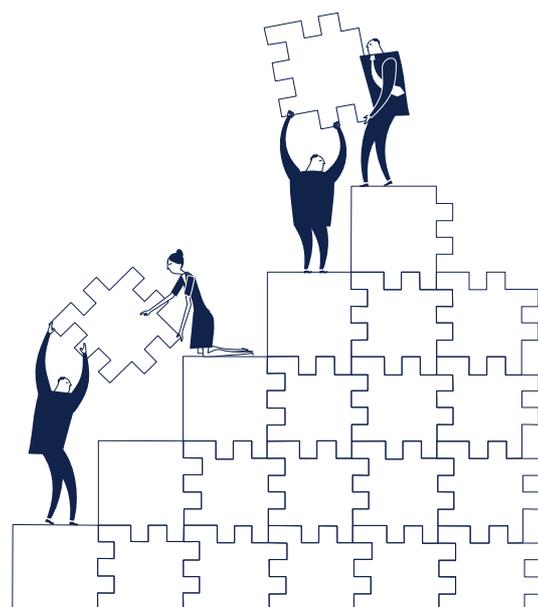


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# Funding the UN Sustainable Development Goals: Lessons from donation-based crowdfunding platforms

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Funding the UN Sustainable Development Goals:  
Lessons from donation-based crowdfunding platforms

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Working paper, February 2019

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**Keywords:**

Crowdfunding, Sustainable Development Goals (SDGs), Platforms, Social Impact, System Builder

## Abstract

This working paper explores research on the rise and operations of donation-based crowdfunding platforms and the early work on system builders, in order to develop actionable insights to build a suite of crowdfunding solutions relevant to address the funding challenges to implement on the United Nations' Sustainable Development Goals (UN SDGs). The orienting arguments treat donation-based crowdfunding as an early days but now stable dominant design technology and examine that model in the context of the work of system building. The core methodology is based on comparative case study research, with unit of analysis being three successful donation crowdfunding platforms. The analysis is conducted using the University of Oxford Technology-Markets-Organizational Capabilities (TMO) vantage point on innovation strategy.

*(1) Functioning of donation-based crowdfunding platforms.* Platforms enable transactions between funders and fundraisers by coordinating activities of different stakeholders. They orchestrate ecosystems comprising vetting actors, financial intermediaries and social media. As donation crowdfunding is not regulated, platforms are potentially global marketplaces. However, to attract users they adapt to local contexts, and this limits in some cases their geographic scope.

The analysis reveals that platforms leverage on similar technology, which is a dominant design based on standard software applications combined modularly, and crowdfunding platforms can also be built using white label solutions against the payment of low subscription fees. Platforms extract value from both fundraisers and funders. Fundraisers are charged subscription fees for the use of platform, access to training and additional data analytics, while percentage transaction fees are deducted from donated amounts.

*(2) Building crowdfunding solutions for the SDGs.* There are favourable contextual conditions for the future growth of donation crowdfunding, lack of technological barriers to entry, and no crowdfunding platforms addressing SDGs currently operating according to the standards of successful platforms. These factors point to the opportunity for creating a new platform linked to the SDGs, aligned with the identified industry practices.

The analysed strategies and the link to the SDGs provide the foundations for system builders to create crowdfunding solutions to promote revenue flows to address the SDG priorities. System builders can define the characteristics of the new solutions within the perimeter of the recommendations we offer. We recommend that the platform be built using similar technology and monetization models of the crowdfunding platforms we analyse in this work. The critical system building work is

the attention to defining and curating new kinds of ecosystem architectures in support of the SDG-relevant platforms. This work in the ecosystem involves partnerships with UN and networks of fundraisers such as Impact Hubs, B-Corp and social enterprise networks, as their projects are more relevant to the SDGs and better engage funders.

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## List of abbreviations

Abbreviation	Description
AML	Anti-money laundering
ICO	Initial Coin Offering
DAO	Decentralized Autonomous Organization
FATF	Fight against Terrorism Financing
PESTLE	Political, economic, social, technological, legal, and environmental issues affecting a company
PGDSI	Postgraduate Diploma in Strategy and Innovation
SDGs	Sustainable Development Goals
TMO	Oxford SBS vantage point for the analysis of innovation strategies based on Technology, Markets and Organization
UN	United Nations
UNSIF	United Nations Social Impact Fund
UNDP	United Nations Development Programme
WFP	World Food Programme
WB	World Bank

## Glossary of Terms used

Term	Description
AltFin	FinTech subcategory referring to technology-enabled market-based funding outside the traditional financial system
Crowdfunding	Open call to the public to raise funds for a specific project, performed via platforms which allow direct interaction between fundraisers and funders.
Donation-based crowdfunding (donation crowdfunding)	Funders send money to fundraisers with no financial return consideration in exchange for their money.
FinTech	Financial innovations enabled by technological advancements.
GiftAid	UK scheme enabling registered charities to reclaim tax on a donation made by a UK taxpayer.
Investment-based crowdfunding	Funders to invest in unlisted entities in exchange for shares in the entity of the fundraiser.
Lending-based crowdfunding	Funders lend directly to fundraisers or invest in debt obligations issued through a platform
Reward-based crowdfunding	Funders send money to fundraisers in exchange for nonfinancial reward.
Smart Contracts	Computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance of a contract.

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# 1 Introduction and methodology

## 1.1 Objectives of the paper and approach

The achievement of the United Nations' Sustainable Development Goals (UN SDGs) entails an estimated financial effort of \$5-7 trillion per year (UNDP, 2017). With public finances across the globe facing increasing constraints, mobilization of alternative financing sources and of the private sector is required.

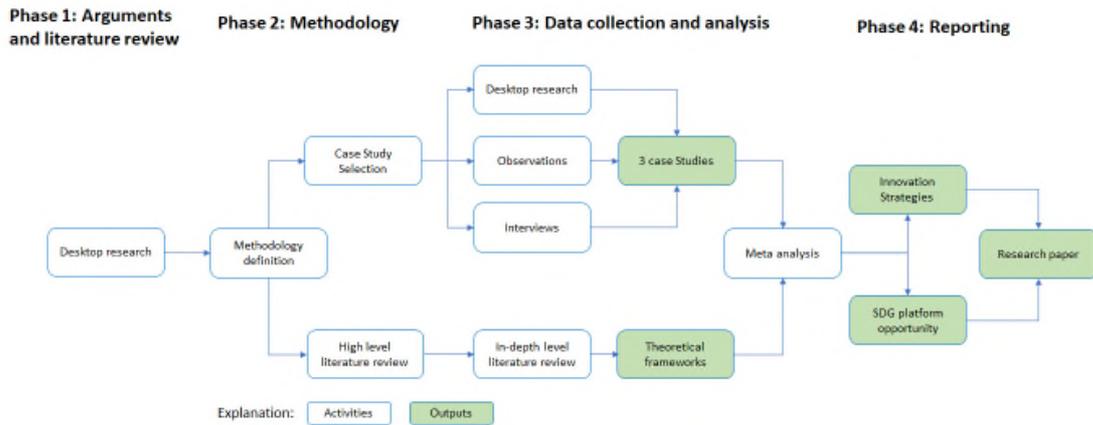
The UN and World Bank (WB) identify in crowdfunding one of these alternative financing options. Donation-based crowdfunding is a fast-growing market, with estimated value of \$0,56 billion globally in 2016 and with high growth potential, as annual global charitable giving amounts to \$0,4 trillion.

In this context, this working paper has two specific objectives: (1) to obtain an in-depth understanding of the innovation strategies of donation-based crowdfunding platforms, in terms of technology, market ecosystems, organization and globalization; (2) to draw lessons and actionable insights on how to build a suite of crowdfunding solutions relevant to UN Sustainable Development Goals.

The research was organized in four phases (see . "Phase 1: Arguments and literature review" sketches out current knowledge about crowdfunding platforms in the context of system building work. "Phase 2: Methodology" reports on the research strategy and design. "Phase 3: Data collection and analysis" focuses on data gathering, triangulates evidence, and shows descriptive analysis. In "Phase 4: Findings and Discussion" we integrate the pattern of results with existing arguments concerning crowdfunding platforms, the innovation strategies and recommendations on the strategy and organization for SDG-focused platforms, and the work of system builders in assembling and shaping ecosystems. We include a detailed appendix with action recommendations for founding SDG-focused crowdfunding platforms.

Figure 1: Key phases, activities, and research outputs . “Phase 1: Arguments and literature review” sketches out current knowledge about crowdfunding platforms in the context of system building work. “Phase 2: Methodology” reports on the research strategy and design. “Phase 3: Data collection and analysis” focuses on data gathering, triangulates evidence, and shows descriptive analysis. In “Phase 4: Findings and Discussion” we integrate the pattern of results with existing arguments concerning crowdfunding platforms, the innovation strategies and recommendations on the strategy and organization for SDG-focused platforms, and the work of system builders in assembling and shaping ecosystems. We include a detailed appendix with action recommendations for founding SDG-focused crowdfunding platforms.

Figure 1: Key phases, activities, and research outputs



Source: From “Process of Building Theory from Case Study Research” (Eisenhardt, 1989)

## 1.2 Arguments and literature review

Crowdfunding platforms have come onto the scene in recent years as solutions to a variety of issues in funding ventures. They vary in useful ways from other kinds of venture funding, in terms of the kind of linkage between the actors. They are increasingly understood as a design with standard features and attributes, shaped by institutional and legal, as well as technological conditions. In this paper, we explore prominent, successful crowdfunding platforms in order to distill out central features that can enable us to shape a new generation of crowdfunding platforms focused on funding the SDGs.

**“Phase 1 work: Arguments.”** The phase 1 work involves drafting research grids in order to systematize arguments. See Table 1. In the research grid, project objectives were translated into research questions and assumptions to be validated (or invalidated).

Table 1: Research grid sample

QUESTIONS	ASSUMPTIONS	ANALYSIS FRAMEWORK	INDICATORS AND DESCRIPTORS	AND	SOURCES OF INFORMATION	OF
3. What is the level of evolution of technology for donation crowdfunding platforms?	The technologies of donation crowdfunding platforms are identifiable  The technologies deployed are the best to facilitate transactions	3 mini case studies on platforms covering S-Curves, Foster, Geroski	S-Curves describing aspects of technology performance		Desk research  Interviews with crowdfunding associations  Interviews with 3 platforms Interviews with 3 platform Fundraisers	

Source: Author elaboration of INSTA.

Our literature review covers three main aspects that set the scene for the research, i.e. the current conversation around the SDGs, how they fit in the broader context of grand challenges and the construct of ecosystems and role of system builders.

### ***UN SDGs prominence and conversation around them***

The SDGs have come to recent prominence as a way to reduce ambiguity and provide guidance for corporations and other public and private actors to address global challenges. They are a set of sector goals, with specific statements about changes in various key metrics. And in turn, these metrics are now associated with estimate of funding needed to accomplish the goals. For instance, the social costs of CO2 emissions add up to more than \$16 trillion globally (Nature international journal of science, 2018), the gender wage gap has slashed global wealth by \$160 trillion (World Bank, 2018), inadequate education for girls leads to an estimated \$15-30 trillion in lost productivity and earnings (World Bank, 2018).

Since 2016, more and more organizations and commentators point to the SDGs as a sort of 'short hand' to focus and quantify fundings for these large-scale public goods. In turn, observers, policy-makers, critics and others have pointed to the very substantial funding required to meet the timetable for the SDGs. And in turn, this has created a diverse policy conversation about how to connect (private) resources to this purpose that shares many features with the current policy debates on grand challenges but is different in this way: The funding challenges for the SDGs point to the need for new models of infrastructure and funding that extend beyond incremental improvement in the current work of institutions, actors, and movements . This is the work of system builders. We review this set of considerations below.

### ***Opportunities and limits in the current conversations about 'grand challenges'***

A wide set of authors, agencies, and institutions in recent decades have pointed to the need for 'systems change', whether in the idiom of re-setting current (unjust) equilibria via fresh use of markets forces (Martin & Osberg, 2015) or in the idiom of broader societal transformation by institutional and political means. 'Systems change' has many connotations and more definitions. This focus on systems change has come into public conversations and the global agenda today from many sources.

One is the intellectual trajectory from the mid-20th century fascination with cybernetics and fresh insights about control. These date back arguably to the impacts of the 'second industrial revolution' and the rise of a 'third' focused on information, control, automation and their modern legacies in the current era (Beniger, 1989; Schwab & Davis, 2018; Zuboff, 1985). Cybernetics and the promise of new models of control and interventions for control has exerted substantial if under-noticed impacts on modernity

and our era (Bowker, 1993, on history of cybernetics; and Cadwallader, 1959 on cybernetics is regulation and control in open systems).

A second is the powerful imagery that we date from ‘wicked problems’, a conceptual artefact of urban planners in the mid-1960s confronting and trying to name the challenges of building and governing complex urban populations centres and all the infrastructure needed to make those worlds viable (Rittel & Webber, 1973).<sup>1</sup>

Wicked problems the term and the practice captured the minds of both policy-makers and practitioners, in part because it named complex interdependencies, where interventions just as often worsened other elements in the ‘system’ or action field, as improved them, and in part made explicit unintended consequences. The term also underscored for many that typically our focus of attention under-specifies critical interdependencies, resources, and outcomes. The usage of the term declined for fifty years, then started to show sharp upticks from 2010s (GoogleBooks).

For another (policy) generation, wicked problems gave way to talk about ‘grand challenges’ and the SDGs. The imagery here is very different from the coarse, direct challenge of wicked problems, taking on the triumphalism that characterizes the world Anand Giridharadas critiques (Giridharadas, 2018).

‘Grand challenges’ in this modern idiom are systemic challenges facing ‘people, planet, prosperity, peace and partnership’ as suggested in the United Nations 2030 Agenda for Sustainable Development (United Nations, 2015) that require focused and imaginative attention, that often involve multi-sector initiatives, and that most commonly foreground a leadership role for global corporations in addressing these challenges.

The SDGs (and before them MDGs [NB J Sachs’ role]) have progressed this conversation into a metrics-driven set of observations and expectations, objectives. For instance, the UN Sustainable Development Solutions Network (SDSN), operating under the auspices of the UN Secretary-General, has developed an ‘Indicators and a Monitoring Framework’ consisting in a list of 100 Global Monitoring Indicators (GMI)<sup>2</sup>.

The very prominence of ‘grand challenges’ has underscored for many the importance of ‘systems thinking’ with a direct to a (restricted) vocabularies of solutions marked by a ‘just get it done’ sensibility. This urgency is admirable. The loss may be in the restricted understanding of the dimensionality and interdependencies involved. This is the loss of the original imagery of ‘wicked problems’ in favor of a language marked primarily by a focus on scale and action.

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<sup>1</sup> Skaburskis 2008. ‘Origin of wicked problems’

<https://www.tandfonline.com/doi/abs/10.1080/14649350802041654?journalCode=rptp20>

<sup>2</sup> SDSN Indicators and Monitoring Framework. <http://indicators.report/>

A final source are the contemporary activities of agencies that straddle conventional sectors such as the World Economic Forum, known for convening expert conversations around a number of pressing global agenda items, in addition to industry transformation issues. The WEF was a monopoly provider of such for several decades, working in parallel with traditional international agencies, global-impactful foundations, state actors, and civil society agencies. Today, there is a more varied set of agencies and initiatives that have grown up in the idiom of the Forum (e.g., Salzburg Seminar, Aspen Institute). Distinct from think tanks, they convene in purposeful ways elites and experts from many worlds. They are one of the avatars of modern system building projects.

### ***Research on system builders and ecosystems***

Research on system building grows directly from the work on the infrastructure shifts that enabled the rise of national electricity grid systems in the late 19th and early 20th century, chronicled by Hughes and others (Hughes, 1993).

In this analysis, system builders are the actors who engage beyond direct invention, entrepreneurship and innovation, to forge a new sense of the possible and then to deliver on that with infrastructure and renovated activity systems. They build and assemble, but also, importantly, unbuild legacy systems and coopt those elements to forge new working capacity (Hargadon and Douglas 2002).

We find reference to system building also in the context of ecosystem literature, referred more broadly as ecosystem leaders. Ecosystem can be considered an organizational field, where value co-creation acts as a recognized area of institutional life. The defining characteristic of ecosystems is that they are dynamic and purposive value-creating networks within which participating firms co-create value together with their customers (Adner & Kapoor, 2010; Autio, Thomas, & Gann, 2016).

Ecosystems are characterized by governance attributes, and in particular coordination rules and rules and standards that cover interactions between participants, as it is these collaboration mechanisms that enable ecosystem functioning and value co-creation (Adner, 2012; Iansiti & Levien, 2004; Nambisan & Sawhney, 2011).

Ecosystem leaders play a key role in establishing coordination mechanisms and an ecosystem strategy that enables members to move towards shared visions to align their investments, and to find mutually supportive roles. (Moore, 1996: 26). In the context of platforms, this role is played by the platform/broker, exercising power through centrality, and appropriate governance choices regarding terms of access, incentives, and control (Adner, 2017).

This paper reports on an analysis of crowdfunding platforms and links these findings to practical application to funding SDGs. We use and extend the literature on the work

and challenges of system builders to organize both the analysis and the findings, as well as recommendations.

### 1.3 Methodology, data sources, and analysis tools

At the core of the methodology is the approach of “Building Theories from Case Study Research” (Eisenhardt, 1989), according to which case studies are used to develop hypotheses, which are compared against existing theoretical frameworks to generate new theoretical insights.

“Phase 2: methodology” encompassed two activities: (1) case study selection and preliminary literature review; (2) development of data collection and analysis tools.

As the first project objective is to understand the innovation strategies of donation-crowdfunding platforms, the unit of analysis of the three case studies are successful platforms. The selected platforms (identified based on desktop research and selection criteria) are Crowdrise, Generosity by Indiegogo and JustGiving (see Table 2: Case study selection methodology. A light review of a less successful platform was also performed, to draw lessons on “dos and don’ts”.

A preliminary literature review was performed, and the list of interviewees identified. Finally, interview guidelines were drafted as well as the data analysis templates.

Table 2: Case study selection methodology

Platforms	Mentions in press	Type	Location	Founding year	Funds raised	N. Funders	N. Fundraisers	Charities	Social enterprise	M&A
CrowdRise	6	Donation	US	2010	\$ 3,000,000,000	25,000,000	1,500,000	Yes	Yes	Yes, acquired by GoFundMe
Generosity by Indiegogo	4	Donation		2008	\$ 1,000,000,000	11,500,000	175,000	Yes	-	-
JustGiving	3	Donation	UK	2001	\$ 4,500,000,000	-	-	-	-	Yes, acquired by Blackbaud
Kickstarter	-	Reward	US	2009	\$ 3,400,000,000	13,940,863	135,425	-	-	-
Razoo	5	Donation	-	2006	\$ 500,000,000	-	-	-	-	-
StartSomeGood	3	Donation	-	-	\$ 8,302,123	-	839	-	-	-
CauseVox	3	Donation	-	-	-	-	-	-	-	-
Causes	3	Donation	-	2007	-	-	-	-	-	-
GlobalGiving	1	Donation	-	2002	\$ 305,000,000	724,091	18,448	-	-	-

Source: Internet articles, (Capterra, 2017), (Double the donation, 2017), (CrowdCrux, 2017), (The Balance, 2017), (GoDaddy, 2017), (Charity Charge, 2017), (The Medium , 2016), (Mashable UK, 2011), (Nesta, 2016), (Nesta, 2016), (Money Saving Expert, 2018), (Crowdsourcing Week, 2016)

“Phase 3: Data collection and analysis” was structured in two levels, i.e. the case study and an overarching one. The data collection plan for case studies covered company databases, datasets of active campaigns, information from platform

websites, and direct observation of platform functioning. The three case studies were developed in the form of self-standing documents with the same structure to allow for cross-comparison and analysis. Each case study covered an overview of the platform (funding process, platform size) technology (software applications used), market ecosystem (qualitative analysis of stakeholders and quantitative analysis of transaction, thickness, safety and congestion), business model and summary conclusions. Limitations concerned interviews with platform owners, which could be carried out only for one platform and the quality of datasets.

We complemented this analysis with insights from an interview with a less successful crowdfunding platform (that wished to remain anonymous). A broad number of lessons learned covering capacity of fundraisers, engagement of donors and functioning of the platforms were used to inform the conclusions of this paper.

The overarching data collection plan encompassed desktop research and interviews. Desktop research covered the crowdfunding context, interviews were carried out with crowdfunding associations from US and Europe, academic experts, platform developers, funders and fundraisers of platforms and experts from UN organizations.

We carried out also a synthetic research on crowdfunding and charitable giving data covering Americas, Asia-Pacific, Europe, Africa and Middle East. For each geography we collected quantitative and qualitative data on crowdfunding market size, regulatory frameworks and trends in charitable giving.

Data analysis leveraged on innovation strategy tools (Ventresca and Siedel, DSI 2010). The PESTLE model was used to clarify the external factors influencing the functioning of platforms and Porter's 5 forces model (Porter, 2007) for industry review. The innovation strategies were analysed using Oxford's vantage point on "Technology-Markets-Organization" (T-M-O). Technologies as means of value creation, were analysed using the "theory of evolution of new markets", "S-Curves" and "dominant design" (Geroski, 2003 ). For understanding how the platforms built their markets, ecosystems were analysed using the "value constellation approach" (Normann & Ramirez, 1994); the theory of "virtuous network cycles" and "social networks in markets" (Ventresca & Zhao, 2010); and the concepts of "thickness, congestion and safety" (Roth, 2015). Organizational models were analysed using the "business model canvas" (Osterwalder & Pigneur, 2010) and SPOC framework (Seidel, 2017); globalization strategies via the "AAA framework" (Ghemawat, 2007), "CAGE distance framework" (Ghemawat, 2007) and "non-market forces" (Barron, 1995).

**In "Phase 4: Reporting"** the same tools and frameworks were used to synthesize case study findings and other data sources, leading to conclusions on innovation strategies, future opportunities, and correlation with the theory of value creation in platforms (Llewellyn, et al., 2014).

## 1.4 Research structure

The research report is organized in four sections, including this chapter.

**“Chapter 2 Analysis of donation-based crowdfunding context”**, introduces the key concepts of crowdfunding, market evolution, trends, influencing factors and platform theory.

**“Chapter 3 Innovation strategies in donation crowdfunding”** is based on the meta-analysis of case studies and triangulation with interviews and desk research. Findings are structured according to the T-M-O dimensions and globalization.

**“Chapter 4: Building crowdfunding solutions for the SDGs”**, derives a number of insights from the previous analysis to inform the activities of system builders on how to develop a set of crowdfunding solutions for the SDGs.

Annexed are the bibliography, list of interviews and additional evidence collected. The case studies of CrowdRise, JustGiving and Generosity have been prepared as self-standing documents and can be made available on request.

## 2 Analysis of donation-based crowdfunding context

### 2.1 Key concepts, market analysis and trends

#### *Key concepts and definitions*

Donation crowdfunding is (Kirby & Worner, 2014) the mechanism by which funders send money to fundraisers with no financial return consideration in exchange for their money. It is one of the forms of crowdfunding, which is part of the broader universe of financial innovations enabled by technological advancements known as FinTech and belongs to FinTech’s subcategory of alternative finance which refers to technology-enabled market-based funding outside the traditional financial system (European Commission, 2016).

Crowdfunding is an open call to the public to raise funds for a specific project (European Commission, 2016). It is performed via platforms which allow for the interaction between two groups of stakeholders, i.e. the fundraisers and funders.

Donation crowdfunding is one of the four main categories of crowdfunding identified in literature (Kirby & Worner, 2014) and defined in consideration of what funders expect in return for their money (and motivation to invest), i.e. donation, reward, lending, and equity. All forms have four elements in common: (i) raising funds in small amounts, (ii) from many to many, while (iii) using digital technology (CGAP, 2017).

Table 3: Crowdfunding types

Donation-based	Reward-based
Funders send money to fundraisers with no financial return consideration in exchange for their money.	Funders send money to fundraisers in exchange for nonfinancial reward.
Lending-based	Equity-based
Funders lend directly to fundraisers or invest in debt obligations issued through a platform	Funders invest in unlisted entities in exchange for shares in the entity of the fundraiser.

Source: From “Crowdfunding: An infant industry in growing fast” (Kirby & Worner, 2014)

While there is a consensus on these definitions, interviewees noted that still period of ferment with tendency to create hybrid forms of crowdfunding, for instance combining rewards and donations.

### **Marked development and size**

Crowdfunding started in the UK in 2006, followed by US in 2007, and other markets after the 2008 financial crisis. The crisis meant a big push for the crowdfunding industry, as it caused a fall in confidence in the financial system, especially banks (InfoDev, 2013). See Box 1.

According to recent studies, the global value of crowdfunding in 2016, amounted to over \$144 billion, with donation-based crowdfunding amounting to \$0.56 billion, reflecting rapid growth over 2014-2016, largely spurred by China (KPMG; University of Cambridge, Centre for Alternative Finance, 2016), (University of Cambridge, Centre for Alternative Finance; The University of Chicago; Chicago Booth Business School, 2017), (University of Cambridge, Centre for Alternative Finance; University, Tshingua; Sydney, University of, 2016), (University of Cambridge, Centre for Alternative Finance; KMPG; CME Group Foundation, 2016), (University of Cambridge, Centre for Alternative Finance; Energy for Impact, 2017).

When considering all forms of crowdfunding the largest market is Asia-Pacific (China), followed by Americas (US), Europe (UK) and Africa/Middle-East. When looking at donation-based crowdfunding, the order is slightly different, Americas (US) come first, followed by Asia-Pacific (China), Africa/Middle East and Europe (UK).

## Box 1: Global trends in crowdfunding and donation-based crowdfunding 2015-2016



Source: Alternative Finance Reports (University of Cambridge, Centre for Alternative Finance, 2016-2017)

Based on the above studies, the number of crowdfunding platforms operating globally is in the range of thousands with almost 3,000 in China, 500 in Europe and similar number in US. No specific data are available in relation to the number of donation platforms; however, these can be estimated in the number of hundreds/thousand.

As donation crowdfunding is a form of philanthropy, it is useful to compare its market size to the overall size of charitable giving. While there are no official global statistics, the aggregate from US (National Philanthropic Trust, 2016), China (China Research Center, 2017), UK (Charities Aid Foundation, 2014), Russia (Charities Aid Foundation, 2015), Australia (Philanthropy Australia, 2015), and Switzerland (University of Basel, 2016) suggests that annual global giving amounts to at least \$ 0.4 trillion. In perspective, rise in middle-class and in the number of millionaires provides a positive outlook for continued growth of charitable giving (Charities Aid Foundation, 2013).

### ***Influencing factors***

**Technological aspects.** Donation crowdfunding is performed via technological platforms accessible via internet or smart phones. Enabling elements are Internet and smartphone penetration, access to banking system and electronic funds transfer, availability of internet or mobile money transactions services, social media uptake (InfoDev, 2013).

In terms of future trends, crowdfunding as many other economic sectors is touched by the rise of cryptocurrencies in diverse ways. Firstly, the piloting of decentralized

crowdfunding platforms, second traditional platforms enabling the launch of Initial Coin Offerings (ICOs) and third the use of blockchain for tracking aid flows (see Box 2: ).

**Legal and regulatory aspects.** Donation-based crowdfunding (as the reward model) is typically not regulated and not subject to licensing or regulatory requirements unless platforms provide additional regulated services (e.g. payment services).

General laws and regulations apply to parties transacting over the platform, typically (1) contract law/civil code, (2) fundraising, (3) consumer protection and privacy (4) data protection, and (5) criminal law, AML, frauds, cyber-attacks (CGAP, 2017), (Council of the European Union, 2017), (CrowdfundingHub, 2016). Cross-border donations are feasible, but there are implications concerning tax deduction which, according to interviewees, can be managed but determine additional management costs.

**Economic.** A study of the WB (InfoDev, 2013), identifies the economic aspects that enable the growth of crowdfunding markets. These include ease of business start-up, existence of structures that develop entrepreneurship skills, and a culture of financing start-ups on behalf of family/friends rather than banks. Budgetary challenges and limitations will continue increasing the relevance of crowdfunding.

**Societal.** The InfoDev study also identifies the societal and cultural factors that enable market growth: existence of entrepreneurial culture, trusting relationships forming quickly, decision made based on group dynamics, prominent level of risk tolerance of people when making investments and high-level of diffusion of online transactions.

There are two additional trends that suggest a further growth of crowdfunding. According to the President of the US CFPA, “the first relates to people needing to feel more connected, and donation crowdfunding gives a sense of touch with communities and persons, although they may never be met. Second, charitable givers require more transparency in the use of donations, and crowdfunding platforms are suitable for this. In response to these trends, Kickstarter converted to Benefit corporation”.

**Policy context.** On 1 January 2016, the 17 SDGs of the 2030 Agenda for Sustainable Development came into force (United Nations, 2016). The SDGs build on the success of the Millennium Development Goals and aim to go further to end all forms of poverty. Governments play a key role in implementing the SDGs through their development policies, plans and programmes. However also civil society, the private sector, and others, are expected to contribute to the realization of the agenda.

Any quantification of the financing needs is necessarily imprecise (United Nations Development Programme, 2018), however annual costs are estimated in the range of \$5-7 trillion globally, of which \$4 trillion in developing countries.

**Pilot decentralized crowdfunding platforms.** The “DAO”, (Wikipedia, 2018), was created in 2016 on Ethereum. Its capital was crowdfunded via token sale. Investors received voting rights to vote on proposals for commercial and non-profit projects submitted by external contractors. The DAO was discontinued due to hackers’ attack.

More recently a similar project called Giveth (2018) is being implemented; it aims at creating on the Ethereum blockchain smart contracts that allow funders and fundraisers to interact directly in a transparent way.

**Crowdfunding platforms enabling ICOs.** Indiegogo (2018) provides services for launching ICOs, the blockchain equivalent of IPOs. It has partnered with Microventures, a company specialized in selecting crypto-investments.

**Transparency of financial flows.** (1) Alice (2018) is a social impact platform built on Ethereum and powered by “smart contracts” that allows to trace donations and keeps funds secure until goals are achieved. (2) The UN WFP uses the Ethereum Blockchain to transfer vouchers based on cryptocurrencies to refugees in Syria (Coindesk, 2017). (3) AID:Tech (2018) provides solutions to international NGOs, governments and corporates to deliver digital entitlements through Blockchain and Digital Identity, to address financial inclusion and corruption. (4) Disberse (2018) is a fund management platform that drives transparent, efficient, effective flow and delivery of humanitarian aid. It enables donors to transfer and trace funds via blockchain.

Source: [Wikipedia](#); [Giveth.io](#); [Indiegogo](#); [Alice](#); [coindesk](#); [AID:tech](#); [Disberse](#).

## 2.2 Crowdfunding platforms

A platform ecosystem is a hub that facilitates the coordination of efforts of buyers and sellers (Bresnahan & Greenstein, 1999) enabling value exchanges; it acts as coordinating structure of a broader network of businesses that provide assets, services, and technologies supporting value co-creation through specialization and complementary offerings.

Crowdfunding is performed via platforms which allow interaction between fundraisers and funders. According to the frameworks outlined in “Architectural leverage: putting platforms in context” (Llewellyn, et al., 2014) crowdfunding platforms are ecosystems. According to Llewellyn et al, platform ecosystems create and appropriate value by:

1. **Production leverage** based on the use of a collection of assets, interfaces and standards that enable sharing these. In the platform ecosystem, distribution of

design, production, and delivery assets, enable economies of scale and scope through specialization and flexible combination of outputs.

2. **Innovation leverage** is also based on the use of a collection of assets and interfaces with the goal to drive economies of innovation. For platform ecosystems, economies of innovation are enhanced by the distribution of self-interested decision making across the ecosystem.
3. **Transaction leverage** is based on manipulation of the market pricing mechanism and market access, which drives transaction efficiency and reduces search costs in the exchange of goods and services. Platform extract surplus value generated by leveraging position as a value hub linking multiple sides of the market.
4. **Architectural openness** refers to the varying levels of openness to participation by parties other than the platform owner. For platform ecosystem participants from both the supply and demand side exemplify a many-to-many architecture.

(Belleflamme, et al., 2016) overviews the **strategies used by crowdfunding platforms to facilitate interactions** between fundraisers and funders. See Table 2. The need for such strategies arises as the interactions create cross-group external effects and within group external effects. The effects are both positive (enabling the transaction) or negative (inhibiting the interaction). Negative effects limit the ability of fundraisers and funders to conduct transactions, resulting in opportunity for value creation and capturing from the platform.

Figure 2: Price and non-price strategies in crowdfunding platforms

Price Strategies	Non - Price Strategies
<b>Transaction fees</b>	<b>Fundraising mechanism</b>
Charged on fundraisers as percentage or raised amount	All-or Nothing' (AON) and 'Keep-it-all' (KIA). AON reassures funders while KIA is more attractive for fundraisers. Choice is driven by the extent to which the benefit from a project depends on the funding level.
<b>Subscription fees</b>	<b>Addressing asymmetric information</b>
Less common in early days of the platforms	<b>Issue:</b> Funders lack information to estimate success chances of <b>Solution:</b> Platforms provide: (1) direct screening of campaign; (2) market-based screening via 'soft' information about fundraisers (e.g. reasons for campaign); (3) involve experienced investors.
<b>Consulting and training</b>	
Creating capacity of fundraisers	
<b>Payment processing fees</b>	<b>Addressing hidden action problems</b>
If platforms handle payments and implicit interest	<b>Issue:</b> Risk of fraudulent use of funds. <b>Solution:</b> Platforms create: (1) monitoring system; (2) reputation system based on past campaigns or social networks; (3) prevent use of funds until success of a campaign is assured by taking control of financial flows; (4) partner with banks address market risks.

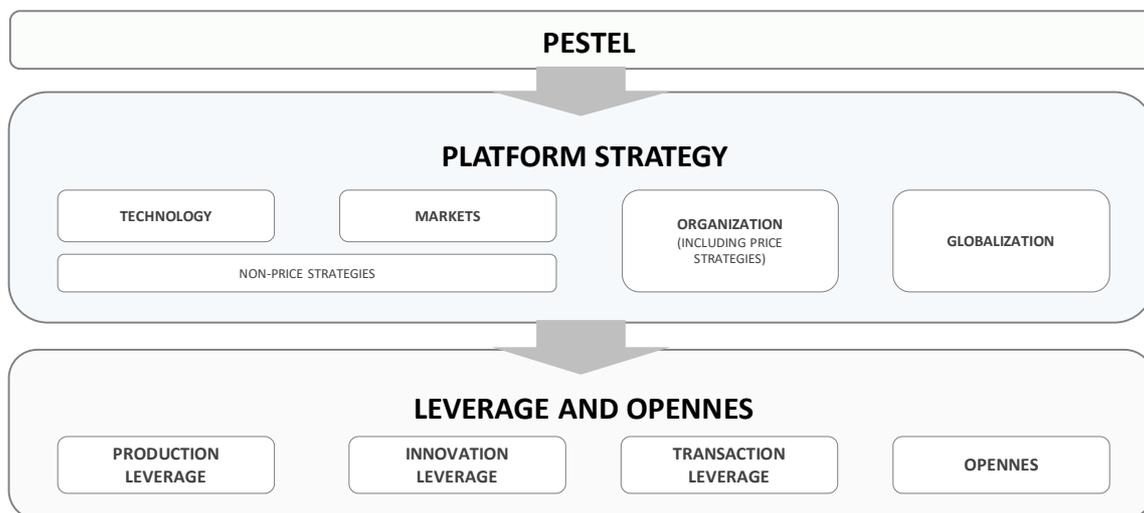
Source: "Understanding the strategies of crowdfunding platforms" (Belleflamme, et al., 2016)

## 2.3 Conclusions

Contextual factors affect crowdfunding markets and platform strategies. Conversely, platform strategies aim at creating leverage and architectural openness to generate and capture value. For instance, technological developments influence choices in terms of platform technology, which can create production and innovation leverage. Policy, economic and societal factors, influence platform ecosystems, and the degree of openness and leverage. Legal and regulatory factors, influence technology, non-market strategy and globalization strategies, which affect leverage and openness

Figure 3:

Figure 3: Framework for analysis of correlation between PESTEL forces, platform strategies, leverage and openness



Source: TMO Framework, (Oxford SAID Business School, 2017), (Belleflamme, et al., 2016)

To understand the correlation, in the next chapter we analyse the innovation strategies of three successful donation crowdfunding platforms, using a set of analytical tools reconducted to technology, markets, organization and globalization.

## 3 Innovation strategies in donation crowdfunding

The platforms in scope are donation-based crowdfunding platforms that enable primarily charitable organizations to raise funds; fundraising campaigns are both general contribution to the organizations and project based.

Table 4: Overview of crowdfunding platforms in scope

Data	Crowdrise Inc.	Generosity by Indiegogo	JustGiving Ltd.
Model	Donation-based and some rewards		
Founding year	2010	2008	2001
Location	United States	United States	United Kingdom
Funds raised	\$ 3 billion	\$ 1 billion	£ 4.5 billion
N. Funders	25,000,000	11,500,000	28,000,000
N. Fundraisers	1,500,000	175.000	25,788
Beneficiaries	Charities, Social enterprises		
Funding model	Keep it all		
Scope			
<i>Fundraisers</i>	US, Canada	Global	UK&I, US, Canada, Australia
<i>Funders</i>	Global		
Financials 2016 <sup>3</sup>			
Revenues	\$ 0.4 million \$1.2 million GoFundMe	\$3.1 million Indiegogo	£ 23 million
<i>Gross profit</i>	-	-	£ 21 million
<i>Net income</i>	-	-	£ 1 million
M&A	Acquired by GoFundMe	-	Acquired by Blackbaud
Websites	<a href="http://www.crowdrise.com">www.crowdrise.com</a>	<a href="http://www.generosity.com">www.generosity.com</a>	<a href="http://www.justgiving.com">www.justgiving.com</a>

Source: Platform Website and Corporate reports, (JustGiving Ltd, 2018) (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018), (Dun & Bradstreet One-Stop Reports, 2017).

## 3.1 Technology

Technology is a core component of crowdfunding platforms as it enables interactions between fundraisers, funders and a broader group of stakeholders. In this section we present the technology enabled functionalities of platforms and software used.

### 3.1.1 Platform functionalities

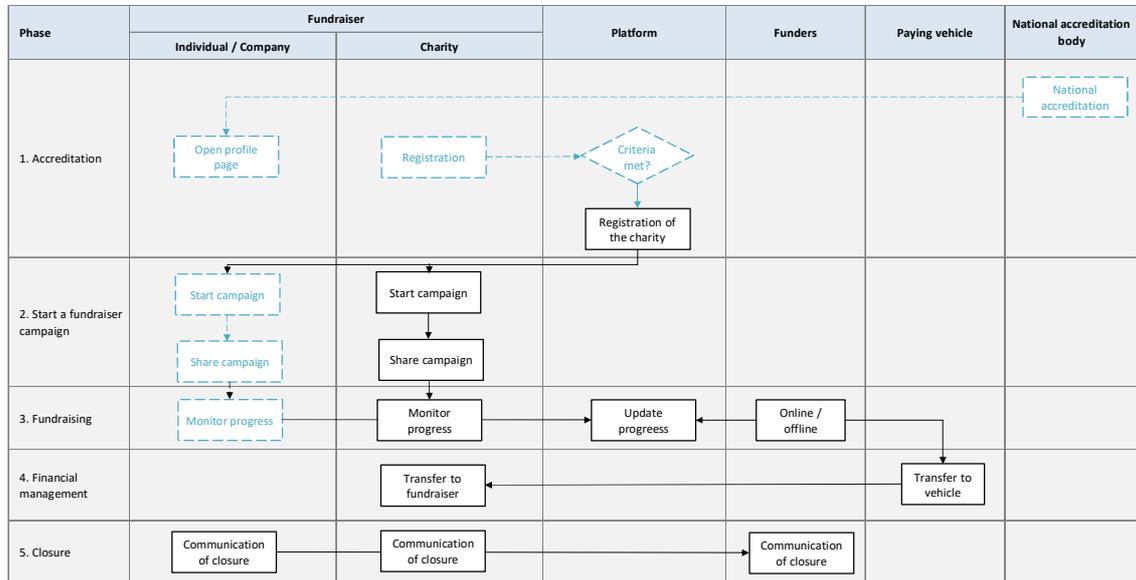
The functioning of platforms is similar and based on five phases (1) accreditation of the fundraiser; (2) campaign start-up and promotion; (3) donation; (4) financial

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<sup>3</sup> Dun & Bradstreet One-Stop Reports, 2017.

management and (5) closure. Below is the description of each phase, process flowchart, functionalities, and stakeholders involved.

Figure 4: Platform process flowchart



Source: Platform websites, (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

**Phase 1: Accreditation of the fundraiser.** Is organized differently on platforms and varies from strict control to no control. As it will be further explained, controls are linked to other two aspects of the platform, i.e. geographical scope and congestion:

- Crowdrise has the strictest rules. Only charities from US and Canada are listed and must fulfil specific requirements. US charities must be 501c3 registered, be in good standing with IRS and have a valid listing on GuideStar. Canadian charities must be in good standing with CRA and have a valid listing on CanadaHelps. Once the charity provides information, CrowdRise performs checks that lead (or not) to accreditation.
- JustGiving accepts charities operating in UK, Australia, Ireland and Canada and claims to be in a phase of further expansion. In the UK charities can register if they are in possession of a registration number or GiftAid number<sup>4</sup>; in Ireland, Australia, Canada registered charities or non-profit organisations can join. JustGiving performs bank account verification to ensure all donations are made to legitimate charities.
- On Generosity charities do not have to prove any accreditation in national systems.

**Phase 2: Campaign start-up and promotion.** A campaign is set-up in few minutes and promoted on social media and via email; goals and deadlines are optional. Besides initiation on behalf of charities, there are different rules on for peer fundraising:

<sup>4</sup> The platform allows non-members to fundraise via JustGiving Foundation, who collects GiftAid on their behalf.

Table 5: Fundraising campaign initiators by platform

Platform	Individuals for charities	Corporates for charities	Individuals for personal cause
Crowdrise Inc.	✓	-	-
JustGiving	✓	✓	-
Generosity	✓	✓	✓

Source: Platforms' terms and conditions and FAQs, Platform websites, (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

**Phase 3: Donations.** Donating is simple: funders are free to select the amount they want to donate, although pre-set amounts are also suggested and may be linked to a specific output to be achieved by the campaign. A dashboard allows fundraisers to monitor the progress of donations; dashboards provide basic information; but further analytics may be accessed versus payments on CrowdRise and JustGiving.

**Phase 4: Financial Management.** None of the platforms handles donations. Funds are managed by third party payment processors, charging a fee linked to donations, and deducted from donated amounts. Funds are transferred periodically to fundraisers.

**Phase 5: Closure.** The closure date of campaigns can be set at the moment of creation, otherwise campaigns may be closed at any point in time by the fundraiser. In relation to tax deductibility, platforms offer diverse levels of service: JustGiving leverages on tax schemes to claim funds from the UK government; at Crowdrise funders from US are provided a tax receipt; Generosity is not dealing with any of these aspects.

### 3.1.2 Software applications

The platforms are accessible on internet websites optimized for use on mobile phones, and JustGiving has a mobile app on Android and Apple stores. To obtain insight on the software applications utilized, we utilized a software-crawler, revealing that (1) platforms use similar applications; (2) most applications are off-the shelf type combined modularly (see Annex 4: Technology applications used by all 3 platforms).

Platforms have API gateways that allow the creation of third-party applications, and Widget Builders that enable to add plug-ins to websites (e.g. donate button). These features are more developed on JustGiving, which also integrates Tax functionalities for GiftAid and online "chat" for questions.

### 3.1.3 Dominant designs

The above findings substantiated by the opinion of interviewed stakeholders, lead to the conclusion that the current crowdfunding technology, based on modular software applications is a dominant design. Incremental improvements pertain data analytics functions, which aim at understanding donor personas to increase the level of funds

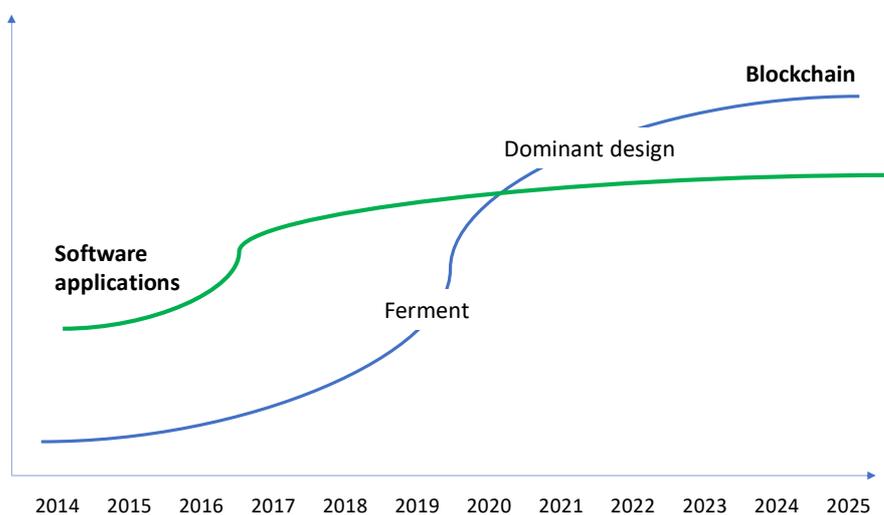
raised by platforms. This is confirmed by the proliferation of white label solutions (Hubbub, 2018), (Launcht, 2018), that allow to set-up crowdfunding platforms versus payment of subscription fees, e.g. UNDP’s “Digital Good” platform (UNDP, 2018).

We do not have sufficient evidence to confirm if the emergence of the dominant design is accompanied also by a considerable reduction in the number of players. A positive argument in this sense would be the closure of some platforms, the acquisitions, and 10-15 platforms that are frequently referred to as “best or largest ones”.

In terms of future trends, some stakeholders described incremental improvements of the existing technologies in terms of (1) development of mobile apps which allow “free” marketing and user acquisition; (2) data analytics to better understand funders’ behaviour and training needs of fundraisers (GrowFunding, 2018), (GoTeo, 2018); (3) safety and user-friendliness; (4) interoperability and ecosystems ala Amazon and Apple for continued engagement. On the other hand, the US CFPA referred to a future (yet uncertain) disruption, driven by blockchain.

This outlook can thus be summarized with the technology S-Curves: a dominant design for crowdfunding has emerged and improvements are incremental. On the other hand, a blockchain S-Curve is undergoing ferment, and according to the forecasts of Accenture & Credit Suisse, may become a dominant design after 2020.

Figure 5: Crowdfunding technology S-Curves, current software applications and blockchain



Source: Accenture and Credit Suisse, (UK Business Insider, 2018)

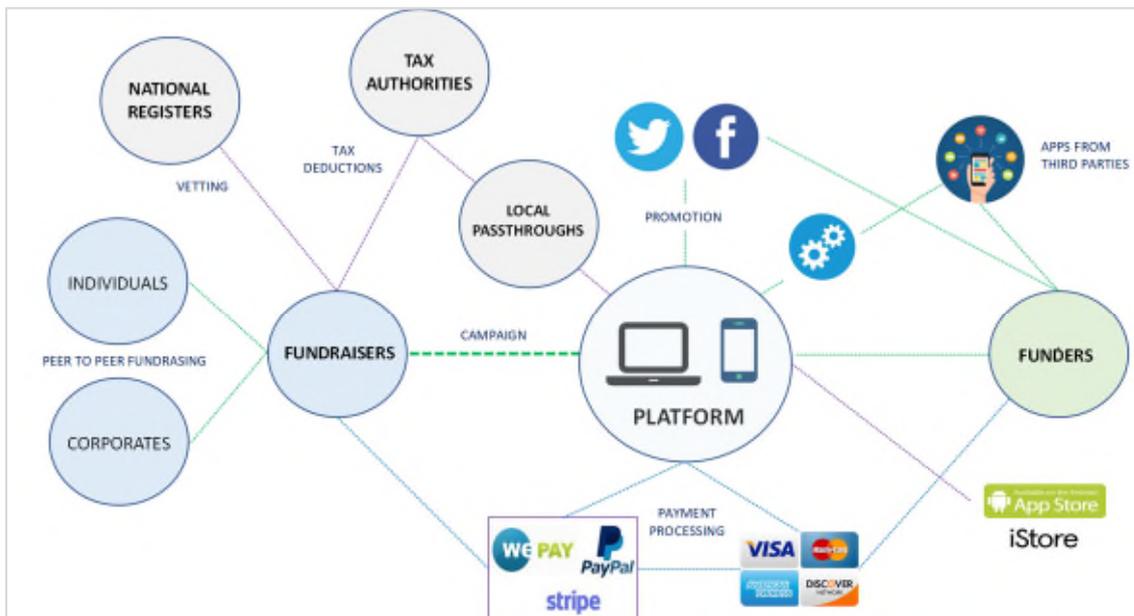
## 3.2 Markets

### 3.2.1 Platform Ecosystem

Platforms enable transactions and extract part of the value generated. To do so they create complex ecosystems that contribute to value creation and appropriate of a

fraction of it. We classified stakeholders in four groups 1) fundraisers and funders; 2) vetting actors; 3) social media; 4) financial intermediaries (see below).

Figure 6: Platform ecosystems



Source: Platform websites, (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

### Fundraisers and funders

**Fundraisers** are charities/social enterprises or third parties fundraising on their behalf (peer fundraisers), with or without formal consent of the beneficiary. The value received by the beneficiary is financial, i.e. the donations raised, while for peer fundraisers it is a moral gratification. Restrictions on geographic origin of fundraisers apply in two platforms. **Funders** are individuals and organizations, without any geographic boundary; they receive no form of remuneration if not a moral one.

### Vetting actors

**Public bodies** that provide charities/social entrepreneurs with legal status, that may be used as a pre-condition to access platform services. There are also third-party organizations that rate charities, signalling their quality. There are no remunerations as this is part of the mandate. Platforms use their databases to vet fundraisers.

### Social Media

Social Media have a key role in promotion of the campaigns. While we do not have access to information about costs, we have observed that the platform uses social media applications which most likely require payment.

## Financial intermediaries

**Credit cards and third-party payment processors.** Credit cards charge fees as by their terms and conditions. Third party payment processors generally charge a fee that is a percentage of each amount donated plus a flat fee.

**Tax Authorities.** One platform has a (digital) interface with tax authorities, that allows to claim additional funds for each privately donated amount. There are no remunerations as this is part of the mandate of the tax authority.

**Local passthroughs.** We understand that if the platform wants to operate in a foreign country and allow for locally donated amounts to be tax-deductible, then the charity needs to either open a legal entity in that country or pass through a third-party organization. Funds donated via the local passthrough gain the status of charitable donation becoming tax deductible.

## Partnerships

Interviewees indicated the importance of partnerships, which do not seem to be developed to a great extent on these platforms. According to interviewees, examples of relevant partnerships are (1) those that can foster creativity of projects<sup>5</sup>; (2) research and sector organizations; (3) public institutions and private foundations embedded in the territory that can create visibility and support the outcome of campaigns via (a) match-funding (SpaceHive, 2018) and (b) training of fundraisers; (4) business support networks/organizations, especially in the developing world, as they can help fundraisers with lack of capacity and small social networks to run successful campaigns; (5) private sector companies to provide match-funding<sup>6</sup>.

### 3.2.2 Social Networks

Social networks play a key role in the crowdfunding process:

- Interviewed stakeholders confirmed that the tightly held network of supporters of a fundraiser is the most important one and it allows to raise 30-50% of funds. Second are the networks mobilized via the platform by promoting campaigns.
- Networks are mobilized via social media (Facebook, Twitter, LinkedIn, Instagram). Fundraisers can connect with (potential) funders at any time.
- Some platforms allow peer-funding, meaning that third party individuals or corporates can raise on behalf of a charity.
- Public figures and celebrities are useful to mobilize even broader networks and provide match-funding to the campaigns.

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<sup>5</sup> As mentioned in the interview with CIVA: “Good examples are the Singularity University, Unreasonable institute, Do School, ZincVC.

<sup>6</sup> WFP ShareTheMeal: “Private companies with activities relevant to the cause, avoiding large multinationals (e.g. Deliveroo)”

- Platforms provide enablers for organizing different fundraising “events” that allow to mobilize crowds, i.e. marathons, competitions, etc.
- API and widgets are used to increase openness of the platform. APIs allow for new ways to leverage on platform capabilities; widgets are used to embed fundraising activities in the website of other organizations.

### 3.2.3 Market design

The comparative analysis covers thickness, congestion and safety, however there are some limitations on the quality and consistency of data across the platforms (see box below), thus the analyses should be interpreted with caution.

#### Box 3: Limitations on the quality of datasets of crowdfunding campaigns

The dataset for each platform is a list of campaigns described in terms of cause, title, funding target, funds raised, number of funders, timeframe. The limitations are:

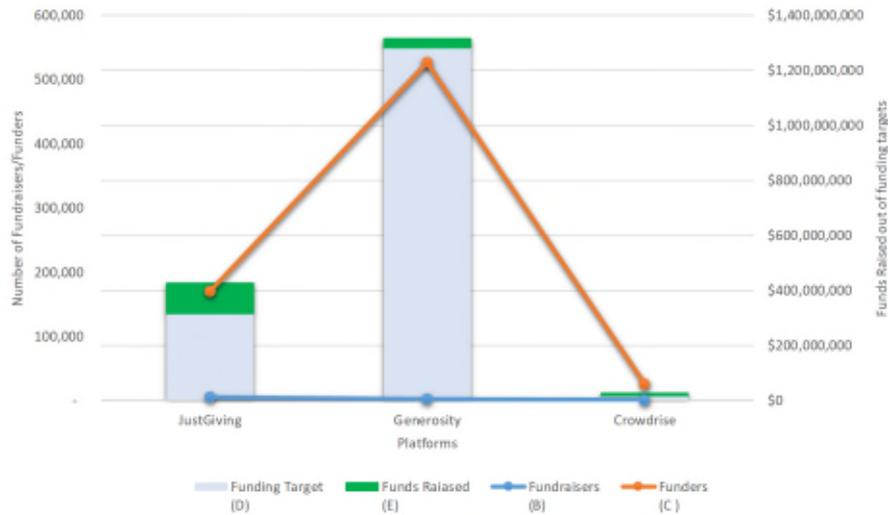
- Data fields of fundraising campaign are incomplete. Consequently, the calculation of averages is distorted.
- Timeframes are expressed differently. The impact is that it is not possible to compare accurately the performance of platforms (1) in terms of funds raised over the same period of time, (2) and in terms of *Funding Ratio* =  $\frac{\text{Funds Raised}}{\text{Funding Target}}$ , a KPI of platform performance, computed on all campaigns rather than closed ones.

Source: Author elaboration

**Thickness** analysis covers (1) funds raised and funding rate; (2) funding targets; (3) donation size; and (4) their correlations.

**Volumes of funds and stakeholders involved.** JustGiving has the highest amounts of funds raised (\$111m), with a 35% funding ratio. It achieves it by connecting 5.670 fundraisers with 164.196 funders. Second in terms of funds raised is Generosity, with one third of JustGiving’s funds (\$38m) and much lower funding rate of 3%, by connecting 2.309 fundraisers with 524.286 fundraisers. Generosity thus needs to manage a much higher number of fundraisers to raise less funds. Third in terms of funds raised is CrowdRise (\$8m), which has the highest funding ratio of 50%. It connects 967 funders to 24.695 fundraisers. Compared to other platforms, the number of stakeholders managed is very small and the funding ratio very high.

Figure 7: Platform thickness



Platform	Causes (A)	Fundraisers (B)	Funders (C)	Funding Target (D)	Funds Raised (E)	Funding Ratio (F = E/D)
JustGiving	7	5,670	164,196	\$315,648,393	\$111,501,881	35%
Generosity	10	2,309	524,286	\$1,281,711,719	\$33,077,183	3%
Crowdrise	22	967	24,695	\$17,676,328	\$8,791,305	50%

Source: Crowdfunding platforms (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

**Funding Targets.** Campaigns have a rather low funding target. Consolidated data for the platforms show that most of campaigns (4,816) have a target below \$5,000, followed by campaigns with target between \$5,000-\$15,000 (1,827) and \$15,000 - \$50,000 (1,272); campaigns with higher targets are the minority. On JustGiving campaigns with funding target below \$15,000 are 80% of the total, on Generosity 60% and Crowdrise 80%.

Figure 8: Number of projects by funding target range by platform



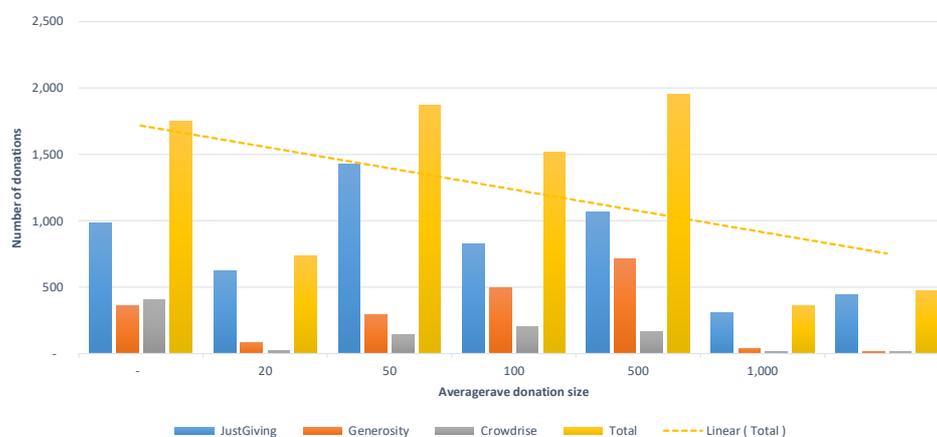
Fundraising Target range	JustGiving		Generosity		Crowdrise		Total
	N.	%	N.	%	N.	%	
0 - 1.000\$	1,949	34%	283	12%	392	40%	2,624
1.000\$ - 5000\$	1,351	24%	594	26%	247	26%	2,192
5.000\$ - 15.000\$	1,144	20%	541	23%	142	15%	1,827
15.000 - 50.000\$	566	10%	583	25%	123	13%	1,272
50.000 - 200.000\$	464	8%	202	9%	51	5%	717
200.000 - 500.000\$	100	2%	66	3%	10	1%	176
Above	96	2%	40	2%	3	0%	139
Total	5,670		2,309		968		8,947

Source: Crowdfunding platforms (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

**Donation size.** The analysis is based on the calculation of the average size of donation per campaign (funds raised per campaign/number of funders), distributed in value ranges. It results that there is a very high number of projects that does not raise any funds (left side of the chart); and that most frequently the average donation is in the range \$100 - \$500; donations above \$1.000 are rather an exception.

At JustGiving, approximately 70% of donations are below \$100, 60% for Generosity, and 80% at CrowdRise. In absolute figures it is JustGiving that has the highest number of donations above \$100 (1.814) followed by Generosity (769) and Crowdrise (197).

Figure 9: Average value of donations by platform

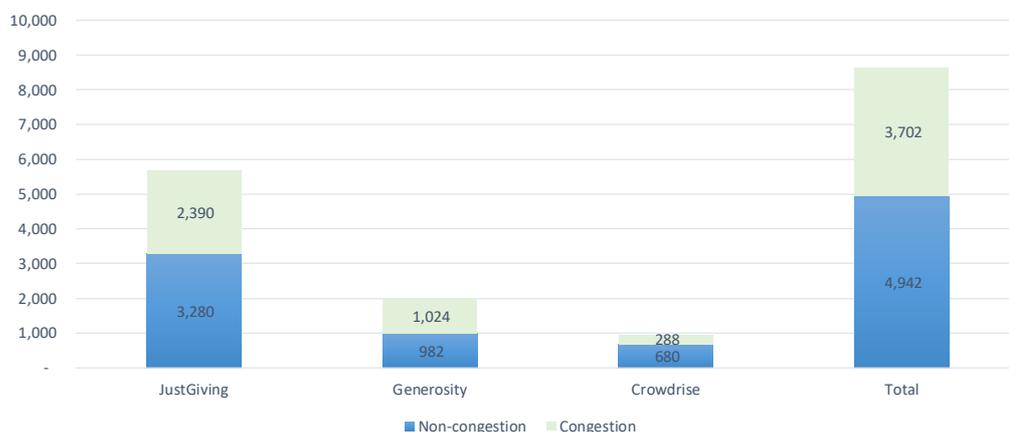


Fundraising Target range	JustGiving		Generosity		Crowdrise		Total
	N.	%	N.	%	N.	%	
-	981	17%	360	18%	408	42%	1,749
1-20\$	623	11%	86	4%	22	2%	731
20-50\$	1,428	25%	295	15%	143	15%	1,866
50-100\$	824	15%	496	25%	198	20%	1,518
100-500\$	1,065	19%	714	36%	168	17%	1,947
500-1.000\$	305	5%	40	2%	17	2%	362
Above	444	8%	15	1%	12	1%	471
Total	5,670		2,006		968		8,644

Source: Crowdfunding platforms (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

**Congestion.** We assumed that projects creating congestion are (1) those that have a funding ratio < 80% and those (2) raising less than \$ 1.000. As it can be observed below, approximately 43% of these projects fall in either category.

Figure 10: Analysis of projects according to the “congestion” criterion



Source: Crowdfunding platforms (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

We used  $R^2$  to analyse the possible correlation between “funding ratio” and respectively the “funding target” and “number of funders”; however, no strong correlation emerged between the variables. According to interviewed stakeholders, the success of a campaign is linked to the quality of the campaign, the size of the network that can be mobilized and the existence of out-layer donation amounts.

As for congestion, possible qualitative explanations for the high number of “congestion” projects could be derived from direct observation of the functioning of the platforms. Firstly, the reduced time required to set-up a campaign makes it easy to create new ones, this was confirmed also by one of the interviewees; second, it is possible for third parties (individuals and corporates) to start fundraising on behalf of a beneficiary organization; third, any organization fulfilling the minimum vetting requirements can start fundraising, thus even those with few followers.

**Safety.** There are some common elements used by platforms to ensure safety:

- Payment processors: none of the platforms handles donations. Funds are managed by third party payment processors, which also ensure compliance with AML, FATF.
- Pricing strategy: clearly stated on Crowdrise and JustGiving. On Generosity no pricing is applied, however funders are incentivized to donate towards the platform’s running costs.
- Vetting: stronger on CrowdRise, JustGiving and non-existing on Generosity.

- Credibility of platforms: all players have a track record of success and credibility. In the case of CrowdRise, founders are public figures and some of the fundraisers too.
- On the downside, we could not identify clear claims related to control/audit of the use of funds or how platforms contribute to AML, FATF beyond introducing compliance statements for users.

### 3.3 Organization

We have developed a general business model canvas for the platforms: key partnerships are the most essential element to ensure the functioning of the ecosystem.

Table 6: Business Model Canvas of crowdfunding platforms

Business Model Canvas				
<u>Key Partners</u> – Networks of fundraisers (charities, social entrepreneurs) – Networks of funders (individuals, corporates, foundations) – Platform online community – Technology providers – Social Media – Credit Cards and payment processors – Tax authorities – National registers of charities – APP developers	<u>Key Activities</u> – Ecosystem management – Marketing – Innovation – Training  <u>Key Resources</u> – Platform – Networks	<u>Offer</u> – Access to non-reimbursable funds – Ease of use – Low cost for fundraisers – Safety for fundraisers	<u>Customer Relationships</u> – Self-Service – Customer support services  <u>Channels</u> – Platform – Mobile app – Social Media – Media	<u>Customer Segments</u> – Fundraisers – Charities – Social enterprises – Peer-Fundraisers individuals, corporates  <u>Funders</u> – Individuals – Corporates – Foundations
<u>Cost Structure</u> – Staff costs – Marketing – Innovation			<u>Revenue Streams</u> – Monthly Subscription Fees – Transaction Fees as a percentage of donations	

Source: Author elaboration of Business Model Canvas (Osterwalder & Pigneur, 2010)

Platforms apply different revenue models, which include subscription and transaction fees. Additional fees are deducted from the donated amounts to remunerate payment processes, as explained below and summarized in the table overleaf.

JustGiving applies a combination of Subscription fees and Transaction fees. The basic functionalities of the platform are free of charge; however, it is likely that a charity rising funds on a regular support basis will opt for subscription, with monthly fees. On top of this, JustGiving charges a 5% fee on all donations received, the fee is calculated on top of the additional GiftAid amount should the donation be eligible for it.

The monetization model of CrowdRise is similar, however subscription fees are not detailed on the site and transaction fees are slightly higher. Generosity charges no

fees, it relies on donations of funders and the infrastructure of Indiegogo (mother company).

Transaction fees are common to all platforms; they are deducted from the value of the donated amounts and paid directly towards third-party payment processors.

Table 7: Revenue models of crowdfunding platforms

Platform	JustGiving	Generosity	CrowdRise
Subscription Fees (paid by fundraiser)	Free of charge for Basic Plan	None	Free of charge. Basic features, max 2 campaigns.
	£ 15/month + VAT for annual raising < £ 15.000/year. Additional support services and data analysis.		Premium. More features, unlimited campaigns. Price on demand.
	£ 39 /month + VAT for annual raising > £ 15.000/year. Additional support services and data analysis.		Enterprise. More features, unlimited campaigns. Price on demand.
Transaction (deducted donations)	Fees from 5% of Gross donation (including Gift Aid if applicable)	None, but funder may donate.	6% of donation
Payments (deducted donations)	Fees from 1.25% to 2.90% depending on funders' currency, fundraisers location and use of Credit Card / PayPal	3% of donations + \$0,30	2,9% of donations + \$0,30

Source: Platform terms and conditions, (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

### 3.4 Globalization

All platforms operate in more than one country to increase openness to users and therefore a higher number transactions and revenues. Globalization strategies are analysed using the aggregation, adaption and arbitrage framework (Ghemawat, 2007).

Generosity is headquartered in the US and based on available information it has no subsidiary/branch in third countries. Its focuses on aggregation as the platform connects funders to fundraisers from all over the world. However, there is no adaption to different markets, resulting in drawbacks, i.e. 1) fundraisers are not vetted using public registers and 2) the platform does not deal with tax deduction implications.

CrowdRise is headquartered in the US and based on available information it has no subsidiary/branch in third countries. Its approach is a mix of aggregation and adaption. Full aggregation in relation to funders who may be located globally, limited aggregation in terms of fundraisers who can be located either in the US or Canada. This comes with a certain level of adaption in relation to vetting and none in relation to tax deductions.

JustGiving is headquartered in the UK and has legal entities in Australia, US and Netherlands; it pursues aggregation as it allows funders to participate from all over the world. As for fundraisers, the company opened subsidiaries in Australia and US:

donations made by tax-payers transition via these entities, we assume for becoming tax deductible. Most likely it is also pursuing fiscal arbitrage via an entity in the Netherlands.

To conclude, Generosity has the broadest approach in terms of aggregation; however, it offers no benefits to funders in terms of taxation or vetting. JustGiving opens to global funders and fundraisers from three countries and offers benefits to fundraisers by adaption; it also pursues fiscal arbitrage. Crowdrise addresses global funders and fundraisers from two countries, and offers services limited related to vetting. The figure overleaf summarizes the approaches.

Table 8: Aggregation, adaption and arbitrage strategies

Platform	Headquarter	Local entities	Fundraisers	Funders	Tax	Vetting	Aggregation	Adaption	Arbitrage
JustGiving	United Kingdom	Australia United States	United Kingdom Australia United States	Located in any of 3 countries	✓	✓	+	++	+
				Located in other country	✗	✓			
Generosity	United States	-	Global	Any location	✗	✗	++	-	-
Crowdrise	United States	-	United States Canada	Any location	✗	✓	+	+	-

Source: Based on “Managing Differences: The Central Challenge of Global Strategy”, (Ghemawat, 2007)

### 3.5 Conclusions

The key stakeholders of ecosystem are (1) fundraisers and funders; (2) vetting actors; (3) social media; (4) financial intermediaries. External partnerships are less developed. Social networks mobilized via social media are a crucial; closely tied networks account for 30-50% of a campaigns’ fundraising.

The platforms included between 1,000 -5,700 fundraisers and 24,000 – 534,000 funders, while the total volume of funds raised varied between \$8m and \$111m. Most projects have a funding target <\$5k and donations are in the range \$100 - \$500. Platforms provide sufficient safety, attributable to branding, financial management, partial vetting. However, 40% of campaigns does not reach 80% of the target or raises <\$1K, which can be considered congestion.

Technology is a key enabler. Platforms utilize similar applications that allow similar processes and functionalities. A dominant design has emerged, and incremental improvements of functionalities is happening as well as ferment in the use of blockchain.

Platforms extract value from both fundraisers and funders. Fundraisers are charged with subscription fees for the use of platform, access to training and additional data analytics, while transaction fees are deducted from the donated amounts.

Donation crowdfunding is not regulated, which makes it a global business. The treatment of tax deductions however is based on national regulations. If platforms want to provide tax deduction services, then they must create local legal entities. Adaption is also required if platforms want to take advantage of local stakeholders for vetting.

These strategic choices reflect in different degrees of production, innovation and transaction leverage and architectural openness and thus value creation:

- Production leverage is enabled using modular technology, and by utilizing social media, financial intermediaries and vetting.
- Innovation leverage follows the same logic. The platform coordinates specialized stakeholders who invest in innovation.
- Transaction leverage: the ecosystem and technology generate value for the fundraisers and for funders. Value is captured via transaction and service fees.
- Openness: ecosystems, technology and multi-country approach allow many-to-many transactions. Limiting factors are vetting mechanisms and restrictions imposed by tax authorities.

These elements are captured in the table 9 below:

Table 9: Innovation strategies and relation with platform leverage and openness

	Production leverage (scale and scope)	Innovation leverage	Transaction leverage	Openness
<b>Ecosystems</b>				
Fundraisers			+	+ -
Funders			+	+
Vetting Actors	+	+	+	-
Social Media	+	+	+	+
Financial intermediaries	+	+		+
Tax authorities and passthroughs			+	+ -
Sponsors			+	+
<b>Technology</b>				
Modular technology	+	+	+	+
APIs				+
<b>Organization</b>				
Revenue model			+	+
<b>Globalization</b>				
Multi-country	+	+	+	+

Source: Based on "Understanding the strategies of Crowdfunding Platforms", (Belleflamme, et al., 2016)

## 4 Building crowdfunding solutions for the SDGs

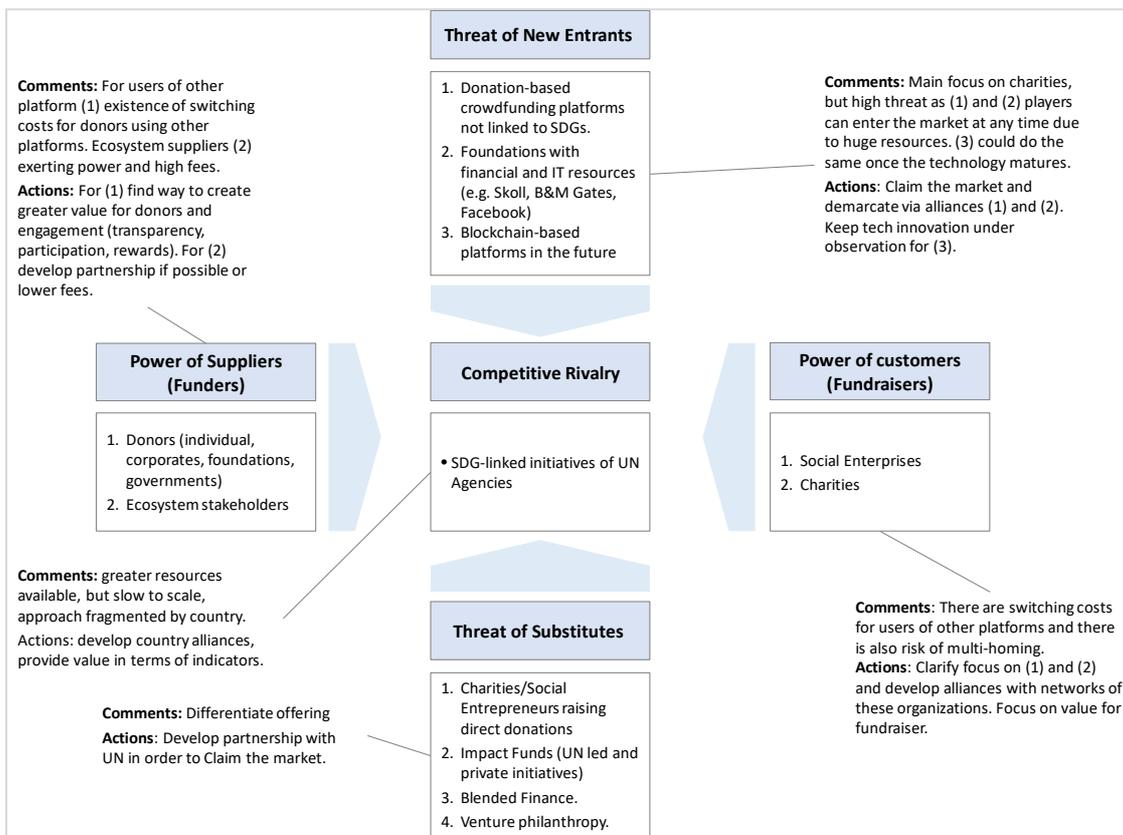
### 4.1 Crowdfunding in the landscape of the SDG Agenda

The financing of the 2030 Sustainable Development Agenda is a key issue since its adoption in 2015. Given the budgetary constraints of governments, there is a need for identifying alternative sources of financing for achieving the SDGs. Crowdfunding is one of the available options and social enterprises are suitable to address development problems (United Nations Development Programme, 2015).

Donation-based crowdfunding has the potential for providing a sizable contribution: the global market value is estimated at \$0.56 billion/year and has the potential to grow further, given the latest trends and a global charitable giving estimated at \$0.4 trillion/year. To further analyse the market of “donation-based crowdfunding of the SDGs” we have used Porters’ “5 forces model” (see

Figure 11: ):

Figure 11: Industry analysis of crowdfunding platforms linked to the SDGs



Source: Based on the “5 forces model”, (Porter, 2007)

**Competitive rivalry.** Existing donation crowdfunding initiatives linked to the SDGs are initiated by UN agencies. None of them operates in the same way as successful crowdfunding platforms; the geographic scope varies from national to multi-country and global; none of them monitors the contribution to SDGs by means of indicators.

Table 10: UNDP Crowdfunding Related Initiatives

Title	Description	Platform	Website
Digital Good, UNDP	Crowdfunding platform linked to SDGs. People can donate directly to UNDP or fundraise on its behalf.	Internet	<a href="https://digitalgood.undp.org/">https://digitalgood.undp.org/</a>
ShareTheMeal, WFP	Crowdfunding to provide money for the purchase of meals in developing countries	Mobile	<a href="https://sharethemeal.org/">https://sharethemeal.org/</a>
#Crowdfunding4Children, UNDP Albania	Civic crowdfunding to build playground for children with disability and citizen services in the near future.	Internet	<a href="http://parku.social/en/">http://parku.social/en/</a>
Global Crowdfunding Academy, UNDP Croatia	Social entrepreneurs learn how to use crowdfunding.	-	<a href="http://www.crowdfundingacademy.eu/">http://www.crowdfundingacademy.eu/</a>
Connect2Effect, Influx	Crowdfunding site for anyone with initiatives that are aligned to the UN's Sustainable Development Goals	Internet	<a href="http://www.connect2effect.com/">www.connect2effect.com/</a>

Source: Author elaboration based on website information

**Potential new entrants.** The platforms analysed in Chapter 3 and their competitors have sufficient resources to establish a link between campaigns and SDG indicators. What is questionable is the technical capacity of charities to develop suitable projects.

**Substitutes.** There are many potential substitutes. First, any fundraiser could use a white label platform to crowdfund directly resources; second there are grants; third impact funds (EPVA, 2017); fourth for social entrepreneurs, revenues generated by operations. On the other hand, each alternative requires an effort on behalf of the fundraiser.

**Suppliers.** These are the funders, who can be individual persons, corporates, foundations, governments, either already active on other platforms or not. A new platform should create sufficient value to attract both. There are also the ecosystem actors who operate according to own terms.

**Customers.** Are the fundraisers, who may be already using a crowdfunding platform or raising funds by any other means. They have opportunity for multi-homing and sufficient value must be generated to attract them to an SDG-focused platform.

To conclude, this brief analysis reveals that there is a limited number of platforms initiated by UN institutions that focus on the SDGs, which however do not adopt innovation strategies aligned with those of successful platforms.

This situation, the favourable contextual conditions for growth of donation crowdfunding and lack of technological barriers to entry, are an open call for the creation of a new platform linked to the SDGs, aligned with industry standards.

## 4.2 Lessons learned and insights for a system builder

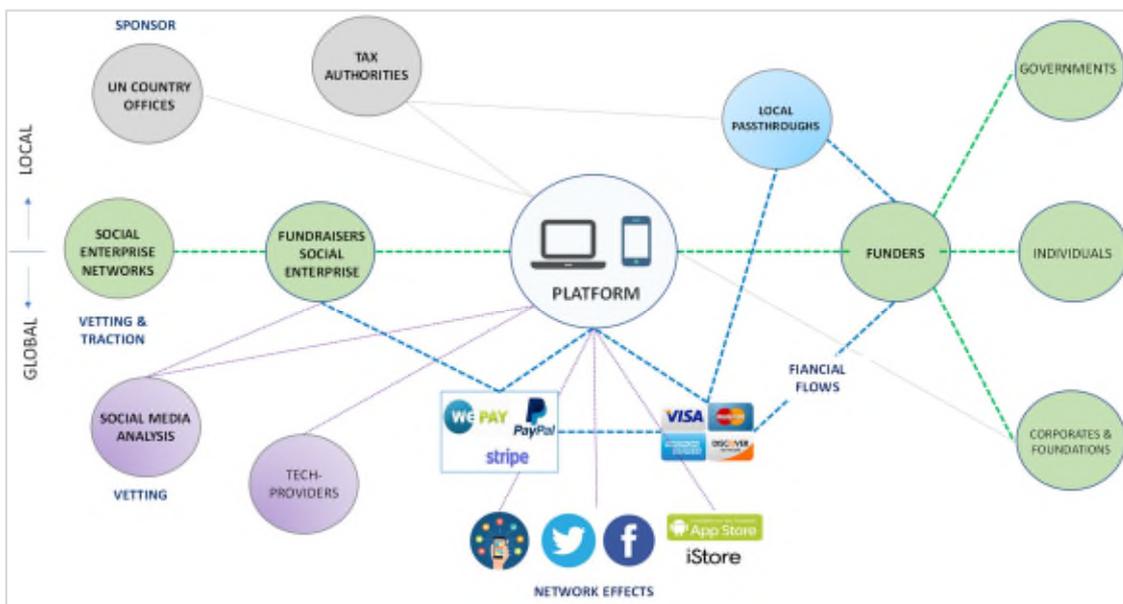
The lessons learned from the analysis of the crowdfunding platforms provide a useful framework for the intervention of system builders intending to develop a crowdfunding solution for the SDGs. And while this provides an overarching guidance, system builders have an ample room of manoeuvre to define the value creation strategies.

In terms of scope, they could opt for a platform covering all the SDGs, a sub-set or an individual one. These choices will also be primarily reflected in the platform ecosystem that the system builder will orchestrate as described in the following paragraphs.

### 4.2.1 Platform ecosystem.

The new ecosystem will comprise 1) fundraisers and funders; 2) vetting actors; 3) social media; 4) financial intermediaries; and 5) sponsors. Some are relevant for global operations of the platform, while others for national level.

Figure 12: Ecosystem of the future platform



Source: Author own elaboration

**Fundraisers and funders.** The platform has the purpose of connecting “fundraisers - charitable givers” to “fundraisers - social enterprises”. The table below provides a rationale for the choices in terms of two sides, crowdfunding model, campaigns:

#### Box 4: Rationale of the platform organization

Aspect	Description	Rationale
Fundraisers	Social Entrepreneurs, connected via national, transnational and global networks, focused on social innovation projects relevant to SDGs.	While the platforms analysed focus on charities, the proposed approach emerged during interviews with academic experts and industry stakeholders: <ul style="list-style-type: none"> <li>• Crowdfunding is relevant to the financial needs of social entrepreneurs;</li> <li>• Social entrepreneurs can develop engaging social-innovation projects;</li> <li>• Financial requirements are in the range of \$50K.</li> </ul>
Funders	Three groups of funders: <ul style="list-style-type: none"> <li>• Individuals;</li> <li>• Corporates and foundations;</li> <li>• Governments.</li> </ul>	<ul style="list-style-type: none"> <li>• Necessary to keep platform open.</li> <li>• Corporates and foundations focus on projects linked to an SDG, relevant to their mission; Governments on projects relevant to national (SDG) priorities.</li> <li>• Greater match-funding amounts can kick-start a campaign faster than individual amounts.</li> </ul>
Model	<ul style="list-style-type: none"> <li>• Hybrid. Donation with elements of reward.</li> </ul>	<ul style="list-style-type: none"> <li>• According to an interviewee, reward-based crowdfunding ensures engagement.</li> <li>• Rewards should be non-financial and non-material, as confirmed also by a platform.</li> </ul>
Rewards	<ul style="list-style-type: none"> <li>• Regular reports on progress on the implementation of SDGs indicators and linked to payments of crowdfunded resources.</li> <li>• Tangible rewards.</li> </ul>	<ul style="list-style-type: none"> <li>• Rewards create engagement, returning users, align funders and fundraisers on common goals.</li> <li>• Monitoring and reporting on SDG indicators leads to UN and government support.</li> <li>• For other rewards costs should not outweigh benefits and distort motives of the donation.</li> </ul>
Approach	<ul style="list-style-type: none"> <li>• All or nothing</li> </ul>	<ul style="list-style-type: none"> <li>• If fundraisers plan to achieve certain objective and quantifiable results with the budget, then this is the only options.</li> </ul>
Campaigns		
<i>Scope</i>	<ul style="list-style-type: none"> <li>• SDG-aligned projects with outcomes measured in terms of indicators</li> <li>• Option 1: projects are initiatives contributing to SDGs.</li> <li>• Option 2: projects are innovative solutions that can solve SDGs in unusual way.</li> </ul>	<ul style="list-style-type: none"> <li>• Unique approach.</li> <li>• Leverages on UN SDG campaign efforts.</li> <li>• Option 2 suggested by one of the interviews and resonates on a smaller scale with GoogleX's moon-shots and the idea that solving a global problem in an innovative way may be much more engaging for funders than known solutions.</li> </ul>
<i>Financial size</i>	<ul style="list-style-type: none"> <li>• \$ 50K range.</li> </ul>	<ul style="list-style-type: none"> <li>• Based on aggregated analysis of projects crowdfunded on the 3 platforms, size is achievable.</li> <li>• This size of projects is considered relevant to the needs of social entrepreneurs.</li> </ul>

Source: Interviews, platform data (JustGiving Ltd, 2018), (Generosity by Indiegogo, 2018), (CrowdRise Inc., 2018)

**Sponsors.** The UN are promoting heavily the SDGs and this effort should be leveraged. It is recommended that the platform registers as “Partnership for the SDGs” (SDG 17) together with the most important stakeholders of the ecosystem. This will give visibility and credibility to the initiative and facilitate the engagement of national UN offices that can support the campaigns at national level. The platform could be linked also to statistical offices of governments and of the United Nations to track contribution and progress towards the SDG agenda.

**Vetting actors.** The curation will allow to check registration of social enterprises in trade registers and/or affiliation to national networks, e.g. “Impact Hubs”, B-Corp with which partnerships should be created. These networks can also provide capacity building services. In addition, it is recommended to create a rating based on social media analysis; i.e. an independent view of what people say about the organization.

**Social Media.** The connection between funders and fundraisers should be enabled by social networks, including peer fundraising functions. This is the most crucial element for the success of a fundraising campaign.

**Financial intermediaries.** The platform will not manage funds to avoid falling under rules of financial regulators. All donations should be channelled through payment gateways comprising credit cards and third-party payment processors. Responsibilities for AML/FTF are transferred to these providers, but it is recommended that the platform puts in place some controls too.

**Tax authorities and passthroughs.** National tax policies may allow for the deduction of donated amounts on behalf of funders or “Gift Aid” type of donations. The platform should enable these processes to create value for funders. Pass-through entities could be created or arranged with third parties for donations to be tax deductible.

**Market design.** It is feasible to organize fundraising campaigns around 17 SDGs and to crowdfund projects in the range of \$50K, in fact platforms funded 200 campaigns in this range. What is more complex is to estimate is the number of fundraisers and funders that the platform should attract to operate a profitable business.

To provide a rough indication, fundraisers active on the platform should be in the range of 1.000 – 5.700 and funders between 18.000 and 567.000, but this aspect requires more accurate business modelling. In terms of timing, according to a white label provider, the key period for raising funds is the first 30 days of the campaign.

#### **4.2.2 Technology**

The platform shall be based on standard technologies combined in a modular way (white label) and accessible on website and mobile. Further investments in data analytics, can enable a better understanding of donor behaviour and fundraisers’ needs in terms of capacity building and attract more users to the platform.

Specific modules could be added for the use of foundations/corporates willing to fund specific projects and for Governments willing to provide match-funding, open development allowed via API Gateway and mobile apps.

#### **4.2.3 Globalization**

As donation crowdfunding is not regulated, aggregation should be pursued to maximise the number of fundraisers and funders using the platform. This shall be accompanied by limited adaption in what concerns local requirements for ensuring tax deduction of donations and local vetting. Arbitrage should be considered only for optimizing the overall tax structure of the platform.

The globalization process should be gradual: the platform should focus firstly on the countries that rank highest both in terms of size of the donation crowdfunding market and level of charitable donations, i.e. US, UK, Australia. These are also countries that are closer in terms of culture, administrative organization and economy (Ghemawat, 2007), while for the same reason China should be initially kept on hold.

#### **4.2.4 Business model**

The business model canvas of successful platforms is relevant and key partners should include UN and networks of social entrepreneurs / innovators. The revenue model will be based on transaction fees; subscription fees should be avoided not to deter users.

## Annex 1: Roadmap for implementation

The call for action for establishing new crowdfunding solutions could be seized either by UN entities, existing donation-platforms or new organizations. In the first two cases, the platform should be treated as an internal start-up as Generosity within Indiegogo, or the Digital Good Initiative within the UN. In such instances, the platform should rely on sponsorships from the highest level, leverage on broader organizational capabilities, and have different KPI's and operational principles, as by the concept of organizational ambidexterity (O'Reilly & Tushman, 2016).

### *Required capabilities*

The capabilities required for the start-up are presented in terms of systems, people, organization and culture, following the SPOC model (Seidel, 2017):

- **Systems:** the core system is the crowdfunding platform, which should be prototyped using a white label solution. The first version should be rough, ready and right (Hargadon & Sutton, 2000), avoiding customization. It should be tested to collect users' feedback on the concept of "crowdfunding the SDGs", use of indicators to measure the progress of campaigns and release of funds based upon achievement of milestones.

As we understand that the functioning of platforms is based on a complex set of activities closely interlinked, we recommend establishing a process for the development of new business opportunities based on the concept of sensing, shaping and seizing (Felin & Powell, 2016). All team members should have the possibility to propose new initiatives, which should reach a quorum before starting.

- **People and talent:** the key operational competencies required for the start-up are (1) innovation strategy, (2) marketing, (3) crowdfunding project management; (4) IT. Additionally, (5) partnership development skills are required for building the ecosystem. Innovation strategy is necessary to drive company start-up, marketing for brand development and external communication, crowdfunding project management to provide support to campaigns; IT to monitor performance of the technology, identify gaps, and develop new modular solutions.
- **Organization:** the start-up should be led by an operational CEO with direct responsibility for strategy implementation and global partnerships. The other functions, reflecting competency requirements are (1) Marketing; (2) Information Technology; (3) Operations. Legal, finance and accounting should be outsourced.
- **Culture:** the start-up team should be aligned to a higher purpose of making a positive contribution to the world, and foster a climate of culture, collaboration,

and self-starting initiative. Understanding of the global context of the SDG is a requirement.

#### *Guidance for a rapid prototyping process*

1. **Build a prototype:** use a crowdfunding white-label solutions (e.g. Thrinacia, Hubhub) to build the first prototype. It will cover most of the functionalities of the biggest platforms. This will include also links to social media to promote campaigns and payment gateways (e.g. Paypal, Stripe) to enable transactions.
2. **Pilot rapidly the prototype:**
  - Pilot set-up: select three social enterprises that are willing to commit to a pilot crowdfunding exercise. The organizations should belong to credible networks (e.g. Impact Hubs, B-Corps), have experience on the SDGs, and have a strong media presence and followers.
  - Design and roll-out crowdfunding campaigns: work with the pilot organizations to design a project with measurable contribution towards the SDGs and crowdfunding target below \$50K. Then support the organizations in rolling out a promotional campaign blending offline (targeting corporates and government authorities with a stake on the SDG) and online (for closely tied social networks) efforts.
  - Oversee crowdfunded projects: for projects reaching the crowdfunding target, set-up simple arrangements to report on the progress of activities via the platform and gradually release funds. At the end of the project collect evidence of the contribution towards the SDG targets.
3. **Consolidate lessons and develop an MVP:** talk to the pilot organizations and donors to understand what worked well, what did not work and what should be improved. Based on the feedback make a minimum set of changes to the prototype, for instance covering the user interface, or automating reporting functionalities for SDG indicators, and adjusting the monetization model.
4. **Focus on traction:** start within in single country and promote the platform towards networks of social enterprises to attract rapidly fundraisers. Also promote the platform among institutional stakeholders and the United Nations as this will add credibility and attract donors.
5. **Improve functionalities:** gradually develop the ecosystem to include national registers for vetting fundraisers, fiscal authorities to ensure tax deductibility of donations, statistical office for interoperability of data on SDG progress. Further invest in platform technology, powering the data analytics function to learn more about platform users, enable third party application development and engage with organizations that can support the external communication efforts.

## Annex 2: Bibliography

Adner, 2017. Ecosystem as Structure: An Actionable Construct for Strategy. *Journal of Management* .

AID:Tech, 2018. <https://aid.technology/>. [Online].

Alice, 2018. <http://alice.si/>. [Online]

Available at: <http://alice.si/>

Anon., n.d. When Innovations Meet Institutions: Edison and the Design of the Electric Light.

Barron, D., 1995. Integrated strategy: market and nonmarket components. *California Management Review*, Issue 37(2), pp. 47-65.

Belleflamme, Omrani & Peitz, 2016. Understanding the strategies of Crowdfunding Platforms. *CESifo DICE Report*.

Beniger, 1989. *The Control Revolution: Technological and Economic Origins of the Information Society*. s.l.:s.n.

Bowker, 1993. How to Be Universal: Some Cybernetic Strategies. *Social Studies of Science*.

Cadwallader, 1959. The Cybernetic Analysis of Change in Complex Social Organizations. *American Journal of Sociology*.

Charities Aid Foundation, 2015. RUSSIA GIVING 2015.

Candidate 1018906, 2017. *Methodology for the Diploma project*, s.l.: s.n.

Capterra, 2017. The Top 11 Crowdfunding Platforms for Nonprofits.

CGAP, 2017. *Crowdfunding and Financial Inclusion*, s.l.: CGAP.

Charities Aid Foundation, 2013. *Future of World Giving: Unlocking the potential of global philanthropy*, s.l.: s.n.

Charities Aid Foundation, 2014. UK GIVING REPORT 2014.

Charity Charge, 2017. Crowdfunding platforms nonprofits should-be aware of.

China Research Center, 2017. Why Giving is Harder than Earning: Philanthropy in China.

Coindesk, 2017. *United Nations Sends Aid to 10,000 Syrian Refugees Using Ethereum Blockchain*. [Online]

Available at: <https://www.coindesk.com/united-nations-sends-aid-to-10000-syrian-refugees-using-ethereum-blockchain/>

Council of the European Union, 2017. *Report from the Commission to the European Parliament and to the Council on the assessment of the risks of money laundering and terrorist financing affecting the internal market and relating to cross-border situations*, Brussels

CrowdCrux, 2017. Top 10 Crowdfunding Sites for Nonprofits.

CrowdfundingHub, 2016. *Current State of Crowdfunding in Europe 2016*, Amsterdam

CrowdRise Inc., 2018. [www.crowdrise.com](http://www.crowdrise.com).

Crowdsourcing Week, 2016. 10 Crowdfunding Platforms in the UK You Need To Know About.

Disberse, 2018. <http://www.disberse.com/>. [Online].

Double the donation, 2017. Top 11 Crowdfunding Platforms for Nonprofits.

Eisenhardt, 1989. Building Theories from Case Study Research. *The Academy of Management Review*, pp. 532-550.

EPVA, 2017. *What is venture philanthropy?*, s.l.: European Venture Philanthropy Association.

European Commission, 2016. *Crowdfunding in the EU Capital Markets Union*.

European Commission, 2017. *Report from the Commission to the European Parliament and to the Council on the assessment of the risks of money laundering and terrorist financing affecting the internal market and relating to cross-border situations*.

European Crowdfunding Network, 2017. *Review of Crowdfunding Regulation 2017, Interpretations of existing regulation concerning crowdfunding in Europe, North America and Israel*.

FATF, 2015. *Emerging Terrorist Financing Risks*.

Felin, T. & Powell, T., 2016. Designing organizations for dynamic capabilities, California Management Review. *California Management Review*, Volume 58(4), pp. 78-96.

Generosity by Indiegogo, 2018. [www.generosity.com](http://www.generosity.com).

Geroski, P., 2003. *The evolution of new markets*. Oxford: Oxford University Press.

Ghemawat, P., 2007. Managing Differences: The Central Challenge of Global Strategy. *Harvard Business Review* 85(3), pp. 58-68.

Ghemawat, P., 2007. *Redefining global strategy : crossing borders in a world where differences still matter*. s.l.: Boston, Mass. : Harvard Business School Press.

Giridharadas, 2018. *Winners Take All: The Elite Charade of Changing the World*.

Giveth, 2018. *www.giveth.io*. [Online]  
 Available at: [www.giveth.io](http://www.giveth.io)

GoDaddy, 2017. Top 20 crowdfunding platforms of 2017.

GoogleBooks, n.d. *N-Gram*. [Online]  
 Available at:  
[https://books.google.com/ngrams/graph?content=wicked+problem%2CWicked+problems%2Cwicked+problems%2CWicked+Problem&year\\_start=1950&year\\_end=2008&corpus=15&smoothing=1&share=&direct\\_url=t1%3B%2CWicked%20problem%3B%2Cc0%3B.t1%3B%2CWicked%20problems%3B%2Cc0%3](https://books.google.com/ngrams/graph?content=wicked+problem%2CWicked+problems%2Cwicked+problems%2CWicked+Problem&year_start=1950&year_end=2008&corpus=15&smoothing=1&share=&direct_url=t1%3B%2CWicked%20problem%3B%2Cc0%3B.t1%3B%2CWicked%20problems%3B%2Cc0%3)

GoTeo, 2018. <https://en.goteo.org>.

GrowFunding, 2018. <https://www.growfunding.be>.

Hargadon, A. & Sutton, R., 2000. Building an innovation factory. *Harvard Business Review*, Issue 78(3), pp. 157-166.

Hargadon & Douglas, 2001. When Innovations Meet Institutions: Edison and the Design of the Electric Light. *Administrative Science Quarterly*.

Hubbub, 2018. [www.hubbub.net/crowdfunding](http://www.hubbub.net/crowdfunding).

Hughes, 1993. *Networks of Power: Electrification in Western Society, 1880-1930*.

Indiegogo, 2018. *Invest in ICOs on a trusted global platform..* [Online]  
 Available at: <https://ico.indiegogo.com/>

InfoDev, 2013. *Crowdfunding's Potential for the Developing World*.

JustGiving Ltd, 2018. [www.justgiving.com](http://www.justgiving.com).

Kirby & Worner, 2014. *CrowdFunding: An Infant Industry Growing Fast*.

KPMG; University of Cambridge, Centre for Alternative Finance, 2016. *Global insights from Regional Alternative Finance Studies*.

Launcht, 2018. <http://www.launcht.com/>.

Llewellyn, Autio & Gann, 2014. Architectural leverage: putting platforms in context`. *The Academy of Management Perspectives*, pp. Vol. 28, No. 2, 198–219..

Martin & Osberg, 2015. *Getting Beyond Better: How Social Entrepreneurship Works*.

Mashable UK, 2011. Top 12 Online Fundraising Platforms for Donors & Non-Profit.

Menard, C., 1995. Markets as institutions versus organizations as markets? Disentangling some fundamental concepts. *Journal of Economic Behavior & Organization*, 28(2), pp. 161-182 .

Mengersen, Mengersen, Bennett & Lorraine, 2014. Viewing systematic reviews and meta-analysis in social research through different lenses. *SpringerPlus*, Issue 3. 511. 10.1186/2193-1801-3-511.

Money Saving Expert, 2018. Top charity giving sites.

National Philanthropic Trust, 2016. Charitable Giving Statistics.

Nature international journal of science, 2018. *The costs of climate inaction*. [Online] Available at: <https://www.nature.com/articles/d41586-018-06827-x>

Nesta, 2016. 9 crowdfunding platforms for charities, community groups and social entrepreneurs.

Nesta, 2016. How find right crowdfunding platform your good cause.

Normann, R. & Ramirez, R., 1994. *Designing Interactive Strategy: From Value Chain to Value Constellation*. s.l.:John Wiley & Sons.

O'Reilly, C. & Tushman, M., 2016. *Lead and disrupt : how to solve the innovator's dilemm*, Stanford: Stanford Business Books .

Osterwalder & Pigneur, 2010. *Business model generation : a handbook for visionaries, game changers, and challengers*. Hoboken, New Jersey: Wiley.

Oxford SAID Business School, 2017. TMO Framework for the analysis of Innovation Strategies.

Philanthropy Australia', 2015. Fast facts and statistics on giving in Australia.

Porter, M., 2007. Understanding industry structure. *Harvard Business School*.

Rittel & Webber, 1973. Dilemmas in a General Theory of Planning. *Policy Sciences*.

Roth, A., 2015. *Who gets what - and why : the hidden world of matchmaking and market design*. London: William Collins.

Schwab & Davis, 2018. *Shaping the Future of the Fourth Industrial Revolution*. s.l.:s.n.

Seidel, V., 2017. *Organizing for innovation*, s.l.: SAID Business School.

SpaceHive, 2018. SpaceHive.

The Balance, 2017. 5 of the Best Crowdfunding Sites for Charitable Giving.

The Medium , 2016. Top 10 Crowdfunding Sites For Fundraising.

UK Business Insider, 2018. UK Business Insider.

UNDP, 2017. *Impact investment to close the SDG funding gap*.

UNDP, 2018. DigitalGood.

United Nations Development Programme, 2015. Innovation for 2030, 2015 YEAR IN REVIEW.

United Nations Development Programme, 2018. Financing for development: the global context. pp. 113-116.

United Nations, 2015. *Transforming our world: the 2030 Agenda for Sustainable Development*. [Online].

United Nations, 2016. The Sustainable Development Agenda.

University of Basel, 2016. Philanthropy in Numbers.

University of Cambridge, Centre for Alternative Finance; Energy for Impact, 2017. *The Africa and Middle-East Alternative Finance benchmarking report*.

University of Cambridge, Centre for Alternative Finance; KMPG; CME Group Foundation, 2016. *Sustaining momentum: the 2nd european alternative finance report*.

University of Cambridge, Centre for Alternative Finance; The University of Chicago; Chicago Booth Business School, 2017. *The Americas Alternative Finance Industry Report*.

University of Cambridge, Centre for Alternative Finance; University, Tshingua; Sydney, University of, 2016. *The Asia-Pacific alternative finance benchmarking report*.

University of Cambridge, Centre for Alternative Finance, 2016-2017. Various studies.

Ventresca, M. & Zhao, M., 2010. Building large-scale technology systems: National electricity grid (excerpted).

Website, C. O., 2018. *CrowdRise*.

Wikipedia, 2018. *The DAO (organization)*. [Online]

Available at: [https://en.wikipedia.org/wiki/The\\_DAO\\_\(organization\)](https://en.wikipedia.org/wiki/The_DAO_(organization))

World Bank, 2018. *Not Educating Girls Costs Countries Trillions of Dollars, Says New World Bank Report*. [Online]

Available at: <https://www.worldbank.org/en/news/press-release/2018/07/11/not-educating-girls-costs-countries-trillions-of-dollars-says-new-world-bank-report>

World Bank, 2018. *This is the global price of gender inequality*. [Online]

Available at: <https://www.weforum.org/agenda/2018/06/the-high-price-of-gender-inequality>

Zuboff, 1985. Automate/informate: The two faces of intelligent technology. *Organizational Dynamics*.

## Annex 3: List of interviews

N	Organization	Interviewee	Date
1	CIVA and Fundit.Buzz Platform	Michael Norton Director at Centre for Innovation in Voluntary Action and founder of Fundit.Buzz	02/06/2018
2	Crowdfunding Professional Association	Scott E. McIntyre President, Board of Directors	01/15/2018
3	European Crowdfunding Network	Francesca Passeri Head of Advocacy	02/06/2018
4	Indiegogo / Generosity	Breanna DiGiammarino Senior Director Social Innovation	01/11/2018
5	UNDP Digital Good	Boaz Paldi Manager, Fundraising and Engagement	01/10/2018
6	United Nations SDG Impact Finance (UNSIF)	Karl Richter Head of Research and Knowledge	02/14/2018
7	United Nations World Food Programme	Massimiliano Cota Head of ShareTheMeal Initiative	01/26/2018
8	United Nations Development Programme	Benjamin Kumpf Innovation Policy Specialist	02/21/2018
9	UNLTD / GSEN	Peter Ptashko Director of Global Social Entrepreneurship Network	02/05/2018
10	Saïd Business School, University of Oxford	Alex Nicholls Professor of Social Entrepreneurship	01/29/2018
11	Saïd Business School, University of Oxford	Kamila Nigmatulina Doctoral candidate	02/13/2018
12	Saïd Business School, University of Oxford	Clarissa Hauptmann Postdoctoral Researcher	02/06/2018
13	Skoll Foundation	Lindsey Fishleder Senior Program Manager, Global Partnerships	01/26/2018
14	Social Enterprise UK	Liz Minns Head of Membership	01/22/2018
15	Skoll Centre for Social Entrepreneurship	Julian Cottee Programme Manager for Research and Insights	01/22/2018

## Annex 4: Technology applications used by all 3 platforms

<b>ANALYTICS AND DATA SCIENCE</b>
<b>Google Analytics</b>
Google Analytics is a free service that generates detailed statistics about the visitors to a website.
<b>Mixpanel</b>
Mixpanel is an analytics platform for the mobile and web, supporting businesses to study consumer behaviour.
<b>Optimizely</b>
Optimizely is the world's leading experimentation platform, enabling businesses to deliver continuous experimentation and personalization.
<b>DEVELOPER</b>
<b>AngularJS</b>
AngularJS is an open-source web application framework mainly maintained by Google and by a community of individual developers
<b>Adobe Flash</b>
Cross-platform plugin plays animations, videos and sound files in .SWF format.
<b>Google Maps</b>
Google Maps provides the world's most popular map data through an API to help companies give their users a better user experience.
<b>HTML5</b>
HTML5 is a mark-up language used for structuring and presenting content on the World Wide Web.
<b>Modernizr</b>
Modernizr is a JavaScript library which is designed to detect HTML5 and CSS3 features in various browsers.
<b>Google Cloud Messaging</b>
Google Cloud Messaging is a service that enables developers to send data from servers to both Android applications or Chrome apps.
<b>jQuery</b>
jQuery is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML
<b>PRODUCT AND DESIGN</b>
<b>Google Fonts</b>
Free, open-source fonts optimized for the web.
<b>PRODUCTIVITY AND OPERATIONS</b>
<b>G Suite (formerly Google Apps for Work)</b>
Google Apps for Work gives team members professional email services along with online storage, shared calendars, video and more.
<b>DEVOPS AND IT</b>
<b>Facebook Comments</b>
Facebook comments plugin lets people comment on content on the site using their Facebook account.
<b>Amazon EC2</b>
Amazon Elastic Compute Cloud is a web service that provides resizable compute capacity in the cloud.
<b>Amazon Route 53</b>
Amazon Route 53 is a highly available and scalable DNS web service.
<b>DigiCert</b>
DigiCert provides high-assurance SSL certificates to government agencies, financial institutions, educational and medical institutions.
<b>New Relic</b>
New Relic is a SaaS-based software analytics platform offering app performance management and mobile monitoring solutions.
<b>reCAPTCHA</b>
reCAPTCHA is a CAPTCHA-like system designed by Google to establish that a computer user is human.
<b>Nginx</b>
Nginx is a free, open-source, high-performance HTTP server and reverse proxy, as well as an IMAP/POP3 proxy server.
<b>MARKETING</b>
<b>Google Tag Manager</b>
Google Tag Manager helps marketers control the end-to-end process of adding website tags.
<b>Google Sign-In</b>
Google Sign-In is a secure authentication system that enables users to sign in with their Google accounts.
<b>LinkedIn Ads</b>
Targeted advertising on LinkedIn
<b>Google AdMob</b>
AdMob is a mobile advertising network that helps app developers monetize and promote their mobile and tablet apps with ads.
<b>CUSTOMER SUPPORT AND SUCCESS</b>
<b>Zendesk</b>
Zendesk provides a SaaS suite that offers help desk ticketing, issue tracking, and customer service support.
<b>FINANCE AND ACCOUNTING</b>
<b>Google Wallet</b>
Google Wallet is a mobile payment system.
<b>WePay</b>
WePay helps platforms like marketplaces, crowdfunding sites & small business software seamlessly facilitate payments with no fraud loss.
<b>Stripe</b>
Offers set of unified APIs and tools that enable businesses to accept and manage online payments.

Source: Siftary.co