**The Human-Centred Business Ecosystem:**

**Towards Stakeholder relationships**

*By* *Angela Sansonetti, Livio Scalvini, Frank Brueck and Marco Nicoli[[1]](#footnote-2)*

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*Abstract*

Global economic system is changing due to a combination of economic, environmental, social and geo-politic forces that are pushing toward a more sustainable economic model of growth and pave the way to new forms of doing business.

In this changing ecosystem, the paradigm shifts towards a new Human Centred Business Ecosystem (HCBE) geared on human values creation and addressed to supply chain resilience, resources preservation, re-use, recycle, combined resources allocation, and the mutual risk and benefits.

This study proposes the implementation of a collaborative business model stakeholder-based as the key-factor to catalyse enterprises transition toward a sustainable and inclusive economy.

In this new and sustainable framework focused on the Human-Centred Enterprises (HCEs) the study analyses the relationships and the interdependencies between enterprises and stakeholders involves in the global value chain shown as interactions involves networks within a new business ecosystem centred on humans and their needs.

*Executive Summary*

The global economic system is changing due to a combination of economic, environmental, social and geo-politic forces that are pushing toward a more sustainable economic model of business and pave the way to new forms of doing business. The climate change, together with the urgency to safeguard natural environment, the demographic growth with the related scanty of resources, the international migrations, the concentration of world’s wealth in a limited number of individuals and corporations, and the new disruptive inclusive technologies are gradually reshaping the fundamental structure of society and businesses. The systemic effects of all these forces are fundamental re-thinking industrial processes on the basis of humans’ preferences.

In such fast-changing ecosystem, sustainability and related human-centric approaches play a pivotal role to support the shift from traditional economies based on high-impact and high-carbon industries towards human value creation and durable growth. As a result, long-term survival and the success of enterprises depend more and more on the capability to integrate economic and human value creation, and to establish multi-level relationships with the whole spectrum of stakeholders.

This is a “sustainability revolution” that requires the promotion of sustainable industries, designed to pay particular attention to socially responsible assets and to low environmental impact processes. In this transformational ecosystem, the paradigm-shift towards a new Human Centred Business Ecosystem (HCBE) geared on human values creation and addressed to supply chain resilience, resources preservation, re-use, recycle, combined resources allocation, and the mutual risk and benefits.

The entire value chain moves towards a circular economy characterised by low-impact processes and open collaboration between shareholders and the network of all concerned stakeholders. To fully exploit mutual benefits along the value chain, enterprises need to establish a common strategy among main partners and stakeholders, and to ensure its execution across all essential functions. The “Triple Helix model”[[2]](#footnote-3) - focused on the relationships among university–industry–government actors of innovation value chain - and the “Penta Helix model”[[3]](#footnote-4)- measuring a company's degree of social responsibility and environmental impact - support this collaborative and sustainable approach, and confirm the multifaceted importance of stakeholders to create value in enterprises growth process. This is a new framework, where the enterprise finds itself at the core of this flourishing ecosystem formed by a growing number of internal and external stakeholders.

The implementation of a collaborative business model stakeholder-based constitutes the key-factor to catalyse enterprises transition towards a sustainable and inclusive economy.

To succeed, the HCE relies on the interplay and cooperation of the relevant stakeholder groups connected to each by economic, social, and environmental, as well as in ethical and integrity principles.This is true for the Human Centred Business Model (HCBM): in order to realise the economic, social, environmental, and integrity principles of the model, Human-Centred Enterprises (HCEs) require a complex system of evaluation, negotiation, collaboration and cooperation among stakeholders.

The analysis of the relationships and the interdependencies between enterprise and stakeholder involves interactions and networks within a new business ecosystem centred on humans and their needs.

On this basis, the study proposes a new systemic framework centred on Human-Centred Enterprise to connect social, environmental and ethical instances with humans and business needs in a positive and resilient domain. The Human-Centred Business Ecosystem (HCBE) typifies this resilient domain to support business transformation for human value creation. This domain founds on a sustainable value chain stakeholder-based in which Human-Centred Enterprises (HCE) could scale-up and growth.

1. **An integrated systemic framework for the Human-Centred Business Ecosystem**
	1. **The Purpose of this Paper and the Human-Centred Business Model**

This research paper is part of a series of background papers of the Human-Centred Business Model (HCBM) project, developed in the framework of the Global Forum on Law, Justice and Development (GFLJD). The HCBM is currently coordinated by the Organisation for Economic Co-operation and Development – Development Centre (OECD-DEV), with the partnership of experts from over 46 international organisations, including the World Bank, IMF, UNIDROIT, European Public Law Organization, academic and research organisations, private sector and civil society organisations.

This paper focuses on the stakeholder engagement and relationships aspects of the overall paradigm-shift from a profit-centric to a human-centric sustainable business model. This shift, represented by the HCBM, is instrumental to the current global development benchmark Agenda 2030 with its Sustainable Development Goals (SDGs), as well as to the Paris Agreement and many other initiatives geared toward sustainability[[4]](#footnote-5). The HCBM stakeholder relationship approach is also in line with ethical principles shared by major religions in the world[[5]](#footnote-6).

Like in Leonardo da Vinci’s Vitruvian man[[6]](#footnote-7), the HCBM puts the human being at the centre of the universe and of the environment we live in. Human-centred means also that the social and ethical principles at the core of this model have been built on the set of universal values developed by enlightened philosophers throughout the entire human history.

The values that constitute the guiding principles of the Human-Centred business ecosystem, and the role of stakeholder relationship and their engagement with Human-Centred Enterprises (HCEs) are crucial to the successful implementation of the HCBM.

The purpose of the HCBM Project is to build a holistic approach for integrating business and sustainability, conceived around an enabling business ecosystem focused on economic, social, environmental and ethical human values and needs, and therefore capable of generating sustainable and inclusive economic growth. To this end, the HCBM project proposes, as a starting point, a common set of principles for voluntarily adoption by private and public enterprises across industries and geographic areas. Each of the principles is accompanied by indicators for measuring enterprise’s performance in regard with the principle. The HCBM principles are compliant with the set of existing global norms and international legal instruments and policies addressing on CSR, sustainable development and business.

The HCBM principles cover issues linked to key human matters such as poverty, hunger, health, gender equality, clean water, affordable energy, urbanisation, climate change, environment, social justice and peace. The HCBM Principles and indicators are suitable to be used by: a) business enterprises, to set their financial, environmental, social, integrity business goals and to measure, analyse, manage and report progress towards these goals and enterprise’s sustainability impacts; b) financial institutions and investors in their evaluation for credit/investment worthiness; c) public administrations and private institutions as criteria in their government policies and practices of sustainable procurement; d) responsible consumers to make informed purchase decisions based on enterprises’ and their products’ sustainability impacts and, e) coherent fiscal systems to encourage max sustainability performance and discourage negative sustainability impacts by enterprises. While the project focuses on development of a business ecosystem for Human-Centred Enterprises (HCEs), the entire spectrum of enterprises - from profit to not-for-profit - will benefit from the establishment of such enabling business environment, that will create market incentives to push all businesses toward more sustainable behaviours conducive to the achievement of the Sustainable Development Goals.

The broader objectives of the whole HCBM project include:

- designing and promoting an innovative, holistic business ecosystem rooted in human values and needs, and the voluntary adoption of common social environmental and, ethical-integrity principles;

- building consensus on a core set of principles for adoption by HCEs in the private and public sectors;

- designing legal provisions and market incentives supportive of sustainable behaviours such as: enabling legal frameworks, adequate governance structures; conditionalities set by financial institutions and investors based on economic, social, environmental and integrity standards; sustainable procurement policies and practices, responsible consumers’ awareness campaigns, tax systems coherent with the impact on SDGs;

- designing a new business model stakeholder-based focused on the involvement of multiple classes of stakeholders within the global value chain of enterprise;

- designing the framework for the development of a set of pilot projects for testing the proposed model;

- building the multi-stakeholder’s model for the development, promotion and dissemination of the Human-Centred business ecosystem for knowledge transfer.

To achieve this set of goals, the HCBM is structured in six Pillars, articulated as follows:

1. Guiding Principles: the “minimum common denominator” of values, guiding principles and performance indicators that all the HCEs must adopt and include in their missions and bylaws;
2. Legal Framework and Governance: addressing the legal and corporate governance solutions coherent with the guiding principles;
3. Financial Mechanisms and Instruments: looking at the suitable forms of financial instruments that can incentivise and support the transition of enterprises towards sustainable behaviours;
4. Fiscal Regime: envisaging a suitable fiscal regime for sustainable businesses based on enterprises’ social and environmental impacts, independently rated;
5. Corporate and Public Procurement Policies: addressing mechanisms for sustainable procurement both for the public and private sector;
6. Stakeholder relationship based on the paradigm shift towards a human-centric business ecosystem, the core of this research paper.
	1. **The 2030 Agenda for Sustainable Development and the international frameworks**

The [2030 Agenda for Sustainable Development](https://sustainabledevelopment.un.org/post2015/transformingourworld)[[7]](#footnote-8), defines a new vision for people, planet and prosperity to shift the world toward a new sustainable and resilient path.

The multidimensional nature of sustainable development delineated within these Agendas aims at creating conditions for sustainable and inclusive economic growth, shared prosperity and good work for all, related to the different dimensions of development.These conditions are the core of the HCBM principles and aims.

As stated in SDG 17, the 2030 Agenda for Sustainable Development focuses on the key-role of an unprecedented variety of stakeholders to commit to its realisation. The scale and ambition of the new Agenda and the thorough engagement and consensus-building process that generated its contents have culminated in strong pressures on all the actors involved to deploy massive behavioural change processes, aimed at achieving the SDGs by 2030. The 2030 Agenda stresses the key-role of businesses for achieving the SDGs and places a clear and strong endorsement of the role of business private and state-owned companies. This role is not limited to the financing of sustainable development initiatives. The business sector, ranging from micro-enterprises to small and medium to multinationals, is expected to play a pivotal role in achieving the Agenda’s goals that goes way beyond simple leveraging business skills to projects that tackle sustainability issues. Companies are expected to be an active source of innovative solutions in tackling sustainable development challenges.

Enterprises, and the business sector in general, are perceived as the real game changer in the enhancement of the quality of the Agenda and the SDGs, jointly to be pursued by the public, private and civil sectors contributing with their resources, competencies, relationships and ideas. The Agenda and the plethora of initiatives linked to it, suggest that businesses could play a facilitating role in preventive risk management, and in monitoring progress made by the implementation of policy interventions towards resilience. The business sector, ranging from micro-enterprises to small and medium to multinationals, is expected to play a pivotal role in achieving the Agenda’s goals. The role goes way beyond simple financial support and leveraging business skills to projects that embrace sustainability issues. Especially, enterprises are expected to be an active source of innovative solutions in tackling sustainable development challenges.

The OECD [Better Life Initiative](https://www.oecd.org/statistics/better-life-initiative.htm) and the [Inclusive Growth Initiative](http://www.oecd.org/inclusive-growth/#introduction) are both focusing on policies that can improve our lives. These initiatives propose going beyond GDP, pursuing well-being, fighting inequalities, measuring better life based on indicators such as Housing, Income, Jobs, Community, Education, Environment, Civic Engagement, Health, Life Satisfaction, Safety and Work-Life Balance.

Additionally, the Addis Ababa Action Agenda (AAAA) emphasises the development and dissemination of technology as well as capacity building as principal means in the implementation of the 2030 Agenda. The promotion of both public and private investment in energy infrastructure and clean energy technologies, including carbon capture and storage technologies is considered a priority.

As a final breakthrough in the process of designing a new pathway for development, the UN Conference on Climate Change brought the targets mentioned in Goal 13 of the Agenda to a whole new level. The 196 governmental representatives that gathered in Paris reached a new agreement imposing a mix of binding and voluntary measures on the global community. The agreement aims at holding the increase in the global average temperature to “well below 2-degrees Celsius above pre-industrial levels” and includes a promise to pursue efforts to limit it to 1.5 degrees Celsius. It also sets the deadline for reaching an emissions peak before 2030, and for emissions to decline altogether soon after 2050.

CoP21 has been a critical event with significant implications for companies in the private and public sector. On the one hand, the business sector is a major consumer of fossil fuels and is responsible for almost 30% of global greenhouse gas emissions. On the other hand, many industries depend heavily on various natural resources and raw materials that can be affected by changes in climate and soon become unavailable.

Moving away from fossil fuels and taking the path of de-carbonisation requires encouraging more significant investments in renewable energies and in developing clean and low emissions technologies. It requires a profound rethinking and redesigning of the environmental impacts of the entire lifecycle of current and future products, with the final objective of reaching a “circular-economy”. It requires engaging the entire value chain in significantly different ways and creating much more inclusive and low impact business models. Finally, it requires a deeply transformed managerial mindset and organisational culture, where these sensitivities become part of the individual and collective consciousness, automatic reflexes, rather than the outcome of deliberate, effortful, decisions and planned action.

The HCBM approach, aiming at re-addressing business towards social, environmental and ethical/integrity principles to address the centrality of human values and needs, is fully in line with the above initiatives and is instrumental to achieving the goals of the 2030 Agenda.

**2. A Stakeholder Perspective on the Human Centred Business Ecosystem**

**2.1. The Stakeholder theory from a Human-Centred perspective**

The beginning of the 21st century has been marked by important financial crisis brought by failures of financial market regulation and corporate governance supervision, excessive risk-taking by banks and insurances, a systemic problem in accountability and ethics and expanding stakeholder pressures for engagement (Narbel & Muff, 2017).

These complex of unplanned and disruptive events evidences the importance of rethinking the purpose of the enterprise for including the interests of every stakeholder involved in business process, included consumers. The present turbulent and dynamic environments require a new conceptual framework able to comprise the multiple inputs, coming from internal and external stakeholders that continually enter into a relationship with the enterprise.

Stakeholder theory supports this framework explaining the ‘what’ and ‘how’ of this transformation and ‘which’ players conduct this new arena. Thus, in order to discuss the stakeholder perspectives of the Human-Centred Enterprise in a Human-Centred Ecosystem the basics of the stakeholder concept need to be addressed.

The Stakeholder theory originates from the observation that the environment in which enterprises perform are dramatically changing, and stakeholders are becoming an important key-element for increasingly socially responsible businesses and business models. While the shareholder theory focuses on maximisation of shareholder returns, stakeholder theory demands that interests of all stakeholders are considered, even if they reduce company profitability (Smith, 2003).

Freeman (1984) examines stakeholders as “any group or individual who can affect or is affected by the achievement of the organisation objectives”. It includes various actors along the internal and external dimensions of the enterprise, as shareholders, customers, employees, suppliers and governments, competitors, special interest groups, and the media. During the time this conceptualisation has evolved for including various stakeholders, “that can affect, or are affected by, the accomplishment of the business enterprise” (Freeman, 1984: 25).

In this significant evolution of the theoretical debate, Freeman (1999, 2004) and colleagues[[8]](#footnote-9) propose a distinction between primary stakeholders (or internal stakeholders), encompassing all the five actors that participating in the production process (including customers), and secondary stakeholders(or external stakeholders), which do not have any particular “stake” in the firm’s development and success (i.e. they do not invest any form of capital in the firm) but are nonetheless capable to influence the behaviour and success of the business enterprise. The list of external stakeholder (secondary stakeholders) can be long and typically varies according to theoretical[[9]](#footnote-10), political and cultural biases.

Freeman illustrated his influential notion of stakeholder theory with the so-called "hub-and-spoke" stakeholder model, depicting corporations as the hub of a wheel and stakeholders at the ends of spokes around the wheel . This was a clear message that focusing on the needs of shareholders alone, firms might lose other stakeholder contribution to value creation processes. The following Figure 1 depicts the “hub and spoke” image of primary and secondary stakeholders proposed by Freeman (1999, 2004).



**Figure 1. Primary and Secondary Stakeholders**

The broad definition of stakeholders as potentially including any subject that can affect, or is affected, by the firm has undermined the managerial relevance of stakeholder theory and opened the way to its “normative” views (Donaldson and Preston, 1995), and to several approaches related to the increase of interest and popularity from academics, but also non-governmental organisations (NGOs), regulators, media, business and policymakers.

Over the time, the evolution of the stakeholder theory has resulted in remodulation of the stakeholder categories by the inclusion of an increasing number of players that relate to the enterprise. In a classical configuration proposed by Friedman (2006), the different categories (classes) of stakeholders are constituted by the groups of people who have continued and defined relationships with the enterprise. In particular, Friedman (2006) distinguishes the following two major stakeholder groups, each including several types stakeholders:

* Internal stakeholders represented by primary stakeholders engaged in economic transactions with the business as customers, employees, shareholders, creditors, suppliers and distributors;
* External stakeholders as the secondary stakeholders that do not engage in direct economic exchange with the business, however they are influenced or can influence its actions. They are formed by general public, local communities, activist groups, business support groups, and the media and the public in general. Moreover, Friedman defines ‘excluded stakeholders’ those had no economic impact on business, such as children or the disinterested public.

Managers are treated differently in the literature. Some regard them as stakeholders others embody them in the organisation’s actions and responsibilities.

Latest research studied innovation in multi-stakeholder settings (Rühli et al. 2017), value creation in issue-based stakeholder networks (Schneider and Sachs 2015), collaboration among non-profit stakeholders (Butterfield et al. 2004), interdependencies of public and private interests (Mahoney et al. 2009), cross-sector partnerships (Dentoni et al. 2016; Koschmann et al. 2012), and value creation in public-private ventures (York et al. 2013). Evolving views of stakeholder theory propose ways to transform societal problems into win-win solutions for the firm and society alike ( Narbel & Muff, 2017).

The new conceptual models redefine the purpose of the enterprise as one guided by societal goals instead of one driven by the pursuit of profit maximisation. In these new directions, the Stakeholder theories are moving towards stakeholder relations management (SRM), and stakeholder value creation. This growing interest towards the relationships enterprise-stakeholder confirms the interest towards new enterprise models focused on human value creation.

**2.2. Stakeholder mapping and the challenges of 2030 Agenda**

Enterprises rely on a wide range of stakeholder groups in order to achieve their corporate objectives. The specific stakeholders could change from enterprise to enterprise and typically include customers and end-users, shareholders and investors, employees, suppliers, governments, pressure groups, local communities and the media.

In the new holistic ecosystem proposed by the international frameworks and the Agenda 2030, the boundaries of stakeholder enlarge to include a broader mapping of the enterprise's stakeholders, as follows:

a) Internal Stakeholders: Employees, Shareholders, Creditors, Customers Owners, Financiers/Investors, Managers.

b) External Stakeholders: Suppliers, Distributors, Labor Unions, Workers’ Families, Government Regulatory Agencies, Government Legislative Bodies, Government Tax-collecting Agencies, Industry Trade Groups, Professional Associations, NGOs and other advocacy groups, International Institutions, prospective Employees, prospective Customers, Competitors, Local Communities, National Communities, Global Community, Tax Authorities, Unions, Schools, Future Generations, Analysts and Media, Local Academia, Research Centres, Prospective Investors.

Thus, the 2030 Agenda for Sustainable Development focuses on the key-role of an unprecedented variety of stakeholders to commit to its realisation.

The engagement and consensus-building process to deploy massive behavioural change are at the core of the Agenda and instrumental for achieving the goals by 2030.

According to the Agenda and specifically to Goal 17, each stakeholder enacts change processes according to its role in the socio-economic system:

* National and local governments are expected to provide the policy and legal framework that are vital for enabling the Agenda. Their role includes formulating a roadmap, developing a policy and enabling framework, developing and implementing plans, and monitoring impacts and progress against targets.
* International organisations are expected to develop an effective support framework for governments to collect, monitor, analyse, and distribute vast amounts of data and information related to the SDGs. Their role includes offering partnership, technical assistance and managing knowledge transfer to local partners to enable the implementation of the SDGs and their global coordination.
* Businesses (both state-owned and private companies) are expected to play a pivotal role in supporting the Agenda (mostly explored in the next section). In addition to their role as corporate citizens (taxes, job creation, investment and funding initiatives), their responsibilities include sharing their resources and capabilities necessary for innovative solutions to SDG challenges, and developing and implementing new and more sustainable business models that will generate the fundamental behavioural changes necessary to achieve most of the SDGs .
* Civil society is expected to play a central role in the behavioural change process for which individual citizens and their collective associations are responsible. In addition, it acts as for supporting governmental and private initiatives during their definition, development and implementation phases. This role includes stimulating and generating innovative ideas and change proposals to support the delivery efforts of local, regional and global institutions.
* Academia and research organisations are expected to play an important role by supporting the enactment of the Agenda. Their role includes developing initiatives through technological and social innovation processes, impact assessment and modelling exercises, and providing general support for behavioural changes at the policy, business and community levels. Especially, Universities and educational institutions are responsible for the development of sustainability-related mindsets in current and future citizens, businesses and representatives of governmental and non-governmental organisations.

The 2030 Agenda stresses the key-role of businesses for achieving SDGs by networking activities of multiple stakeholders and PPP project to exploit and disseminate best practice oriented towards a sustainable development transformation of the planet. In this regard, it places a clear and strong endorsement of the role of business private and state-owned companies for realisation of the SDGs.

**2.3. The role of stakeholders within Human-Centred Business Ecosystem**

Following the vision of the HCBM project, the involvement of a complex set of stakeholders plays an essential role in the knowledge transfer of the HCBM principles to the Human-Centred Enterprise and the involvement of humans as citizens, users, customers and clients represents the real challenge of this new framework. The Penta Helix Model[[10]](#footnote-11) supports this conceptual framework by the engagement of the different groups of actors through the valorisation of the expected effects of cooperation[[11]](#footnote-12).By the Penta Helix forces, the ecosystem moves from competition towards “co-opetition”, enhancing the collaboration among the multiple actors and stakeholder within the value chain and exploiting the advantages of open innovation.

According to the Penta Helix model of economic and social development each player share common goals using specialised skills and resources to address a range of societal challenges. The convergence of each component of the Penta Helix framework into a common ground of goals (SDGs), values, behaviours, and outcomes, is a progressive process, where each player develops a new purpose in the interaction with the stakeholders and the other players of the ecosystem. Each category of stakeholder (businesses, public authorities, civil society, the knowledge sector and finance) can be represented at different socio-political and geographic levels:

- The Global or Macro level constituted by Supra Governmental Organisations (e.g. EU), International Organisations (e.g. UN Organisations/Agencies, OECD, World Bank Group), Global NGOs (i.e. WWF, Transparency International, etc.), Communities of Shareholders, International and/or Global Think Tanks (i.e. WRI, SustainAbility, etc.), Global Standards (i.e. ISO, GRI, etc.); Assurance and Financial International Institutions;

- The Cluster or Meso Level operating by National and Regional Governments, National and Regional Industry and Interest Group Organisations , Territorial, Local, National and Regional institutions, Communities, Civil society associations and Foundations; Investors and National Financial Institutions, Suppliers and distributors;

- The Local, Individual or Micro Level represented by Single Enterprises, Individuals, Local communities,Private partners.

Customers, and Academia and NGOs operate with a focus on all three levels. The convergence of each component of the Penta Helix framework into a common ground of goals, values, behaviours, and outcomes is a progressive process, where each player develops a new purpose in the interaction with the other components of the ecosystem.

As defined in the HCBM principles (Pillar 1 of the HCBM), Circular Economy exploits the relationships among the multiple stakeholder of the ecosystem and boosts this converge[[12]](#footnote-13). Circular economy sets a new level of ambition towards inclusive governments policies: the capacity to understand and anticipate citizens' needs, to engage them, to co-create and deliver new solutions in partnership with other actors, is strongly connected to a profound transition toward a new HC Ecosystem.

Circular economy, by itself, poses important challenges to its establishment and diffusion, despite the obvious socio-economic and environmental advantages that it provides. For instance, it requires significant use of inclusive governments policies: the capacity to understand and anticipate citizens' needs, to engage them, to co-generate and deliver new solutions in partnership with other actors, is strongly connected to a profound transition toward the HCBE.

The HCBM analyses the different players involved in the Human-Centred Business Ecosystem related to set of six pillars (Fiscal, Procurement, Financial, Ethics/Integrity, Social and Stakeholders relationships), that are considered ‘determinants’ for the transformation of enterprises behaviours towards Human-Centred and sustainable assets. In this perspective the ecosystem can be already recognised by looking at the figure below. A comprehensive set of actors on many different levels are cooperating to create the momentum necessary to provide the principles of the HCBM for the business sector in order to generate the Human-Centred Enterprise. Obviously the multiple interactions between each player and its stakeholders increase the ecosystem complexity, making the framework so complex.



**Figure 2. Human-Centred Business Model, T. Lessidrenska, 2018**

Each player in the Human-Centred Ecosystem becomes a change agent, influencing the evolution of the other players and supporting positive action for sustainable change.[[13]](#footnote-14) In this open-innovation and inclusive ecosystem, new forms of collaboration evolve among stakeholders, creating growing networks and broader business space.

Each organisation absorbs external inputs – in terms of technology, business models, ideas -with internal inputs performing the interaction with other players. Thus, in this open ecosystem, the HCE can growth and flourish exploiting this relationship-platform that shapes new partnerships for a predefined common goal towards sustainability performance. Including stakeholders in internal processes and governance systems will go a long way towards the successful establishment of HCBE, since the change and innovation processes related to new business models will be enabled and enhanced by stakeholder support. These types of change efforts are likely to create supportive internal and external operating environments, where cooperation and partnerships are based on the quality of the relationships and capabilities of stakeholders.

**3. Analysis and Design of Human-Centred Business Ecosystem**

**3.1 The Transition toward the Human-Centred Enterprise (HCE)**

Enterprises and, in general, business sector are perceived as the real game changer for the enhancement of the quality of the competitive and sustainable arena due to their resources, competencies, relationships, influences and ideas. Their roles go way beyond simple financial support and leveraging business skills to projects that tackle sustainability issues.

According to the 2030 Agenda, enterprises are expected to be an active source of innovative solutions for overcoming sustainable development challenges. Especially, the business sector - ranging from micro-enterprises to small and medium to multinationals, from profit to non-profit organisation, from State to private owned- is expected to play a pivotal role in achieving the Agenda’s goals. The cooperatives and collaborative models of business are privileged in this new scheme. The business sector is also encouraged to engage in awareness-raising, employee and customer training, supporting research, innovation, and technological development for risk management, as well as in the sharing and dissemination of knowledge and pre-competitive data to foster collective learning and adaptation.

In this open, globalised and hyper-competitive ecosystem the boundaries of enterprise enlarge to include not only inter- and intra-organisational processes, but also the multiple relationships with internal and external stakeholders.

The evidence from academic research shows that the enterprises open towards stakeholder’s collaboration, create more economic and social value due to the relationships with their stakeholders, both internal and external (Fontaine et al., 2006). These interdependencies cannot be described in terms of simple contractual exchanges, but involve interactions and networks, that could be exploited to define a new ecosystem centred on humans and their needs. The HCBM offers a practical framework that aims to help the Human-Centred Enterprises (HCE) to scale-up and grow in a positive and resilient domain characterised by a collaborative business process and to become the nodal element within a network of interrelated stakeholders that create, sustain, and enhance its value-creating capacity.

The relationships with the several classes of stakeholder determines a strong changing in business process: whereas the main focus of classical value chain is the internal industrial process, the sustainable value chain extends the line of sight to include input suppliers and service providers and their contribution to the creation of value. The business evolves toward open environments characterised by a number of new actors that all together cooperate to the long period survival of enterprise: the competition between enterprises becomes coopetition among partners.

The Penta Helix model supports this framework, evidencing how and in which direction, the several players could share common goals using specialised skills and resources to address a range of societal challenges. It exploits the creative synergies and close collaboration among several players involved in the global value chain.

The HCE represents an important step in this process with the actual business practices and the way how business organises itself being at the core of the attention to improve the “rules of the game” in a lasting way. These activities are embedded in a complex system with relevant stakeholders on different levels who have to collaborate in a concerted interactive way to achieve the goals of the HCE. To succeed, the HCE relies on the interplay and cooperation of the relevant stakeholder groups connected to each of economic, social, and environmental, as well as in ethical/integrity principles. Importantly, stakeholders are relevant in different ways for the identification of issues, for their prioritisation, the search for potential solutions, their experimentation and deployment of the related organisational change and development initiatives, for assessing the impact of the initiatives and feedback to the continuous sensing, adaptation and learning processes necessary to develop and realise the Human-Centred Enterprise.

According to the Pillar 1 of the HCBM, the HCEs are expected to address all main dimensions of sustainability simultaneously: the economic dimension, in terms of ensuring long term economic and financial performance; the Social dimension, by creating value for the society; the Environmental dimension, through a responsible management and re-construction of natural resources; and the so called Ethical/Integrity dimension that represents ethical and legal compliance and impacts of the HCEs. In the following section, a closer look is taken on how the exogenous determinants of sustainability and innovation ecosystem perform towards the growth of the HCE. The design of the HCE is strongly interrelated to the evolution of the Human-Centred Business Ecosystem. Therefore, the growth of the HCE depending by:

1. Design of the Human-Centred Business Ecosystem
2. Adoption of the set of HCBM principles.

Thus, the analysis of the several implications related to the adoption of the HCBM principles within this innovative Human Centred Ecosystem will be integrated with the contexts of the other pillars of the overall project to define the global framework in which HCE could start-up and scale-up.

**3.2. Design of the Human Centred Business Ecosystem**

The HCBM designs a new open ecosystem characterised by a broad cooperation among the several players of sustainable ecosystem for supporting the HCE towards the long-period survival. This new Human-Centred ecosystem could be designed on a regenerative economy model based on the Penta Helix model for a deep integration with the innovation ecosystem, leveraging capabilities, expertise, relations, resources. The adoption of this Penta Helix model with its patterns and principles could build stable, healthy, and sustainable systems[[14]](#footnote-15) focused on circular economy principles.

The Penta Helix model supports the information flow among the several players involved in this ecosystem exploiting proactive synergies among Enterprises, Academia, Government, Private sector and Citizens.

The HCBE focused on Penta Helix relationships requires enabling factors to produce a continuously learning environment: trust and respect between actors, strong collaboration on joint programs and co-creation capabilities in flexible and adaptable processes can result in shared knowledge insights, the attraction of financial resources and leverage legitimation and support from each player. The convergence of each component of the Penta Helix framework into a common ground of goals (SDGs), values, behaviours, and outcomes, supports the progressive process towards the adoption of HCBM principles. Thus, each player develops a new purpose in the interaction with the other components of the ecosystem. In this open and collaborative ecosystem, the involvement of internal and external stakeholders into the governance systems supports the pervasive growth of Human-Centred Enterprises.

The establishment of the Human Centred Business Ecosystem (HCBE) requires a set of enabling mechanisms to generate a continuous innovation, learning and transformational change environment for all the stakeholders involved.

Indeed, the design of the HCBE depends on a number of interdependent factors:

1. The emergence of a Human-Centered form of enterprise, open to integrate the voice and the interests of its primary stakeholders (employees, customers, suppliers, investors and local communities) in its governance and strategic decision processes, in addition to the integration of HCBM guiding principles in the enterprise decisions and behaviors.
2. The evolution of the consciousness by the enterprise’s primary stakeholders of their new role and the voice they can carry in the governance and the strategic decision processes of Human-Centered enterprises. Clearly, both sides of the enterprise-stakeholder dyad have to mature a joint interest in creating an open network of actors aiming to create economic and non-economic value for each other and the whole system.
3. The recognition by the secondary stakeholders[[15]](#footnote-16) of their critical role in the development of HCBE, and the proactive commitment to contribute to their establishment and diffusion.

Thus, the creation of the HCBE implies that the concept of corporate sustainability shifts from weak notions related to responsibilities to “give back” to society, to much more mature conceptualizations related, for instance, to the system-level collaboration in environmental and social regeneration of depauperate areas, as well as the joint development of environmentally and/or socially enabling production and service standards.

Some of the necessary conditions that can be highlighted for the emergence of HCBE are the following:

1. The evolution of mindsets in business leaders and managers along the HCBM values, and the corresponding diffusion of corporate culture embedding those values as identity traits for the enterprise[[16]](#footnote-17);
2. The evolution of purpose, governance and organising structures, competitive and growth strategy choices, incentive and control systems, and strategic decision-making processes across all functional activities of the enterprise;
3. Supportive public policies: incentives in the regulatory framework to promote, educate and recognise the evolution of enterprises toward Human Centred principles and ESG policies;
4. Availability and regulatory support of innovative financial instrument for ventures in open innovation environment: business angels, venture capital, micro-loans, crowdfunding, crowdsourcing, equity funding;
5. Capacity and human capital development: public and private investments in organisational change, as well as for entrepreneurs willing to design their new ventures along the novel principles of SDGs and HCBE;
6. Venture-friendly markets for products and services: identification and stimulation of early adopters for prototypes, of reference customers, providing support and legitimacy to companies and entrepreneurs engaged in the launch or transformation of their HCBE oriented companies;
7. Institutional and corporate advising system: legal and accounting advisers, evolution of legal and reporting standards facilitating the innovation in enterprise purpose and governance, development and diffusion of open source platform, data science and advanced information and communication technologies to enable continuous collaborative work among stakeholders and enterprises.

However, the challenges and constraining factors before these evolutionary processes are equally strong. The transition towards sustainable eco-systems conveys new economic, social, and environmental dimensions to solve the systemic nature of high-complexity problems. The establishment and eventual diffusion of this model of socio-economic system development constitutes, in fact, an ambitious framework where the universal patterns and principles are used to build stable, healthy, and sustainable systems[[17]](#footnote-18) focused on circular economy principles[[18]](#footnote-19).

In this HCBE, organisations progressively transform themselves into ‘platform enterprise’ able to connect with other stakeholders in liquid forms of partnership according to the goal they want to achieve. These new forms of partnership with a modular and variable geometry, create complex interweaved networks of relations, ideas, capabilities, technologies, access to global markets and competitive advantages.

The network effect[[19]](#footnote-20) on demand-side, described as network externality or demand-side of economies of scale, is reinforced by the specular network effect on the supply side of solution providers with innovative capabilities. The network effect creates global hubs, attracting resources, players, and users without viral consequences. New hubs can benefit from the learning curve but have to be designed and developed from scratch every time.

The combined effects of these trends produce the general evolution of the private sector towards hybrid enterprise logic, hybrid technology frameworks, open innovation/platform organisations and networks that redefine purpose, capabilities, strategy, organisation, assets, value chains and relations with stakeholders towards the new HCBE.

**3.2.1 The innovative players of the Human-Centred Ecosystem Arena**

Following the new patterns of open innovation and circular economy new players and network, and oldest players with new collaborative and sustainable strategies, are emerging in mature as well as in developing markets to compete in a more and more collaborative and globalised ecosystem.

However, the inclusion of these new players in this HC changing system requires a deeper understanding of the required role and behaviours of each players:

1. ***Research and Development knowledge-based***

***A.1. Academia and Research Centres:*** upstream in the knowledge value chain, academia has been traditionally concentrated in the pursuit of foundational research, typically in large established centres. The emergence of a HCBE requires academia to take on a new role in the era of open knowledge and engaged scholarship, defining new logics and processes to co-generate knowledge in collaboration with business and the other actors in the system, across each and every step of the research process. The unique advantage of academia as a neutral platform to potentially host the establishment and development of HCBE-oriented multi-stakeholder initiatives can play a determinant role in the evolution and diffusion of such forms of ecosystem. As long as academia learns to play such role and is willing to engage with its own stakeholders in the pursuit of its core scientific discovery mission.

***A.2. Incubators and Accelerators:*** the efficient distribution of knowledge that Incubators and accelerators provide in their support to new HCEs is a crucial indicator of value creation in their activity. Specialisation on global challenges and intertwined sectors is emerging as a significant trend in enhancing their performance and contribution to real impact. This evolution is reinforcing the bridge role among the Penta-Helix players in emerging challenges. While specialisation of these clusters on environmental related expertise is consolidated, specialisation on social challenges - education, inclusion, gender or migration issues - is still lagging.

***A.3 Academic Spin-offs:*** many promising spin-offs are merging robust technology-based contents with human-centred principles in core mission and behaviour. The integration of technology and social challenge represents higher potential to scale impact, more opportunities to attract financial resources and to connect with the private sector.

1. ***Sustainable Enterprises Arena***

***B.1. Enterprises:*** as mentioned above, private companies, including SMEs, evolve their identity and strategy from a weak CSR approach to a progressively integrated stakeholder strategy[[20]](#footnote-21) in their efforts to establish a full HCE logic. This shift toward hybrid model interests a growing number of enterprises across different sizes and geographic areas. This transition can be highly beneficial to increase interaction with impact start-ups and to their growth. In the business world, a path is being taken towards the development of new forms of sustainable enterprises defined as Impact start-ups

***B.2. Impact Start-ups:*** cooperative and collaborative models of innovative start-ups and other organizations oriented towards ESG and Social Corporate Responsibility policies-able to solve local needs improve their financial sustainability and managerial capabilities to scale their impact on a large number of geographies. The interactions among enterprises-institutions-academias improve business modelling, capabilities and market reach. The opportunity to integrate technology and most of all impact data can be highly beneficial to their development. In this context innovative technologies and new business models provide unprecedented opportunities of expansion together with the evolution of new shapes of legal entities such as: Cooperative Platforms, Popular Cooperative Shareholder and Benefit Corporation.

***B.3. Global corporations:*** Several multinational enterprises are shifting towards new business models centred on sustainability policies for sustaining the multiple pressures coming from consumers, social media, unions, NGOs and employees as well as in response to the international rules based on ESG principles. These multiple pressures support the transition towards HC enterprise logics in global companies, because both research and financial investors recognize that creating value (both economic and non-) for stakeholders generate also superior financial value for shareholders (Eccles et al., 2014: Barro and Zingales, 2016: Blackrock CEO letter, 2018).

***B.4. Financial players:*** Asset managers, banks, venture capital-firms, business angels and institutional investors as pension funds and foundations are adopting an integrated stakeholder strategy inside their organisation for redesigning their investment strategy into a fully ESG focused portfolios. This process of resource reallocation - from traditional business models to HC enterprise logic - accelerates the transition of the whole ecosystem towards HCBE status. New actors are emerging to support the crowdfunding of new enterprises, facilitated by the access to ESG and impact reporting and the corresponding reduction of asymmetric information and increase in data transparency.

***C. Public entities***

***C.1. Public Administration:*** the PA are progressively integrating the HCBE logic in policy-making, by the design of legislation framework focusing on sustainability and ESG principles. This process is occurring at variable speed among administrators - local, regional, or international - about the degree of participatory approach with the other players of the eco-system. New opportunities are introduced by new ICTs tools, such as the open platforms and multi-channel democratic participation platforms that support innovation in public administration and collect ideas and contributions from the community and the general “crowd”. ICTs have transformative potential speeding up the efficiency of the most dynamic administrations, by channelling political information, and by creating new low-cost forms of participation.

***C.2. State-Owned Enterprises:*** by their nature, State-Owned Enterprises have the role of leading the transition to HC Enterprise logic fully integrating stakeholder strategy and promoting extensive and in-depth interaction with stakeholders and local communities, facilitated by the role of the public shareholder. Also, in this case, technology generates important innovation, which were typically launched in private sectors and easily transferred to public sectors. For instance, several services appeared on the market combining integrated solutions in financial, energy, digital, health, and education with affordable models (e.g. Pay as you go, freemium, etc) to local underserved communities.

***D. Civil Society***

***D.1. Communities:*** local communities benefit from the interaction with other players already acting with a hybrid approach to co-design and tailor solutions to their needs. Even in this case, new subjects are blossoming such as open technology platforms to collect community needs to be matched with solution providers on different issues successfully deployed in other regions. A growing movement of people is exploring opportunities for Digital Social Innovation (DSI), developing bottom-up solutions leveraging on participation, collaboration, decentralisation, openness, and multi-disciplinary approach.

***D.2. NGOs:*** two options are emerging in this cluster: on one hand NGOs delivering services to communities can evolve into hybrid enterprises with sustainable business models. On the other, some foundations are transitioning their approach towards different degree of impact finance.

***D.3. Individuals:*** individuals may evolve their role from a consumer perspective into responsible and active citizenship in knowledge development, behavioural attitudes, sustainable consumption habits. New technologies and new business models provide unique opportunities to reach and customise each affordable solution for most of the existing challenges, to measure the real impact on core needs for each beneficiary. Open data ecosystems are expected to bring many advantages, such as stimulating citizen participation in enterprise and system-level decision-making and innovation.

In the sustainability HCBE each player acts as a change agent toward a common goal. In this context, the concept of sustainability shifts from weak concept of sustainability in the past, to strong actual concept of sustainability up to future perspective of regenerative sustainability as described in this paragraph.

According to the literature[[21]](#footnote-22) and practical learning, the growth towards a new sustainability-based business ecosystem focused on sustainability values is influenced by a set of enabling factors analysed below. Specifically the analysis can be grouped into six domains: (1) a conducive culture including ESG principles, (2) facilitating policies and leadership (e.g. regulatory framework incentives, existence of public research institutes), (3) availability of dedicated finance (e.g. business angels, venture capital, micro-loans, crowdfunding, crowdsourcing, equity funding), (4) relevant human capital (e.g. skilled and unskilled labour, entrepreneurs, entrepreneurship training, coaching and mentoring programs), (5) venture-friendly markets for products (e.g. early adopters for prototypes, reference customers) and, (6) a comprehensive set of institutional and infrastructural supports (e.g. legal and accounting advisers, telecommunications and transportation infrastructure, entrepreneurship promoting associations).

However, the transition towards sustainable ecosystems conveys new economic, social, and environmental dimensions to solve the systemic nature of high-complexity problems, as ESG issues. In particular, the development of a sustainable ecosystem focused on human-needs, involves the adoption of social welfare function based on a set of sustainability constraints linked to the individual preferences - as a prerequisite of intergenerational equity - and overall system integrity.

***3.3. Adoption of the set of HCBM principles***

The HC ecosystem flourishes their effects on general environment, starting from exogenous variables as social, environmental, governance and integrity determinants. The Pillar 1 of the HCBM analyses them within a new integrated and pervasive framework that charts the trajectory not only for enterprises but for the other organisations engaged in the Human Centred Business Ecosystem, and in their transition towards Human-Centred approaches. Thus, the adoption of a systemic set of principles, in line with generally accepted values and ESG parameters, is the prerequisite towards the Human-Centred business ecosystem. These principles could be applied to both companies and their business ecosystem to scale up the multi-stakeholder collaboration.

In particular the Pillar 1defines a set of Key Performance Indicators that could be adopted from each sort of organisations in each country and in multiple cultural, social, governance and ethics systems.

Hence, to operate into the new sustainable HCBE, the enterprises HC-oriented are expected to address all main dimensions of sustainability simultaneously: the economic dimension, in terms of ensuring long term economic and financial performance; the Social dimension, by creating value for society; the Environmental dimension, through a responsible management and re-construction of natural resources; and the so called Ethical/Integrity dimension that represents ethical and legal compliance and impacts of the HCEs.

By including the principles of the Declaration of Human Rights into the HCBM - as well as multiple normative and regulatory instruments by United Nation Organisations (e.g. by UNGC, UNEP, UNDESA, etc.), OECD, ISO, the International Labour Organisation, the World Bank, the European Union and other international institutions – the model supports and allows the protection of the human resources in a broad spectrum.

In order to to transform global ecosystem and produce positive effects on enterprises value-chain is essential to adopt HCBM principles into each form of enterprises and everywhere to achieve:

1. the integration of social, environmental and integrity principles in actions
2. the integration of activities involving internal and external stakeholders.

The past has seen excellent ideas on how to tackle specific sustainability challenges often resulting in excellent sustainability initiatives. However, in many cases, companies treated social, ecological and economic sustainability targets as separate from each other.

The integration of a sets of sustainability principles is a prerequisite of the HCBM on the one hand, but it also calls for the development of guidelines and pathways highlighting how to potentially integrate certain principles.

Another vital integration task concerns a company’s internal and external stakeholders. Different principles focus on different stakeholder groups:

1. ***Principles oriented towards internal stakeholders***
* Adequate wages and dignified family living
* Healthy and safe work environment, leisure and paid leave
* Employee collective rights
* Environmental responsible business principles
* Minimisation of waste and emissions into air and water
* Environmental precautionary principle
1. ***Principles oriented towards external stakeholders***
* Customer protection
* Positive community impact
* Environmental compliance principles
* Environmental liability
* Corruption and bribery
* No tax evasion and money laundering
* Anticompetitive behaviour.

It will be important to pair the actions towards external and internal stakeholders in a way that mutual benefit can be generated. Ultimately, an HCE needs to focus on sustainability-driven transformational change activities that create value for multiple stakeholders and that can be assessed towards multi-dimensional performance metrics (economic, social, and ecological impacts).

 ***3.3.1. Governance Implications***

Governance issues are of utmost importance for the paradigm shift toward a stakeholder-centric model. Many National legal frameworks are not compatible with a business model balancing economic performance with social and environmental goals. Also, the ways how companies can organise their governance in order not to violate exiting law differ from country to country. Sometimes a solution requires a certain amount of flexibility and creativity to achieve this goal.

Beyond the legal requirements, the governance of the enterprise reflects its purpose, its business model, its stakeholder relations, and its economic and social environmental and governance (ESG) strategy. The HCE will need to define what value means for its different internal and external stakeholders and how it is going to address the issue of value creation for these stakeholders.

Thus, in order to achieve a cultural change toward the HCBM, it is fundamental to define the purpose of the organisation centred on ESG principles. For an HCE this would usually involve the following:

1. The definition of value creation for a broader set of stakeholders, rather than for shareholders only;
2. A broader definition of purpose, beyond only economic value, and inclusive of social, environmental and integrity values like:

- Quality of the natural environment

- Equal access to growth opportunities for community members

- Well-being, trust, care diffused among internal and external stakeholders.

In this way the company will be able to establish a set of values and norms which represent the building blocks of the organisational culture of the HCE. The establishment of the relationships with the stakeholders in terms of rules and norms defining the rights and responsibilities of each stakeholder group will determine the way these groups can engage themselves and invest in the flourishing of the firm by means of different forms of material and immaterial capital (financial, human, social, , environmental, cultural).

The involvement of stakeholders in the activities of the HCE would bear material or immaterial returns for the respective stakeholder group. An essential factor in the transition to increased stakeholder engagement would be the establishment of action systems dedicated to functional, support, transactional or relational processes.

The inclusion of a larger number of stakeholders brings significant advantages in achieving challenging goals in complex systems combined with challenges due to complexity and slow speed of the decision-making and implementation process; it also leads to the general problem of the performance evaluation of PPPs. Evaluation tools may sometimes have to be developed alongside the establishment of a specific

This could be organised by envisaging very different options such as establishing independent directors or special committees, with structured representation of stakeholder interests within the organisation (e.g. consultative bodies, quick online surveys, apps for customers’ and suppliers’ feedback, etc.), stakeholders representation in the board of directors[[22]](#footnote-23).

In dealing with sustainability, Public Private Partnerships (PPPs) and Multi-Stakeholder Partnerships play an increasingly important role.

The significant advantage is the inclusion of a larger number of stakeholders to achieve challenging goals in complex systems; this however leads to the general problem of the performance evaluation of PPPs. Evaluation tools may sometimes have to be developed alongside the establishment of a specific PPP to support a better understanding of their performance. Attempts to evaluate the early stages of PPPs (i.e., initiation, planning, and procurement) were already developed and empirically tested. [[23]](#footnote-24) This way PPPs may also have their place in the context of the introduction of the HCBM.

The B-Corp Certification System in the USA[[24]](#footnote-25) and [Global Partnership for Sustainable Development Data](http://www.data4sdgs.org/) in the context of the 2030 agenda[[25]](#footnote-26) represent 2 excellent example of adoption of ESG principle.

Whether or not this transformational change can be successful and being fully embraced in all parts of the organisation also depends on the organisational capabilities[[26]](#footnote-27) to innovate, build/renew relationships, adapt processes, and learn from experience. A lack of these capabilities will result in a shallow compliance mode rather than in an HCE that is ruled by the HCBM.

***3.3.2. Financial Implications***

Long-term growth and sustainable development cannot be achieved without responsible finance able to support socially and environmentally sustainable businesses.

While the financial markets progressively move toward “sustainable finance” also known as “responsible finance” or “impact finance”, setting sustainability criteria for eligibility, the HCBM aims at building in the HCEs’ inherent structure the same sustainable elements that are at the base of financial assessments as requisites.

In this way, performing HCEs will be eligible for impact financing, providing a qualified “demand side” of sustainable finance. The special attention paid by the HCBM to Micro Small and Medium Enterprises should allow them a greater and easier access to sustainable financial funds.

Therefore, sustainable finance plays a key role to support the shift from traditional economies based on high-impact and high-carbon industries to open and sustainable ecosystem more oriented to durable growth and stakeholders’ interests. Sustainable finance empowers Environmental, Social and Governance (ESG) factors in the decision-making process of investments such as climate change mitigation, inequality eradication, reducing greenhouse gas emissions, energy efficiency, and social inclusion[[27]](#footnote-28).

To provide needful funding for Sustainable Responsible and Impact investing (SRI), each actor of financial value chain should be involved in this sustainable transformation, from institutional and professional investors to financial intermediaries, accounting companies, rating agencies and in general, businesses.

Ergo, the financial system should be focused on sustainability, to ensure the stability of the global economy, and to transform society and the world’s economy to green basis.

To promote this new paradigm, international institutions have implemented an adequate legal framework for re-addressing financial investment towards a more sustainable economy.

Already in 2006, the United Nations (UN) launched the Principles for Responsible Investment (PRI) that works to include a voluntary set of environmental, social and governance (ESG) issues into investment practice. Since then, the number of signatories has grown from 100 to more than 1,800 institutions around the world with more of 87,1 Trillion of AUM (Asset Under Management) invested in ESG goals during 2018. Currently, a large number of investors are including ESG strategies, in their portfolios: in 2018 the 21% of the whole pension funds and insurance companies developed impact-investing strategies.

Despite this set of political and legislative initiatives, the current levels of investments are not sufficient to support this shift. To achieve these primary goals, governments should provide incentive institutional and professional investors to increase ESG investment, with particular attention on social infrastructures, green bonds, and green business. In particular, as stated by OECD, sustainable infrastructure investment represents a key factor in this transition, considering that infrastructure contributes to about 60% of greenhouse gas emissions.

This transition is a historical process that will take decades and involve every aspect of the economy, including the finance sector. The transition will be a core element of this socio-economic and financial transformation.

Thus, to change the financial system, there is need of an integrated and holistic approach to sustainable development that involves financial and political institutions intending to sustain world evolution towards a dynamic equilibrium, aligned with the planet’s ecological processes of development. Governments to encourage sustainable investment and planet durable growth should integrate policies and actions to stimulate sustainable finance with an equal set of rules and behaviours that produce an impact on businesses and the real economy.

***3.3.3. Supply Chain Implications***

In order to effectively address ethical, social and environmental concerns along with the economic dimension in the corporate sector, it is necessary to adopt and spread the use of sustainable business practices across the entire supply chain, in both private and public sectors[[28]](#footnote-29).

In line with this objective, the HCBM seeks to expand the impact of the Model beyond the HCBM entities themselves, to the upstream suppliers and downstream purchasers of products and services of the “Human-Centred Enterprises” (HCE).

With regard to the private sector, the aim of the mechanisms proposed will be to provide guidelines intended to assist Human-Centred Enterprises in the implementation of sustainable private procurement practice, and to prevent any procurement contracts that contradict or impede the HCBM principles.

With regard to the public sector, the ambition of the Project is to encourage governments on one side to increase the use of public sustainable procurement policies. This should have the effect of widening the use of preferred procurement practices in both public and private enterprises and strengthening the observance of ethical/ integrity, social and environmental compliances standards in procurement.

In addition, HCEs’ are encouraged to consider the voluntary adoption of “suppliers diversity programs” targeting minority or diverse suppliers[[29]](#footnote-30) in order to give their contribution to an “inclusive” business ecosystem. Among the reasons for great importance for the sustainability performance of a company’s supply or value chain are the facts that:

* The social and environmental impact generated by the supply chain in many cases outweighs the one by the company’s operations[[30]](#footnote-31)
* Supply chains often expand across country borders and hence involve different value systems and legal frameworks[[31]](#footnote-32)
* Risk management in the supply chains is often much more difficult than in a company’s other operations, particularly when sub-suppliers are taken into account[[32]](#footnote-33)
* Supply chains often reflect a difference in power structures causing dependencies on either side and with that affecting the way transactions and business practices can be controlled[[33]](#footnote-34)
* Increased demands by customers for sustainable products and services.[[34]](#footnote-35)

For an HCE sustainable supply chain management carries a lot of weight. Sustainable Supply Chain Management is defined as: “The strategic, transparent integration and achievement of an organisation’s environmental, social and economic goals in the systematic co-ordination of key inter-organisational business processes for improving the long-term economic performance of the individual company and its chains”[[35]](#footnote-36). It can also be found that the minimum environmental and social standards for global as well as local suppliers in multinational supply chains have increased substantially[[36]](#footnote-37). However, there are conflicts of several stakeholder groups involved in the regulatory and organisational levels. Studies in the automotive industry point out, that intensified international collaboration – for instance in the context of environmental and safety aspects can help to ease conflicts in the sustainable supply chain management.[[37]](#footnote-38) For a HCBM this means that a collaboration with stakeholders on the macro-level is very important. This is true for national regulations and standards but also for industry specific supply chains.

***3.4. HCE Value Chain Design***

In this open, collaborative and sustainable Human-Centred Business Ecosystem the human value creation depends more and more on the capability to build open and durable relationships among the multiple stakeholders involved in the value chain.

Stakeholders presses to reduce the negative environmental and social impacts of industrial production asking for new corporate strategies oriented to sustainability. This Stakeholders pressure changes organisational processes and business dynamics, generating a new paradigm-shift that alters the overall industry structure with an impressive impact on global value chain.

The value focuses on collaboration, supply chain resilience, shared resources allocation, and shared risk and benefits. The new patterns of this competition transform the structures of industries, and embodying this disruptive transformation in the global value chain.. All the stages of the global value chain are redesigned in a new open and collaborative value chain, stakeholders oriented.

The enterprise become the core of this new business ecosystem, able to give and receive outputs from the whole global environment. To fully exploit mutual benefits along this more sustainable value chain, enterprises build a common strategy among main partners and stakeholder, and its execution across essential functions (Gattorna, 2006; Fearne et al., 2008). The global value chain becomes the result of a ‘shared value creation’ (Porter and Kramer, 2011) coming from a mutually beneficial of the relationship stakeholder-enterprise.

The value chain becomes the result of a shared vision through aligned strategies, structures and processes, based on trust, open communication, commitment to continuous improvement, and the intrinsic product value for consumers (Bonney et al., 2007). This new stakeholder-enterprise relationship transforms inter- and intra-organisational processes and business dynamics, generating a new paradigm-shift that alters the overall industry structure, moving towards a new open, sustainable and pervasive value chain.

We define this innovative global value chain as being stakeholder-based - the HCE VALUE CHAIN including the set of activities through which a product or service is created to respond to humans needs, and to deliver sustainable products – goods and services that provide environmental, social and economic benefits - to beneficiaries, as the end-users of this complex sustainable process. This new HCE VALUE CHAIN represents the basic tool for understanding the influence of internal and external actors of enterprise (following figure 3).



**Figure 3. The Global Human-Centred Value Chain**

In the pilot stage of HCBM design the adoption of the Human Centred Value Chain supports the adoption of the HCBM principles within different typologies of enterprises in different geographical areas. In particular the strategy could include:

* seek proactive engagement by stakeholders to understand how to create economic and non-economic value to them (sensing);
* involve stakeholders in the redefinition of the purpose of the cooperation, centred on stakeholder value creation, ;
* develop a roadmap for transformational change based on the initiatives generated with stakeholders followed by the identification of experiments to adapt the core elements of the cooperation model;
* learn from the results of experiments and identify the change initiatives to scale up;
* share the insights from the organisational experimentation and adaptation processes initiatives with the members of the ecosystem of stakeholders and originate and nurture systemic level co-evolution.

The feedback loops between the different stakeholder groups are most relevant to enable an adaption of the model wherever necessary based on experiences in the field. In this HCBM framework, the core activities of enterprises shift from high-volume to high-value production, and competition increasingly depends on the interaction among technological, institutional, and organisational factors.

***4. Conclusions***

The purpose of the HCBM Project is to build a holistic approach to sustainability conceived around the notion of Human-Centred Business Ecosystem focused on human-needs, and therefore capable of generating sustainable and inclusive economic growth instrumental to the achievement of the SDGs. The HCBM principles for public and private companies are in compliance with the goals of the SDGs set by [2030 Agenda for Sustainable Development](https://sustainabledevelopment.un.org/post2015/transformingourworld) and are well aligned with the [Paris Agreement,](https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf) the [OECD Better Life Initiative](https://www.oecd.org/statistics/better-life-initiative.htm) and the Inclusive Growth Initiative, the [Addis Ababa Action Agenda](https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf) and many other initiatives, including Pope Francis’ “[Laudato Sì](https://w2.vatican.va/content/dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf)” Encyclical. An important aspect in the introduction of an HCBM is the alignment and management of the stakeholder systems companies operate in. As the discussion above showed, these systems are complex, very diverse, operate on different levels and, like all social systems, cannot be controlled easily but the Penta Helix Model could be the best approach.

The system approach points out that all actors in the HCBE around the HCE will have to interact and cooperate meaningfully, focusing on the same goals for the global society and environment.

The actors in this support system of HCE will be internal and external stakeholders that all together contribute to the growth of the HCBM.

Hence, the relationships of all stakeholders with each other must be addressed, evaluated, aligned, and translated into actions for all members of the ecosystem. That way these members will be able to strategically interact with each other to provide inputs in terms of engagements, knowledge inputs, investments at the most relevant places of the ecosystem the HCE operates in, in the most effective way. The new nature of this open and collaborative process entails a shift towards the development of a new business ecosystem focused on internal and external relationships between stakeholder and enterprise.

The enterprise become the core of this new business ecosystem, able to give and receive outputs from the whole global environment. All the stages of the global value chain are redesigned in a new open and collaborative value chain, stakeholders oriented. This means that not only the enterprises have to learn who to engage with their internal and external stakeholders in the best way, this is true for all players in the different ecosystems on different level (macro, meso, micro), in different locations and cultures. This learning process naturally does not start from zero but builds on the existing (working) relationships within connected ecosystems. HCBM designs a new stakeholder-oriented HCE value chain, that becomes the result of a shared value creation, coming from a mutually beneficial of the relationship stakeholder-enterprise.

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1. Angela Sansonetti, Professor of Economics and Management of Innovation, Luiss University, Rome; Livio Scalvini, Executive Director of the Leonardo Centre and CEO and Co-founder of Golden for Impact; Frank Brueck, Executive Director The IKIGAI Corporation; Marco Nicoli, Special Advisor to the Director OECD Development Centre. [↑](#footnote-ref-2)
2. The triple helix model refers to a set of interactions between academia, industry and governments, to foster economic and social development towards innovation (The triple helix as a model for innovation studies, Leydesdorff L. & Etzkowitz H. (1998) http://www.oni.uerj.br/media/downloads/195.full.pdf)

 [↑](#footnote-ref-3)
3. Penta helix (Lindmark, Sturesson & Roos, 2009: 24) is an extension of the triple helix strategy by involving various elements of the community or non-profit institutions in order to realize the innovation. [↑](#footnote-ref-4)
4. There is an impressive number of instruments and initiatives that we could consider human-centric including Human Rights instruments, ILO’s Conventions, [OECD Better Life Initiative](https://www.oecd.org/statistics/better-life-initiative.htm) (focusing on Well Being), [G20 Inclusive Business Framework](http://www.g20inclusivebusiness.org/), [OECD Going Digital](https://www.oecd.org/going-digital/), just to mention a few. [↑](#footnote-ref-5)
5. See « [Les principes des religions les plus suivies dans le monde appliqués à un modèle d'entreprise centré sur l'homme](http://globalforumljd.com/new/sites/default/files/documents/communitiesOfPractice/Principles%20of%20the%20Most-Followed%20Religions%20in%20the%20World%20vs%20Human%20Centred%20Business%20Model%20French.pdf) » and Pope Francis’ encyclic “Laudato Si”. [↑](#footnote-ref-6)
6. Encyclopaedia Britannica online states, "Leonardo envisaged the great picture chart of the human body he had produced through his anatomical drawings and Vitruvian Man as a cosmografia del minor mondo (cosmography of the microcosm). He believed the workings of the human body to be an analogy for the workings of the universe." [↑](#footnote-ref-7)
7. Including: the [Paris Agreement,](https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf)  the [Addis Ababa Action Agenda](https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf), as well as Pope Francis’ “[Laudato Sì](https://w2.vatican.va/content/dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf)” Encyclical, and the [OECD Better Life Initiative](https://www.oecd.org/statistics/better-life-initiative.htm) and the Inclusive Growth Initiative and other OECD Initiatives as: Guidelines for Multinational Enterprises; ILO: Tripartite Declaration of Principles concerning multinational enterprises and social policy; IFC: Performance Standards on Environmental and Social Sustainability; The Environmental, Health and Safety guidelines of IFC and WBG; The United Nations Global Compact; United Nation Guiding Principles; ISO standard 26000; Global Reporting Initiative; WBCSD: Guidelines for Environmental & Social Impact Assessment Sustainability Accounting Standards Board; the Equator Principles

EC European non-binding guidelines on non-financial reporting; EC on taxonomy on sustainable finance

EU climate benchmark and ESG disclosures; Guidelines on reporting climate-related information

European Bank for Reconstruction and Development Performance Requirements and Guidance;

Sustainable Stock Exchanges: World Federation of Exchanges; S&Ps Institute for Corporate for the MENA region’s ESG index; Australian Security Exchange: ESG guide; Singapore Exchange guide to sustainability reporting [↑](#footnote-ref-8)
8. Freeman et al., 2010 [↑](#footnote-ref-9)
9. Another very popular approach is the one proposed by Friedman (2006), which distinguishes primary from secondary stakeholders on the basis of the presence (primary) or absence (secondary) of a transactional relationship with the firm. This view, however, has also been criticized for its narrow view of a business enterprise as a nexus of transactions, without giving sufficient relevance to the social ties bonding critical non-market stakeholders, such as employees and local communities, to the firm. For the purpose of this article, Friedman (2006) model is problematic since (a) it does not recognize the investment made by local communities in sharing their natural capital as well as its social capital with the firm, and (b) the fact that the local government gives and can revoke, the license to operate, in exchange for the firm’s contribution to the satisfaction of the broad variety of human needs by the local population (over and above the provision of taxes and jobs). [↑](#footnote-ref-10)
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