from other parts of the world to contribute to the research work to be undertaken. This will be enhanced by the fact that the International Scientific and Policy Advisory Board consists of members from inside and outside the European Union. This international exchange and transfer of information will also be used for dissemination purposes.

Communication Activities

The dissemination plan for the relevant target groups will include a broad array of dissemination tools to enable the abovementioned considerations and needs. The dissemination strategy's various components will reinforce one another, benefiting the project not only by increasing its visibility, but also by keeping up to date with and accommodating new policy and research developments. The keywords of the dissemination strategy are therefore: impact oriented, effective, targeted and integrated. The various dissemination activities will be carefully planned to optimise synergy with the project's research, quality control and management activities.

Plenary Conferences:

The three conferences will become FIRES' landmarks. For reasons of efficiency, economies of scale and to endorse a common rhythm for all participants, the conferences will guarantee the integration of all activities. The conferences will last four days and will be organised in such a way that:

- WP Coordinators will organise meetings to plan their activities and to discuss their work in progress and their results; they will invite members of the Advisory Board to comment.
- Experts will present key lectures and plenary meetings will be organised on central programme issues to enable and facilitate stakeholder reflection on the latter.
- Coordinating activities - decisive meetings of the executive committee and the governing committee - will be organised.

These conferences will institute programme landmarks, the integration of all the participants and the tempo of the research activities. These meetings will also be crucial to management activities. Finally, the conferences will promote the visibility of the programme and the spreading of information on its results.

Online Activities:

The project website: A highly professional website will be developed that will have an interactive, moderated communication interface for project partners and external communities. The website will facilitate dialogue between key target groups and the project with a view to increasing the project's policy responsiveness. It will present the programmes, the teams, the goals and, if available, the tentative and final results.

The website will provide a discussion forum for everybody interested in the project's main themes, from proponents to critics, and can contribute ideas to a structured discussion. A moderator will guarantee the quality of the contributions. This uncomplicated ongoing discussion will enable the quick inclusion of new research and ideas.

A specific policy section of the website will feature an area for downloading project outputs as well as relevant third-party documents (papers, reports, legislation, directives, etc.). Other features, such as a working paper series, will be developed as results become available and in accordance to the needs of the various target groups. Website maintenance will be an ongoing project activity.

Printed Tools:

Flyers with clear and attractive presentations of the project, its objectives and its partners will be valuable during the early stages of the project acting as consortium business cards that can be used for professional contacts. Brochures produced at the project's outset and during its finalisation phase will serve to physically disseminate the project's intentions and results.

Policy briefs:

Policy briefs have recently (and with reason) gained immense importance. Short presentations in written form, six to ten pages long, with key and catchy information definitely attract the highest attention from policymaking and policy decision circles. With this in mind, the managers of FP7-SSH have initiated the policy brief website: Getting policy insights at a glance, discovering thought-provoking results and comparisons in Europe, checking quickly a methodology. This is why the Socioeconomic Sciences and Humanities (SSH) programme publishes policy briefs: to communicate research results in a structured way in only a few pages. Policy relevant results will be published when appropriate throughout the project in a series of policy briefs in which researchers can articulate their evidence-based conclusions in the form of constructive policy recommendations. Over the course of the project, sixteen policy briefs will be made available as project deliverables. A final conference will be organised in Brussels at which the findings will be discussed.

Academic publications (open access):

Besides the policy briefs, the project will also produce academic publications. As scientific research into European entrepreneurship is the project's core, academia will be highly involved in all dissemination efforts. The new knowledge created by the project will be disseminated throughout the academic fields with the goal of engaging scientists all over the world in the further development of research on this topic. All the dissemination tools will therefore address the academic community with academic publications, edited volumes, special issues and conference coverage. A professional project website, where working papers will be published is essential. In Month 18, all preliminary and final results will be assembled and presented at the academic conference that will also feature an open call for papers to explicitly invite scientists from outside the consortium to participate and reflect on our work to date. A specific impact will be to boost academic research on EU entrepreneurship by focusing on the interplay between institutions and practices and this will be presented in academic journals, at seminars and conferences.

When possible the project will strive to publish open access following the 'gold' model. If this is not possible the 'green' model will be chosen.

Networking the networks:

The academic institutions of the partners in the project have access to a broad array of publications relevant to this project. In addition, a number of the project contributors also have extensive media visibility and connections. Members of the project consortium are active in academic networks that will be important channels for capitalising on the research findings within the academic community. These networks include the Schumpeter Society, World Interdisciplinary Network for Institutional Research, Small Business Economics Journal etc.. The project will make use of these established dissemination vehicles and networking activities in combination with the expertise of all the beneficiaries to present and discuss project results, providing permanent ongoing involvement and dialogue with key target groups at all levels throughout and after the project.

The project will specifically aim to prominently publicise its findings and policy conclusions:

- in the in-house periodicals of the partners with special issues for FIRES
- in academic and practitioners' newsletters
- in relevant peer-reviewed academic journals, particularly those edited by consortium and Advisory Board members
- at regular scientific conferences, workshops and/or seminars organised by partners
- at any other transfer activities directed at civil society or policy actors where FIRES lectures could be provided.

Media Appearances and Contributions:

Appearances in the press will accompany the project throughout its duration. The conferences present an obvious publicity-seeking opportunity. The presence of a large number of high-ranking experts and scientists, members of the scientific and policy boards, key stakeholders including civil society representatives as well as political and economic opinion leaders will attract public attention and provide an opportunity for an intensive interchange with newspapers, radio stations and television broadcasters.

As the scope of the project is European, the aim of the media activities is to reach an interested audience at various national levels as well as at a European level. It will therefore address media with national and international coverage.

Press releases will constitute a basic media tool and will be drawn up to communicate to-the-point information of public interest.

At significant stages in the project, when information of interest to a wider audience is available, journalists will be invited to the conferences and round tables. Direct contact with European and national journalists will be maintained to provide them with basic information, including organising exchanges with consortium experts and members of the scientific and policy boards if appropriate and useful to the project's goals as a whole. Short and accessible articles will also be sent to journals and magazines such as the (European) Parliament Magazine in an effort to connect with policymakers at a national level. Contacts at national and international newspapers and journals will be activated for possible review or publication purposes. We will also organise interviews with members of the International Scientific and Policy Advisory Board in connection with the topic of entrepreneurship, to be published on a regular basis in prominent media. In addition, a number of the project contributors also have extensive media visibility and connections.

Discourse with the European Commission and related bodies:

The project's findings will also be made relevant and accessible to practitioners and policymakers e.g. at a European Union level through presentations at European Commission events, such as those organised by DG-ENTR, DG-ECFIN, DG-REGIO and DG-EMPL on various aspects of EU entrepreneurship. Other specialised bodies related to the commission should be identified to establish a broad platform of policymakers and stakeholders in Europe to ensure that they are aware of and positively support the project's objectives.

Conference coverage:

The dissemination plan will be updated annually with a list of appropriate conferences, workshops, etc., where the project outputs could be best presented and/or special sessions could be organised. If the opportunity exists, special sessions will be held during these international conferences and discussion partners from Europe and other parts of the world will be invited to contribute to the themes. Furthermore, project experts will intend to obtain roles as keynote speakers during plenary sessions at these conferences.

Relationship between target groups and tools:

The various dissemination tools will be utilised in specific ways to communicate information about the project and the scientific and policy-relevant results of FIRES to the key target groups in the most effective manner possible. The dissemination focus of FIRES is shown in the table below, which gives a brief impression of the planned dissemination activities.

Target group

	Academia	Policy Makers	Stakeholders	Public	
Academic Journals Tools	Online Activities	XX	XX	XX	XX
	Printed Tools	X	XX	XX	XX
	Policy briefs	X	XX	XX	X
	Academic Journals	XX			
	Networking the networks	XX	X	XX	X
	Media Appearances and Contributions	X	XX	XX	XX
	Discourse with the European Commission		X		
	Conference coverage	XX	XX	X	X

X = very relevant to target group, XX = very strong relevance to and focus on target group

Management of intellectual property rights and data:

With regard to intellectual property rights, it is the partners' intention to waive these to the highest level possible, since this project is to strive towards augmenting the public good with its results which are to be used and implemented by all stakeholders. All deliverables will have a public dissemination (PU) level with the exception, for obvious privacy reasons, of the micro data collected in the survey in WP5. A data-management plan will be provided as part of the dissemination plan.

3. Implementation

3.1 Work plan — Work packages, deliverables and milestones

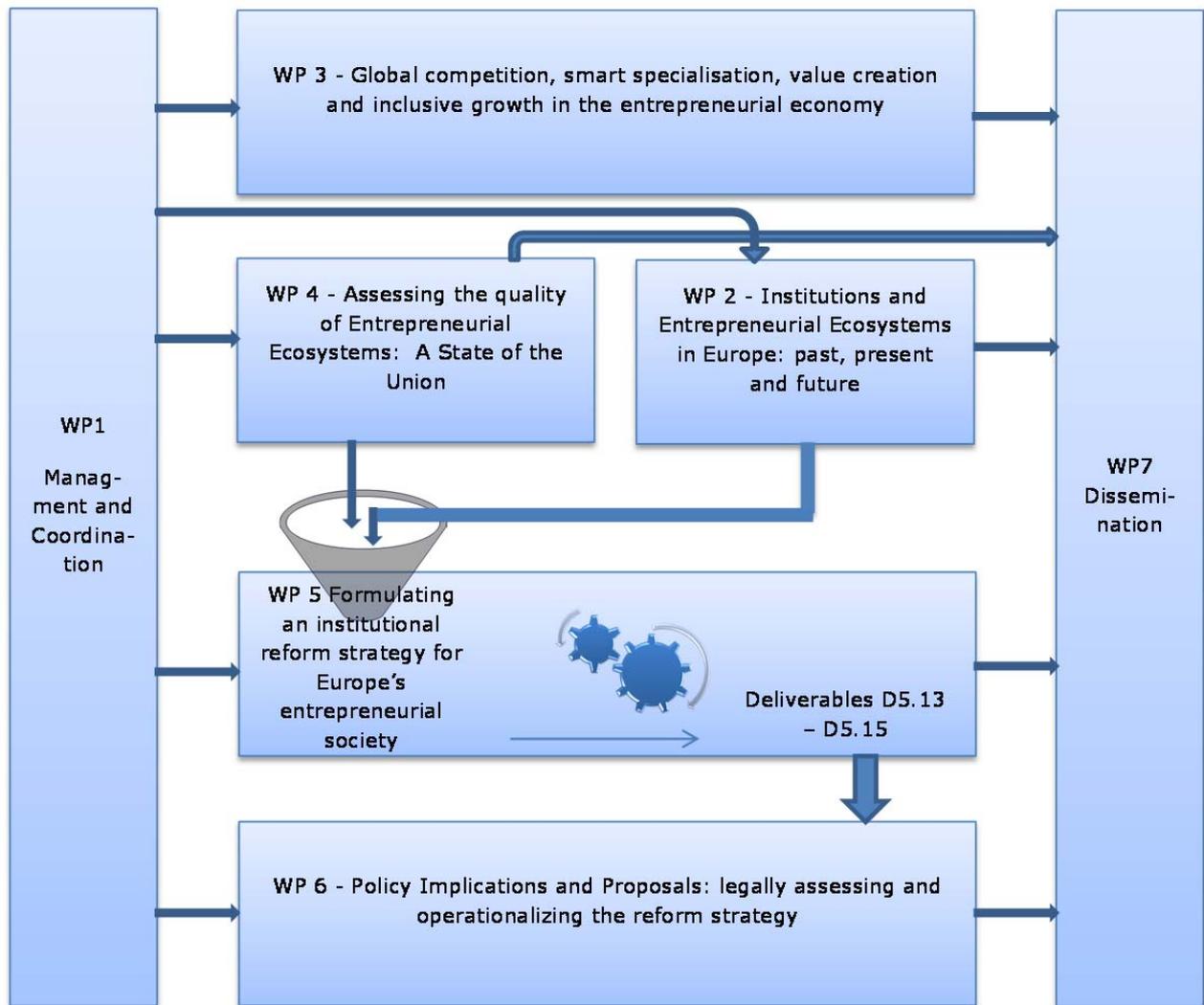
The work that we propose to do is divided over 7 work packages – see table 3.1b below.

Table 3.1b: List of work packages

WP No	Work Package Title	Lead Participant No	Lead Participant Short Name	Person-Months	Start Month	End month
1	Management and coordination	1	UU	10.8	1	36
2	Institutions and Entrepreneurial Ecosystems in Europe: past, present and future	8	IFN	76	3	36
3	Global competition, smart specialisation, value creation and inclusive growth in the entrepreneurial economy	3	FSUJ	58,5	3	36
4	Assessing the quality of Entrepreneurial Ecosystems: A State of the Union	1	UU	55	3	36
5	Formulating an institutional reform strategy for Europe's entrepreneurial society	1	UU	80	12	36
6	Policy Implications and Proposals: legally assessing and operationalising the reform strategy	2	KU Leuven	40	3	36
7	Dissemination	1	UU	15	1	36
				Total 335,3		

Inter-relation between the work packages.

Two general work packages, WP1 management and WP7 Dissemination, support the project. Work package 3 provides the basis for why we propose to conduct this research. Work packages 4 and 2 will lead to results which will be funnelled into Work package 5 which will culminate in Deliverables D5.13 till D5.15. From there it will be used by the work package 6 on policy implementation and proposals. See the pert chart below for a graphical representation.



Planning of the work

Almost all of the work packages start with the consultation conference in M3. Only WP5 will start later in the project. The supporting work packages 1 and 7 will of course continue throughout the whole duration of the project. See Gantt chart below

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
Workpackage 1:	Management and coordination	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█		
Workpackage 2:	Institutions and Entrepreneurial Ecosystems in Europe: past, present and future		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Workpackage 3:	Global competition, smart specialisation, value creation and inclusive growth in the entrepreneurial economy		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Workpackage 4:	Assessing the quality of Entrepreneurial Ecosystems: A State of the Union		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Workpackage 5:	Formulating an institutional reform strategy for Europe's entrepreneurial society																																								
Workpackage 6:	Policy Implications and Proposals: legally assessing and operationalising the reform strategy																																								
Workpackage 7:	Dissemination	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
		reporting period 1																		reporting period 2																					

Tables 3.1a: Work package descriptions

Work package number	1	Start Date or Starting Event					1
Work package title	Management and coordination						
Participant number	1						
Short name of participant	UU						
Person/months per participant:	10.8						

Objectives

The main objective of this work package is to manage the entire project and coordinate the work between all partners and with the European Commission services. Furthermore this work packages objectives are:

- To ensure that the project progresses according to schedule and within the budgetary constraints set out in the proposal.
- To ensure that all deliverables are finished on time and are of high quality
- To ensure that the project's scientific and technical objectives are achieved
- To ensure that cost statements, reports and other necessary documents from all partners are delivered to the commission in a timely manner.
- To ensure that project meetings are well organised and adequately reported.
- To ensure that project communication channels are effective, efficient and transparent to all concerned

Description of work (where appropriate, broken down into tasks), lead partner and role of participants

Task 1.1 Project management, financial management and reporting (UU)

The UU Coordination Team has overall responsibility for consortium management and reporting. It will be assisted by a project manager and the Faculty of Law, Economics and Governance's Grant Office. This will include the following subtasks:

- Communications with the commission for all administrative and financial project issues.
- Participation and consultation in ongoing communication between partners and Advisory Board
- Cost statement reports from all partners and efficient distribution of project funds
- Handling of legal issues, IPR issues and maintenance of the consortium agreement.
- Implementing and maintaining the project infrastructure, e.g. the internal platform for information exchange and email lists.
- Compilation and distribution of all reports to be delivered by the project
- Coordination and communication with other relevant projects
- Providing guidance, support and oversight to all partners during the project implementation, especially to work package leaders and with specific reference to ensuring that partners complete their project work in accordance with the scientific and technical objectives set out in the proposal, and that this is done on time and within the constraints of the budget.
- Ensuring that milestones are reached and deliverables finished on time and are of high quality.

Task 1.2 Quality Assurance (UU)

A Quality Assurance Plan (QAP) will be explicitly planned at the project's outset and implemented by the coordination team for the project as a whole and by Work Package Coordinator at the Work Package level. These measures will provide continuous quality control from the project's outset to its conclusion. Two basic tiers of quality management will be implemented: 1) permanent external feedback from the Scientific and Policy Advisory Boards and 2) external feedback at specific points in time from Peer Reviews, Expert Panels and Stakeholders

Task 1.3 Project meetings (UU)

There will be four meetings of the full consortium during the project. The first full consortium meeting will be organised in Berlin. This will be both the kick-off and the consultation conference with stakeholders. The purpose of the kick-off will be to discuss and raise project implementation issues including finances and reporting. This includes a detailed review of the project's aims, objectives, timescales, tasks and responsibilities in each work package, and any changes to the work programme approved by the commission. Work package presentations and discussions on the role of each partner will be led by the work package leaders, ensuring that roles are understood by all. Introductions from all partners, their organisations and their main activities will be included so that the full picture can be seen and understood by all present, and so that the partners become familiar with one another.

Subsequent full consortium meetings will take place annually and will be 4 days long. During these annual meetings the General Assembly will be held, the work packages will hold workshops and other meetings they have planned. Whenever possible dissemination and impact meetings (midterm and final conference) will be connected to these annual events as well to minimise travel time and costs.

The location of each meeting will rotate so that awareness of the project can be increased in the host countries. The host partner will help the coordinator with organising, accommodation, facilities and provide details about travel at least one month in advance and in consultation with the coordinator. The coordinator will develop the agenda, chair the meetings, ensure that minutes are adequately recorded, circulated for comments and subsequently distributed. Included with these will be a list of priority actions, who is responsible for completing them and proposed deadlines for these before the next full consortium meeting. The tentative schedule is as follows:

- Kick-off meeting, Berlin, Germany, (UU) (Month)
- 1st annual consortium meeting, Utrecht, the Netherlands (Month 15)
- 2nd consortium meeting and mid-term conference, Greece (Month 27)
- Final consortium meeting and final conference, Brussels, Belgium (Month 35)

Besides the full consortium the Executive Board will hold additional meetings in between each of the annual meetings to discuss progress in relation to the work programme and to seek input and feedback on the deliverables that are imminent or have been received since the previous meeting, including possible issues of concern to the Commission or of any of the other partners.

Deliverables (brief description and month of delivery)

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
1.1	Quality Assurance Plan	UU	3
1.7	Midterm report: A summary of work progress, an explanation of the use of resources and an overview of expenses	UU	
1.5	Final report: A final report on the progress of the work towards the objectives of the project, including the achievement and attainment of any milestones and deliverables identified in Annex 1.	UU	36
1.2	Kick-off Meeting	UU	3
1.3	1st Consortium Meeting	UU	18
1.4	2nd Consortium Meeting	UU	24
1.6	Final Consortium Meeting	UU	36

Work package number	2	Start Date or Starting Event	3
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Work package title	Institutions and Entrepreneurial Ecosystems in Europe: past, present and future						
Participant number	8	1	2	6	4	3	
Short name of participant	IFN	UU	KUL	POL	UPRC	FSUJ	
Person/months per participant:	14.6	30.3	8.5	22.0	0.1	0.5	

Objectives

The core objective of this WP is to analyse the historical roots and evolution of the institutional arrangements that are most relevant to European entrepreneurial ecosystems and to identify the most important future challenges and opportunities in this respect. It is well established in the literature that institutional arrangements evolve historically into complex, interrelated and multi-layered (Williamson 2000) systems of complementary arrangements (Hall and Soskice 2001) that are crucial in hampering or supporting the allocation of resources to entrepreneurship (Baumol 1990). The a-historical one-size-fit-all approach, implementing for example policies that successfully support entrepreneurship in the US, is likely to fail in the much more diverse European setting. A good understanding of the historical evolution and the causes of different institutional arrangements in Europe is therefore extremely important in order to formulate a reform strategy that will actually be effective in a European context. As these institutions have developed historically and in close interaction, we expect to unravel different families of institutional arrangements within Europe, comparable to additional models proposed by scholars to the dichotomies of LME and CME (e.g. Amable (2003) who distinguishes an Anglo-Saxon model, a Continental European model, Social Democratic economies, a Mediterranean model and Asian Capitalism). After having established the main institutions in Task 2.1, Task 2.2-4's main objective to show how financial, labour market and knowledge institutions in Europe have evolved historically. From history we then turn to the future and which will be discussed in Task 2.5

Description of work, broken down into Tasks and Roles of Participants.

IFN will provide the overall lead for this work package; UU will act as co-leader.

Task 2.1: The institutional framework for innovation and entrepreneurship

The purpose of this task is to identify the most important policy areas and measures likely to create a favourable environment for entrepreneurship. As entrepreneurship policies do not target existing firms, our discussion will retain a systemic focus. In this task we will address how public policy can stimulate entrepreneurial activity, with an emphasis on productive entrepreneurship in relation to differences in the institutional set-up at a more detailed level. We will therefore identify the most important institutions for the entrepreneurial ecosystem. Preliminary results suggest the focus should be on institutions governing the flow of talent, resources and knowledge to entrepreneurs, but in this task we will develop a more detailed framework.

(Lead IFN)

Task 2.2: Institutional evolution of finance in Europe and entrepreneurship

In this task we identify the most important financial institutions in Europe that facilitate or hamper entrepreneurship and review their historical evolution. The effectiveness of financial intermediaries in the allocation of resources to firms is limited by the informational opacity of new firms, which have uncertain returns and are costly to monitor. In many European countries large financial conglomerates have emerged that seem less willing/able/suited to financing entrepreneurship. Bank credit and collective pension funds may be optimum for financing fixed, physical capital that may serve as collateral for debt, but more finance in the form of equity and private wealth may be needed to enable innovative, experimental entrepreneurship. Indeed recently more importance is given to equity and private wealth financing, often influenced and shaped in different member states by different policy interventions implemented over time that aim to create a flourishing venture capital segment for entrepreneurial ventures and young innovative companies. The results are mixed however. In this task, we could exploit our knowledge of the European VC industry,

accumulated mainly through members' participation in a four-years project of the 7^o framework programme (e.g. the VICO project).

(Lead UU, input from POL)

Task 2.3: Institutional evolution of knowledge creation in Europe and entrepreneurship

Knowledge as an input into a production function is different from the more traditional input of labour and capital. The economic value of knowledge is uncertain, it is non-trivial in use and its potential value is asymmetric across economic agents (Thurik et al. 2013). In this task we will identify the most important institutions that hamper or favour knowledge circulation, and analyse them historically. For example, the model of publicly funded universities that conduct fundamental research and large-scale corporate R&D labs that conduct applied research in relative isolation might block knowledge circulation. The role of patents and intellectual property rights should also be discussed as it can promote, but also hinder innovation (Jaffe and Lerner 2011; Acs and Sanders 2012)

(Lead UU, input from UPRC)

Task 2.4: Institutional evolution of labour markets in Europe and entrepreneurship

Another important condition for entrepreneurship is labour mobility. The institutions governing the allocation of labour and talent in society both enable entrepreneurs to develop their businesses and affect the willingness of employees to be(come) entrepreneurial. We will analyse these institutions by reviewing labour market regulation in European countries from a historical perspective. In the VoC literature a lot of research has already been conducted to classify national systems in institutional families, but here we will put special emphasis on how these institutions affect the entrepreneurial process. As part of this task we will also compare and analyse super-entrepreneurship. Entrepreneurship is often measured by using self-employment or business ownership rates. This is likely to give erroneous results as well as misdirected policy conclusions (Hurst and Pugsley 2011; Henrekson and Sanandaji 2014). In this task, we will therefore also zoom in on high-impact Schumpeterian entrepreneurship using the Forbes Magazine worldwide list of billionaires. From that list we have identified 1,000 individuals who became rich by founding new firms since 1996. Preliminary results confirm that Europe is currently underrepresented in that list, but we cannot yet determine when Europe's initial lead was lost or why.

(Lead UU, input from IFN)

Task 2.5: Megatrends and the transition from a managed to an entrepreneurial economy in Europe

This task aims to bridge the gap between history and the future, connecting the more historical analysis in this work package with the forward-looking reform proposals in later work packages. We will first describe the essential trends in the transition from managed to entrepreneurial economy for Europe and then extrapolate developments into the near future. Of course we cannot predict the future, but several international organisations and research institutes are engaged in predicting exercises, which try to capture the mega-trends over the coming years. These foreseeable trends may interact with and affect the effectiveness of our reform strategy. The objective of this task is therefore threefold. To map the global and European mega-trends and forces on the basis of existing studies. To select the global and European mega-trends and forces with significant impact on knowledge institutions, financial institutions and welfare institutions influencing entrepreneurship and the creation of an entrepreneurial economy and to identify the crucial challenges, opportunities and key questions in building a more entrepreneurial economy in Europe.

(Lead UU, input from KUL, IFN and FSUJ)

Deliverables (brief description and month of delivery)

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
2.1	Consultation workshop for stakeholders on topics outlined in tasks 2.1	IFN	3

2.6	An institutional framework for innovation and entrepreneurship	IFN	12
2.8	Policy Brief on studies outlined in tasks 2.1	IFN	13
2.11	Manuscript submitted to peer reviewed journal based on D2.6	IFN	18
2.2	Consultation workshop for stakeholders on topics outlined in tasks 2.2-4	UU	3
2.17	The institutional evolution of finance in Europe and entrepreneurship	UU	24
2.12	Venture capital in Europe	POL	18
2.18	Policy Brief on studies outlined in tasks 2.2	UU	24
2.21	Manuscript submitted to peer reviewed journal based on D2.17	UU	30
2.22	Manuscript submitted to peer reviewed journal based on D2.12	POL	30
2.23	Round table on the implications of deep institutions for an effective reform strategy	UU	36
2.10	The institutional evolution of knowledge creation in Europe and entrepreneurship	UU	16
2.13	Policy Brief on studies outlined in tasks 2.3	UU	18
2.16	Manuscript submitted to peer reviewed journal based on D2.10	UU	22
2.4	The institutional evolution of labour market institutions in Europe and entrepreneurship	UU	8
2.5	Policy Brief on studies outlined in tasks 2.4	UU	9
2.7	Superentrepreneurship in Asia, Europe and the US	IFN	12
2.9	Manuscript submitted to peer reviewed journal based on D2.4	UU	14
2.14	Manuscript submitted to peer reviewed journal based on D2.7	IFN	18
2.3	Consultation workshop for stakeholders on topics outlined in tasks 2.5	KUL	3
2.15	Megatrends and the transition from a managed to an entrepreneurial economy in Europe	KUL	18
2.19	Manuscript submitted to peer reviewed journal based on D2.15	KUL	24
2.20	Policy Brief on studies outlined in tasks 2.5	KUL	24

Work package number	3	Start Date or Starting Event	3
Work package title	Global competition, smart specialisation, value creation and inclusive growth in the entrepreneurial economy		

Participant number	3	4	1	2	8		
Short name of participant	FSUJ	UPRC	UU	KUL	IST		
Person/months per participant:	1.0	1.7	39.4	12.5	4.0		

Objectives

This work package aims to establish the need and desirability of a transition to more an entrepreneurial Europe. The tasks in this work package are all geared towards obtaining new evidence and a better understanding of the effects of entrepreneurship, institutions and structural change on growth in the EU. Using concepts including global value chains, smart specialisation and Foreign Direct Investment (FDI), this work package aims to identify and analyse how entrepreneurship and institutions drive related variety at national and regional (NUTS2) levels and how, in turn, related variety, entrepreneurship and institutions affect national and regional growth and new value creation. We will also establish the fact that Europe's competitive advantages have shifted to non-routine tasks. The desirability of the transition will then be established in tasks that analyse the ways in which entrepreneurial processes foster inclusive, sustainable growth in the EU. These include new job creation, better governance, alternative opportunities for outsiders on the labour market, non-monetary rewards from entrepreneurship and effectuating knowledge spill overs in the economy.

Description of work, broken down into Tasks and Roles of Participants.

FSUJ will provide the overall lead for this work package; UPRC will act as co-leader.

Task 3.1: A review of the literature on the effects of related variety on growth at the national and regional level.

In this task we will provide a critical review of the literature on related variety (e.g. Frenken et al, 2007; Boschma and Iammarino, 2009). Using the concept of global value chains (Baldwin and Lopez Gonzalez, 2013; UNCTAD, 2013), we will analyse related variety in the context of smart specialisation, representing the main framework of current and future growth strategies in the EU (Foray et al., 2009; McCann and Ortega-Argiles, 2013). This review will provide a baseline for the creation of a much needed database of new indicators of related variety and new empirical research on the drivers and effects of related variety at national and regional levels in the EU. (Leader UU, input JFSU and UPRC).

Task 3.2: Construction of pan-European database at national and regional (NUTS2) levels including sectoral data, product data, task data and derived indicators of relatedness.

Using the findings from the review in Task 3.1, we will create a new database of indicators of related variety at national and regional (NUTS2) levels for the EU. The database will be based on detailed trade statistics, industry statistics and global value chain data from the University of Groningen's World Input Output Database (see Timmer et al., 2014). The database provides new national and regional indicators of related variety at sectoral, product and task levels for EU member countries and OECD countries (Leader UU, input UPRC).

Task 3.3: Empirical analysis of drivers of related variety at national and regional level in EU.

In this task, we will use the database from Task 3.2 to conduct descriptive and econometric analysis of the main drivers of related variety at national and regional levels in the EU. The first part will consist of a detailed descriptive analysis of smart specialisation in the EU created by analysing degrees and developments of related variety in EU countries in recent decades. The second part of this task will consist of econometric analysis to identify the main drivers of related variety. We will follow Hausmann and Rodrik (2003), who envisage an entrepreneurial discovery process to be central to the process of countries and regions developing detailed and related activities, and tasks (Foray and Goeraga, 2013) and capabilities (Sutton, 2012). Alongside entrepreneurs, we will consider the roles of institutions, structural change and FDI as further drivers of related variety and smart specialisation (Leader JFSU, input UU).

Task 3.4. Empirical analysis of the effects of related variety at national and regional level in EU.

Having identified the main drivers of related variety, in this task we will conduct econometric analysis to

identify actual direct and indirect growth effects of entrepreneurship and related variety. Besides analysing how related variety can foster economic growth at sector and product level (Hidalgo and Hausmann, 2009; Neffke et al., 2011), we will also use indicators of related variety at the task level, based on global value chain data from the dataset that we built in Task 3.2. Using this data, we will identify the direct and indirect effects of related variety, entrepreneurship and institutions on economic growth, value, company, job and knowledge creation and the latter's dissemination in the EU. (Leader JFSU, input UU and UPRC).

Task 3.5. Patterns in global trade and EU labour markets.

Over the past decade, the labour market in Europe has witnessed changes similar to those in the US. As offshoring to low-wage countries took off, workers in occupations that are intensive in routine tasks have suffered (Goos et al. 2014). Exploiting information on net export flows we will investigate which countries have a comparative advantage in non-routine tasks and stand to gain and lose from this process. We then build on a recent literature that has uncovered institutions as a source of comparative advantage (Nunn and Trefler, 2014). Given trends in global trade, it is important for future employment growth that the institutional environment is conducive to the performance of non-routine tasks.

(Leader KUL, input UU)

Task 3.6. New job creation and entrepreneurship.

Using information on Belgian start-ups supplemented with the employment history of their employees, we are able to identify *de novo* start-ups with much greater accuracy than has been the case in previous research. Using this data we will be able to investigate which sectors have provided the largest growth opportunities for small firms and how growth dynamics for small start-ups differ from that of incumbents. Preliminary results suggest that in Belgium, even more than in the U.S. (see Haltiwanger, Jarmin, and Miranda, 2013), new entrants with between five and twenty employees have witnessed the strongest growth performance. In this task we will provide more robust empirical support for the claim that net job creation is achieved by new firms.

(Leader KUL, input UU)

Task 3.7. Social and corporate responsibility and governance in young SMEs.

In addition to the creation of new jobs, we hypothesise that there is also a difference between the governance of young, typically small firms and that of the larger incumbents. At small, entrepreneurial firms decision-making is perhaps more informal and governance can be classified as high trust. In more established larger corporations the management is more distant from production and governance necessarily follows a more hierarchical model. In this task we want to explore if these different modes of governance affect decision making, with a specific focus on short versus long-term orientation and sustainability versus profitability of the business model.

(Leader UU)

Task 3.8. Entrepreneurship and inclusive growth in EU.

In this task we will shift from a focus on the creation of new employment and governance of new and small organisations to the opportunities new firm creation offer minorities and others that may be considered outsiders in the formal labour market. In general, studies point out that migrant status and ethnicity affect the individual propensity to start a new business (Levie, 2007) and that self-employment rates among immigrants are, in general, higher than those of natives (Yuengert, 1995); however, research also shows that the survival probabilities in entrepreneurship are lower for immigrants than for non-immigrants (Georgarakos and Tatsiramos, 2009). Therefore it is important to understand why immigrants despite being generally overrepresented in entrepreneurship, cannot develop their business to survive on the market.

(Leader IST, input UU)

Task 3.9 Institutions, entrepreneurship and wellbeing.

In addition to the creation of new formal and self-employment opportunities, evidence suggests a considerable share of entrepreneurs is willing to, all else equal, accept lower (expected) incomes (Blanchflower et al. 2001; Astebro and Chen 2014). To some extent this may reflect over-optimism and the irrational hope of large profits, but it has also been interpreted as a compensating differential. That is, working as an independent entrepreneur may offer non-monetary benefits in the form of higher autonomy and feelings of achievement. A similar result is found for employees at small firms. In the literature this has been linked to rent-sharing (e.g. Arai 2003), but we are not aware of studies that have systematically looked for compensating differentials in that dimension. In this task we will systematically collect the available evidence and use household panels and public labour market survey data to quantify that effect for a subset

of European member states.

(Leader FSUJ, input UU)

Task 3.10. Knowledge creation and diffusion and entrepreneurship in EU.

A final task in establishing the desirability of a transition to a more entrepreneurial Europe is to test the proposition in the Knowledge Spillover Theory of Entrepreneurship (Acs et al. 2009; Acs and Sanders 2012, 2013) that it is entrepreneurs who explore and exploit the opportunities basic research and new knowledge create. Evidence for Germany (Audretsch and Lehmann, 2005) suggests that entrepreneurship creates higher growth in knowledge intensive regions, while investments in new knowledge yield a higher return in the presence of entrepreneurial activity. We aim to use European patent data to map the knowledge flows in Europe and investigate the role of entrepreneurship in commercialising the results of academic research and incumbent firms' R&D.

(Leader UPRC, input UU)

Deliverables (brief description and month of delivery)

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
3.4	A review paper from task 3.1 on indicators and growth effects of related variety at the national and regional level in the EU	UU	9
3.5	Pan European database with new indicators of related variety at national and regional (NUTS2) level; related variety indicators based on sectors, products and	UU	12
3.1	Consultation workshop for stakeholders on topics outlined in tasks 3.3-5	FSUJ	3
3.7	Report based on the study outlined in task 3.3	FSUJ	18
3.10	Manuscript submitted to peer reviewed journal based on D3.7	FSUJ	24
3.11	Policy Brief on studies outlined in tasks 3.3-5	FSUJ	24
3.26	Round Table on the need for the transition to a more entrepreneurial economy	FSUJ	36
3.21	Report based on the study outlined in task 3.4	FSUJ	30
3.25	Manuscript submitted to peer reviewed journal based on D3.21	FSUJ	34
3.6	Report based on the study outlined in task 3.5	KUL	12
3.8	Manuscript submitted to peer reviewed journal based on D3.6	KUL	18
3.2	Consultation workshop for stakeholders on topics outlined in tasks 3.6-3.8 and 3.9	UU	3
3.9	Report based on the study outlined in task 3.6	KUL	18
3.12	Manuscript submitted to peer reviewed journal based on D3.9	KUL	24

3.13	Policy Brief on studies outlined in tasks 3.6-3.8-9	UU	24
3.27	Round Table on entrepreneurship and inclusive growth in Europe	UU	36
3.3	Consultation workshop for stakeholders on topics outlined in tasks 3.7	UU	3
3.14	Report based on the study outlined in task 3.7	UU	24
3.15	Policy Brief on studies outlined in tasks 3.7	UU	24
3.20	Manuscript submitted to peer reviewed journal based on D3.14	UU	26
3.28	Round Table on entrepreneurship and sustainable growth in Europe	UU	36
3.16	Report based on the study outlined in task 3.8	IST	24
3.22	Manuscript submitted to peer reviewed journal based on D3.16	IST	30
3.17	Report based on the study outlined in task 3.9	FSUJ	24
3.23	Manuscript submitted to peer reviewed journal based on D3.17	FSUJ	30
3.18	Report based on the study outlined in task 3.10	UPRC	24
3.19	Policy Brief on studies outlined in tasks 3.10	UPRC	24
3.24	Manuscript submitted to peer reviewed journal based on D3.18	UPRC	30
3.29	Round Table on entrepreneurship and innovation in Europe	UPRC	36

Work package number	4		Start Date or Starting Event				3		
Work package title	Assessing the quality of Entrepreneurial Ecosystems: A State of the Union								
Participant number	1	3	6	9					
Short name of participant	UU	FSUJ	PTE	LSE					
Person/months per participant:	18.5	1.0	17.0	18.5					

Objectives

The main objective of this work package is to assess the current state of and identify the bottlenecks in entrepreneurial activity and institutional arrangements in Europe. We will base this work package's activities on prior work carried out in developing the global entrepreneurship and development indicator (GEDI). Tasks for this work package include the collection of data to construct a time series of GEDI for EU member states. This will allow us to explore the time dimension in GEDI and link its development to indicators of economic growth and performance. Based on an earlier data collection effort we also have the GEDI indicator at regional level. This data will allow us to provide a quick scan of Europe's main strengths and

weaknesses when it comes to the entrepreneurial economy. A more detailed cross sectional analysis of this data and regional performance indicators will provide additional insight into the dynamic relationship between entrepreneurship and economic development at a regional level. Finally, we will develop and employ a geographic, macro and regional (GMR) model to integrate all the above. The results of this work package will be an unprecedented understanding of entrepreneurship in the EU regions and countries. We will be able to identify policy bottlenecks that when addressed will lead to new horizons for the EU economy on the world stage. An understanding of where the EU regions stand with respect to other countries in entrepreneurship and innovation is an important step in formulating policies for the 21st century. The benchmarking methodology allows all policymakers to be on the same page to address issues. GEDI will produce a large usable database that can be upgraded annually. A group of scholars and policymakers trained in GEDI will be able to continue the work and connect to a global academic and policy community.

Description of work

Task 4.1: Developing a time series of GEDI for European Members States

The GEDI is a composite index, built to understand how *individuals* and *institutions* interact to create economic growth. Whereas, for example, the national systems of innovation literature focus exclusively on a system of framework conditions and entrepreneurship literature has focused on individuals or teams of individuals, GEDI combines these two approaches: the framework conditions (institutions) create the incentive structure for individual agents to pursue economic and social opportunity. By basically reducing the number of variables to one, composite indices are appropriate tools for providing summary information on multi-dimensional phenomena. The index uses a unique 'penalty for bottleneck' methodology, which incorporates the interconnection of the variables in the index. The key principle of this approach lies in the assumption that system performance is determined mainly by the weakest performing variable. The index uses two data sources. First, the institutional data comes from the publically available Global Competitiveness Report, Index of Economic Freedom, Ease of doing business, UNESCO, United Nations and KOF. Second, the individual data comes from the Global Entrepreneurship Monitor world survey of individuals. GEDI scores were originally collected for the broadest possible set of countries in the world. Consequently, the indicator was limited both in breadth (number of institutional and entrepreneurship variables included) and depth (time dimension) by the data availability in developing countries. For our purposes we can create much more depth (including more years) and expand the indicator with more specific variables on the financial, labour and knowledge institutions for the EU member states, as data availability is much less of an issue. This constitutes our first task in this work package.

(Lead: LSE, input from PTE)

Task 4.2: Time series and panel data analysis of GEDI and growth performance indicators

Using the extended data collected in Task 4.1 we will perform econometric time series and panel data analyses to empirically investigate trends across Europe since 2000. In these analyses we validate the GEDI indicator and establish its usefulness as an indicator of progress towards the entrepreneurial economy. By showing how GEDI scores correlate with growth, innovation and industry dynamics at a national level, we can establish that it is a useful tool for assessing the current state of affairs. The penalty for bottleneck methodology then has the potential to guide policy, as it is able to identify the weakest link in a country both at institutional and individual level, and highlights where change is needed and policy is most effective. The index can then be used to track changes over time to see the impact of the policy changes.

(Lead UU, input from LSE and PTE)

Task 4.3: Assessing Europe's entrepreneurial ecosystems at a regional level

Having established the validity of GEDI and uncovering the dynamic interaction between GEDI scores and performance indicators, we will proceed with a more detailed scan of Europe's current state when it comes to the quality of its entrepreneurial ecosystems at a regional level. The Regional Entrepreneurship and Development Index (REDI) is an extension of GEDI to the sub-national level (NUTS1 and NUTS2). The two main data sources are the GEM survey data i.e. representative surveys of the population aggregated at a regional level. The institutional data is drawn from a variety of sources within the EU and other, more global, sources.

(Lead LSE, input from PTE)

Task 4.4: Cross-sectional analysis of REDI and regional growth performance measures

The data collected and presented in Task 4.3 can then be analysed in more detail and using rigorous cross-sectional, multi-level regression techniques. This will help us uncover the relevant empirical relationships between institutions, entrepreneurship and economic performance at regional, national and European levels.
(Lead UU, input from FSUJ)

Task 4.5: GMR model for Europe linking Entrepreneurship, Institutions and Growth

From analysing time trends and assessing the current state we will move to a more forward-looking assessment of possible policies and reforms. The GMR approach is an economic development policy impact modelling framework that allows us to do so. GMR models provide ex-ante and ex-post evaluation of development policies such as the promotion of R&D activities, human capital advancement or improved physical accessibility. The models simulate macro and regional economic impacts while taking into account geographic effects such as regional innovation system features, agglomeration, migration and costs of transportation. The GMR research programme intends to develop efficient and relatively simple models, suitable for the generally weak quality of regional data. The first incarnation of the GMR approach was the EcoRET model built for the Hungarian government for ex-ante and ex-post evaluation of the Cohesion policy. This was followed by the GMR Hungary model, which is currently used by the Hungarian government for Cohesion policy impact analyses. GMR Europe was built in the IAREG FP7 project and was recently expanded and applied to policy simulations for DG Regional Policy.

(Lead LSE, input from PTE)

Deliverables

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
4.1	Consultation workshop for stakeholders on topics outlined in tasks 4.1-2	LSE	3
4.4	A review paper from task 4.1 on the extension of the GEDI-indicator where needed with additional indicators on financial, labour and knowledge institutions construction	LSE	9
4.5	Pan European database with time series of new GEDI-indicators	PTE	12
4.6	Report describing and presenting database in D4.5	PTE	12
4.7	Manuscript submitted to peer reviewed journal based on D4.6	LSE	18
4.8	Policy Brief on time trends in GEDI outlined in tasks 4.1-2	LSE	18
4.18	Practitioners Workshop on using GEDI/REDI to improve Europe's entrepreneurial ecosystems	LSE	36
4.9	Report based on the study outlined in task 4.2	UU	18
4.12	Manuscript submitted to peer reviewed journal based on D4.9	UU	24
4.2	Consultation workshop for stakeholders on topics outlined in tasks 4.3-4	UU	3
4.10	Pan European database with new REDI-indicators	PTE	18
4.11	Report describing and presenting database in D4.10	PTE	18
4.13	Manuscript submitted to peer reviewed journal based on D4.11	PTE	24

4.14	Policy Brief on REDI studies outlined in tasks 4.3-4	UU	24
4.15	Report based on the study outlined in task 4.4	UU	24
4.16	Manuscript submitted to peer reviewed journal based on D4.15	UU	30
4.3	Consultation workshop for stakeholders on topics outlined in tasks 4.5	LSE	3
4.17	Report based on the GMR-model and simulations outlined in task 4.5	LSE	30
4.19	Manuscript submitted to peer reviewed journal based on D4.17	LSE	36
4.20	Policy Brief on GMR-model simulations outlined in tasks 4.5	LSE	36

Work package number	5		Starting date or start event				12			
Work package title	Formulating an institutional reform strategy for Europe's entrepreneurial society									
Participant number	1	2	3	4	5	6	7	8	9	
Short name of participant	UU	KUL	FSUJ	UP RC	POL	PTE	IST	IFN	LSE	
Person/months per participant:	42.8	2.5	2.5	2.5	18.7	1.0	2.5	5.0	2.5	

Objectives

WP5's core objective is to illustrate the usefulness of our approach in working out a reform strategy for three member states (representing three distinct institutional families) in full detail thereby identifying the opportunities for and limits to entrepreneurship policies in Europe. Following-up on the insights gained in the previous WPs, we will ask: Which institutional reforms would successfully promote entrepreneurial activity in different institutional settings? To address this question, we will subdivide this work package into 5 Tasks:

- Collecting internationally comparable data on start-up processes in Germany, Italy, the UK and the US.
- Reveal country-specific typologies of start-up processes using sequence analysis.
- Analysing the impact of institutions on start-up processes in Germany, Italy, the UK and the US.
- Collecting case studies on creating, developing and funding entrepreneurship in Europe.
- Formulating a country-specific institutional reform strategies for Germany, Italy and the UK.

Description of work, broken down into Tasks and Roles of Participants.

UU will provide the overall lead for this work package; POL will act as co-leader.

In line with the abovementioned objective for this work package, five major tasks need to be completed.

Task 5.1: Internationally comparative dataset on start-up processes and their institutional foundations in Germany, Italy

Thanks to an earlier Marie Curie project in this research field (Herrmann 2010), a database of 400 start-up processes and their institutional foundations in Germany (210 cases) and the US (160 cases) already exists. To enable quantitative results, WP5's first task consists of expanding this database in such a way that it contains information on 300 start-up processes in Germany, Italy, the UK and the US (i.e. a total of 1,200 cases). Data therefore needs to be collected for 830 start-up processes: 90 in Germany, 140 in the US, and 300 in both Italy and the UK.

(Lead UU)

Task 5.2: Sequence analyses to reveal country-specific typologies of start-up processes and their institutional foundations

The second task to be completed consists of analysing the data collected. To illustrate how entrepreneurial start-up processes unfold over time and identify their institutional foundations, we will use sequence analyses (SA). In particular, our analyses will test the hypothesis that entrepreneurship policies need to be complementary to a country's institutional environment in order to be effective. In line with the Varieties-of-Capitalism literature, we will focus our analyses on a country's labour and financial-market institutions, as well as on the institutions governing knowledge creation and business cooperation.
(Lead UU, input from POL)

Task 5.3: Case studies in creating, growing and funding entrepreneurship in Europe

To gain an in-depth understanding of the link between entrepreneurial support programmes, their complementarity with national institutions and the distinct characteristics of entrepreneurial ecosystems, the third step will consist of completing country-specific case studies. A list of these case studies as well as the researchers responsible for completing them will be provided in the table below:

5.3.1	An evaluation of Italy's YIC programme	Grilli, Croce	POL
5.3.2	An evaluation of London's crowd funding system	Estrin	LSE
5.3.3	An evaluation of Dutch solo-self employment	Stam, Liebrechts	UU
5.3.4	An evaluation of Swedish intrapreneurship	Stam, Henrekson	IFN
5.3.5	An evaluation of German Entrepreneurial ALM	Fritsch, Stam	FSUJ
5.3.6	An evaluation of Greek Philantropy	Economidou, Acs	UPRC
5.3.7	An evaluation of the Hungarian new tech entrepreneurial ecosystem	Acs, Szerb	PTE
5.3.8	Stock Option Taxation and Entrepreneurship in Europe	Henrekson, Sanandadji	IFN
5.3.9	An evaluation of Belgian business succession practices	Marx, Sanders	KUL
5.3.10	Elderly Entrepreneurship in Portugal	Amaral	IST

Task 5.4: The impact of institutions on the process of team-formation, finance and know-how acquisition in Germany, Italy and the US

On the basis of the data and analyses described in Tasks 5.1-2 we will zoom in on the institutional foundations of new firm formation in specific national institutional contexts. For this task we will zoom in on how labour-market institutions influence the formation of founding teams over time, on how financial-market institutions shape the type and timing of finance acquisition by entrepreneurs, and on how anti-trust and IPR regulations determine the extent to which entrepreneurs build know-how individually or in cooperation with company consortia or encompassing industry associations.

Importantly, each paper will identify typologies of team-formation, finance acquisition and, know-how acquisition in each country and highlight their institutional foundations as well as complementary entrepreneurship policies.

(Lead UU, Input from LSE and POL)

Task 5.5: A country-specific agenda for institutional reform to promote Europe's entrepreneurial society

In order to bring our findings to the attention of policy-makers, the fifth task of WP5 consists of drafting a reform agenda. This agenda consists of policy proposals, which we intend to submit to the respective national Ministries of Economic Affairs as well as to the EU Directorate General Enterprise in Brussels. Based on our scientific analyses, these proposals will indicate which institutional reforms are effective means of stimulating entrepreneurship in the various EU member states under investigation – and which ones are less likely to be successful. Furthermore, it can serve as a basis for analysing the effectiveness of the 'Entrepreneurship 2020' Action Plan. Our main objective with this reform agenda is to illustrate how our approach can be usefully applied. Creating a fully developed reform agenda for Germany and Italy illustrates to practitioners in policy making that our approach works and our project provides the tools needed to develop such reform strategies for other member states or even at a regional level.

(Lead UU, input from LSE and POL)

Deliverables (brief description and month of delivery)

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
5.3	Internationally comparative dataset on start-up processes and their institutional foundations in Germany, Italy, the UK and the US	UU	14
5.7	Sequence analyses that reveal country-specific typologies of start-up processes and their institutional foundations	UU	24
5.1	Case Study on London's Crowd Funding	LSE	12
5.2	Case Study on Dutch Solo-Self Employment	UU	12
5.4	Case Study on Swedish Intrapreneurship	IFN	18
5.5	Case Study on German Active Labour Market Policy	FSUJ	18
5.8	Case Study on Italy's Young Innovative Companies Program	POL	24
5.6	Case Study on Greek Philanthropy	UPRC	18
5.11	Case Study on the Hungarian new tech entrepreneurial ecosystem	PTE	30
5.9	Case Study on Stock Option Taxation and Entrepreneurship in Europe	IFN	24
5.10	Case Study on Belgian business succession practices	KUL	24
5.12	Case Study on Elderly Entrepreneurship in Portugal	IST	30
5.16	Manuscript submitted to peer reviewed journal based on D5.7 focusing on finance	UU	32
5.17	Manuscript submitted to peer reviewed journal based on D5.7 focusing on labour	UU	32
5.18	Manuscript submitted to peer reviewed journal based on D5.7 focusing on knowledge	UU	32
5.13	An institutional reform strategy for Germany	UU	30
5.14	An institutional reform strategy for Italy	UU	30
5.15	An institutional reform strategy for the UK	UU	30
5.19	Policy Brief on the reform strategy for Germany	UU	34
5.20	Policy Brief on the reform strategy for Italy	UU	34
5.21	Policy Brief on the reform strategy for the UK	UU	34
5.22	Round Table with policy makers on the reform strategy for Germany	UU	36
5.23	Round Table with policy makers on the reform strategy for Italy	POL	36

5.24	Round Table with policy makers on the reform strategy for the UK	LSE	36
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Work package number	6	Starting date or start event						
Work package title	Policy Implications and Proposals: legally assessing and operationalising the reform strategy							
Participant number	1	2						
Short name of participant	UU	KUL						
Person/months per participant:	0.1	39.9						

Objectives

To operationalise the institutional reform strategy developed in the other work packages, we need to give thought to how this strategy can be implemented. The objective of this work package is therefore threefold. First, we need to understand the various dimensions of entrepreneurship policy, i.e. a policy area at the intersection of several policy domains (financial, economic, labour market, industrial, etc.) and its current grounding in the international and EU legal and institutional framework (i.e. parts of *acquis communautaire*⁵ relevant to entrepreneurship policy) relevant to the development of the entrepreneurial society with a specific focus on the division of competences, policy coherence, subsidiarity and multi-level governance.

Second, we will identify the legal implications of the proposed institutional reform agenda as outlined in WPs 4 and more specifically 5 and assess the (legal and political) limits and potential of the proposed reform agenda with specific reference to the current *acquis communautaire*. This will involve both a legal assessment (what is legally possible/impossible given the current treaty) and political assessment (what will be politically feasible in the near future). After this final exercise we can, thirdly, propose a realistic and effective strategy to reform institutions in Europe to support a more entrepreneurial economy.

Description of work

This work package will proceed in five steps, to be executed in close collaboration with WP's 4 and 5.

Task 6.1: Entrepreneurship Policy: a multi-dimensional (coherence) and multi-level assessment (subsidiarity)

WPs 4 and 5 will identify the various *institutions* (rules), which are important to foster entrepreneurship. WP6 will link these institutions to existing policy areas and legislative competences (multi-dimensional). Next, a mapping of the division of competences will be made, both horizontally and vertically. Horizontally, research will focus on the EU level and more specifically on the European Commission. Many different directorate-generals are involved in policies, which influence entrepreneurship at the European Commission. These will be identified and an assessment will be made concerning the coherence of the various policy-initiatives. Vertically, the analysis will focus on the multi-level dimensions of entrepreneurship policies, from the multilateral level (WTO law) to regional level with a main focus on the EU level. At the multilateral level, several rules of the game have been developed under the auspices of the World Trade Organisation which limit the policy space of states (or state-like institutions such as the EU) to pursue economic policies, some of which are relevant to entrepreneurship policy (i.e. WTO agreement on subsidies and countervailing measures). Due to the application of the subsidiarity principle this vertical mapping will result in a multi-level map of competences within the EU and hence levels at which policy initiatives can be taken. First there will be a division of competences at EU level (between EU institutions and Member States). Second, within Member States there will be division of competences between the state and sub-national units. The latter is especially important in the context of MS in which sub-national units have legislative power (i.e. Germany,

⁵ *Acquis communautaire* is the accumulated legislation (treaties), legal acts (regulations and directives) and court decisions which constitute the body of European Union law)

Belgium, Italy, etc.) This research task will mainly be based on desk research and consultations with experts. This task will also feed into WP 4 and WP5. By identifying the various dimensions of entrepreneurship policy WP 4 and 5 will better understand the legal complexities of policy reform.

(Lead KUL, input from UU, LSE, PTE, POL)

Task 6.2: Identification and assessment of the legal implications of the proposed reform agenda

Based on the mapping performed in Task 1 and the proposals formulated in WP4 and WP5, Task 2 will focus on identifying the legal implications of the policy proposals put forward. Next, this task, focusing on European Commission level, will assess what the legal options are for the policy proposals. Starting with current EU legislation (i.e. relevant parts of the existing *acquis communautaire*, treaties, legal acts and case law) an assessment will be made of the compatibility of the policy proposals with current EU law. However, this task will not only focus on the compatibility of the proposals with existing EU law, but also on compatibility with existing WTO law (both agreements and case law). This task will mainly be carried out on the basis of desk research (legal assessment) and consultations with experts within and outside the consortium.

(Lead KUL)

Task 6.3: Assessment of the political opportunities and constraints of the proposed reform agenda

Besides the legal opportunities and constraints of reform there are also the political opportunities and constraints of reform. Hence, this task will concentrate on benchmarking the proposed policy reforms with a wide array of stakeholders relevant to pursuing a policy aimed at a more entrepreneurial economy. These include policy makers from relevant directorate generals/ministries (economy, industry, planning, innovation, R&D), business associations (confederations, chambers, trade unions, entrepreneurial clubs), investors (investment agencies, banks), business and research collaborators (universities, business schools, research and technological organisations, consultancies). This task will bring together experts, policy makers and stakeholders and organise several rounds of consultation and discussion on the policy proposals. These consultations will take the form of bilateral talks (interviews) and roundtable discussions. The feedback will be discussed with the experts within the consortium to amend the list of proposed policy changes.

(Lead KUL, input from all other partners)

Task 6.4: Towards the Entrepreneurial Society: A Coherent Policy Reform Agenda

Based on Tasks 2 and 3, an agenda for policy reform will be developed by the consortium including a range of proposed policy changes and interventions in a diverse set of policy areas. We will go into the most detail for Germany, Italy and the UK for which detailed additional data will have been collected in WP5. Still based on the more superficial but extensive scan executed in WP4 and the consultation in Task 6.3 we can draft an EU institutional reform strategy based on general principles. The final task of this work package (and the project) is therefore to do so. The resulting policy brief will be discussed with policymakers at a concluding round table at the final conference.

Deliverables

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
6.1	Consultation workshop for stakeholders on topics outlined in tasks 6.1-3	KUL	3
6.2	Entrepreneurship Policy: a multi-dimensional and multi-level assessment	KUL	12
6.3	Manuscript submitted to a journal or magazine based on D6.2	KUL	18
6.4	Identification and assessment of the legal implications of an entrepreneurial reform agenda	KUL	24
6.5	Manuscript submitted to a journal or magazine based on D6.4	KUL	30
6.6	Report: Assessment of the political possibilities and constraints of the proposed reform agenda's in D5.13	KUL	34
6.7	Report: Assessment of the political possibilities and constraints of the proposed reform agenda's in D5.14	KUL	34

6.8	Report: Assessment of the political possibilities and constraints of the proposed reform agenda's in D5.15	KUL	34
6.10	Manuscript submitted to a journal or magazine based on D6.6	KUL	36
6.9	Policy Brief: Towards the Entrepreneurial Society: A Coherent Policy Reform Agenda	KUL	34
6.11	Round Table with EU policy makers on the reform strategy	KUL	36

Work package number	7	Start Date or Starting Event					1
Work package title	Management and coordination						
Participant number	1						
Short name of participant	UU						
Person/months per participant:	15						

Objectives

The objectives of this Work Package are to:

- To disseminate information about the project, its objectives, approaches and results using a website, reports, publications and presentations.
- To promote, where applicable, the use of the outputs from the project by the target groups.
- To engage in two-way communication with users and academic communities for disseminating the project deliverables and conclusions.
- To set up an effective dissemination and operation plan.
- To publish results in academic and professional journals.

Description of work (where appropriate, broken down into tasks), lead partner and role of participants

The project's dissemination strategy will be focused on ensuring the project results are fed into policy making processes at both national and European levels. At national level, project partners will be asked to outline a local dissemination strategy, to initiate and carry out face-to-face meetings with practitioners, to fully publicise results on institute websites and to set up training centres for young researchers and academic professionals.

Task 7.1: Dissemination plan

This task includes the working out of a dissemination plan, identifying the target groups to be addressed, the dissemination agents to be employed, the dissemination tools to be addressed and the implementation structure to be set up. It will also include a data-management plan. A workshop with the consortium partners in conjunction with the start-up workshop to which some key stakeholders will also be invited, will be organised to validate the dissemination plan.

Main activities:

- set up a dissemination plan

Task 7.2: Set up dissemination structure

This task includes the setting up of an efficient structure for the dissemination tasks involving consortium partners in 'regional dissemination teams' that work as transmitters in the respective countries.

Main activities:

- compilation and update of address list for e-newsletters, media work and press conferences
- setting up of a database of key stakeholders at various territorial levels: local, regional, national,

European and global at the project's outset, to be updated as needed

- set-up of regional dissemination strategies
- production of flyers at the project's start (content, layout, print)
- series of e-newsletters – collection and compilation of partner input for e-newsletters, distribution of e-newsletters (one e-newsletter every six months, two separate conference announcements)
- final project brochure (content, layout, print)
- dissemination sessions at project meetings

Task 7.3: Development of corporate identity

This task includes the development of a corporate identity concept for the project which will define a logo and basic layout-formats to give project items a recognisable 'house style'.

Main activities:

- design of logo, basic layout, presentation format and decision making process
- structure and layout for policy briefs
- partner guidance on how to apply corporate identity

Task 7.4: Online tools

- This task includes the development of an online-infrastructure for the dissemination, consisting of the project-website and newsletter management.
- Main activities:
- set up website (technically, content)
- set up e-newsletter format
- technical update of website
- monthly update of website content

Deliverables (brief description and month of delivery)

Deliverable Number	Deliverable Name	Lead Participant	Delivery Month
7.1	Dissemination plan (M3)	UU	3
7.5	Preliminary report on Dissemination Structure (M9)	UU	9
7.2	Corporate Identity including logo, basic lay-out templates (M3)	UU	3
7.4	Project brochure and flyers (M6)	UU	6
7.3	Website (M3)	UU	3
7.6	Academic Conference	UU	18
7.7	Policy Workshop	UU	36

Table 3.1c: List of Deliverables⁶

Nr	Deliverable Name	Work package number	Lead Participant	Type	Dissemination Level	Delivery Month
1.1	Quality Assurance Plan	1	UU	R	PU	3
1.2	Kick-off Meeting	1	UU	O	PU	3

⁶ If your action taking part in the Pilot on Open Research Data, you must include a data management plan as a distinct deliverable within the first 6 months of the project. This deliverable will evolve during the lifetime of the project in order to present the status of the project's reflections on data management. A template for such a plan is available on the Participant Portal (Guide on Data Management).

1.3	1st Consortium Meeting	1	UU	O	PU	18
1.4	2nd Consortium Meeting	1	UU	O	PU	24
1.5	Final report: A final report on the progress of the work towards the objectives of the project, including the achievement and attainment of any milestones and deliverables identified in Annex 1.	1	UU	R	PU	36
1.6	Final Consortium Meeting	1	UU	O	PU	36
1.7	Midterm report: A summary of work progress, an explanation of the use of resources and an overview of expenses	1	UU	R	PU	
2.1	Consultation workshop for stakeholders on topics outlined in tasks 2.1	2	IFN	O	PU	3
2.2	Consultation workshop for stakeholders on topics outlined in tasks 2.2-4	2	UU	O	PU	3
2.3	Consultation workshop for stakeholders on topics outlined in tasks 2.5	2	KUL	O	PU	3
2.4	The institutional evolution of labour market institutions in Europe and entrepreneurship	2	UU	R	PU	8
2.5	Policy Brief on studies outlined in tasks 2.4	2	UU	R	PU	9
2.6	An institutional framework for innovation and entrepreneurship	2	IFN	R	PU	12
2.7	Superentrepreneurship in Asia, Europe and the US	2	IFN	R	PU	12
2.8	Policy Brief on studies outlined in tasks 2.1	2	IFN	R	PU	13
2.9	Manuscript submitted to peer reviewed journal based on D2.4	2	UU	R	PU	14
2.10	The institutional evolution of knowledge creation in Europe and entrepreneurship	2	UU	R	PU	16
2.11	Manuscript submitted to peer reviewed journal based on D2.6	2	IFN	R	PU	18
2.12	Venture capital in Europe	2	POL	R	PU	18
2.13	Policy Brief on studies outlined in tasks 2.3	2	UU	R	PU	18
2.14	Manuscript submitted to peer reviewed journal based on D2.7	2	IFN	R	PU	18
2.15	Megatrends and the transition from a managed to an entrepreneurial economy in Europe	2	KUL	R	PU	18
2.16	Manuscript submitted to peer reviewed journal based on D2.10	2	UU	R	PU	22
2.17	The institutional evolution of finance in Europe and entrepreneurship	2	UU	R	PU	24
2.18	Policy Brief on studies outlined in tasks 2.2	2	UU	R	PU	24

2.19	Manuscript submitted to peer reviewed journal based on D2.15	2	KUL	R	PU	24
2.20	Policy Brief on studies outlined in tasks 2.5	2	KUL	R	PU	24
2.21	Manuscript submitted to peer reviewed journal based on D2.17	2	UU	R	PU	30
2.22	Manuscript submitted to peer reviewed journal based on D2.12	2	POL	R	PU	30
2.23	Round table on the implications of deep institutions for an effective reform strategy	2	UU	O	PU	36
3.1	Consultation workshop for stakeholders on topics outlined in tasks 3.3-5	3	FSUJ	O	PU	3
3.2	Consultation workshop for stakeholders on topics outlined in tasks 3.6-3.8 and 3.9	3	UU	O	PU	3
3.3	Consultation workshop for stakeholders on topics outlined in tasks 3.7	3	UU	O	PU	3
3.4	A review paper from task 3.1 on indicators and growth effects of related variety at the national and regional level in the EU	3	UU	R	PU	9
3.5	Pan European database with new indicators of related variety at national and regional (NUTS2) level; related variety indicators based on sectors, products and	3	UU	O	PU	12
3.6	Report based on the study outlined in task 3.5	3	KUL	R	PU	12
3.7	Report based on the study outlined in task 3.3	3	FSUJ	R	PU	18
3.8	Manuscript submitted to peer reviewed journal based on D3.6	3	KUL	R	PU	18
3.9	Report based on the study outlined in task 3.6	3	KUL	R	PU	18
3.10	Manuscript submitted to peer reviewed journal based on D3.7	3	FSUJ	R	PU	24
3.11	Policy Brief on studies outlined in tasks 3.3-5	3	FSUJ	R	PU	24
3.12	Manuscript submitted to peer reviewed journal based on D3.9	3	KUL	R	PU	24
3.13	Policy Brief on studies outlined in tasks 3.6-3.8-9	3	UU	R	PU	24
3.14	Report based on the study outlined in task 3.7	3	UU	R	PU	24
3.15	Policy Brief on studies outlined in tasks 3.7	3	UU	R	PU	24
3.16	Report based on the study outlined in task 3.8	3	IST	R	PU	24
3.17	Report based on the study outlined in task 3.9	3	FSUJ	R	PU	24

3.18	Report based on the study outlined in task 3.10	3	UPR C	R	PU	24
3.19	Policy Brief on studies outlined in tasks 3.10	3	UPR C	R	PU	24
3.20	Manuscript submitted to peer reviewed journal based on D3.14	3	UU	R	PU	26
3.21	Report based on the study outlined in task 3.4	3	FSUJ	R	PU	30
3.22	Manuscript submitted to peer reviewed journal based on D3.16	3	IST	R	PU	30
3.23	Manuscript submitted to peer reviewed journal based on D3.17	3	FSUJ	R	PU	30
3.24	Manuscript submitted to peer reviewed journal based on D3.18	3	UPR C	R	PU	30
3.25	Manuscript submitted to peer reviewed journal based on D3.21	3	FSUJ	R	PU	34
3.26	Round Table on the need for the transition to a more entrepreneurial economy	3	FSUJ	O	PU	36
3.27	Round Table on entrepreneurship and inclusive growth in Europe	3	UU	O	PU	36
3.28	Round Table on entrepreneurship and sustainable growth in Europe	3	UU	O	PU	36
3.29	Round Table on entrepreneurship and innovation in Europe	3	UPR C	O	PU	36
4.1	Consultation workshop for stakeholders on topics outlined in tasks 4.1-2	4	LSE	O	PU	3
4.2	Consultation workshop for stakeholders on topics outlined in tasks 4.3-4	4	UU	O	PU	3
4.3	Consultation workshop for stakeholders on topics outlined in tasks 4.5	4	LSE	O	PU	3
4.4	A review paper from task 4.1 on the extension of the GEDI-indicator where needed with additional indicators on financial, labour and knowledge institutions construction	4	LSE	R	PU	9
4.5	Pan European database with time series of new GEDI-indicators	4	PTE	O	PU	12
4.6	Report describing and presenting database in D4.5	4	PTE	R	PU	12
4.7	Manuscript submitted to peer reviewed journal based on D4.6	4	LSE	R	PU	18
4.8	Policy Brief on time trends in GEDI outlined in tasks 4.1-2	4	LSE	R	PU	18
4.9	Report based on the study outlined in task 4.2	4	UU	R	PU	18
4.10	Pan European database with new REDI-indicators	4	PTE	O	PU	18
4.11	Report describing and presenting database in D4.10	4	PTE	R	PU	18

4.12	Manuscript submitted to peer reviewed journal based on D4.9	4	UU	R	PU	24
4.13	Manuscript submitted to peer reviewed journal based on D4.11	4	PTE	R	PU	24
4.14	Policy Brief on REDI studies outlined in tasks 4.3-4	4	UU	R	PU	24
4.15	Report based on the study outlined in task 4.4	4	UU	R	PU	24
4.16	Manuscript submitted to peer reviewed journal based on D4.15	4	UU	R	PU	30
4.17	Report based on the GMR-model and simulations outlined in task 4.5	4	LSE	R	PU	30
4.18	Practitioners Workshop on using GEDI/REDI to improve Europe's entrepreneurial ecosystems	4	LSE	O	PU	36
4.19	Manuscript submitted to peer reviewed journal based on D4.17	4	LSE	R	PU	36
4.20	Policy Brief on GMR-model simulations outlined in tasks 4.5	4	LSE	R	PU	36
5.1	Case Study on London's Crowd Funding	5	LSE	R	PU	12
5.2	Case Study on Dutch Solo-Self Employment	5	UU	R	PU	12
5.3	Internationally comparative dataset on start-up processes and their institutional foundations in Germany, Italy, the UK and the US	5	UU	O	CO	14
5.4	Case Study on Swedish Intrapreneurship	5	IFN	R	PU	18
5.5	Case Study on German Active Labour Market Policy	5	FSUJ	R	PU	18
5.6	Case Study on Greek Philantropy	5	UPR C	R	PU	18
5.7	Sequence analyses that reveal country-specific typologies of start-up processes and their institutional foundations	5	UU	R	PU	24
5.8	Case Study on Italy's Young Innovative Companies Program	5	POL	R	PU	24
5.9	Case Study on Stock Option Taxation and Entrepreneurship in Europe	5	IFN	R	PU	24
5.10	Case Study on Belgian business succession practices	5	KUL	R	PU	24
5.11	Case Study on the Hungarian new tech entrepreneurial ecosystem	5	PTE	R	PU	30
5.12	Case Study on Elderly Entrepreneurship in Portugal	5	IST	R	PU	30
5.13	An institutional reform strategy for Germany	5	UU	R	PU	30
5.14	An institutional reform strategy for Italy	5	UU	R	PU	30
5.15	An institutional reform strategy for the UK	5	UU	R	PU	30
5.16	Manuscript submitted to peer reviewed journal based on D5.7 focusing on finance	5	UU	R	PU	32
5.17	Manuscript submitted to peer reviewed journal based on D5.7 focusing on labour	5	UU	R	PU	32

5.18	Manuscript submitted to peer reviewed journal based on D5.7 focusing on knowledge	5	UU	R	PU	32
5.19	Policy Brief on the reform strategy for Germany	5	UU	R	PU	34
5.20	Policy Brief on the reform strategy for Italy	55	UU	R	PU	34
5.21	Policy Brief on the reform strategy for the UK	5	UU	R	PU	34
5.22	Round Table with policy makers on the reform strategy for Germany	5	UU	O	PU	36
5.23	Round Table with policy makers on the reform strategy for Italy	5	POL	O	PU	36
5.24	Round Table with policy makers on the reform strategy for the UK	5	LSE	O	PU	36
6.1	Consultation workshop for stakeholders on topics outlined in tasks 6.1-3	6	KUL	O	PU	3
6.2	Entrepreneurship Policy: a multi-dimensional and multi-level assessment	6	KUL	R	PU	12
6.3	Manuscript submitted to a journal or magazine based on D6.2	6	KUL	R	PU	18
6.4	Identification and assessment of the legal implications of an entrepreneurial reform agenda	6	KUL	R	PU	24
6.5	Manuscript submitted to a journal or magazine based on D6.4	6	KUL	R	PU	30
6.6	Report: Assessment of the political possibilities and constraints of the proposed reform agenda's in D5.13	6	KUL	R	PU	34
6.7	Report: Assessment of the political possibilities and constraints of the proposed reform agenda's in D5.14	6	KUL	R	PU	34
6.8	Report: Assessment of the political possibilities and constraints of the proposed reform agenda's in D5.15	6	KUL	R	PU	34
6.9	Policy Brief: Towards the Entrepreneurial Society: A Coherent Policy Reform Agenda	6	KUL	O	PU	34
6.10	Manuscript submitted to a journal or magazine based on D6.6	6	KUL	R	PU	36
6.11	Round Table with EU policy makers on the reform strategy	6	KUL	O	PU	36
7.1	Dissemination plan (M3)	7	UU	R	PU	3
7.2	Corporate Identity including logo, basic lay-out templates (M3)		UU	O	PU	3
7.3	Website (M3)	7	UU	O	PU	3
7.4	Project brochure and flyers (M6)	7	UU	O	PU	6
7.5	Preliminary report on Dissemination Structure (M9)	7	UU	R	PU	9
7.6	Academic Conference	7	UU	O	PU	18
7.7	Policy Workshop	7	UU	O	PU	36

Table 3.2a: List of milestones

Milestone number	Milestone name	Related work package(s)	Estimated date	Means of verification
1	Kick-off Meeting and Consultation workshop for stakeholders (D2.1,	1,2,3,4,6	3	Report sent to commission

	D2.2, D2.3, D3.1, D3.2, D3.3, D4.1, D4.2, D4.3, D6.1)			
2	A review paper from task 3.1 on indicators and growth effects of related variety at the national and regional level in the EU	3	9	Report sent to commission
3	A review paper from task 4.1 on the extension of the GEDI-indicator where needed with additional indicators on financial, labour and knowledge institutions construction	4	9	Report sent to commission
4	An institutional framework for innovation and entrepreneurship	2	12	Report sent to commission
5	Pan European database with new indicators of related variety at national and regional (NUTS2) level; related variety indicators based on sectors, products and tasks	3	12	Report sent to commission
6	Pan European database with time series of new GEDI-indicators	4	12	Report sent to commission
7	Report describing and presenting database in D4.5	4	12	Report sent to commission
8	Entrepreneurship Policy: a multi-dimensional and multi-level assessment	6	12	Report sent to commission
9	Internationally comparative dataset on start-up processes and their institutional foundations in Germany, Italy, the UK and the US	5	14	Report sent to commission
10	Pan European database with new REDI-indicators	4	18	Report sent to commission
11	Report describing and presenting database in D4.10	4	18	Report sent to commission
12	Sequence analyses that reveal country-specific typologies of start-up processes and their institutional foundations	5	24	Report sent to commission
13	Case Study on Italy's Young Innovative Companies Program	5	24	Report sent to commission
14	Identification and assessment of the legal implications of an entrepreneurial reform agenda	6	24	Report sent to commission
15	Report based on the GMR-model and simulations outlined in task 4.5	4	30	Report sent to commission
	An institutional reform strategy for Germany (D5.13), for Italy (D5.14), for the UK (D5.15)	5	30	Report sent to commission

3.2 Management structure and procedures

A clear, professional, yet flexible management structure is of crucial importance to efficiently manage a complex, interdisciplinary RTD project over a period of 36 months. To ensure optimum research results both the composition of the consortium and its governance should be such that it makes the best possible use of the added value of the specific expertise of the individual consortium partners. At project level, transparent decision-making processes are required.

Therefore, the proposed structure aims to assign clear roles and responsibilities while providing a research arena in which experts feel involved and therefore strongly motivated to contribute to the research goals. Transparent communication pathways, quick reporting mechanisms and clearly defined decision and voting processes will grant an efficient project management structure.

Roles and responsibilities

The following management bodies have been proposed.

Executive Board (EB)	Chairperson	Scientific Coordinator
	Members	<ul style="list-style-type: none"> • Scientific Coordinator • Work Package Coordinators <p>The project manager and dissemination manager will be present at Executive Board meetings, but will not have voting rights.</p>
	Tasks	<p>The Executive Board is the main decision-making body of the project and as such will make major strategic management decisions and coordinate the links and interfaces between the activities of the key work packages. It provides the high-level steering of the project in terms of academic goals, progress, quality assurance, finance, dissemination and operation.</p> <p>The Executive Board will also be responsible for the scheduling, planning and organisation of annual General Assembly meetings.</p> <p>The Executive Board shall prepare and present to the Advisory Board the interim reports due every 12 months, elaborated with input delivered by the WP Coordinators responsible for each Work Package</p>
	Meetings	2x per year; monthly additional Skype or telephone conferences
Coordination Team (CT)	Chairperson	Scientific Coordinator
	Members	Scientific Coordinator, Project Manager, Dissemination Manager
	Tasks	<p>Operational coordination of the project in terms of academic goals, progress, quality assurance, finance, dissemination and operation.</p> <p>Concrete tasks</p> <ul style="list-style-type: none"> • Communicate all project information to EC • Coordinate all logistics and services • Ensure activities progress in accordance to scheduling • Ensure smooth internal communication on general aspects of the network • Process project deliverables and assure that the Quality Assurance Procedures are executed • Receive financial EC contribution and distribute it to the partners in accordance with the project budget. • Produce overviews of project expenses and results within the framework of general financial responsibilities • Prepare annual reports • Prepare consortium agreement • Monitor the progress of the activities • Implement the Quality Assurance Plan • Prepare the meetings of the management bodies
	Meetings	Regular (bi-monthly) meetings or as often as necessary
General Assembly (GA)	Chairperson	Scientific Coordinator
	Members	One representative per partner
	Tasks	The General Assembly will be devoted to the project's strategic coordination. The General Assembly will be responsible for:

		<ul style="list-style-type: none"> • approval of changes to the consortium agreement that would involve change of powers of the co-ordinator and/or Steering Committee • approval of the overall project strategy and its major changes. • General Assembly meetings will also respond to feedback calling for improvement from external stakeholders in the Advisory Board.
	Meetings	The General Assembly will meet 4 times during the project. The first meeting will coincide with the kick-off meeting.
Scientific and Policy Advisory Board	Chairperson	Scientific Coordinator
	Member	Stakeholders, high-level scientific experts, experts from related and complementary European projects
	Tasks	<ul style="list-style-type: none"> • Reflect on project findings and results from a technical and academic point of view • Reflect on the project from a cultural point of view, especially by international members of the Advisory Board • Periodically advise the General Assembly on refining activities based on project findings and results • Forward project findings and results to stakeholders involved in regulatory procedures and policy recommendations • Ensure communication and coordination with other ongoing projects and initiatives
	Meetings	The Advisory Board will meet annually.

Quality Assurance Plan

Quality in the context of this project is defined both in terms of high academic quality as well as ensured dissemination, aimed at maximising the impact of the project's results in terms of usefulness and operationality for relevant target groups. Given the complex nature of the project's scope, a Quality Assurance Plan (QAP) will be explicitly planned at the project's outset and implemented by the coordinator for the project as a whole and by a Work Package Coordinator at Work Package level. These measures will provide continuous quality control from the project's outset to its conclusion. Two basic tiers of quality management will be implemented: 1) permanent external feedback from the Scientific and Policy Advisory Boards and 2) external feedback at specific points in time from Peer Reviews, Expert Panels and Stakeholders.

Risk Management

FIRES can potentially be confronted with the following administrative and scientific problems:

Table 3.2b: Critical risks for implementation

Description of risk	Work package(s) involved	Proposed risk-mitigation measures
Administrative risks		
Indisposition of the Coordinator or work package coordinator.	All	In order to solve the problem of indisposition, each of the participating institutes will designate a (temporary or permanent) qualified member of staff to act as the replacement for the identified staff member.
Administrative problems	All	Utrecht University has an extensive track record in managing European and International projects and has experience in handling

		administrative contingencies. An experienced project manager will assist the coordinator and the consortium in the coordination and administration of the project. He/she will be located at the Research Support Office of the Faculty of Law, Economics and Governance where he/she will become part of a team of project managers involved in similar project (i.e. the FP7 project bEUcitizen)
Conflicts within work packages or between partners		The partners consider conflict resolution by consensus to be possible at work package level or, if the conflict arises between members of different work packages, at project level. In the latter case, it will be up to the coordinator to attempt to mediate a resolution: if no agreement can be reached within a reasonable time, the executive board will take on the responsibility of resolving the conflict. If consensus fails, the conflict will be resolved by a simple majority vote. The EB will have final decision-making power. The full details of the process of conflict resolution will be described in the Consortium Agreement
Scientific risks		
Failure to achieve deliverables and milestones	All	The project manager will continuously monitor work progress. He/she will make sure that in the event of delays necessary mitigating measures will be taken (if needed) and the project officer in Brussels will be kept up to date on all changes to the work plan. The list of milestones/key deliverables under 3.2a above will obviously be monitored closely. The coordinator has also taken an active role in the key deliverables 5.13-15.
Missing data on possibly relevant additional variables to build a time series at the EU member states or the regional GEDI indicators for European regions.	WP4	A preliminary investigation has given us the confidence that this will not pose a problem. Should data availability be an issue to expanding the index in a desired direction, we will have to limit our analysis to the data that is available as there is no budget for

		collecting new data in this work package. This may imply one or two new member states will have to be dropped from the time series and/or we cannot disaggregate to the regional level for all member states and pillars.
Data collection on three countries. Quality of data depends on selection of excellent call centre. We have not yet selected them for Italy and the UK.	WP5	We have budgeted conservatively (at the high end) to be able to select on quality. Should we not be able to find a suitable call centre in Italy or the UK then the country concerned will have to be dropped from our list as it makes no sense to base our analysis on data of which the quality cannot be assured. The respective deliverables will then also be scrapped. This, however, will be known within 6 months of the start of our project. Of course we will try to find other suitable countries, should this problem materialise, but this may then cause some delay.
Work needs timely delivery of results from other work packages.	WP6	The consortium management takes direct responsibility for the essential inputs to this work package.

The International Scientific and Policy Advisory Board

The FIRES programme will be supported by a highly reputable *International Scientific and Policy Advisory Board*. The members of the board will be eminent, high-level experts, internationally recognised for their academic achievements and/or societal status. The board will furthermore reflect the multidisciplinary approach of our project as its members will cover the key institutional areas, finance, labour and knowledge with a keen eye for entrepreneurship in the US and Europe. The Advisory Board members will meet annually with the Executive Committee of the project to provide suggestions on strategic direction and project research challenges. The members of the Advisory Board will receive a standing invitation to these annual meetings, will be invited to key lectures and plenaries that will be held within the context of this project. During the annual conferences the board members will, depending on their expertise and the content of the work package, join the workshops that are organised to discuss the findings and questions of each work package. This will allow the quality of the work to be assessed and suggestions can be made as to how to proceed and to improve research quality.

Considering the expertise and standing of the board members we expect the International Scientific and Policy Advisory Board to have a major influence on the entrepreneurship discourse and to significantly contribute to the dissemination of the results of the FIRES project. Their status in society and their academic reputation will certainly contribute to future discussions on entrepreneurship, working towards an effective institutional reform strategy to promote sustainable, inclusive and smart growth in the European Union.

The advisory board members are:

Prof. Dr. Jan Luiten van Zanden is Faculty Professor of global economic history at Utrecht University, Honorary Angus Maddison Professor at Groningen University and Honorary Professor at Stellenbosch University, South Africa. He was Secretary-General (1998-2006), Vice-President (2006-2009) and is currently President (2009-2012) of the International Economic History Association, the most important international

organization in this field, which organizes the World Economic History Congress. In 2011 he was awarded the prize 'Akademiehoogleraar' by the Royal Academy of Sciences.

David Audretsch is a Distinguished Professor and Ameritech Chair of Economic Development at Indiana University, where he is also serves as Director of the Institute for Development Strategies. He also is an Honorary Professor of Industrial Economics and Entrepreneurship at the WHU-Otto Beisheim School of Management in Germany. In addition, he serves as a Visiting Professor at the King Saud University in Saudi Arabia, Honorary Professor at the Friedrich Schiller University of Jena in Germany, and is a Research Fellow of the Centre for Economic Policy Research in London.

Audretsch's research has focused on the links between entrepreneurship, government policy, innovation, economic development and global competitiveness.

David Storey, OBE, is Professor at the Department of Business Management and Economics at University of Sussex, UK. He has a First Class Degree in Economics, a Diploma in Applied Statistics and a PhD in Economics. He has two honorary Doctorates and has been Visiting Professor at the Universities of Manchester, Reading and Durham, and was an International Fellow at Sydney University in 2009. He is an EIM Fellow. In 1998 he received the International Award for Entrepreneurship and Small Business Research from the Swedish Council and was awarded a Wilford White fellowship in 2008. Between 2001 and 2005 he was appointed by the UK Secretary of State for Trade and Industry as a Member of the Small Business Council which advised the government on small business policy-making.

Herman Wijffels is professor in Sustainability and Societal Change at the Utrecht Sustainability Institute (USI) of Utrecht University. This chair poses as a central question, which quality of life is possible given the ecological boundaries, and to which processes of societal change this has to lead. Wijffels studied economics at Tilburg University. He worked at the Dutch Ministry of Agriculture & Fishery and subsequently as secretary general of the Dutch Christian Employers Association (NCW). In 1981 he joined Rabobank as an executive director and was appointed Chair of the Executive Board in 1986. In 1999 followed his appointment as Chairman of the Social-Economic Council (SER). From 2006 to 2008 Wijffels was executive director at the World Bank in Washington, DC.

Roy Thurik is professor of economics and entrepreneurship at Erasmus University Rotterdam and professor of entrepreneurship at the Free University in Amsterdam. He is scientific advisor at Panteia in Zoetermeer, the Netherlands, the largest private small business research institute in the world. Roy's research focuses on the role of small firms in markets, on the role of business owners in firms and on the consequences and causes of entrepreneurship in economies. He is visiting professor GSCM-Montpellier Business School in France. He is a research fellow at two renowned Dutch schools: the Tinbergen Institute for Economic Sciences and the Erasmus Research Institute of Management.

Professor **David Soskice** is the LSE School Professor of Political Science and Economics in the Department of Government. He was Economics Fellow of University College, Oxford from 1967 to 1990. He was Research Director and Research Professor at the WZB Berlin from 1990 until 2007, holding a part-time Centennial professorship at the LSE European Institute from 2004-2007. From 2007 to 2012 he was Research Professor of Comparative Political Economy at Oxford University, and Senior Research Fellow at Nuffield College divided his time between Nuffield College Oxford; and each Spring Semester he was Research Professor in Political Science at Duke University. He worked in the Blair Policy Unit at 10 Downing St in 1997-8. He was Visiting Professor of Government at Harvard in 2007, the Forrest Mars Visiting Professor at Yale in 2004, and the Semans Distinguished Visiting Professor at Duke in 2001. He was President of the European Political Science Association from 2011 to 2013. And he was elected a Fellow of the British Academy in 2013 in the Politics Section and with cross-membership in the Economics Section.

Prof Dr **C.Mirjam van Praag** is Maersk Mc-Kinney Møller Professor of Entrepreneurship at Copenhagen Business School, Department of Innovation and Organizational Economics. Besides she holds an unpaid position as a Professor of Entrepreneurship and Organization in the Amsterdam Business School of the University of Amsterdam. She is also a Crown Member of the Socioeconomic Council (SER) of the Dutch government.

In the past, Mirjam was employed as a consultant with The Boston Consulting Group, as a financial analyst with Procter & Gamble and as a research consultant with GFK Intomart. She has served as a non-executive member on various boards, both in the public and the private sector. Mirjam was the founding director of the Amsterdam Center for Entrepreneurship. Mirjam van Praag is an econometrician (MSc and Phd UvA)

3.3 *Consortium as a whole*

For the success of this project it is imperative that we bring expertise together on the central topic of entrepreneurship. In that respect our consortium includes the most relevant people in Europe. Professors Zoltan Acs (LSE), Magnus Henrekson (IFN), Saul Estrin (LSE), Michael Fritsch (FSUJ) Erik Stam (UU) have published extensively on the topic in peer reviewed scientific journals and the popular media⁷. The emphasis on institutions has already featured prominently in their work, as well as the regional dimension of entrepreneurship. The essential regional and evolutionary perspectives are most prominently found in the works of Prof. Michael Fritsch (FSUJ), Prof. Koen Frenken (UU) and Dr Niels Bosma (UU). In recent studies with Dr Alina Sorgner and Dr Michael Wyrwich, Prof. Michael Fritsch has already explored the embeddedness of entrepreneurship culture in Germany, which is nicely aligned with the work outlined for WP2. Prof. Magnus Henrekson is working with Mikael Stenkula MSc. and Dr Tino Sanandadji on relevant topics such as super entrepreneurship and the relevance of fiscal treatment of stock options that appear prominently in our project.

To establish the need and desirability of making a transition to a more entrepreneurial Europe in WP3 we have secured expertise on global trade, specialisation and the link to job creation and destruction. Prof. Jo Van Biesebroek (KUL), Dr Jacob Jordaan (UU) and Dr Claire Economidou (UPRC) have a strong track record in empirical trade studies. And while all the above have published on young firm growth in terms of employment Kathleen Geurts MSc. (KUL) specifically works on labour and industry dynamics in young firms under the supervision of Prof. Jo Van Biesebroek (KUL). To also establish a firm link to inclusive growth we have invited Dr Miguel Amaral, Dr Miguel Torres Preto and Catarine Seco Matos MSc. (IST) to join us as they are among the first in Europe to systematically investigate the phenomenon of elderly entrepreneurship and have published on migrant and minority entrepreneurship. Prof. Hans Schenk's (UU) contribution on corporate governance in entrepreneurial SMEs adds another valuable dimension to our analysis of the desirability of a more entrepreneurial economy.

The theoretical link between knowledge creation, entrepreneurship and growth was explored elaborately by Prof. Zoltan Acs (LSE) and Dr Mark Sanders (UU) in their work on the Knowledge Spillover Theory of Entrepreneurship. In her more recent work Dr Claire Economidou (UPRC) has worked on the empirical analysis of knowledge diffusion and circulation in the United States, and will bring that expertise to our project, so we can investigate the empirical relevance of entrepreneurship for the diffusion and commercialisation of knowledge.

Having established the need and desirability of more entrepreneurial growth in Europe, our project will turn to an assessment of Europe's entrepreneurial ecosystems in WP4. Given that Prof. Laszlo Szerb (PTE), in close collaboration with Prof. Zoltan Acs, has developed the GEDI indicator on which we will build our work in Work Package 4, he and his team (Dr Gabor Rappai, Dr Marcus Gabor, Dr Eva Komlosi, Pager Balasz MSc. and Peter Jarosi MSc.) at the University of Pécs are therefore crucial partners in elaborating that methodology and effectively introducing this vital assessment tool into our project.

The prior work of Dr Andrea Hermann (UU) developed the data collection and sequence analysis methodology we will apply in WP5 and Dr Luca Grillo (POL) and Dr Analisa Croce (POL) at Politecnico di Milano have extensive experience in policy evaluation and will contribute to Work Package 2 with empirical research on the (short) history of venture capital in Europe. This consortium therefore brings together most of Europe's relevant expertise on entrepreneurship and the financial, labour and knowledge institutions that arguably currently hold it back.

We then appended Dr Gerarda Westerhuis (UU) and Dr Oscar Gelderblom (UU), both based at the world-class Centre for Global Economic History and Prof. Jan Wouters (KUL) and Dr Axel Marx (KUL) at the Centre for Global Governance Studies to this core team to provide the essential historical and legal

⁷ Between them Google Scholar lists 1,165 publications for these authors alone.

perspectives that set our project apart from more mono-disciplinary approaches. Responsible for WP2 and WP6, these partners will provide our consortium with the best possible chance to design effective reform strategies that have undergone a rigorous test of institutional compatibility and legal feasibility.

To ensure effective consultation with stakeholders during and broad dissemination of our results after our project we have included Utrecht-based Sustainable Finance Lab in our consortium. It's chairman, Prof. Herman Wijffels (Member of the High Level Expert group under Chairman Liikanen) and director Rens van Tilburg (MSc.) have developed an effective dialogue with stakeholders in the financial sector and have had a strong impact on policy discussions with the Dutch financial sector and responsible policy makers.

Our most esteemed advisory board completes our consortium. The abovementioned Prof. Herman Wijffels (Utrecht University, Utrecht, NL) will provide a strong link to the financial sector and national and European policy makers. Prof. Jan Luiten Van Zanden (Utrecht University, Utrecht, NL) is a world-renowned expert on economic history and Prof. David Audretsch (Indiana University, Bloomington IN) and Prof. Roy Thurik (Erasmus University Rotterdam, NL) coined the term 'entrepreneurial society' and together with Prof. Zoltan Acs they played key roles in building the field of entrepreneurship studies. Prof. David Soskice (London School of Economics, London UK), being the intellectual father of the Varieties of Capitalism approach, links institutions and economic development and Prof. David Storey (University of Sussex, Brighton UK) is widely considered the highest-ranking entrepreneurship scholar outside the US. Prof. Mirjam van Praag (Copenhagen Business School, Copenhagen DK) completes the board with her strong background in entrepreneurship and labour markets.

3.4 Resources to be committed

The total budget for the FIRES project would be 2.544.641€ . Approximately 64,2% (1.636.082€) of this is reserved for the 335,3 PMs in staff costs. A further 205.000€, approximately 8,2%, will be subcontracted. This is mainly used for the organisation of consultation activities with stakeholders (100.000€), the collection of data via a call centre (83.000€) and some minor research activities at the university of Pecs. The other direct costs, 235.630€ (9,2%), will be used for travel costs for the consortium to consortium meetings, international conferences etc. and the organisation of an academic conference (midterm) and a final conference.

	1	2	3	4	5	6	7	8	9	
	UU	KU Leuven	FSU Jena	UPRC	PTE	POLIMI	IST	IFN	LSE	total
Personnel costs (in €)	765.698	389.000	28.920	7.850	37.008	136.947	9.445	124.120	137.094	1.636.082
Subcontracting	188.000	5.000	0	0	12.000	0	0	0	0	205.000
Other direct costs (in €)	86.350	26.160	16.160	26.160	16.160	16.160	16.160	16.160	16.160	235.630
Indirect costs (in €)	213.012	103.790	11.270	8.503	13.292	38.277	6.401	35.070	38.314	467.929
T otal budget (in €)	1.253.060	523.950	56.350	42.513	78.460	191.384	32.006	175.350	191.568	2.544.641
Requested EU contribution (in €)	1.253.060	523.950	56.350	42.513	78.460	191.384	32.006	175.350	191.568	2.544.641

Table 3.4a: Summary of staff effort

		Workpackag e 1	Workpackag e 2	Workpackag e 3	Workpackag e 4	Workpackag e 5	Workpackag e 6	Workpackag e 7		total PM per participant
Partner	UU	10,8	30,3	39,36	18,5	42,83	0,1	15		156,89