















ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Background: INSTITUTIONAL LEVEL/LAWS AND PUBLIC STRATEGIES				
 <ul style="list-style-type: none"> • Great importance of the adoption of EU Directives and policies • Fragmentation of responsibilities • Lack of guidance and coordination of the policies • National Energetic Strategy (EE): raise of minimum standards/ energetic performance of buildings • Lack of a National Strategy on the efficient use of resources • Energetic certification of buildings • Incentives: <ul style="list-style-type: none"> • Thermal Bill Decree (EE and RE) • White Certificates System TEE (EE for big energy distributors) • Tax credit for energetic requalification of buildings • Specially-made initiatives: urban restructuring, school and public constructions, big infrastructures • High diversification at local level (on EE of buildings and energetic certification) • New Code for Tenders including mandatory environmental standards (2016) 	 <ul style="list-style-type: none"> • Long-term strategies (from EnEG 1976) • 2016 Federal sustainability strategy (from 2002) • National Legislation: Acts on Renewable Energy Sources (EEG) and Conservation (EnEg) + • Energy Saving (ENEV, 2002)/ certification of sustainable buildings (DGNB system) • “Resource efficiency” policies (2012-2016) • Ordinance on Hazardous Substances (2004) • Incentives and programs (KfW funding programme among the oldest and most well-know ones) 	 <ul style="list-style-type: none"> • Great importance of the adoption of EU Directives and policies (Europe 20-20-20 targets) • 3° National Renewable Energy Action Plan (2014) • Federal and regional Initiatives on EE (certifications, allowances, tax credits, d-base of building materials....) • Training, economy, employment and energy policies 	 <ul style="list-style-type: none"> • Great importance of the adoption of EU Directives and policies (Europe 20-20-20 targets) • More focus on the environmental dimension of economic growth than on the social one • Poor coordination of the legal framework at different PA levels/initiatives/key-actors supporting sustainable construction • Excessive regulatory production on sustainable construction, as a consequence of the poor coordination (mentioned above) • Few state support/initiatives fostering sustainable construction • Initiatives on energy savings, efficiency, diversification • Diversification at regional and local levels 	 <ul style="list-style-type: none"> • Delayed adoption of EU Directives on EEO buildings: • - Construction Law (July 1994) • - Spatial Development Act (March 2003) • - Minister of infrastructures and Development (MID) Regulation on technical conditions for buildings and their location (Journal of Laws 2002, n.75, it.690) • On buildings’ energy performance: <ul style="list-style-type: none"> • - Act on Energy performance of buildings (29/8/2014) • - Ministry of Infrastructure and Development (MID) Regulations on the methodology to define EBP and energy performance certificates (27/2/2015); on the methodology and scope of verification of energy performance certificates and protocols for inspection of heating and air conditioning systems (17/2/2015); on protocols of control on heating and air conditioning systems (17/2/2015) • National Plan to increase low energy consumption buildings (July 2015) • State loans to fund thermal insulation of existing multi-family houses (Bank Gospodarstwa Krajowego) • Lack of funds to support legal regulations in GB • Current debate on raising standards and introducing penalties due to the effects of building heating on air pollution





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 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none"> • Great importance of the adoption of EU Directives and policies • Focus on EE/energy saving issues • Use of incentives (I-B- S) • Importance of certification systems (I-G-B-S-P) • Diversification at regional and local levels (I-B–S-G) • Integrated approach to sustainable building (not only EE, but also urban regeneration, territorial safety and planning) in I - G – S fosters a smart city approach 	<ul style="list-style-type: none"> • Long/short term strategies • Policies about specific issues • Poor coordination (I-S) in relationship between national and local policies • Training and qualification policies • Decreasing tendency in the use of incentives in G






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Background: ECONOMY AND EMPLOYMENT				
 <ul style="list-style-type: none"> • Decrease in employment, production, profit, companies (with a light recovery in 2015) • Fragmentation of companies • Very small dimension of the companies (96% with <10 employees) • Growth of undeclared work • Stability of the technology systems in buildings • Reduction of the effects of the crisis due to EE interventions • Need for new competencies • Lack of high skilled workers • Inadequate educational/training system • Changes in demand in the market: wood building increase and technology systems 	 <ul style="list-style-type: none"> • Stable sector, with light increases (also prospective) • Construction sector as agent of economic growth • Prevalence of small and micro enterprises (75%) • Shortage of skilled construction workers and high-seniority • Workers shortage in near future • Need for the certification of workers' competences • Poor appeal of the sector for workers • Low attention to clients (information and culture) 	 <ul style="list-style-type: none"> • Greatest potential for EE in existing buildings (high consumption: 72% more than EU-25 average) • Greater interest in GB on behalf of installation companies • Prevalence of small and micro enterprises • Competitiveness among producers of construction materials based on prices instead of innovation • Poor aptitude towards innovation • Poor demand in the market for quality in goods and services • Introduction of automation and prefabricated materials in the construction process • High turn-over and shortage of qualified workers • Decrease in workers (10%) • Coordination of training activities at federal level (Constructiv) • Updated profiles and definition of new competences (2011-2014) • Diversifies markets according to company typology 	 <ul style="list-style-type: none"> • Activity and employment levels below normal ones • Collapse of employment (- 73%), companies, economic activity, consumes and cement production (similar levels in the '60s) • Activities on existing buildings got the fewer decrease within the sector • Need for administrative support and public investments • High decrease of innovation rates (lower than in other sectors) • Fragmented and heterogeneous sector • Majority of small and micro companies and self-employment • Poor demand in the market of energetic restructuring/sustainable construction • Availability and use of European Funds • Need for workers' training and qualification depending on branch or activity in construction sector • Lack of interest in training of the workers of the sector at environmental level (low awareness) • The important professionalization of the sector is not homologated in official formation (training) • Loss of technological knowledge/skilled workers due to jobs decrease • Administrative barriers against the mobility of Spanish workers 	 <ul style="list-style-type: none"> • 20% decrease in the sector from August 2015 to 2016 • Slow and gradual improvements in buildings' EE (natural gas and coal main source of energy in single-family buildings) • Higher costs for EF constructions than for traditional ones • New construction projects carried out within new standards but with no regard to their future development • Fragmentation of the sector (96% companies with <9 employees) • Chronic shortage of qualified specialists (due to the unstable labor market and higher salaries abroad) • 200.000 specialized workers in other MSs and 260.000 immigrants in the sector (98% from Ukraina) • Formal training fits sustainability issues in GB but labor market workers gained informally their competences





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Background: ECONOMY AND EMPLOYMENT	
 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none"> • Effects of the economic crisis (P) – slow recovery (I-S-B) • More opportunities on interventions on existing buildings (I-S-B) • Prospective growth of the sector within the sustainability framework (I-G-S-B) • Majority of small/micro companies/fragmentation (I-G-B-S-P) • Irregular/undeclared work in I - G and S (as a consequence of crisis) • More focus of the companies on costs instead of on quality of goods/services (I-G-B) due to rare demand services (S) • Diversified markets for different groups of companies (eg. technological systems in I-B) • Introduction of innovation (I – G - B); notwithstanding the larger decrease in technological innovation (-75%) S exhibits feeble signs of positive change in the sector • Lack of skilled workers (G-B-I-S-P) • Ongoing surveys and identification of profiles and innovative competences (I-B-G-S) • Need for upgrading workers’ competences (I-B-S- G-P) 	<ul style="list-style-type: none"> • Stable sector only in Germany • Beginning of new industrialization process (B-I-S) • 200.00 Skilled workers migrated in other MSs, 260.000 qualified workers (mainly from Ukraina) arrived in P






ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Background: R&D, TECHNOLOGY AND INNOVATION				
 <ul style="list-style-type: none"> • Prospective new phase/industrial cycle related to technology and innovation • Introduction of prefabricated materials/launch of industrialization in the sector • More focus on costs than on quality of constructions • Establishment of the Observatory on Sustainability and Innovation in Building (OISE) from 2011 			 <ul style="list-style-type: none"> • Data on R & D show a lower weight of these activities in the construction of those that have throughout the economy • The intramural R & D activity of companies in the construction sector is less frequent than that of the total productive sectors • The main indicators of technological innovation of companies in Spain point to a backward position in the construction sector. • However, both the weight of innovative firms and the intensity of innovation turn out to be greater in the business segment of more than 250 workers. • Nevertheless, the process of internationalization of the Spanish construction industry causes signs of a positive trend change in the sector in terms of innovation. • The factors that may be limiting a greater innovative intensity are basically of a structural nature, associated with the characteristics of the sector and the very nature of the activity • There is ample room for improvement of innovative activity in construction 	 <ul style="list-style-type: none"> • High level ecological and technological standards in the manufacturing of construction materials and products • Sectoral small and micro-companies lack the resources to invest in development, materials and technology





ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Background: R&D, TECHNOLOGY AND INNOVATION	
 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none"> • Small dimension of companies as a limit to innovation (S-I-P) • Orientation towards industrialization (I) and innovation (S) 	<ul style="list-style-type: none"> • High level ecological and technological standards in the manufacturing of construction materials and products (P) • Establishment of the Observatory on Sustainability and Innovation in Building (OISE) from 2011 (I)






ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Background: SOCIAL DIALOGUE				
 <ul style="list-style-type: none"> • Sound SD system, present at all levels • Tripartite structure of SD in GB with the contribution of environmental organizations • Cooperation among trade unions • Signing of the Manifesto of the General States of Construction on behalf of the social partners (2012) • Strengthening of the bilateral systems • Bilateral tools for training and social protection of workers of the construction sector • Agreements at territorial level • Establishment of the National Observatory for Quality Reconstruction in the Areas of Central Italy interested by earthquake (2017) 	 <ul style="list-style-type: none"> • Sound SD system, present at all levels • Tripartite structure of SD in GB • DGB (German trade unions confederation) Manifesto in 1996 • IG BAU - Alliance for Job and Environment with civil society organizations (from 1998) • German Council for Sustainable Development (from 2001) • Agreements among social partners and legal framework • Unitary trade unions and strong sector-based associations 	 <ul style="list-style-type: none"> • Sound SD system, present at all levels (unions and employers) • Bilateral structure of SD in GB (unions and employers) • Permanent Joint industrial committee for the construction industry • Fvb-Ffc Constructiv (fund for vocation training) within the Joint Industrial Committee • Participation in the Social Protection Fund • Partnerships on training at national and regional levels 	 <ul style="list-style-type: none"> • Well structured model of industrial relations in the sector (from 1998) • Lack of government and institutions in social dialogue: lack of tripartite social dialogue (good social dialogue between unions and employers associations). • Permanent agreements concerning industrial relations at national, regional, local level • Bilateral organizations (Foundations for construction, cement, wood) • Bilateral Forum on the integrated cycle of construction from 2013 • Good practice of tripartite SD (concluded!): Industrial Observatory on the construction sector (2009-2011) 	 <ul style="list-style-type: none"> • Weak SD system (National Council and Voivodship Councils for SD) • Lack of a tripartite dialogue • Few and decreasing collective agreements (in general) • Poor focus of social partners on environmental issues in the economy and sustainable development at national level • The Tripartite Commission on Building and Municipal Services in the sector constitutes the main formal forum for SD (also in the field of health and safety in construction) • Joint social partners' initiatives on professional education for SB at sectoral level (Competences in the Construction Industry from 2017 and activities on the Sectoral Qualification Framework) • Lack of SD focusing on GB at company level





ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Background: SOCIAL DIALOGUE	
 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none"> • Sound SD system, present at all levels (I-G-B-S) • Tripartite (I – G) or bilateral (B) structure of SD in GB • Permanent agreements • Partnerships among actors belonging to different sectors (eg.: industrial or waste management sectors) • Wide range of joint organizations involving SD actors (in Forum, observatories, committees, foundations) in different activities (for instance in training) • Cohesion among social partners in the sector (G – S – B) - only more recently in I 	<ul style="list-style-type: none"> • Weak SD system and poor trilateral dialogue on GB in P • Lack of institutions in SD in GB in I , B and especially S (with the exception of G) • Long tradition of SD with civil society organizations (green movement in politics) in Germany • Each country presents partially different structures • Establishment of the National Observatory for Quality Reconstruction in the Areas of Central Italy interested by earthquake (2017) - I






ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Social dialogue and green building – INSTITUTIONAL AND POLICIES LEVEL									
									
D	L	D	L	D	L	D	L	D	L
Adoption of European policies Management of territorial emergencies (securing activities) Energetic policies Incentives	Lack of a defined position on GB on behalf of government Lack of framework policies Lack of coordination between National and European policies on GB Lack of coordination between National and local policies on GB Lack of medium and long-term planning Discontinuity of incentives	National Energy Acts Certification Compliance to federal laws	Decrease of incentives	Adoption of European policies	Diversification among regions Discontinuity of the incentives	Adoption of European policies (PEF) National Strategy and Law on sustainable economy	Lack of coordination among the actors of the policies Lack of national policies Lack of an integrated approach to urban regeneration/resource management	Government actions implementing European regulations	Small amount of significant economic incentives Law propensity to invest in EE in buildings





ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS

Social dialogue and green building – INSTITUTIONAL AND POLICIES LEVEL	
 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none"> • Laws and policies at different levels • Limited coordination among different levels • Main driver represented by compliance with EU policies • Lack of National policies directly fostering SC in I-S-B (present in G) • Discontinuity of incentives (I-B) - orientation towards reducing some incentives (G -S) – small amount of significant economic incentives (P) 	<ul style="list-style-type: none"> • Different needs depending on the nature of the building stocks (old/new, level of insulation, etc.) and on environmental factors (eg: earthquake safety in I) • Germany presents greater coordination among different PA levels and exhibits a driving effect compared with EU • Significance of building securing issues in Italy (due to recent earthquake events)

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Social dialogue and green building – ECONOMY AND EMPLOYMENT									
									
D	L	D	L	D	L	D	L	D	L
<p>Requirements for territorial security</p> <p>CSR</p> <p>Information on good practices</p> <p>Training and certification of companies</p> <p>Compliance with European policies</p> <p>European Funds</p> <p>Practices of technological and organizational innovation in the sector</p>	<p>Fragmentation of the sector</p> <p>Need for workers' qualification</p> <p>Inadequacy of current training offer</p> <p>Poor information on BIM models</p>	<p>Energy saving demands</p> <p>Increase in legal requirements</p> <p>Certification</p> <p>European Qualification Framework</p> <p>Technological R&D on heating/ventilation/EE/lighting/renewable energy sources</p> <p>BAU trade Fair (knowledge management/dissipation)</p> <p>Further enhancement of the educational dual system</p>	<p>Knowledge gap among companies and workers</p> <p>Demand for partial building restructuring</p> <p>Economic interests in potential conflict with environmental ones</p> <p>Poor reliability of the consultancy market for the sector</p>	<p>Identification of new competences for updated profiles</p> <p>Need to match "performance standards" instead of "best efforts"</p> <p>Awareness raising activities targeting executors and contractors</p> <p>Symbolic role of public commitment</p> <p>Need for more qualification and continuous employability of workers</p>	<p>Rapidity of changes in competence needs</p> <p>Poor focus on the operational dimension of training activities delivered through partnerships</p>	<p>Past investments in innovation</p> <p>Focus on LCA applied to environmental certification of goods and services</p> <p>Public Private Partnership (PPP)</p>	<p>Decrease in public investments</p> <p>Lack of credit opportunities</p> <p>Fragmentation of companies</p> <p>Poor demand on behalf of clients</p> <p>Willingness to invest only if "requested"</p> <p>Exit of qualified workers from the market</p> <p>Poor awareness about opportunities for GB delivered by BIM models</p>	<p>Common willingness of social partners to reduce the informal economy</p> <p>Common interest of social partners in reorganizing the labor-market</p> <p>Common interest of social partners in filling the gap in the demand of high-qualified specialists</p> <p>Joint social partners' initiatives on professional education for SB at sectoral level (Competences in the Construction Industry from 2017 and activities on the Sectoral Qualification Framework)</p>	<p>Fragmented structure of the construction industry</p>

ANNEX – COMPARATIVE ANALYSIS ON COUNTRY REPORTS





Social dialogue and green building – ECONOMY AND EMPLOYMENT	
 CONVERGENCES 	 DIVERGENCES 
<p>Drivers:</p> <ul style="list-style-type: none"> -Compliance to legal framework -Availability to innovate -Certifications (I-G-S) -Demand for more qualifications and competences of workers (I-B-P) <p>Barriers:</p> <ul style="list-style-type: none"> -Fragmentation/small dimension of companies (I-S-P) - Lack of competences among workers and companies 	<ul style="list-style-type: none"> • In some cases there is a capitalization of past innovations • R&D activities: poor relations among key-actors (I-S-P); ongoing relations (G - B) • Sound and long-term dual system (education/companies) in G • Low attitude to undertake integrated restructuring interventions in buildings due to costs (G – S) • Information available on good practices in SD on GB (I) • Lack of information on BIM model (I-S) • Further enhancement of the educational dual system in G

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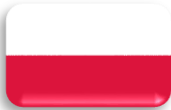
Social dialogue and green building – SOCIAL DIALOGUE

Social dialogue and green building – SOCIAL DIALOGUE									
									
D	L	D	L	D	L	D	L	D	L
Involvement of national actors on international debate on GE and sustainable development	Fragmented and de-structured building sector (lack of a critical mass)	DGB Manifesto (1996)	Lack of a shared definition of green workplaces and green economy	Tripartite initiatives at regional/local level	Lack of arenas/tables/platforms to debate among SD actors and other professionals of the enlarged supply chain	Good performance of SD in the construction sector	Lack of state commitment (currently absent) on SD on SC	The Tripartite Commission on Building and Municipal Services in the sector as main formal forum for SD	The law is not conducive to conclude binding collective bargaining
Tripartite alliance initiatives fostering sustainable development	Absence of a common position among employers associations	Representativeness of trade union and employers organizations	Few companies having workers' councils (thus nurturing the poor appeal of the sector)	Partnerships to involve different key-actors in the field of green competences	Difficulty in considering white collars as a target group of policies	Agreements among employers and trade unions (2014 Oficemen – MCA UGT and FECOMA CCOO)	Lack of coordination among employers and trade unions with the different levels of PA	Common willingness of social partners to reduce the informal market, to reorganize the labor-market and to supply for high qualified specialists in the sector	Fragmentation of the industry
Dialogue on the building sector	Detachment and lack of information on SD/GB between national and local level	Social partners' common vision on some key issues	Difficulty to involve other sectors in SD on GB	Different sectoral knowledge centres to work on sustainable building		Industrial Observatory on the sector (good experience of already concluded tripartite SD)	Lack of platforms/tables/arenas for debate among PA actors		Low level of organization of employers and trade unions in small firms
Relevance of training activities in SD in GB	Poor participation of green companies in controversies between social partners	Tripartite initiatives at regional/local level		Relevance of training activities in SD on GB			Feeble bonds among universities, technical institutes and companies (in general)		Poor representativeness of employers' organizations
Participation in European projects	Lack of focus on health and safety in GB	Relevance of training activities in SD in GB							Few workers associated to trade unions
Local initiatives on: training, information, buildings qualification, urban planning and regeneration	Difficulty in considering white collars as a target group of policies	Relevance of health and safety at work							
Bilateral entities	Difficulty to involve other sectors in SD on GB								
Workplace safety and health issues									
European corporate committees									





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Social dialogue and green building – SOCIAL DIALOGUE	
 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none"> • Partnerships among different actors • Structured forms of interaction • Need to focus on health and safety in GB (G-B-I) • Lack of arenas to debate with government/institutions (I-B-S.P) • Relevance of training activities in SD on GB (I-G-B-P) • Crucial role of regional/local initiatives accompanying national ones 	<ul style="list-style-type: none"> • Poor representativeness of employers’ organizations (P) • Difficulties in considering white collars a target group of policies (I-B)

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Social dialogue and green building – SOCIAL AND CULTURAL ASPECTS									
									
D	L	D	L	D	L	D	L	D	L
	Poor knowledge and information on real advantages	Long time presence of a strong green movement Clients' expectations on competences of the workers of the sector	Limited local and immediate visibility of the consequences of not-sustainable behaviors				Workers polarization (high e low skilled) Scarce linguistic competences of migrant workers Myths/false representations about construction materials Poor environmental awareness about potentialities for SC of BIM models Poor general ecological awareness		Low awareness on advantages among owners and builders

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Social dialogue and green building – SOCIAL AND CULTURAL ASPECTS	
 CONVERGENCES 	 DIVERGENCES 
<ul style="list-style-type: none">• Poor information among citizens on the concrete advantages of GB (I-S-P)	<ul style="list-style-type: none">• Long time presence of a strong green movement in G