

DOI: 10.1111/isj.12353

SPECIAL ISSUE PAPER**WILEY**

Digital identity as a platform for improving refugee management

Shirin Madon^{1,2}  | Emrys Schoemaker^{3,4} ¹Department of Management, London School of Economics & Political Science, London, UK²Department of International Development, London School of Economics & Political Science, London, UK³Caribou Digital, London, UK⁴Visiting Fellow, London School of Economics and Political Science, London, UK**Correspondence**

Shirin Madon, Department of Management,
Department of International Development,
London School of Economics & Political
Science, London, UK.
Email: s.madon@lse.ac.uk

Abstract

Digital platforms are restructuring how many companies and industries function, including humanitarian organisations that operate in complex environments and serve vulnerable populations. To date, however, there has been limited study of their use in humanitarian and particularly refugee contexts. This paper seeks to address this gap by drawing on the concept of platformisation to study the opportunities and challenges arising from UNHCR's transition from a closed transactional system to an open innovation platform focusing on core processes of identification, value creation and platform governance that are relevant for refugee management and protection. Our empirical study captures the perspectives of the UNHCR, organisational stakeholders and refugees in the world's largest refugee camp in Northern Uganda with regards to UNHCR's strategy towards platform openness. We find that UNHCR's data transformation strategy introduces the potential for increasing institutional value in the form of more effective service delivery to refugees. However, these technological opportunities do not necessarily translate to greater value if they do not mesh with current work practices, incentives and activities of service provider

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2021 The Authors. *Information Systems Journal* published by John Wiley & Sons Ltd.

organisations and refugees. Our study helps identify opportunities to address these constraints, primarily through improving understanding of the emergent governance-related tensions that exist for digital platforms for development and surfacing existing issues of exclusion and vulnerability. We conclude with insights for the broader theorisation of identification platforms and with recommendations for policies and practices that together might help realise the potential value creation introduced through the platformisation of identification systems.

KEYWORDS

Bidi Bidi camp, digital identity, governance, platformisation, refugees, value creation

1 | INTRODUCTION

Digital platforms increasingly structure our world, often in unnoticed ways and with far reaching consequences. In recent years, a significant amount of research has focused on how platforms generate value for different players with a core debate about whether private gain through personalised services clashes with broader societal value (Van Dijk et al., 2018). The concept of platformisation as a process by which a closed system is turned into an open platform has emerged as a useful lens to study the emergence and evolution of digital platforms. In the commercial sector, while platformisation may promote trust, transparency and cooperation among actors, too much platform openness can decrease its consistency and quality as the goals and ambitions of different actors may not align with the platform owner's strategy and affect the generation of business value (Huber et al., 2017; Majchrzak & Malhotra, 2016). Although an emergent strand of literature, platformisation has also been found to be a useful lens to study the particular characteristics of governmental platforms which aim to generate value to society by encouraging citizen involvement in democratic processes whilst adhering to government regulations and structures (Dahl-Jorgensen & Parmiggiani, 2020). This paper aims to contribute to this nascent strand of literature focusing on inter-governmental organisations that are established to address issues of common interest using the case of the UNHCR, a UN agency mandated by law to protect refugees globally.

As the demands for UNHCR's services have grown, the organisation has been exploring transforming its information systems into digital identity platforms for tasks such as registration and service delivery driven by the need to support its existing operations and improve accountability to donors and refugees (Jacobsen & Sandvik, 2018). Built on its earlier legacy systems, UNHCR's current global digital platform called PRIMES (Population Registration and Identity Management Ecosystem) was introduced in 2018 as part of its wider data transformation strategy stating that it believes it will help improve the collection and analysis of refugee data and thereby offer better protection and assistance to refugees.¹ At present, PRIMES can be described as a closed loop platform, as it is populated only with data drawn from UNHCR's own registration processes as well as from its partner organisations at field level. Access to and use of this data is limited to UNHCR and its partner organisations who deliver services on its behalf, while access outside this humanitarian ecosystem by third-party organisations and stakeholders is limited, including for refugees or asylum seekers themselves. Currently, UNHCR is in the planning stage of opening its identification platform with a view to improving how it manages and protects refugee populations by offering a range of new services to refugees such as mobile, internet and financial services outside the UNHCR and humanitarian ecosystem

(UNHCR, 2018a, 2018b, 2019). There are two possibilities for the shape of this platformisation for UNHCR – an open platform *within the closed loop humanitarian ecosystem* that enables more actors to interact through UNHCR's systems, or to open up PRIMES beyond its current closed loop nature by inviting third party players *outside the UNHCR and humanitarian ecosystem access to PRIMES by relying on UNHCR's credentials to provide services to refugees* such as mobile, internet and financial services (UNHCR, 2018a, 2018b, 2019). While the theoretical separation between closed and open platforms is useful for analytical purposes, in reality the platformisation process reflects a continuum with so far little understanding of its drivers and outcome possibilities.

Our paper responds to the call for improving understanding of digital platforms where the main purpose is not to make profit but for development and to improve the life chances of vulnerable populations (Bonina et al., 2021). As UNHCR transitions from a closed system to an open platform, the need to strengthen theoretical understanding of platformisation for improving refugee management drives our research question: How can we characterise the process of platformisation as it applies to refugee management systems? We study the process of platformisation as a move from a closed, transaction-based system to an open architecture which enables organisations from outside the humanitarian eco-system to provide services to refugees. Drawing on the refugee management literature, we identify three key issues which are implicated by this process, (a) how refugees are identified; (b) how value is created for different stakeholders and (c) how governance of the platform is orchestrated. Our case study is undertaken in Bidi Bidi camp, Uganda which provides an opportunity to investigate the interplay between these three sub-processes as the PRIMES platform meshes with evolving work practices, priorities and perceptions among refugees, partner organisations and third-party service providers. Our findings hold important practical implications for UNHCR's currently evolving data transformation strategy as well as more broadly for understanding the opportunities and challenges for humanitarian organisations embarking on similar digital innovation strategies and for theorising of digital platforms for development.

2 | DIGITAL PLATFORMS FOR REFUGEE MANAGEMENT: IDENTIFICATION, VALUE CREATION AND GOVERNANCE

UNHCR is exploring different models of platforms for its approach to identification management, each characterised by different degrees and forms of openness. We draw on two models of platformisation from the information systems literature to explore their implications for creating value, namely transaction and innovation platforms (Bonina et al., 2021). Transaction platforms facilitate exchanges between different organisations, entities and individuals, and development context examples include identification systems such as Aadhaar² which streamlines the process of social assistance programming from the government to eligible beneficiaries. Innovation platforms establish foundations upon which other organisations can build complementary products, services or technologies (Gawer, 2009). While transaction platforms can enable innovation, it is the variety of functionality or data and interfaces that allows 'different types of innovation' (Bonina et al., 2021). We use these two categories of systems to describe UNHCR's approach to identification and to explore its implications for development.

The move towards an open platform for UNHCR's processes of refugee management introduces costs and benefits for different stakeholders which we discuss by drawing on ideas from the literature related to the three concepts of identification, value creation and governance. First, we draw on the concept of identification because the way refugees are identified has a huge bearing on their experience as they engage with the organisations and systems that provide response and support, as well as the protection they receive following persecution. Second, the way identification processes are managed determines the value that identifying and identified parties are able to realise, with more open processes introducing new value creation opportunities but also new challenges and risks. Third, the concept of governance helps us engage with the challenges introduced as the transition to an open platform changes the relationships between the identifier, the identified and the parties that rely on these processes, as well as the diverse and sometimes conflicting objectives and values that drive these different stakeholders.

2.1 | Identification

The terms identity, identification and categorisation describe distinct yet interrelated phenomena, although as Whitley et al. (2014) argue, the distinction between the technological issues of *identification* and the social issues of organisational and personal *identity* is 'arbitrary and increasingly unhelpful for studying contemporary practice'. We understand identity as practice-based, relational and therefore dynamic (Weick, 1995). As Weick puts it, 'identities are constituted out of the process of interaction. To shift among interactions is to shift among definitions of the self' illustrating how identity is always emergent from the parties to each interaction. This relational nature of identity is thus inherently linked to the concept of identification, as identity is always established by multiple parties – the identifier, identified and parties relying on this identification and is always an active process, one through which agreed categories and labels are applied. Jenkins (2000) describes this interplay as an internal-external dialectic between self-perception and external categorisation, a process characterised by relations of power and control.

While categorisation and labelling by external actors are acknowledged to be a necessary part of public policy-making (Gandy, 2001), those with limited agency such as refugees struggle to participate in how institutions categorise them and therefore lack access to and influence over decisions that affect their lives (Jacobsen & Sandvik, 2018; Zetter, 1991). There is a long discourse in information systems on the politics of how categories are selected and how they become embedded into working infrastructure and are subsequently black-boxed into invisibility (Bowker & Star, 1999). In the context of developing countries, Thompson (2004) demonstrates how certain classifications, ordering and constructions of 'development' embodied in the design and implementation of information technology have served to reinforce a particular western-centric worldview of modernisation and progress. At the same time, evidence shows how any given classification systems imposed top-down will fail to capture the nuances and variety of local context. For example, a study of the medical profession by Timmermans and Berg (2003) shows how a 'technologies-in-practice' lens can shed light on categories that have been largely ignored by the medical profession, but which are nonetheless relevant at operational level. In the context of refugees, Porter et al. (2008) note in their study of Liberian camp-based refugees in Ghana that often work opportunities for refugees depend not only on categories related to domain and language skills but also on diaspora linkages and innovative livelihood strategies of the individuals concerned. The focus on categorisation and its implications are particularly severe for refugees as various legal, bureaucratic and social labels are imposed on these individuals by different institutional actors. In their study of Syrian refugees in Lebanon, Janmyr and Mourad (2018) show how labels imposed by institutional actors such as humanitarian organisations, state and local government agencies are used to enforce or reproduce modes of ordering that affect how an individual is understood by others in the community and his or her rights and protections. The authors show how categorisation does not occur in silos but rather that membership of a refugee in one arena such as employment may create an opportunity or constraint for his or her membership in another arena such as housing. Moreover, categories imposed in one organisation tend to have isomorphic influences on other organisations in the sector, sometimes leading to a blurring of categories which may influence the life chances of a refugee.

The discussion above suggests the need to ensure that the voices of classifiers and their constituents remain active and integrated in such a way as to allow the system to be flexible and relevant in the light of changing contextual circumstances. In theory, the very essence of an open multi-sided platform provides scope for the making and remaking of categories through negotiation that takes place between parties when one side wants one type of classification and another wants something else. In an insightful analysis of *PatientsLikeMe*, a well-known digital platform owned by a health and well-being company, Tempini (2015) shows how the use of social media by patients allows the organisation to construct a data structure of medical categories for research. On one side of the platform, patients discuss their ailments and contextual circumstances using their own definitions and categories, while on the other side medical and drug companies want to use the data for providing treatment according to their medical representations. Tempini describes how the open platform evolved by relating contextual data through patients' use of the social media platform to data structures of categories and classification in a way that made sense for both patients and the organisation. However, while mediation between different sides of an open platform in terms of

categories may work when each side has something to gain by cooperating with the other to co-create value, this may not hold true when the balance of power is skewed against one side such as in the case of refugees.

2.2 | Value creation

In recent years, there has been interest in understanding how open and collaborative digital platforms implemented at national, state and local government levels can deliver public value to citizens (Cordella et al., 2018; Yotawut, 2018). The public value approach (Moore, 1995) signals a shift away from a singular focus on 'value' in terms of results and efficiency in government towards a broader goal of matching citizen demand for services such as transportation, healthcare and education provided by a mix of state, entrepreneurial and civil society organisations. As many governments around the world are pursuing open data policies, private organisations are seen to reap economic value by providing data-rich services using new techniques such as artificial intelligence (Scott, 2014). With the prevalence of third-party involvement in the implementation of digital platforms, some scholars have called for a deeper analysis of the public value concept in terms of the societal and ethical implications of the technology to protect citizens against potential misuse of data and to maintain equity in welfare outcomes across different sections of the community (Cordella & Paletti, 2019).

Digital infrastructures are playing an increasingly prominent role in the lives of the growing number of refugees on the move around the world. Refugees frequently rely on mobile communication technologies to stay in touch with each other using digital messenger applications and to access a range of free geo-location-based apps that connect refugees with services in the vicinity (Kaufmann, 2018). At local government level, collaborative information platforms are beginning to play a prominent role in the lives of the growing numbers of refugees who have fled from persecution and social conflict and on arrival in the host country typically lack basic information about how to process an asylum application, and obtain basic services such as medical care, education, employment and housing. In many cases, municipalities, NGOs and local enterprises in the host country work together to coordinate much-needed information about immediate service provision which can be accessed by refugees via smartphone (Schreieck et al., 2017).

At a macro policy level, digital platforms have recently been introduced by large humanitarian organisations at inter-governmental level as part of their strategy to improve the way refugees are managed and assisted. A key ongoing organisational challenge for refugee management systems has been to put in place an efficient mechanism that can be used by partner organisations and third-party actors working on the ground for exchanging information in order to provide services to refugees (Sanchez-Monedero, 2018). However, while increasing the capacity to transfer and process refugee data is important, it has been argued that the drive to achieve interoperability must not be an exclusively top-down effort driven by organisational imperatives but should also pay attention to refugee needs and to ensure they have control over their data (Caribou Digital, 2018). A second key challenge for humanitarian organisations has been to ensure that all new innovations are creating 'value' in terms of listening to the voice of affected populations as embodied in the principle of 'accountability to affected populations'³ and increasingly attempted through the use of digital technologies that enable individuals to share their views and experiences with each other and with service delivery organisations by mobile phone (Madianou et al., 2016). To create value for refugees, refugee management systems need to put in place governance mechanisms for listening to and incorporating the views and experiences of affected populations through appropriate channels dedicated to supporting their mission to protect refugees and thereby create value for society at large (Hakli et al., 2017; Kallio et al., 2019).

2.3 | Governance

Online infrastructures and digital platforms constitute important governance mechanisms in contemporary society as their internal dynamics mediate relationships between various parties. As Gorwa (2019) notes, digital platforms interact with social structures by virtue of their design but at the same time they are subject to scrutiny by a range of

actors in the policy and regulatory environment. In the public sphere, platform owners play a central role in establishing governance mechanisms to facilitate congruence between different ideologies that are implicated in the co-creation of value, for example balancing market-driven objectives versus social priorities (Avgerou & Bonina, 2019). As digital platforms for refugee management become more open, rules need to be in place that ensure data use is congruent with organisational and individual interests. The European General Data Protection Regulation (EU GDPR, 2016) outlines how the adoption of technical and governance standards is essential to establish best practices and optimal systems security, data privacy and data protection. This is not always easy to implement as a study of European small and medium enterprises found where a very limited level of awareness or compliance existed (Freitas & da Silva, 2018).

In the humanitarian sector, there are significant challenges to data protection, with incidents such as WFP's data breach highlighting how even well-funded systems can become compromised (IRIN, 2018). The collection of biometric refugee data introduces new data protection needs with migration management and anti-terrorism measures frequently conflicting with human rights protection for refugees, particularly as these individuals typically find themselves in countries where data protection legislation is lacking (Jacobsen, 2015; Kingston, 2018). Hence, opening the platform too soon may lead to an unfair balance of power between refugees who are being identified and organisations who set the way categories are decided upon for the provision of services to these individuals. A fully open platform through which refugees can use their agency to self-serve their requirements may also fail to recognise the persistence of structural challenges facing certain groups of refugees. For example, in Jordan's Zaatari camp despite the promotion of mobile financial services and entrepreneurship women form just 4% of refugee-led market activity as social reasons prevent them from actively seeking services such as microcredit (Pasha, 2019).

Given this reality, while digital platforms may serve as a tool for more efficient management of refugees, this objective may deflect attention away from more durable, non-technology solutions to alleviate suffering of these individuals (Matias, 2017). The governance of digital platforms for identification in the refugee context is therefore characterised by a tension between the goal of enabling innovation, particularly through increased openness of systems and technology, and of the necessary control over the same systems and technology, for example, to maintain standards and adhere to existing policy commitments (DuBois, 2018). Insights from other fields are informative, such as the study of open government data, which has also engaged with the tensions between opening access to data and the resulting impact and implications. Our review notes that the literature has recognised these are not just technical issues, but 'also involve questions of data governance with political choices embedded in the use of standards and structures, having substantial implications for who can use and benefit from data' (Davies et al., 2019).

In this section, we have discussed platform models and the relevance of the three concepts of identification, value creation and platform governance. Figure 1 below illustrates how the concepts are related.

The diagram above represents the transition that takes place from a closed loop transaction platform as depicted by the triangle with solid lines to an open innovation platform denoted by the triangle with dashed lines. Our review of the literature suggests that the move from a closed, transactional to an open, innovation platform has varying implications in terms of value generation. Opening up the identification platform within the ecosystem can increase existing value in terms of more efficient refugee management while opening the platform beyond the ecosystem introduces the possibility of creating new forms of value to individual refugees, existing humanitarian service providing organisations and third-party organisations. At the same time, opening the identification platform both within and beyond the humanitarian ecosystem introduces new challenges related to the formation of identification categories to ensure that this process implicates both identifier organisations and identified refugees. As a result, governance mechanisms are needed to protect refugees against the risk of unfair exploitation by market providers and to ensure that the identification platform reflects the changing priorities experienced by refugees. In the rest of the paper, this conceptual framing will be used to present and analyse the voices of identifiers, third-party service providers⁴ and identified refugees in order to support further theoretical understanding of the move from a closed to an open identification platform. Following a description of our methodology, our empirical section describes how the PRIMES platform meshes with work practices, priorities and perceptions of (a) the UNHCR as it pursues its global

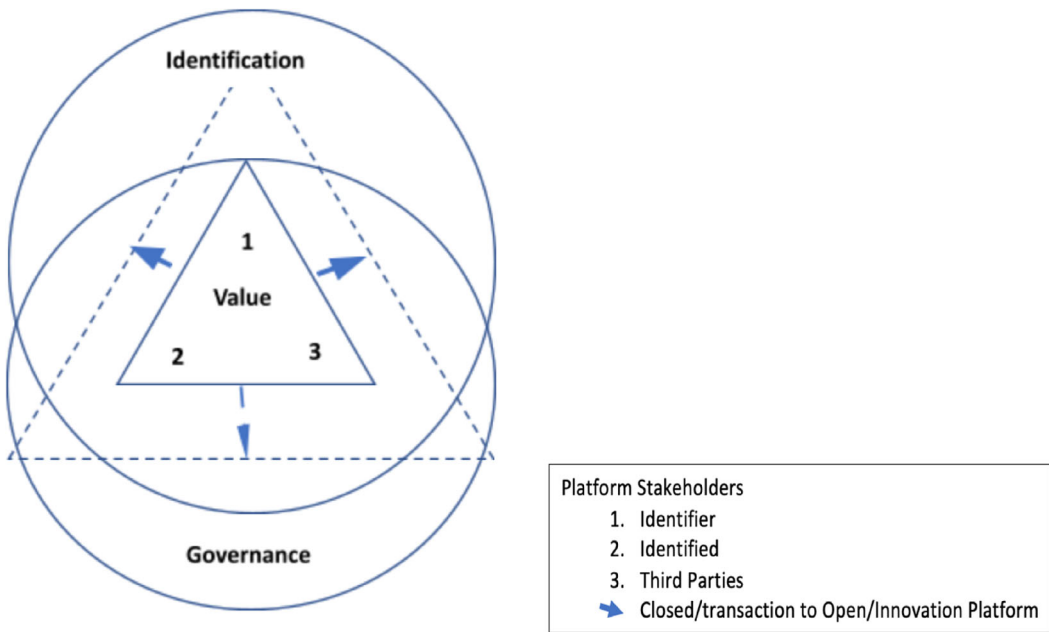


FIGURE 1 Conceptualising Digital Identity Platforms for Refugee Management [Colour figure can be viewed at wileyonlinelibrary.com]

open platform strategy; (b) partner organisations and market providers who provide services to refugees and (c) refugees who flee from persecution from South Sudan and arrive in Bidi Bidi camp, Uganda.

3 | METHODOLOGY

We adopted a qualitative research approach for its value in building theory on digital platforms for refugee management by exploring perceptions held by individual refugees as well as the stakeholder organisations in their particular social and institutional context (Myers & Avison, 2002). We chose a case study approach for its value in exploring complex social issues related to information system development and use (Walsham, 1995). Interviews were conducted with different stakeholders about their strategies, work practices and activities to augment understanding of whether and how the transition of PRIMES to an open platform can improve the system of refugee management.

Primary data on UNHCR's data transformation strategy was obtained through interviews with UNHCR staff involved in the organisation's Digital Identity Strategy Review. Interviews and focus group discussions were also held with partner organisations and refugees by a team of researchers from Caribou Digital which included one of the authors during a 5-month period between January to May 2018 while primary data from third-party service providers was obtained through telephone interviews held in August 2020. While Caribou Digital conducted a wider study of refugee registration and identification in Lebanon, Jordan and Uganda, in this paper we draw exclusively on data from Uganda where the government, through its Office of the Prime Minister (OPM)⁵ has taken the lead in the registration and management of refugees (OPM, 2018).

In February 2018, there were over 1.4 million refugees and asylum seekers in Uganda, 21% of which were located in Bidi Bidi camp, Yumbe in northwestern Uganda where we based our study (UNHCR, 2018a). One of the largest refugee camps in the world covering 250 square kilometres divided into several zones, Bidi Bidi is operated by UNHCR along with 30 partner organisations. By early 2017, more than 270 000 South Sudanese refugees had fled the civil war which had commenced in their country in 2013 and arrived in Bidi Bidi camp. The recruitment of

participant refugees for the study took place through a combination of invitations sent out by partner organisations, personal networks and snowball sampling. Save The Children, an international NGO, provided logistical and initial recruitment support inviting beneficiaries to participate in our study. We also drew on our research assistants' personal networks to access community-based organisations active in supporting refugees within the vicinity of the refugee camp. Tables 1 and 2 provide details of interviews held with service provider organisations and refugees/local community members respectively in the order they first appear in the paper.

Our case description consists of a narrative that is interspersed with quotations from key informants in UNHCR, service provider organisations and refugees. We adopted a within-case analysis approach to enable the many details present in the narrative to emerge and be interpreted by the reader guided by the study's theoretical framing (Eisenhardt & Graebner, 2007).

We followed a thematic analysis approach to guide the coding process. At the first stage of data analysis, the narratives of the UNHCR, service organisations and refugees were used to identify issues related to the three concepts of identification, value creation and governance. A second stage of analysis involved a deeper engagement with each of these three core concepts looking at the data to identify sub-categories which reflected the practices and conflicting interests that platforms have brought to existing social structures. Table 3 provides examples of sub-categories that were identified through the narratives of the different stakeholders.

IRB ethical clearance guidelines were adhered to in our study which involves people who have been forcibly displaced and carries some risk of increased exposure to cause harm to individuals who are legally and physically

TABLE 1 Details of interviews with service provider organisations working in Bidi Bidi camp

Organisation	Official interviewed
STC Uganda	Humanitarian Adviser
STC Uganda	Senior Officer, Education
WVI	Senior Director
Mercy Corps	Consortium Programme Manager
Oxfam	Digital Registration and Programme Data Specialist
STC	Operations Adviser
ACF	Deputy Country Director
Mobile Network Operators' Trade Industry Body	Director
GSMA	Representative
Mastercard	Representative

Respondent(s)	Type of interview
Male Dinka refugees	FGD
Male and female refugees	FGD
Female refugees	FGD
Female Dinka Zone 1 refugee	Individual
Dinka refugee woman 1	Individual
Dinka refugee woman 2	FGD
Male refugees Zone 1	FDG
Female refugee students	FGD
Dinka refugee woman 4	Individual
Host community man and woman	Individual

TABLE 2 Details of interviews with refugees/local community members

TABLE 3 Examples of sub-categories identified through stakeholder narratives

Stakeholder	Sub-categories
UNHCR	Refugee agency; interoperability; new services; standards; reputation; credentials
Service organisations	Data privacy and protection; interoperability; refugee agency, legal and regulatory frameworks; cash transfers; trust
Refugees	Social identity; domestic violence; ration; lack of documentation; cash transfer; barter

vulnerable. To minimise risk, we obtained institutional permissions from the Ugandan Office of the Prime Minister and Save the Children. In order to mitigate against respondent bias when reporting on the conduct of the recruiting or partner organisation and to maintain privacy, most interviews and focus groups were conducted in private without the presence of these organisations. We provided written and oral explanations of the research to respondents in both English and Arabic emphasising that they were under no obligation to participate and could withdraw at any time without any consequence. This was particularly important for those respondents recruited through service providing partner organisations. We maintained respondent confidentiality and anonymity throughout the study by using pseudonyms and numbered references in the transcription, coding and analysis process.

4 | CASE STUDY: UNHCR PRIMES PLATFORM AND ITS USAGE WITHIN BIDI BIDI CAMP

Our case study is presented in three parts, each part containing narrative and analysis. Section A seeks to understand UNHCR's global data transformation strategy which affects the management of refugees across the world. Section B presents perspectives of organisations involved in delivering services to refugees within Bidi Bidi camp which include UNHCR partner organisations and market providers. Section C presents refugee perspectives during their journey from the time of fleeing their home to their arrival in the camp and integration within the host community.

4.1 | UNHCR's evolving approach to identification

Over the years, UNHCR has placed increasing emphasis on digital identification to support its goal of protecting people of concerns such as refugees, asylum seekers, IDPs,⁶ returnees and stateless persons. In October 2017, the UNHCR High Commissioner announced that he would like every refugee to have a unique digital identity claiming that while nearly one third of the world's 25.9 million refugees were registered with UNHCR, the remaining two-thirds were not and were excluded from the services offered to those with trusted identification credentials. A significant proportion of the eight million individuals registered with UNHCR are actually under host state registration but using UNHCR systems and the prospects of obtaining a formal state credential necessary for accessing so many public and private services depends on the remote possibility of shifts in state policy.

UNHCR's current global identification infrastructure is built on legacy systems developed by field operations with the first digital identification management system introduced in the aftermath of the 1999 Kosovo crisis. UNHCR built on these initiatives by establishing PRIMES in order to improve its system of refugee management and thereby offer better protection and assistance to refugees.⁷ PRIMES integrates systems that record foundational data of refugees such as names and date of birth with systems that record biometric imprints. At present, PRIMES can be described as a closed loop platform as it is populated only with data drawn from UNHCR's registration processes as well as from its partner organisations at field level. Access to and use of this data is limited to UNHCR and its partner organisations who deliver services on its behalf while access outside this humanitarian ecosystem by third

UNHCR PRIMES (Population Registration and Identity Management EcoSystem)

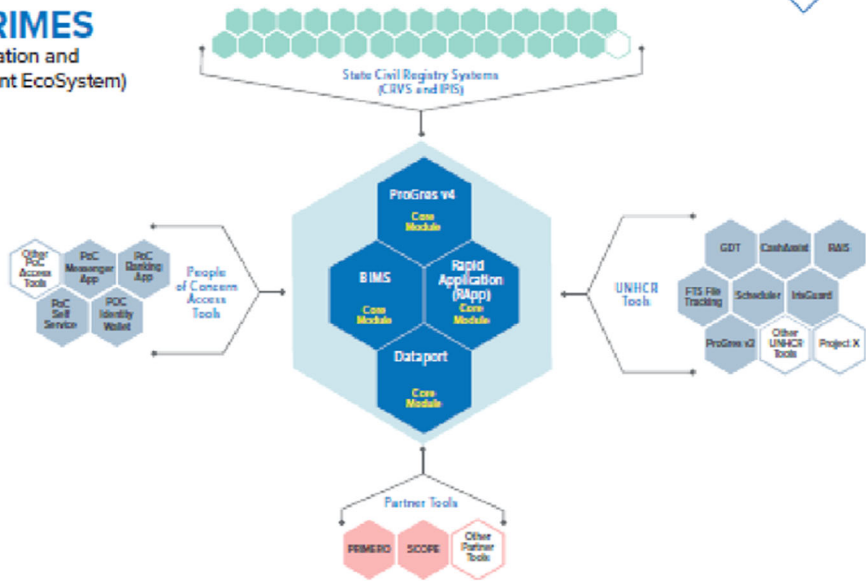


FIGURE 2 UNHCR PRIMES digital platform.

Source: UNHCR 2018 <https://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/03/2018-03-16-PRIMES-Flyer.pdf> [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

party organisations and stakeholders is limited, including for refugees or asylum seekers themselves. In the majority of cases, the refugee data from partner organisations, many of whom manage this data using basic technologies such as spreadsheets and google sheets, is e-mailed to UNHCR and input into PRIMES. Currently, UNHCR is in the planning stage of opening its identification platform with a view to improving how it manages and protects refugee populations. As Figure 2 illustrates, as of 2018 there are a suite of applications in development or proposed for use within UNHCR, by partner organisations and by refugees.

As UNHCR plans this transformation of PRIMES there are different approaches to identification management emerging. One approach increases the range of services and transactions that UNHCR offers its populations of concern⁸ and partners within the humanitarian ecosystem, for example, implementing plans to develop a bespoke internal messaging application for refugees as communications services are particularly valued by refugees, and introducing new tools which would enable refugees to manage the data held in PRIMES related to their identification.

An alternative direction suggests a move in which UNHCR's transformation to an open platform would enable refugees to access services such as mobile, internet and financial services outside the UNHCR and humanitarian ecosystem (UNHCR, 2018a, 2018b, 2019) as well as facilitate the innovation of new services enabled by UNHCR's identification platform. This direction is evident, for example, in the request for proposals the UNHCR issued in 2019 to develop a self-managed digital wallet for use by refugees themselves. This proposal would allow refugees to store a variety of different forms of identification such as education credentials, biometric registration, individual ID documentation, attestation card⁹ and already-existing authenticated paper documents that have been digitised and uploaded. Importantly, UNHCR would enable apostille¹⁰ services to certify refugee credentials so that other parties could recognise and trust the authenticity of these documents when presented by refugees. Another example is the organisation's engagement with intergovernmental standard-setting bodies to ensure that refugees' identification credentials are recognised by mainstream market service providers outside the humanitarian ecosystem.

Transforming UNHCR's identification service to an open platform issuing credentials trusted by key service providers would enable refugees to more easily access services within the humanitarian ecosystem without needing to re-register with each service provider organisation on behalf of UNHCR. UNHCR's data transformation strategy also envisions an open platform that would be outward facing in terms of helping to strengthen national records – for example, on resettlement cases, and helping host governments to build national identity systems. However, it is also recognised within UNHCR that these possibilities would require substantial system and process overhaul to deliver value. For example, for an open platform to function, interoperability between UNHCR, other UN agencies and service provider organisations requires that strategies are in place so that data are standardised and categorised in the same way to enable each organisation's system to 'read' and 'understand' the data of other organisations.

At the time of writing, UNHCR was actively developing its approach to opening its digital identification platform, recruiting additional staff to support the Registration and Identity Management Team. As one advocate of the move towards an open platform-based approach within UNHCR put it, "Instead of relying on UNHCR to be custodian and gatekeeper they [refugees] should be able to use their data to access external services such as obtaining a SIM card, bank account, visa, etc". The objective of empowering refugees through their engagement with the platform was articulated by UNHCR in 2018 when its Division of Programme Support and Management developed a Digital Identity and Inclusion Strategy with the ambition that, "Individuals will be able to request UNHCR to certify their identity. Such a certified individual identity will be portable and valid across borders and can be used and shared in a self-determined way by each user".

The move to transform UNHCR's closed identity ecosystem to an enabling platform is part of UNHCR's broader 2019 Data Strategy, which calls for 'new frameworks that facilitate the flow and use of data while also ensuring the right to privacy and data protection'. This data-driven approach is assumed to strengthen the organisation's ability to deliver value in a changing context of displacement, particularly the commitment it has made in the global compact on refugees (GCR)¹¹ to increase access to public and private sector services such as access to online work or education, cash-based interventions and mobile connectivity. UNHCR has taken the position that meeting the aspirations of the GCR and the changing refugee context will require UNHCR to issue an identity that is compliant with the international standards and regulatory regimes, such as those set out by the International Organization for Standardization (ISO) and the Financial Action Task Force (FATF) – standards that are used to define the identity requirements for accessing public and private services. To do so, UNHCR has engaged with these bodies to advocate for recognition of refugees' special circumstances – advocacy that has so far resulted in the FATF's revised guidelines that include a specific reference to refugees and digital identity.

While currently at an early stage of development, these different UNHCR initiatives describe divergent plans, on the one hand to transform UNHCR's identity systems into a more open platform to enable the iteration and development of new services within UNHCR's existing ecosystem and on the other to transform the PRIMES platform from a closed to an open architecture that enables service provision from outside the humanitarian ecosystem. These two approaches reflect two distinct approaches to identification, one characterised by enabling innovation through opening the platform to enable new services and functionality for refugees, the other maintaining the prevailing transactional, closed approach to identification through PRIMES. On the one hand, the organisation aspires to pursue a strategy of demand-led innovation by opening its platform to stakeholders at the sharp end of service delivery. On the other hand, the imperatives of responding to the magnitude of refugee protection tend to favour defaulting to known and trusted processes, structures, relationships, systems and standards which leaves limited space for innovation. Furthermore, as with any form of transformation, established networks of positions, functions and relationships among UNHCR system managers and with external parties such as vendors are resistant to disruption. A manifestation of this tension is that although the existing PRIMES set of systems has struggled with the scale of demand, there seem to have been limited attempt to establish new innovative approaches to identification management – indeed, the pilot to develop the digital wallet remains on hold.

4.1.1 | Value creation for UNHCR

In the case of UNHCR, platform openness has the potential to create value in the form of efficiency, through delivering a more efficient and streamlined system of refugee management. It also has the potential to consolidate UNHCR's position as an identity provider in the humanitarian sector, at least for refugees. Opening up its identity platform to be trusted beyond the humanitarian sector would further establish UNHCR's authority, essentially positioning UNHCR as an issuer of proxy 'refugee state' citizenship. Beyond UNHCR, the fact that the organisation's systems are often adopted by host states means that open identification platforms based on protection can add value to global humanitarian and development practice, for example, through establishing standards and norms for host state identity systems that comply with the global agenda of providing legal identity and protecting the increasing number of displaced persons. At the same time, within UNHCR there is scepticism about the potential and feasibility of opening up its identification systems and processes so that they are trusted by parties outside the humanitarian system. In other words, there is tension between a limited approach to the platformisation of identification that maintains the existing value of closed loop service provision and an expanded form of platformisation that can increase value by enabling UNHCR credentials to be recognised by parties outside the humanitarian ecosystem, the potential for which is also determined by the governing regulatory environment set by bodies such as FATF.

4.2 | Service organisation perspectives

The processes of registration and identification for service provision involve different practices and priorities for service providing organisations. In Bidi Bidi camp, there were 30 partner organisations and numerous third-party providers working on the ground to provide services to refugees. One of the big drivers of digital identification in the humanitarian sector is the increasing use of cash as a way to provide support, because this requires greater rigour in identification and authentication in order to meet global Know Your Customer / Anti-Money Laundering (KYC/AML) requirements. We explore the perspectives on UNHCR's plans towards platform openness of 8 partner organisations working *within* the humanitarian ecosystem, followed by the perspectives of 2 third-party organisations *outside* the humanitarian ecosystem, for whom greater platform openness may provide new opportunities.

Partner organisations described how the move from in-kind food distribution towards cash transfers was enabled in part by the increasing ubiquity of mobile phones among refugees and a desire to promote refugee self-reliance and participation in local markets. For example, Save The Children (STC) exploits this ubiquity to teach mothers to be market traders issuing them with disbursements via mobile money to buy greens and sell in the market. The broader move towards cash was described by a humanitarian advisor from an international donor in Kampala as being part of trying new technologies and of promoting individual decision making,

“There is a really big push by many agencies such as WFP, ECHO, STC and Mercy Corps to go large on cash, pushing new technologies and trying to enable individuals to choose their own path.”

The way humanitarian organisations provide relief is often linked to the creation of a mobile money account. For example, STC identifies priority 'cash for work' projects such as roads, tree planting and waste management in and around the camp, selects applicants through consultation with refugee and host community leaders and verifies their eligibility for the scheme. When individuals are registered for the scheme STC collects personal data, and registers them for a mobile money account, through which STC distributes cash for the work completed. As the Senior Officer Education of STC described,

“STC then registers these individuals, recording name, family size, attestation ID, national ID, telephone contact recording details on an excel sheet. At the point of registration, STC brings an MTN representative and each participant is signed up to an MTN account and set up with a mobile money account.”

The move towards cash also introduces new risks and challenges, particularly around the protection of the sensitive personal data required by KYC/AML regulations. This is further complicated because as refugee management is a multi-agency system with a number of actors moving towards transforming their own systems into open platforms, there is no comprehensive, sector wide approach to data protection and management. This is particularly the case in terms of individual consent to the increasingly complex systems and ways in which data is used, processed and shared. Although consent is fundamental to the principle of human dignity, resolving the tension between identification and service delivery was recognised to be deeply problematic. As a Senior Director at World Vision International (WVI) commented,

“If you could solve how we get beneficiary consent that would be wonderful. I don't believe there is a thing as informed consent in this sector. I think the power dynamics are too great.”

The processes of registration and identification for service provision involve different practices and priorities for service providing organisations. In Bidi Bidi camp, there were 30 partner organisations and numerous third-party providers working on the ground to provide services to refugees. We explore the perspectives on UNHCR's plans towards platform openness of partner organisations working *within* the humanitarian ecosystem, followed by the perspectives of third-party organisations outside the humanitarian ecosystem, for whom greater platform openness may provide new opportunities.

Within UNHCR's current ecosystem, partner organisations identified challenges in achieving an identity platform that functions in a fluid and seamless manner. For example, the majority of partner organisations indicated that a key operational challenge they faced was related to lack of effective inter-organisational coordination and information-sharing which stands in the way of PRIMES moving towards an open platform. For example, Mercy Corps Uganda are currently involved in supporting refugees in Bidi Bidi camp to become economic agents. During the enrolment process, the agency records various additional identification categories about whether an individual has experience with a particular activity, whether he or she is a phone owner and has social connections. At a later time, further details are added about the individual's experience of participating in the programme but as the Mercy Corps Consortium Programme Manager commented, these categories of data are not always shared between service providers,

“All this information is stored on an excel sheet and although technically we are required to share both beneficiary and activity data, only the latter is shared. People do ask you to share your beneficiary list and data and when they do, you're just like ... well, no'. ‘The only way you would get better data sharing is if it was mandated.’”

While the lack of coordination between service providers may affect the availability of relevant and timely data to support refugees with services, Oxfam's Digital Registration and Programme Data Specialist noted a wider issue related to ensuring that identification categories remained a relevant representation of the changing needs and priorities of refugees,

“There is a minimum data requirement for data on name, age, gender, household. At the next level, head of household, dependents' information, community information such as address/place of origin, core sets of vulnerabilities – some of this should be changeable to remain relevant.”

Partner organisations also felt that refugees do not have a mechanism to express their own changing priorities and the degree to which they are being met. As an STC Operations Advisor noted,

“There has been no systematic inquiry into what refugees want or are concerned about.”

Overall, the lack of coordination and information sharing creates confusion for service organisations which ultimately affects the effectiveness of provision and therefore the value that refugees obtain through the humanitarian effort as communicated to us by the Deputy Country Director of ACF, an agency that works in WASH¹², nutrition and food security and livelihoods,

“Coordination between implementing partners doing activities is ad hoc and hit and miss. It can result in two kinds of approach under a single theme. For example, there might be different rates for cash-for-work programmes, or ACF might be distributing seeds while Mercy Corps takes a more market-based approach to agriculture.”

UNHCR's exploration of opening its identification platform beyond the humanitarian ecosystem represents a more ambitious vision and involves the organisation acting as an issuer of credentials trusted by open market service providing actors to have verified that refugees are who they say they are. The two approaches that have been explored by UNHCR include the provision of a platform to enable apostille services to verify refugee documents, and through obtaining FATF approval of UNHCR-issued credentials such that they can be relied on by open market providers of services outside the humanitarian ecosystem. Both of these approaches would serve to expand the marketplace of services that refugees can access, and we present the perspectives of mobile SIM card and financial service providers, two of the most commonly talked about services.

The Director of the mobile network operators trade industry body's programme for identity and humanitarian services noted that the main barrier to accessing SIM cards so far has been the national legal and regulatory framework,

“Each country has different regulations - in terms of refugees the main omission is that they don't tend to refer to refugees at all, and don't cover the particular contexts of refugees / stateless persons - so they have no legal basis to issue SIM cards. If the Government were to state that UNHCR credentials were sufficient forms of identification on which to base SIM issuance, mobile network operators would be very happy to do so.”

While this was an attractive proposition for the mobile network industry, the primary concern for individual network providers was maintaining a trusted relationship with customers. As the GSMA representative noted,

“While mobile network operators could use and monetise data of refugees, they do not want the liability of having that data misused and their reputation and individuals harmed. This would be bad for business.”

We also spoke with a representative of Mastercard who provides financial services to refugee-serving organisations. When asked to describe the existing identification requirements to access financial services, his reply illustrated how under current arrangements most financial services for refugees existed within a closed ecosystem with KYC and AML requirements meaning that the holder of the bank account where money is paid to refugees is commonly an NGO or UN agency, not the refugees themselves. As he noted,

“The common pre-paid cards used to disburse funds to refugees are generic - they are single use, pre-issued in the name of the NGO or other organisation. This is one of the challenges in making cash transfer a more flexible and reusable instrument - because of KYC and AML laws we can't allow a mechanism for refugees to reload their cards, because from our perspective the cards are given to anonymous individuals, and therefore they can't be used outside the organisation to whom we issue the cards.”

4.2.1 | Value creation for service providers

The move to cash as a method to distribute benefits to refugees introduces value for providing organisation as it reduces logistical and associated transaction costs. The KYC/AML requirements also increase the data they have to gather from their beneficiaries, which is a valuable resource. The wider range of partners that this approach introduces creates opportunities for synergy and collaboration, yet also introduces new challenges for data protection and competition.

The move from a closed to an open system of refugee identification within the humanitarian ecosystem offers the potential to overcome many of the issues raised by partner organisations around the lack of coordination in service delivery and to offer new services to refugees through increased sharing of activity and beneficiary data. However, while the possibilities exist for this increase through more open technology, our data shows that partner organisations are already reluctant to share beneficiary data in order to limit risk to individuals through increased access to personal data, to maintain the trusted relationships with refugees that are critical to service delivery and to maintain organisational advantage in the competitive market for service delivery contracts. Different levels of platform openness will involve sharing different kinds of personal data: at level 1 many of the categories reflect static data such as name, age, gender while at Level 3 categories are dynamic, particularly those relating to a refugee's changing vulnerability status. While a platform enabling access to Level 3 categories may increase value in the form of more targeted and bespoke services, the required degree of interoperability introduces governance risks to data management and protection, particularly for vulnerability issues such as child protection or domestic violence. Opening up the platform to third-party service providers beyond the humanitarian ecosystem, introduces new risks as the lack of appropriate governance frameworks to enable data access and use, for example to cover mobile or financial service providers, leaves the sharing and use of sensitive personal data unprotected. This creates a tension between the increase of value through opening up UNHCR's identification platform and the lack of governance to ensure the resulting value maintains principles of protection.

4.3 | Refugee perspectives on registration and identification

The experience of being a refugee is shaped significantly by the identification credentials that individuals hold and are able to access. Refugees must prove who they are, yet because of the circumstances in which they fled, lack the basic documentation that proves who they are. As one respondent said,

“I had my education certificate in South Sudan but lost it due to fighting. They took all my certificates. We lost everything, even our clothes.” (Male Dinka Refugee FGD)

The process of becoming a refugee and accessing services involves having to share deeply personal information, often linked to traumatic experiences. Obtaining recognition of refugee status and the issuance of a UNHCR credential are critical for refugees to access entitlements and services. Proving to UNHCR that they qualify for refugee status without any other form of documented proof often involves UNHCR asking very personal questions about both community and place of origin. Because refugee status also means entitlements to health and welfare benefits, refugees are also often asked questions about physical status. Describing the process of registration, one respondent described,

“OPM asked questions like your name, your father's name, age, religion, tribe, your place of origin and the route you took to arrive in Uganda. Questions were also asked about hygiene, body weight, health leading to immunization by UNHCR, Red Cross, Plan, WFP, WV and others. If you didn't answer what they asked you, you were not registered. The whole process took several days, and they sent you to so many places that some people got tired and just left the entire process and didn't get registered.” (Male and Female Refugee FGD)

These questions also often involve probing the traumatic experiences that led to individuals filing and claiming refugee status. As one respondent described,

“Some of us witnessed our parents being killed and they ask us why we are registering alone, where are our parents – you feel like crying.” (Male Dinka Refugee FGD)

This process of being identified by UNHCR and the establishment of an institutionally recognised status was commonly understood, and tolerated, as the condition or cost of the benefits and entitlements associated with the legal status of being a refugee.

This process of institutional identification also had implications for social identity such as religion, tribe and politics that were often unexpected, unwelcome and problematic. Respondents often described how the context they fled was characterised by discrimination or persecution linked to specific social identities, such as religion, and how the lack of identifying credentials enabled them to avoid discrimination. As one respondent described,

“Sometimes not having your ID was a good thing as you didn't want to reveal who you are if you were crossing into Uganda. If you had a Muslim surname, they would restrict you and ask several questions.” (Female Refugee FGD)

But social identity is established through multiple markers, some of which are harder to hide even if individuals try. As another respondent described,

“Your name reveals what tribe you belong to but even if you change your name, you can hear the language spoken and tell by looks and lifestyle who is a Dinka, Bantu, Nuer.” (Male Dinka Refugee FGD)

The tensions between different social identities or groups were also described as being directly related to the conflicts that prompted individuals to have to flee in the first place. Respondents described how attempts to ignore these social categories and mix people from different tribes often led to conflict, and forced refugee organisations to recognise the relevance of these identities and attempt to manage the tensions between them,

“There are some tribes from South Sudan who hate us because they think that it is us who brought the war. The problem arose where tribes were mixed up in the camp. Now OPM is protecting the Dinka community by organising dialogues between all the refugees and the host community.” (Female Dinka Zone 1 refugee)

Respondents also described how identification by refugee organisations created other kinds of conflict. The conflicts between existing social identities were common, and unsurprising, as they were part of the reasons that led to individuals becoming refugees in the first place. The identification categories pre-existed their status as refugees. However, respondents also described how the process of registration created categories that reshaped social structure, introducing new opportunity and new forms of conflict.

Respondents described how women often fled before their husbands, and so at the time of registration were identified as head of the household and responsible for rations and the plot of land granted by the Government of Uganda. While this introduced new decision-making responsibilities, violence often erupted when their husbands arrived later from South Sudan and demanded to be reinstated as head of household to control access to food and land. This was identified as the most common cause of domestic violence and required extensive conflict management, as one respondent described,

“Every month in coordination meetings, all the partners working in Zone 1 including UNHCR and OPM will be there and we discuss all the issues. If cases are urgent such as domestic violence we go to the Chairman and complain and go to the police if the violence is too bad, otherwise the Chairman will resolve.” (Dinka Refugee woman 1)

Despite these challenges, registration with refugee organisations is critical for individuals to access the services refugees are entitled to. Respondents described how the UNHCR credential attesting to refugee status was vital to access services,

“The attestation card is the most important document for us in Uganda because it proves you are a refugee and it is needed for getting a ration card, for going to hospital or for any activity outside the camp. If you lose your attestation card, it is a lengthy process to get a new one taking 1-2 weeks.” (Dinka Refugee woman 2)

Others described how the cards enabling access to entitlements such as rations were critical, but were complicated by the linking of ration cards to identification credentials, forcing individuals to submit to the schedule and requirements of organisations distributing rations,

“For ration collection, before if you are not around to collect your food someone could get it for you using the ration card, but now they want the real person. This is bad because if the owner of the ration card has gone to the clinic, he/she will not get the food.” (Male Refugees, Zone 1 FGD)

In addition to the refugee credentials required to access services, many other opportunities required credentials to demonstrate suitable qualifications and other credentials that many respondents described as having left behind. The most common form of credential that individuals described was proof of education qualifications which were required to prove particular skills, but without which meant they were not recognised as being eligible for consideration. As one respondent described,

“If you have the academic diploma to show that you have the skills for the job, or a document to say you have gained experience then you have a chance. But if you have no documents and you see an advert and apply, they will not trust you and don't care if you had to flee and didn't have time to get your documents.” (Male Refugees, Zone 1 FGD)

The importance of education credentials was also linked to education opportunities as many organisations providing education services required proof of schooling to allow access to school. Without these credentials many were told they would have to start at the beginning again, putting them off any form of education,

“When we came here, they told us that if we have nothing to show that you have been to secondary school you have to start again from primary school. This discouraged us from going for further studies.” (Male Dinka Refugee FGD)

“While many refugees came to Uganda with school testimonials to certify that they had passed their exams, Ugandan authorities insisted on original documentation. It was also difficult to convert South Sudanese P8 certificate to Ugandan P7 and some refugees dropped out of school because of that.” (Female Refugee Students FGD)

Finally, refugees expressed concern about the move among donor agencies to replace ration distribution with direct cash transfers to their mobile phones.

“Money is nothing to us here. Food is more important. Men would say yes [to cash transfer] because they are drunkards and would use the money for drinking alcohol and smoking. They don't mind if the children eat or not. Moreover, in Yumbe there is food starvation. Even if we had the money we would wonder where to buy food from.” (Dinka Refugee Woman 1 and Woman 4)

The value refugees derived from rations, rather than cash also benefited the host community in this poor region of Uganda,

“Since the South Sudanese arrived, Ugandans are benefitting. In the market we barter as refugees bring foodstuffs such as cooking oil, beans and maize and we give them grains, mangoes, firewood.” (Host community man and woman)

4.4 | Value creation for refugees

UNHCR's move towards an innovation-enabling, open and transparent identification platform has potential to create value for refugees through overcoming information asymmetries around system operation and service availability. Increased transparency could help overcome refugees' lack of knowledge or awareness about how the registration process and identification systems functioned, why certain questions were asked, what happened to the information that was collected, and what their rights were in relation to both data collection and management. It could also increase value through streamlining the registration process, saving time and reducing stress. Further value to refugees could be realised through increased data interoperability enabling access to services that refugees were not aware of, for example, sharing pregnancy status could trigger referrals to appropriate medical and support services.

However, enhanced interoperability may not always be of value to refugees, indeed it may also increase risk. For example, our findings show how the institutional categorisation of women as heads of households enabled access to resources and new forms of empowerment but often also led to domestic violence once their husbands arrived at the camp and demanded a reinstatement of their authority. The tension between formal categories such as female-headed household and social norms, whilst known to partner organisations and potentially valuable for protecting refugees, was not reflected in the structure and processes of UNHCR's registration processes or its future strategy towards identification. Similarly, despite UNHCR's intentional ‘blindness’ to social identity characteristics such as ethnic or tribal affiliations, we found that tensions between social identities such as Dinka and Nuer tribes were maintained as UNHCR placed people from both tribes together. This highlights how the institutionally defined rigidity of UNHCR's identification system cannot be separated from and indeed clashes with the fluidity and complexity of individual identity(ies), highlighting inherent tensions and protection risks arising from the platformisation of refugee identification.

Transitioning towards an open platform can provide opportunities for refugees to self-manage and exert greater agency over their needs and priorities – especially when it enables access to the wider marketplace of private services such as mobile connectivity or finance. However, while the proposed identity wallet trust scheme seeks to incorporate a wider portfolio of documents in the identification process for a refugee, the accessibility of services is determined by national and international governance frameworks of domestic legislation and the guidance of international bodies such as FATF. For example, we found that the lack of credentials means many are not in a position to derive value from this innovation, for example, for career or education. In the few cases, where refugees were able to present common education credentials that were required to pursue further studies, differences in the levels of school attainment between South Sudan and Uganda resulted in complications and delays in enrolling students onto courses. Our findings suggest that document portability only has value to the extent that it is accommodated within a wider ecosystem of arrangements, such as mutual recognition of certification.

Our data shows that refugees' social and categorical identity is inherently linked and always in flux. While opening the identification platform, categories may serve to expand the entitlements and services that refugees can access, we also showed how important it is that these institutional categories accommodate the ever-changing elements of social identity.

5 | DISCUSSION

Our analysis so far suggests that UNHCR's exploration of a move from a closed 'transactional' platform towards a more open 'innovation' platform provides scope to increase value for UNHCR and partner organisations. However, for this value to extend to refugees themselves in ways that protect their interests requires a governance regime that accommodates the new stakeholders and processes that a transformed identification regime may include. Specifically, we see how the move towards an open identification platform offers the possibility of increasing the accuracy and efficiency of the identification and registration process, and expanding the opportunity for third-party service providers to offer additional services that can add value for refugee wellbeing. However, our findings show that current work practices, incentives and activities of service provider organisations and refugees mean we cannot automatically assume that value will necessarily derive from digital innovation, or that any increase in value will be equally distributed. Indeed, as innovation platforms increase the variety of third parties that contribute platform transactions, it becomes critical to identify and manage their interests and values to ensure that despite divergent motivations, the platform generate public value in the form of development outcomes. We have shown how the PRIMES platform serves as a critical governance mechanism by its ability to apportion value to different stakeholders as its technical functions interact with the everyday practices of service delivery organisations and refugees. We conclude that the extent to which developmental value is attained through an open innovation platform depends on the extent to which refugee protection is prioritised in system design and governance.

We now turn to a broader discussion of our theoretical contribution to the nascent discourse on digital platforms for development, the theme of this Special Issue. Our paper has attempted to respond to the call for a deeper critical engagement with the interaction between transaction and innovation platforms (Bonina et al., 2021). While useful for analytical purposes, in reality existing literature demonstrates that these two types of functionality co-exist with the platform owner strategising the interaction between the two. For example, we know from studies of commercial platforms that new possibilities of value creation in the digital era have focused on hybrid business models combining transaction and innovation functionality (Cusumano et al., 2019). What remains a gap, however, is an understanding within the policy space of how transaction and innovation platforms interact to address development and humanitarian goals (Bonina et al., 2021). In this paper, our research question has responded to this call by investigating how decisions related to identification and governance affect value creation for different stakeholders involved in refugee management.

In terms of identification, we have argued that two dimensions are of significance. There needs to be a resolution of the distinction between institutional identification as categorisation and social identity. While the former reflects a technical-rational process that ascribes fixed categories which stabilise and regulate phenomena that serve as the basis of a refugee management system, the latter reflects a socially-embedded process dependent on fluid, flexible phenomena within the contextual setting of refugee communities. Although these are two distinct phenomena, their separation is arbitrary and, as we have shown, the imposition of one over the other leads to tensions, that is as institutional categories of global institutions responding to refugee needs dominate over categories of social identity and personal identity of refugees and service provider organisations. We have argued that these tensions could be mitigated by establishing mechanisms of governance in a phased manner through which refugees could articulate their interests. The extent of platform openness has implications that potentially compromise this refugee agency and control. As platform openness increases data interoperability and sharing, so too does the potential for personal information of individuals to be accessible to and used by actors in ways that individuals may not be aware of, may not have consented to and do not have control over.

Unlike commercial platforms where both platform owner and complementors have the overall objective of maximising profit, development and humanitarian platforms are intended to generate social value, and this distinction complicates the analysis of interaction between and transformation from transaction to innovation platforms. We find that the platformisation of development services, and specifically the opening up of identification platforms from transaction platforms towards innovation platforms highlights tensions between organisational aspiration to increase value, commitments to the people they serve and wider values of the humanitarian sector. For example, we saw how the platformisation of identification systems may challenge UNHCR's commitment to strengthening refugee agency and the humanitarian principle of informed consent. The limited agency that refugees currently have over the identification systems through which they are recognised and categorised emphasises the importance of accommodating the reality of refugees' social identity into the systems and practices of institutional identification. Similarly, the extent to which UNHCR credentials are recognised and trusted by third-party actors – which is a function of regulatory governance – influences the value of UNHCR's identification platform for all actors – UNHCR, third-party organisations and most importantly, refugees themselves. While the value of an identification platform is in part determined by its reach and power, that is by its network effects, as identification platforms for refugee management open, they accommodate new actors and relationships from within and beyond the humanitarian ecosystem, some of whom may not be covered by existing governance frameworks and who may not share the same commitments to public value and to the protection of refugees. For these changes to lead to improved refugee management requires UNHCR to carefully manage the degree and timing of platform openness, ensuring that governance mechanisms accommodate all stakeholders and processes that constitute the new identification system in order to ensure that the platform maintains the prioritisation of public value and protection.

Overall, our study highlights the complexities and limitations of using categories and analytic frameworks derived from the experience of commercial platforms grounded in the epistemologies of the 'Global North' for the design of global platforms that are intended to protect vulnerable populations often in the context of the Global South. We showed how the arbitrary distinction between institutional and social categories enables the imposition of institutional categories derived from the Global North over the social identities located in the Global South. With an increasing presence of digital identity platforms among leading humanitarian organisations, there is the need to mitigate against the tendency for 'colonisation' by institutional categories. For digital platforms to generate value in line with development and humanitarian goals and to respond to the needs and realities of people in diverse contexts, socio-technical systems should be developed in partnership with and reflect the insight, innovation and epistemologies of both Global South and North (Jimenez & Roberts, 2019).

5.1 | Policy implications

Platforms reflect and articulate interests through their design and governance, and identification platforms are no different. UNHCR's identification platforms were commissioned by UNHCR's Identification and Registration team, and although the organisation's mandate emphasises the rights and agency of its populations of concern, our research suggests there has been limited user research or refugee involvement in the design of the identification platform. As a result, the platform arguably primarily represents the organisation's interests and encodes these into the design and affordances of the system and technologies that constitute the platform. What is evident from our study is that UNHCR's move to an open platform to improve data collection and analysis is a hugely relational process: the implications of failing to include refugee perspectives is to strengthen the interests and power of the identifier, UNHCR, at the expense of the identified – the refugee, amplifying existing power relations. To mitigate against this bias, it will be important for the organisation to put in place change management procedures and design thinking approaches that can foster co-creation of value to both organisations and refugees.

This is even more significant in the potential move towards identification as a platform that enables refugees to access services outside the humanitarian system, as this will require the collection of even more personal

information, demanding greater trust from refugees, partner organisations and third-party service providers in UNHCR and the credentials it provides for the system to function. This change management strategy will need to be a continuous, partner and refugee-led process, emphasising a localised approach towards mitigating against risk to refugees (Pincock et al., 2020). One measure that may help would be for UNHCR to establish an independent governance board that includes refugees and their representatives to ensure their perspectives are included in platform design and management. This governance board should have an oversight role that goes beyond monitoring and advisory and instead holds an accountability function that grants it real power – like Facebook's Oversight Board,¹³ but arguably with greater accountability.

While the opening up of UNHCR's identification platform beyond the humanitarian ecosystem would enable other parties to rely on UNHCR's identity verification and to trust that those identified as a refugee are who they say they are, UNHCR's current identification and registration processes are not sufficiently robust to meet the requirements that would enable market service providers to trust UNHCR as an identity issuer. One approach for UNHCR would be to adopt a 'tiered' approach to identity proofing based on the level of proof that individuals are able to provide, with the level of identity proofing determining the tier of confidence that relying parties would have in the UNHCR-issued credential and be able to offer an appropriate level of services – from a UNHCR-controlled bank account to full participation in financial markets. The shift from a transaction to innovation-based platform is more than a set of design or operational considerations. As others have noted, the transformation implicates platform owners as well as platforms themselves (Cusumano et al., 2019). For UNHCR, this implies a change in UNHCR's organisational mindset as much as a service or technology shift.

5.2 | Limitations and directions for further research

While our conceptual framing has provided a relevant lens for investigating the value of UNHCR's digital identity platform for improving refugee management, we recognise that there are many ways in which this area of research can be extended, expanding on recent scholarship. First, we recognise that the task of assessing value is a normative judgement, which can be further researched by drawing on concepts of data justice, for example, recent work on digital identity systems for refugees which builds on feminist accounts of data justice provides a useful direction to follow (Schoemaker et al., 2020).

Second, while our study has focused on the case of UNHCR's digital identification system we have also shown how the implications of these systems are determined by the wider context in which they function as much as they are by the nature and affordances of the system itself. For example, Uganda's existing regulatory framework for accessible mobile and financial services plays an important part in the potential for UNHCR's identification credentials to improve the life and well-being of refugees (Martin & Taylor, 2020). The platformisation of identification extends the interaction of identity systems beyond the immediate technology platform, and so to this end we identify the study of the ecosystem in which identification systems exist and affirm calls for empirical studies of identification systems in practice (Weitzberg et al., 2021) as an important area of study which would help inform an understanding of the platformisation of identification.

A further recent area of study has been to undertake a political economy analysis of identification platforms (Roy & Khan, 2019). This is all the more important as the platformisation of identification systems amplifies the existing power relations not only between identifier and identified but also in terms of the aspiration for more integration of market-based development actors with humanitarian partners in emergency response – sometimes called the 'humanitarian-development nexus', supported by institutions including the UN, the World Bank¹⁴ and the OECD.¹⁵ Zetter (2019) criticises the increasing penetration of the refugee market by global corporates which not only converts refugees from welfare recipients into market actors but also results in the extraction of economic surplus from refugee-impacted host developing countries.

5.3 | Conclusion

This paper has focused on conceptualising the platformisation of UNHCR's refugee identification system based on research undertaken in Bidi Bidi camp, Uganda. We studied the move from UNHCR's closed transaction-based system to establishing an open innovation platform focusing on three key interrelated sub-processes that refer to how refugees are identified, how the platform derives value for its key stakeholders and the development of appropriate governance mechanisms to achieve the ultimate goal of managing and protecting refugees.

Our findings have implications for humanitarian organisations and development agencies embarking on similar digital innovation strategies, and for all efforts to platformise identification systems for service provision. We are led to conclude that digital platforms for development promise new opportunities for the creation of individual and public value, but transformation of established technical systems, no matter how open the platforms are, is not sufficient to disrupt the old problems of exclusion and vulnerability. The authors thank Carsten Sorensen for his valuable comments which helped us to improve the paper.

ACKNOWLEDGEMENTS

The authors thank Carsten Sorensen for his valuable comments which helped us to improve the paper.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ENDNOTES

- ¹ <https://www.unhcr.org/blogs/data-millions-refugees-securely-hosted-primers/>
- ² India's National Identity System introduced in 2009.
- ³ UNHCR's Accountability to Affected Populations framework includes a number of core actions: Participation and inclusion; Communication and transparency; Feedback and response; Organisational learning and adaptation <https://emergency.unhcr.org/entry/42554/accountability-to-affected-populations-aap>
- ⁴ Third-party providers include partner organisations who work with UNHCR and market providers.
- ⁵ OPM is the government body in Uganda which managed refugee registration in Bidi Bidi at the time of writing. WFP and UNHCR subsequently took over following claims of government corruption.
- ⁶ Internally displaced persons.
- ⁷ UNHCR, From proGres to PRIMES - <https://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/03/2018-03-16-PRIMES-Flyer.pdf>
- ⁸ The UNHCR uses this term to describe the refugees and others that it serves.
- ⁹ An attestation card is a temporary identity credential that attests to an individual's refugee status.
- ¹⁰ An apostille is an official certification added to identification documents so that they will be recognised by other parties.
- ¹¹ The GCR represents the political will and ambition of the international community to strengthen support for refugees and affected host communities. The resolution was adopted by the UN General Assembly In December 2018.
- ¹² WASH refers to Water, Sanitation, and Hygiene.
- ¹³ <https://about.fb.com/news/2020/05/welcoming-the-oversight-board/>
- ¹⁴ OCHA, 2017 New Way of Working, OCHA Policy Development and Studies Branch (PDSB) https://www.unocha.org/sites/unocha/files/NWOW%20Booklet%20low%20res.002_0.pdf
- ¹⁵ OECD, DAC Recommendation on the Humanitarian-Development Peace Nexus, OECD/LEGAL/5019 <https://legalinstruments.oecd.org/public/doc/643/643.en.pdf>

ORCID

Shirin Madon  <https://orcid.org/0000-0002-4497-2165>

Emrys Schoemaker  <https://orcid.org/0000-0001-6457-9435>

REFERENCES

- Avgerou, C., & Bonina, C. (2019). Ideologies implicated in IT innovation in government: A critical discourse analysis of Mexico's international trade administration. *Information Systems Journal*, 30(1), 70–95.
- Bonina, C., Koskinen, K., Eaton, B., & Gawer, A. (2021). Digital platforms for development: Foundations and research agenda. *Information Systems Journal*. <https://doi.org/10.1111/isj.12326>
- Bowker, G., & Star, S. L. (1999). *Sorting things out: Classification and its consequences*. The MIT Press.
- Caribou Digital. (2018). *Identity at the margins: Refugee identity and data management*. Caribou Digital Publishing.
- Cordella, A., & Paletti, A. (2019). Government as a platform, orchestration, and public value creation: The Italian case. *Government Information Quarterly*, 36(4), 101409.
- Cordella, A., Paletti, A., & Shaikh, M. (2018). Renegotiating public value with co-production. DOI:<https://doi.org/10.1093/oso/9780198816225.003.0008>.
- Cusumano, M. A., Gawer, A., & Yoffe, D. B. (2019). *The business of platforms: Strategy in the age of digital competition, innovation, and power*. HarperBusiness.
- Dahl-Jorgensen, T., & Parmiggiani, E. (2020). *Platformization of the public sector: Assessing the space of possibility for participation*, PDC.20 (Vol. 2, pp. 35–39). Proceedings of the 16th Participatory Design Conference 2020.
- Davies, T., Walker, S., Rubinstein, M., & Perini, F. (Eds.). (2019). *The state of open data: Histories and horizons*. African Minds and International Development Research Centre.
- DuBois, M. (2018). The new humanitarian basics. Humanitarian Policy Group Working Paper.
- Eisenhardt, K., & Graebner, M. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32.
- EU GDPR. (2016). General Data Protection Regulation Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ 2016 L 119/1.
- Freitas, M. C., & da Silva, M. (2018). GDPR compliance in SMEs: There is much to be done. *Journal of Information Systems Engineering & Management*, 3(4), 30. <https://doi.org/10.20897/jisem/3941>
- Gandy, O. (2001). Dividing practices: Segmentation and targeting in the emerging public sphere. In L. Bennett & R. Entman (Eds.), *Mediated politics: Communication in the future of democracy*. (141–159). Cambridge University Press.
- Gawer, A. (2009). Platforms, markets and innovation: An introduction. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 1–16). Edward Elgar.
- Gorwa, R. (2019). What is platform governance? *Information, Communication & Society*, 22(6), 854–871.
- Hakli, J., Pascucci, E., & Kallio, K. (2017). Becoming refugee in Cairo: The political in performativity. *International Political Sociology*, 11, 185–202.
- Huber, T., Kude, T., & Dibbern, J. (2017). Governance practices in platform ecosystems: Navigating tensions between co-created value and governance costs. *Information Systems Research*, 28, 3–584. <https://doi.org/10.1287/isre.2017.0701>
- IRIN. (2018). Exclusive: Audit exposes UN food agency's poor data-handling. *IRIN* Retrieved from <https://www.irinnews.org/news/2018/01/18/exclusive-audit-exposes-un-food-agency-s-poor-data-handling>.
- Jacobsen, K. L. (2015). Experimentation in humanitarian locations: UNHCR and biometric registration of Afghan refugees. *Security Dialogue*, 46(2), 144–164.
- Jacobsen, K., & Sandvik, K. (2018). UNHCR and the pursuit of international protection: Accountability through technology? *Third World Quarterly*, 39(8), 1508–1524.
- Janmyr, M., & Mourad, L. (2018). Modes of ordering: Labelling, classification and categorization in Lebanon's refugee response. *Journal of Refugee Studies*, 31(4), 544–565.
- Jenkins, R. (2000). Categorization: Identity, social process and epistemology. *Current Sociology*, 48(3), 7–25. <https://doi.org/10.1177/0011392100048003003>
- Jimenez, A., & Roberts, T. (2019). Decolonising Neo-Liberal innovation: Using the Andean philosophy of 'Buen Vivir' to reimagine innovation hubs. In P. Nielsen & H. C. Kimaro (Eds.), *ICT4D 2019, IFIP AICT 552* (pp. 180–191). International Federation for Information Processing.
- Kallio, K., Hakli, J., & Pascucci, E. (2019). Refugeeeness and political subjectivity: Experiencing the humanitarian border. *EPC: Politics and Space*, 37(7), 1258–1276.
- Kaufmann, K. (2018). Navigating a new life: Syrian refugees and their smartphones in Vienna. *Information, Communication & Society*, 21, 6.
- Kingston, L. (2018). Biometric identification, displacement, and protection gaps. In C. Maitland (Ed.), *Digital lifeline? ICTs for refugees and displaced persons* (pp. 35–55). MIT Press.
- Madianou, M., Ong, J., Longboan, L., & Cornelio, J. (2016). The appearance of accountability: Communication technologies and power asymmetries in humanitarian aid and disaster recovery. *Journal of Communication*, 66(6), 960–981. <https://doi.org/10.1111/jcom.12258>

- Majchrzak, A., & Malhotra, A. (2016). Effect of knowledge-sharing trajectories on innovative outcomes in temporary online crowds. *Information Systems Research*, 27, 4–703. <https://doi.org/10.1287/isre.2016.0669>
- Martin, A., & Taylor, L. (2020). Exclusion and inclusion in identification: Regulation, displacement and data justice. *Information Technology for Development*, 27, 1–17. <https://doi.org/10.1080/02681102.2020.1811943>
- Matias, B. (2017). *How has the role of the UNHCR evolved in responding to the Syrian Refugee flows? A comparison of Jordan and Germany* (pp. 135–151). Observatorio das Migracoes, ACM, I.P.
- Moore, H. (1995). *Creating public value: Strategic management in government*. Harvard University Press.
- Myers, M. D., & Avison, D. (Eds.). (2002). *Qualitative research in information systems: A reader*. Sage.
- OPM. (2018). *Office of the Prime Minister*. Refugee Management Retrieved from <https://opm.go.ug/refugees-management/>
- Pasha, S. (2019). Developmental humanitarianism, resilience and (sis)empowerment in a Syrian refugee camp. *Journal of International Development*, 32(2), 244–259.
- Pincock, K., Betts, A., & Easton-Calabria, E. (2020). *The Global Governed? Refugees as providers of protection and assistance*. Cambridge University Press.
- Porter, G., Hampshire, K., Kyei, P., Adjalo, M., Rapoo, G., & Kilpatrick, K. (2008). Linkages between livelihood opportunities and refugee-host relations: Learning from the experiences of liberian camp-based refugees in Ghana. *Journal of Refugee Studies*, 21(2), 230–252.
- Roy, P., & Khan, M. (2019). *Digital identities: A political settlements analysis of asymmetric power and information, working paper, ACE: Anti-corruption evidence*. SOAS Retrieved from <https://ace.soas.ac.uk/wp-content/uploads/2019/10/ACE-WorkingPaper015-DigitalIdentities-191004.pdf>
- Sanchez-Monedero, J. (2018). The datafication of borders and management of refugees in the context of Europe, Working Paper, Cardiff University. Retrieved from <https://datajusticeproject.net/wp-content/uploads/sites/30/2018/11/wp-refugees-borders.pdf>
- Schreieck, M., Wiesche, M., & Krcmar, H. (2017). Governing nonprofit platform ecosystems – An information platform for refugees. *Information Technology for Development*, 23(3), 618–643.
- Scott, A. (2014). *Open data for economic growth: Transport and ICT global practice*. World Bank.
- Schoemaker, E., Baslan, D., Pon, B., & Dell, N. (2020). Identity at the margins: Data justice and refugee experiences with digital identity systems in Lebanon, Jordan, and Uganda. *Information Technology for Development*, 27, 13–36. <https://doi.org/10.1080/02681102.2020.1785826>
- Tempini, N. (2015). Governing PatientsLikeMe: Information production and research through an open, distributed and data-based social media network. *The Information Society*, 31(2), 193–211.
- Thompson, M. (2004). ICT, power, and developmental discourse: A critical analysis. *EJISDC*, 20(4), 1–25.
- Timmermans, S., & Berg, M. (2003). The practice of medical technology. *Sociology of Health & Illness*, 25, 97–114.
- UNHCR. (2018a). UNHCR Data Portal. Uganda Comprehensive Refugee Response Portal. Retrieved from <https://data2.unhcr.org/en/country/uga>
- UNHCR. (2018b). From proGres to PRIMES. Retrieved from <https://www.unhcr.org/primes.html>
- UNHCR. (2019). UNHCR Innovation Service. Retrieved from <https://www.unhcr.org/innovation/wp-content/uploads/2019/04/Displaced-Disconnected-WEB.pdf>
- van Dijk, J., Poell, T., & de Waal, M. (2018). *The platform society*. Oxford University Press.
- Walsham, G. (1995). Interpretive case studies in IS research: Nature and method. *European Journal of Information Systems*, 4(2), 74–81.
- Weick, K. E. (1995). *Sensemaking in organizations*. Sage.
- Weitzberg, K., Cheesman, M., Martin, A., & Schoemaker, E. (2021). Between surveillance and recognition: Rethinking digital identity in aid. *Big Data & Society*, 8(1), 20539517211006744. <https://doi.org/10.1177/20539517211006744>
- Whitley, E. A., Gal, U., & Kjaergaard, A. (2014). Who do you think you are? A review of the complex interplay between information systems, identification and identity. *European Journal of Information Systems*, 23, 17–35. <https://doi.org/10.1057/ejis.2013.34>
- Yotawut, M. (2018). Examining progress in research on public value. *Kasetsart Journal of Social Sciences*, 39, 168–173.
- Zetter, R. (1991). Labelling refugees: Forming and transforming a bureaucratic identity. *Journal of Refugee Studies*, 4(1), 39–62.
- Zetter, R. (2019). Theorizing the refugee humanitarian-development nexus: A political-economy analysis. *Journal of Refugee Studies*, fez070. <https://doi.org/10.1093/jrs/fez070>

AUTHOR BIOGRAPHIES

Shirin Madon is associate professor working jointly in the Departments of Management and International Development at the LSE. She currently teaches two postgraduate interdisciplinary courses, one on ICT and Socioeconomic Development, the other on Humanitarian Emergencies Management and Development. Her current areas of research are (a) biometric digital identity platforms for refugee management from a sociological perspective, (b) digital identity platforms for improving the effectiveness of social assistance programming focusing on Aadhaar, and (c) the effectiveness of community participation in village governance for improving primary healthcare in rural Karnataka. She currently serves as associate editor for journals in information systems and ICT for Development.

Emrys Schoemaker is a research director at Caribou Digital and a visiting fellow at the LSE and Cornell Tech. At Caribou Digital he has led research projects on digital identification in national and refugee contexts in India, Lebanon, Jordan, Uganda, Kenya and Ghana for clients including the UK's DFID, Australian DFAT, the World Bank, United Nations and private foundations. His research interests focus on the relationship between technology and development, particularly around digital identification and digital media technologies and political processes. His PhD is from the LSE where he focused on the relationship between social media and religious identity in Pakistan. He is currently based in Amman, Jordan.

How to cite this article: Madon, S., & Schoemaker, E. (2021). Digital identity as a platform for improving refugee management. *Information Systems Journal*, 1–25. <https://doi.org/10.1111/isj.12353>