ACCESS AND INCLUSION

A Survey of Innovation through Global Solution Networks

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The work of organizations, foundations, and individuals to increase awareness and remove barriers to access for people with disabilities has been constrained for decades by the artificial limitations of institutional functional silos and the lack of collaborative problem solving. In many cases, the barriers are created by attitudes and assumptions about capabilities as much as they are by the built world.

The emergence of a new model of multi-stakeholder problem solving—global solution networks that can break down silos and produce highly effective collaborative models—will be instrumental in addressing the complex issues of the field.

GLOBAL SOLUTION NETWORKS

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Idea in Brief

Disability is not a binary state—"abled" versus "disabled." Disability is a form of human diversity that presents society with a variety of both challenges and opportunities. Scott Page writes,

> Diversity yields superior outcomes, differences can be leveraged for the benefit of all, and collective wisdom exceeds the sum of its parts.[1]

At a time of high unemployment and unprecedented income inequality, people who are limited by challenges of access are at a critical disadvantage. Therefore the social obligations to develop better methods and practical built solutions for access and inclusion are clear, but the opportunities are economic as well as humanitarian. As the population of individuals with a disability grows, the business advantage to accommodating that population multiplies.

The Global Solution Networks (GSN) model[2] describes multi-stakeholder groups that are leveraging digital technologies in order to find better solutions to global problems. These organizations are working beyond the framework of nation-states or traditional institutions. In the access and inclusion space, they are focusing on the global issues of access to public areas, schools, workplaces, and employment and they are making efforts to overcome access barriers in buildings, technology, transportation, and housing as well as striving for income equality.

The work of organizations, foundations, and individuals to increase awareness and remove barriers to access for people with disabilities has been constrained for decades by the artificial limitations of institutional functional silos and the lack of collaborative problem solving. In many cases, the barriers are created by attitudes and assumptions about capabilities as much as they are by the built environment. The emergence of a new model of multi-stakeholder problem solving—global solution networks—that can break down silos and produce highly effective collaborative models, will be instrumental in addressing the complex issues of the field.

A Primer on Global Solution Networks

Global Solution Networks (GSNs)[3] are emerging non-state organizations leveraging multi-stakeholder engagement with 21st century digital technology in order to achieve new forms of global problem solving, cooperation, and governance. GSNs are addressing the most urgent challenges humanity

faces—from poverty, human rights, health and the environment, to economic policy and food security. And they are key players in addressing the issues of access and inclusion.

GSNs are defined by a set of four key characteristics:

1. *Diverse Stakeholders.* There are participants in the GSN from at least two of the four pillars of society:
   - *Government or international institutions*
   - *Corporations and business interests*
   - *The civil society, NGOs and academia*
   - *Individual citizens*

2. *Leverages Digital Technology.* GSNs are 21st century networks in the sense that they harness new forms of digital communications, tools, and platforms (social media, big data, data analytics, mobile devices, geo-spatiality, and "the cloud") to achieve their goals.

3. *Addresses a Global Problem.* The network seeks to improve the state of the world through developing solutions to global problems. Local solutions to what are truly global challenges are often inherently scalable to the global level. Many undertake to address these issues on a local level and scale to regional and finally global scope.

4. *Self-Organizing and Self-Governing.* Not controlled by a state or state-based institution, although participation by government stakeholders is often beneficial to the goals.

GSNs are also distinguished in terms of the different types of functions they perform. Three years of original research and analysis by the Global Solution Networks program have identified and validated a comprehensive taxonomy of ten GSN types. The types are not mutually exclusive categories—any network can fall into more than one type, and networks may change types over time. Further, networks that function as a particular type often benefit from collaboration with networks of other, complementary types. Thus, advocacy groups working on raising awareness may elect to work with service programs from an operational and delivery network in order to reach overarching solution goals.

The ability of networks to partner with other groups focusing on different aspects of the same challenges can ultimately lead to the creation of a "network of networks." This is an important shift that has the potential to reduce redundancy and increase both work and funding efficiency.

Global Solution Network Types and Familiar Examples

Knowledge Networks develop new thinking, research, ideas, and policies that can be helpful in solving global problems. Their emphasis is on the creation of new ideas, not their advocacy.

> **Example:** OpenPediatrics is a community of clinicians sharing best practices from resource settings around the world through collaboration and digital learning technologies.

Operational and Delivery Networks actually deliver the change they seek, supplementing or even bypassing the efforts of traditional institutions.

> **Example:** The World Wildlife Fund has international programs to protect and restore species and habitats.

Policy Networks create government policy even though they are not networks of government policy makers.

> **Example:** The Urban Institute shapes decisions and offers solutions through economic and social policy research.

Advocacy Networks seek to change the agenda or policies of governments, corporations or other institutions.

> **Example:** 350.org is a very influential network organizing demonstrations, marches, and campaigns to raise awareness in the climate change arena.

Watchdog Networks scrutinize institutions to ensure they behave appropriately.

> **Example:** Amnesty International keeps watch on human rights around the world, and reports on issues and abuses.

Platforms create the capability for other networks to organize.

> **Example:** Change.org is a platform on which people around the world can initiate campaigns for change, mobilize supporters and work for solutions.

Global Standards Networks are non-state based organizations that develop technical specifications and standards for virtually anything, including standards for the Internet itself.

Example: The International Standards Organization develops voluntary, consensus-based, market-relevant international standards that support innovation and provide solutions to global challenges.

Governance Networks have achieved or been granted the right and responsibility of non-institutional global governance.

Example: The Internet Corporation for Assigned Names and Numbers is one of the organizations that constitute the complex ecosystem that governs the Internet itself.

Networked Institutions provide a wide range of capabilities even similar to state-based institutions but with a very different *modus-operandi.*

Example: The World Economic Forum blends many kinds of organizations, from the public and private sectors, international organizations and academic institutions to discuss and promote action on many global issues.

Diaspora Networks pursue problem solving through kinship and ethnicity connections.

Example: One Vietnam is an online hub for connection, updates and involvement by people with an interest in Vietnamese culture.

GSNs are exciting innovations in many global arenas, and their capabilities are increasingly relevant to and important in the access and inclusion space.

The Global Access Problem

Around the world today there are more than 1.3 billion people living with a disability, and the numbers are growing.[4] Disability is a broad term that describes a physical, mental, sensory, or cognitive condition that may limit an individual's full participation in daily life due to environmental or societal barriers. It is a form of human diversity that can be caused by accident, condition, or disease. Importantly, it is not one half of a binary state—abled versus disabled—rather, it is a broad continuum of mismatches between the needs of individuals and the design of the environment or system or service.[5]

There are many different kinds of barriers to full participation in daily life:[6]

- **Awareness:** A lack of understanding of the extent of the social, health and economic impact of disability, and the absence of motivation to take action.

- **Attitudinal:** An assumption or perception about a disability, held by oneself or others, either purposefully or inadvertently.

- **Physical:** A feature of a building, structure, technology, system, or space, or an environment that prevents access or use.

- **Health:** A lack of cures or care to contribute to an individual's state of wellbeing in body and/or mind.

- **Educational:** A lack of appropriate access to an inclusive educational experience and necessary training and skill development.

- **Employment:** A lack of access to meaningful, relevant, and economically self-sustaining work.

People with disabilities seek the means to access all elements of their environment. However, there can be a lack of sensitivity on the part of society with regard to the barriers and the limitations imposed on those with disabilities. This may result in a failure to either appreciate the extent of the social, health, and economic impacts of disability, or a failure to take action to create access and enable inclusion.

The distinction between "disabled" and "non-disabled" is sometimes arbitrary and seldom absolute. People with disabilities do not fit neatly into diagnostic categories—categories that may only be a small factor in an individual's needs and preferences. Accessibility is therefore the ability of the design or system to match the requirements of all individual users. It is a measure of the degree to which a product, device, activity, facility, service, or environment allows anyone to participate fully and is available to everyone on an equal basis.

A mismatch between the individual and the environment is a measure of the abilities of the individual and an assessment of the potential for interaction between that individual and the environment. Accessibility advocates are beginning to move away from the "pity/charity medical model" that considers disability as a problem to be solved by "fixing" an individual. Focus is shifting to design that is inclusive of all abilities.

The "social model"[7] sees disability as the result of an individual's interaction with environmental barriers with the implication that it is the environment that must be adjusted to accommodate the needs of the individual, rather than vice versa. In other words, the social model puts making access possible the responsibility of society rather than of people with disabilities. It also highlights the economic imperative of developing solutions that allow the

growing populations of individuals with disabilities to have a role in their own, and their communities', economic growth.

An attitude of inclusion is a prerequisite for accessibility and many GSNs are working to ensure that everyone has an equal opportunity to fully participate in daily activities. Inclusion is also about considering the full range of human diversity (including ability, language, culture, gender, age, and other forms of human difference[8]) in order to have a society that values diversity, respects equality, and realizes the full potential of all people.

Accessibility problems are unstructured, span multiple domains of policy and action, and are relentless. They are global in nature, and require multi-pronged initiatives at the policy, implementation, and governance level—with continued monitoring—in order to be solved. The GSN model is particularly well suited to identifying and executing the needed solutions.

Scott Page, in his landmark book, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*,[9] says, "The distinct tools and abilities multiple individuals bring to the table might lead to greater progress and innovation than a few lone thinkers with enormous IQs." Multiple stakeholders bring multiple perspectives when formulating a problem solving approach. Groups that display a range of perspectives outperform groups of like-minded experts.

According to Page's research, "Difference beats out homogeneity and diversity yields superior outcomes." Harnessing the untapped potential of our diversity and leveraging our differences results in benefits for all. The disability space is vast and complex and GSNs bring a critical capability to find new, collaborative solutions to the pervasive problems of access and inclusion.

Innovation in Global Problem Solving

Networks around the world have been committed to raising awareness, changing attitudes, and breaking down barriers for people living with a range of capabilities. These networks are key to achieving a vision of an inclusive, networked world where people with disabilities are living and contributing to their full potential.

Three case studies selected for exploration highlight innovative networked approaches to creating long-term solutions for access and inclusion. In these cases, an array of public, private, and individual actors are key players in shaping, developing, or implementing solutions. These cases describe organizations that exemplify the potential, capabilities, and operational

challenges that are associated with applying the new GSN model of cooperation, governance, and problem solving. They are each comprised of a range of stakeholders, they are using digital technology to promote their goals, they are self-organizing, and they are working on issues that are pervasive around the globe.

Rick Hansen Foundation

About

The Rick Hansen Foundation was established in 1988, following the completion of Rick Hansen's Man In Motion World Tour, to create a world without barriers for people with disabilities.

For almost 30 years, the Rick Hansen Foundation has been committed to raising awareness, changing attitudes, and breaking down barriers for people living with disabilities. Its programs and activities have altered perceptions about the potential of the four million Canadians living with disabilities; helped over 1,000 communities participate in Canada's National Access Awareness Week; funded more than 1,200 Quality of Life grants; created awareness about accessibility and inclusion amongst 500,000 Canadian students each year; and accelerated the pace of new discoveries that have vastly improved the lives of people with spinal cord injuries.

Transformational change has been made in Canada and around the globe through the work of the Foundation's spinal cord injury research initiatives and programs such as the Rick Hansen Institute, Rick Hansen School Program, Quality of Life Program, the Ambassador Program, and other initiatives. While great progress has been made, there is still a long way to go—and the Rick Hansen Foundation intends to be a driving force in creating an even better future for the broader disability community in Canada and around the world. Businesses and governments are beginning to recognize that inaccessible public spaces mean lost revenues. The Foundation hopes to motivate people to shift from a charity model, where access and inclusion initiatives are the right thing to do, to a business model, where it's the economically intelligent thing to do.

The scope of the Foundation's work is broad, reaching into more than one of the GSN network types. In line with the taxonomic definition, it is a powerful advocacy network, working to raise awareness and engage participation amongst stakeholders in problem solving. It also has the characteristics of a policy network—working to drive policy makers and the government to take a different look at increasing employment opportunities for people with disabilities, as well as access for consumers with disabilities, by reducing barriers in the form of stigma, attitudes, and accessibility.

The Foundation is developing a series of programs and partnerships aimed at connecting and strengthening current disability communities to maximize impact through the power of one collective voice.

Becoming an operational and delivery network, the RHF has developed a number of programs to deliver change. One of its plans is to develop access initiatives that enable organizations to assess and improve the overall level of accessibility of built environments. Beginning in Canada, these initiatives have a longer-term objective of expanding RHF's reach and impact globally.

The following strategic imperatives guide the Foundation in creating the conditions for a more inclusive world:

- Increase awareness and change attitudes about the potential of people with disabilities to become catalysts for removal of physical barriers to accessibility.

- Develop initiatives that increase accessibility in the built environment.

- Transform how business is done in order to ensure long-term sustainability required to maximize impact.

- Engage, align, and empower team members to make a difference.

To advance its strategic goals, the Foundation, in partnership with Global Solution Networks, has launched a web-based platform—the Global Access & Inclusion Hub. The Hub positions RHF as a multi-type GSN and is a step toward networking the many organizations in this community. The Hub will host and curate content through a robust information and technology ecosystem, and connect, educate, and foster engagement in a global online community. By cataloging active networks, and opening discussions in forums and blog publications, the Hub will enable global public and private partnerships, accelerating policy and infrastructure advances for access and inclusion.

The fragmentation of effort in the access and inclusion arena has made it difficult to give this community a voice. A "network of networks" that opens communication channels and enables collaboration, holds promise for initiating action on problem solutions efficiently and effectively. As Doramy Ehling, Chief Operating Officer of RHF, says, "This is a major social issue that cannot be solved in isolation with just legislation, or just awareness. We need everybody bringing what they can to the table."[10]

Building a Multi-stakeholder Network

By engaging multiple stakeholders, networks can realize the benefit of reducing redundancy and increasing efficiency of resources. Collaboration will permit distribution of work across a broader system of experts and will speed the development and implementation of best practices and problem solutions. Ehling explains:

> If we want to realize transformational change, we have to start working across organizations….We will engage in meaningful corporate, government, and key stakeholder partnerships that

will secure funding, advance the accessibility conversation, and allow for implementation of key programs, policies, and initiatives that will enable people with disabilities to fully contribute to society.[11]

The Foundation will invite key stakeholders to participate in Hub development. The spinal cord injury (SCI) community is already well connected to RHF and will serve as a standard of interaction as the expansion to a broader realm of disability access and inclusion attracts a new audience of potential participants with a wider range of knowledge and experience.

Leveraging Technology

Technology, one of the fundamental characteristics that defines a GSN, is key to the growth strategy of the Foundation. Rick Hansen applied technology solutions starting decades ago when he set up a common data set of SCI patient information across countries for research into achieving a cure for SCIs. As a result, the Rick Hansen Spinal Cord Injury Registry was born, and it has now evolved into a global research platform.

The online networking capability of the new Hub will create dialogue for both the people that the foundation serves, and the influencers and thought leaders that share the vision. Combining the power of the web presence with a social media campaign will amplify Rick Hansen's convening power through outreach and will bring users together to create a more powerful and cohesive voice for global accessibility and inclusion.

Opportunities for Transformation

The Global Access & Inclusion Hub will be a vehicle that supports collaboration across Canada and around the world and enables the sharing of expertise and best practices. RHF has current partners with very limited resources, and as the catalog of organizations grows, the sharing of resources will be a major contribution to problem solving.

Raising the Floor

About

Raising the Floor (RtF) is a global operational and delivery network of over 300 individuals and 50 companies, universities, and organizations engaged in building a Global Public Inclusive Infrastructure (GPII)—a platform that would make it easier and less expensive to create an inclusive (digital) society. The concept of "Raising the Floor" implies raising the base level of publicly available digital access technology sufficiently to permit users to reach and access web content and use pervasive digital technologies.

RtF seeks to ensure that "existing and future technologies are accessible to everyone with disability, literacy, and aging-related barriers, regardless of their economic status."[12] With ever-increasing dependence on digital tools, technologies must be accessible in order to mitigate economic, social, and educational disadvantages. Temporary or permanent functional limitations due to disability, literacy skills, or effects of aging should not be limiting factors in the use of these critical 21st century resources.

The network is creating the necessary tools to build inclusion into all digital interfaces by adapting the interfaces to the preferences of each user. Co-Director Jutta Treviranus articulates RtF's position on the disability and accessibility space:

> We are trying to shift the understanding of disability to a conversation about diversity, and remove the binary distinction between people who are disabled and people who are non-disabled. We are not only cross-disability in our focus, but beyond grouping or classifying people by their deficits. We feel that disability is not a personal trait but a common human experience brought about by how our society is designed.[13]

Rtf is also trying to break down the silos or categories of accessibility and move from a one-size-fits-all approach for the most diverse group of needs. People are multi-faceted. Their individual requirements are unique and influenced by much more than a classified deficit. RtF works primarily in the digital realm, or the digitally mediated realm, but this now covers almost everything encountered with respect to design. This realm is complex and dynamic so, out of necessity, the RtF approach needs to be systemic and focus on the complex interaction between many elements and influences.

The RtF group includes community members with both expertise and lived experience in many forms of disability and accessibility. For example, it includes some of the most knowledgeable world experts in augmentative and alternative communication, digital inclusion for individuals who are blind, and the leading researchers in cognitive access. It also helps its beneficiaries to have a voice of their own in designing their infrastructure.

The most notable achievement of RtF is the triggering and support of an ongoing global shift in the approach taken to access for people with disabilities. It emphasizes the shift from a deficit category, one-size-fits-all approach, to a one-size-fits-one approach that recognizes human diversity. The network has recruited over 300 partners globally to this effort.

One of the challenges RtF faces is that public and private institutions and academic entities are invested in the deficit or medical approach to access, focused on fixing the individual rather than the environment. Moreover, the platform design of the project is not a model recognized by public funding entities. The solution has been to adopt an open collaborative process that maximizes the portion of the problem addressed through normal market

mechanisms, and minimizes that which needs to be addressed through government or philanthropic resources.

At the same time, RtF provides a means to reach those the market cannot. Collaboration allows networks to build upon each other's work and lower the cost to develop and maintain access software for all. Any infrastructure must support both open source and proprietary, commercial, and free solutions, all on a level playing field. RtF fosters adaptation that can accommodate different needs, languages, and cultures.

Building a Multi-stakeholder Network

RtF co-Directors Gregg Vanderheiden[14] and Jutta Treviranus[15] have both been in the field for many years and have been global collaborators through the TRACE Center at the University of Wisconsin and the Inclusive Design Research Center (IDRC) at OCAD University (previously the Adaptive Technology Resource Center (ATRC) University of Toronto. The approach to digital inclusion supported by the RtF, known as AccessForAll, was conceived by Treviranus and the ATRC in 1998 and developed through several iterations via projects involving earlier network technologies (e.g., Web4All, TILE). In 2011 RtF adopted the approach. In response to a US government focus on Cloud Computing, RtF advanced AccessForAll to a Cloud infrastructure called the Global Public Inclusive Infrastructure (GPII). Within a year, over 50 leaders and key programs joined them from the mainstream IT and accessibility fields, with more coming on board weekly as they became aware of the effort.

RtF sees its multiple stakeholders as vital to its function. The mission of the consortium is dependent on multi-stakeholder involvement and collective risk taking. This is an ecosystem that is dependent on all stakeholders participating. Each group is critical to the mission.

The various stakeholders in RtF make unique contributions. The government sector partners—the Canadian government, the US government, and the European Union—bring funding, implementation to meet service commitments, and demand for accessibility through regulations and legislation. The private sector partners, including IBM, Microsoft, and Google, contribute via implementation in products and mainstream technical expertise. The public sector members such as IDRC, and RNIB, offer valuable co-design of user experience as well as research regarding feasibility, efficacy, and impact.

Having multiple stakeholders also impacts RtF's leadership, vision, mission, and operation. These are kept agile, responsive, and organically thriving through the multi-stakeholder community. The consortium's growth and evolution are fed by the multi-perspectives, and balance is maintained through community processes and the compelling nature of the mission. Continuous improvement and innovation are built into the open source. The key is inclusive co-design of all aspects of the ecosystem.

Leveraging Technology

This model is not without its challenges. Each stakeholder group is taken out of its comfort zone in some way. The consortium has a policy of open source, open access, and open data, which is not familiar territory for private sector groups. Fundamentally, the consortium is deconstructing traditional conceptions of research, metrics, enterprise, and work.

The use of digital technology is as ubiquitous as the use of electricity today. The RtF network is dedicated to making increasingly prevalent digital tools accessible by everyone—all people experiencing temporary or permanent functional limitations due to disability, literacy skills, or effects of aging should be able to access these Internet resources freely. RtF leverages technology to achieve its goals in research, analysis, advocacy, collaboration, and engagement. It is the vehicle for distributed collaboration, the means for achieving new innovations, and the connection between demand and supply.

Governance and Accountability

The RtF consortium is a collection of operating groups held together by its two strong director/orchestrators. The overarching model is an open source community model developed through the IDRC-led FLUID project.[16] Co-director Treviranus says:

> The characteristic that contributes most to our network's effectiveness is our commitment to open—open source, open access, open data—and a commitment to transparency. Continuous improvement processes are embedded into the infrastructure. The network achieves legitimacy in the eyes of the key stakeholders through open participation, a commitment to co-design, quality control with continuous improvement, robust technical standards combined with agile development, and inclusive design.[17]

The same philosophy of openness goes to ensure transparency, accountability, and representation in the multi-stakeholder network. As a distributed community, all communication and decisions are documented online and open to every community member. It is a welcoming and supportive meritocracy that is accessible to members with disabilities.

Impact, Effectiveness, and Resiliency

The RtF network has a review and feedback component that aggregates data on successful matches. These are verified through outside evaluation by external researchers at a number of universities and research centers. The impact of RtF is measurable by support and policy changes, successful implementation, number of end users requesting and receiving personalized services that meet their needs, and suppliers/producers using the tools and resources to address those needs.

Opportunities for Transformation

RtF was set up as a self-organized and self-governed consortium of people and organizations engaged in a broad range of activities—commercial, academic, voluntary, and governmental—that use technology to address the global challenges of digital access. In that sense, RtF has been a GSN since its inception, thus validating the utility of GSNs in the access and inclusion space.

In the words of Treviranus, "We are implementing all the aspects of a GSN with an inclusive take that is appropriate to our domain."[18] Their consortium of projects toward the implementation of their AccessForAll program is re-framing the challenge of inclusion and access in a way no traditional organization could.

Disabled People's International

About

A global cross-disability advocacy organization, Disabled People's International (DPI) was born during the era of rising activism that favored disability self-advocacy. Until the 1980s, service providers, parents and professionals controlled the conversation in the global disability movement through Rehabilitation International (RI), and disability organizations that focused on a single disability. People with disabilities were permitted to attend annual conferences of RI as observers but were not allowed to speak.[19] During the 1981 RI conference in Winnipeg, Canada, the policy prompted a walkout by a group of people with disabilities. "Nothing about us without us" became a rallying cry for the movement to give a voice to the disabled. DPI was established the next year, 1981, the International Year of Disabled Persons.

DPI was the world's first successful cross-disability effort to convert the talk about full and equal participation of persons with disabilities into action. Thirty years after it was formed, DPI continues to be the world's only global cross-disability organization advocating for all age groups and all disabilities, although other smaller organizations with similar focus have been set up in response to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD).

DPI is now a global network of national disability organizations. In over 150 countries across the world, disability organizations have joined together to form nation-level Member National Assemblies (MNAs), which focus on capacity-building and empowerment of people with disabilities in their home countries. Over half of the MNAs are based in the developing world, where 800 million of the world's one billion people with disabilities live. The MNAs are grouped into seven regional centers in Africa, the Middle East, Asia-Pacific, Russia, Europe, Latin America, North America, and the Caribbean, and are monitored by the DPI World Council.

The Goals of DPI are:

- To promote the human rights of people with disabilities.

- To promote economic and social integration of people with disabilities.

- To develop and support organizations of people with disabilities.

DPI's primary area of focus is advocacy for the rights of people with disabilities and this is done at the grassroots level through local member organizations in districts and villages across the world. The MNAs also advocate at the country level with regard to their respective governments. DPI's senior leadership does the same at the global level with regard to the United Nations and other global agencies.

Over the past two years, a primary DPI objective was to ensure inclusion of disabilities in the UN's Sustainable Development Goals—disability *vis-à-vis* health, disability *vis-à-vis* education, disability *vis-à-vis* gender—given that there was not any mention of disability in the Millennium Development Goals (MDGs) that spanned 2000-2015. "We have taken up with the UN to recognize the connection between disability and poverty, and to realize the Sustainable Development Goals (SDGs) for people with disabilities. Due to our advocacy, now disability finds a mention in the preamble to the SDGs," said Javed Abidi, Chairperson of DPI.[20]

Building a Multi-stakeholder Network

The primary stakeholders in DPI are the individuals with disabilities who organize themselves at various levels of the DPI hierarchy. MNAs represent a group of NGOs from each country. In addition, DPI forms partnerships with other NGOs, state bodies, and the private sector for action on issues. Some partners are:

- Zero Project

- The Hans Foundation

- ABILIS Foundation

- Global Initiative for Inclusive Information and Communication Technologies (G3ICT)

- Global Alliance on Accessible Technologies and Environments (GAATES)

- MphasiS—a HP company

- The Nippon Foundation

- World Health Organization

DPI's strengths are also its challenges. It is the largest global cross-disability advocacy network spreading from the least developed areas of the world to the most developed. Language barriers and cross-disability unity pose

challenges. "There is no formula to maintaining cross-disability unity; we are simply respectful and mindful of all disability groups. At the global level, most of the times it is about disability—period,"[21] says Abidi.

Leveraging Technology

DPI uses the most basic level of technology, but in the most effective way possible. Technology plays an important role in helping achieve the organization's goals and targets. In today's Internet age, DPI is able to connect and engage with all members (in more than 150 countries across 7 regions) with the click of a mouse. The use of social media such as Facebook and Twitter enables massive outreach and helps in spreading the word to a much larger audience. Whether it is dissemination of information, implementation of surveys for research and analysis, implementing campaigns, or seeking collaboration for their work, all of it is made possible by, and executed through, digital technology.

Governance and Accountability

Although DPI is essentially a global network of disability networks, it follows an institutionalized leadership and decision-making structure. In every country, disability organizations gather under their umbrella MNA. DPI's constitution allows membership for only one MNA per nation. Elections are held every two years at the regional level, where each MNA has one vote and has the right to stand for elections.

At the global level, elected representatives of each of the seven regions get a place in the World Council, which is the administrative body. Each regional representative has one vote as well as the opportunity to stand for the Executive Office. The World Council Members vote and elect the Executive Officers at the DPI World Assembly, which is held once every four years.

DPI is a democratic organization in which elections are held in a free, fair, and transparent manner. The network has a Constitution and By-Laws that are in sync with the new Canada Not-for-profit Corporations Act (CNCA). The constitution and the by-laws are followed for any issues related to governance, audit, or membership, which affords transparency and accountability. DPI has been registered with the United Nations since 1983 and enjoys consultative status with the UN Economic and Social Council (ECOSOC).

Impact, Effectiveness, and Resiliency

DPI has enabled several impactful social and policy changes since inception. They include:

- Promoting the philosophy of "Nothing About Us Without Us" to the world.

- Bringing about the philosophy of cross-disability cooperation and collaboration.

- Advocating for the UNCRPD and getting it passed at the UN.

- Advocating for the ratification of the UNCRPD across the world.

- Advocating for the inclusion of disability in a comprehensive manner in the SDGs.

DPI's goal is to achieve full participation of *all* persons with disabilities in mainstream life through promotion and protection of human rights. Its focus is particularly on people living in developing countries—who form 80 percent of the world's one billion people with disabilities and 20 percent of the world's poorest and most disadvantaged people. It ensures that people with disabilities, especially those from the poorer nations in the Global South, have their voices heard. Leveraging steadily improving online connectivity over the past few years, DPI has facilitated the gradual expansion of the power of disability politics from its center in the Global North into the South.

Opportunities for Transformation

Advocacy can be done at low cost with high impact, if done well. DPI has stirred the pot in a way that the world had not seen in the several past decades. It has turned the entire North/South paradigm upside down and given vision and confidence to the South. With 80% of the people with disabilities living in the global South, all decisions relating to disability issues being made by the North cannot be acceptable.

DPI is a unique global organization of people with disabilities. It is not only the first human rights based cross-disability disabled persons organization, but it also has what may be the broadest reach.[37] There is a transformation that the global disability movement is seeing—akin to the one that gave rise to the setting up of Disabled People's International in 1981: People with disabilities, especially in the Global South, now want to determine their own futures.

DPI's 9th World Assembly, taking place in 2016, will leverage its huge human capital to steer the global disability movement toward a stronger grassroots movement. With its theme, "*Building Human Capital: Realizing SDGs for People with Disabilities*," the Assembly will address the crucial questions of access, knowledge transfer, monitoring, self-determination, and representation in the post-2015 process as well as in other human rights processes.[38]

Access and Inclusion GSNs by Network Type

There are hundreds, perhaps thousands, of GSNs working in the accessibility and inclusion arena. The opportunity to connect those efforts and encourage collaboration will certainly enhance the delivery of solutions to people with disabilities around the world. Following are some examples of active access and inclusion GSNs, representing many of the taxonomic types identified in the Global Solutions Networks research, that are active around the world:

GSN Type: Knowledge Networks

Knowledge networks develop new thinking, research, ideas and policies that can contribute to solutions for global problems. The emphasis for knowledge networks is the creation and dissemination of new ideas, not their advocacy. Through the use of digital tools and Internet presence, knowledge networks have been able to expand their scope and global reach.

Global Alliance on Accessible Technologies and Environments

The Global Alliance on Accessible Technologies and Environments (GAATES) organization includes stakeholders from a broad array of experience and disciplines, including people with and without disabilities. Members include architects, educators, government agencies, and other experts.

Calling on their multitude of stakeholders, GAATES has completed numerous studies and accessibility audits of built environments, and developed training, educational programs and guidelines for use by all sectors. Its resources and publications are a valuable catalog of learning and information for use in the Universal Design and access fields. Topics in its web repository include the built environment, ICT, transportation, tourism, disaster preparation, and a toolkit for implementation of Universal Design in line with the UNCRPD.

GSN Type: Operational and Delivery Networks

This class of networks actually delivers the change it seeks, supplementing or even bypassing the efforts of traditional institutions. Many such networks predate the Internet and have had global impact (the Red Cross is a prime example). But as the Internet reduces transaction costs, increases collaboration opportunities and boosts the power of self-organization, individuals in concert with other institutions can take action to deliver solutions.

Achilles International

Founded in 1976, Achilles International, with chapters and members in 65 locations in the US and around the world, has developed specialized programs for training and athletic participation by people with disabilities.

Programs include races and special training tailored to adults, to children, and to war veterans, often pairing disabled competitors with race "guides" who can grab water, pace the athlete and provide a physical buffer from other runners. Race guides can be representatives from stakeholders in the network, including executives from member corporations, and government groups. Today the network provides a focus on athletics with an emphasis on the importance of outcomes of hope, inspiration, and the satisfaction of achievement.

GSN Type: Policy Networks

Policy networks engage non-governmental participants in the creation of government policy. They may or may not be created or even encouraged by formal governments or government institutions.

Powered by global multi-stakeholder collaboration, they are becoming a material force in global policy development. Their activities cover the policy process and policy proposals or lobbying, including agenda setting, policy formulation, rulemaking, coordination, implementation, and evaluation.

Center for Policy Studies

Partnering with other GSNs (such as Inclusion Europe and the European Disability Forum) the Center for Policy Studies (CPS) has reported on issues of access and inclusion to the European Commission in order to better inform policy making and political decision making in Europe and in other target countries. The center also provides one of the largest research centers in the Central European University, creating a new generation of policy makers and advocates.

Zero Project

The Zero Project is a worldwide network, founded by the Austrian Essl Foundation and run in partnership with the World Future Council and the European Foundation Centre. Its mission is to work for a world without barriers for persons with disabilities, by selecting innovative practices and policies and by communicating them to decision-makers and opinion-leaders worldwide, as well as researching social indicators to measure the implementation of the UNCRPD.

GSN Type: Advocacy Networks

Advocacy networks seek to change the agenda or policies of governments, corporations or other institutions. Of course, advocacy has been around since early civilization, but global advocacy is a relatively new phenomenon, paralleling the rise of globalization and the Internet.

The Association for Persons with Severe Handicaps

Advocating for the civil rights of people who have profound handicaps, The Association for Persons with Severe Handicaps (TASH) works to advance inclusive communities through advocacy, research, professional development, policy, and information and resources for parents, families, and self-advocates. The inclusive practices TASH validates through research have been shown to improve outcomes for all people.

Christopher and Dana Reeve Foundation

Another network engaged in advocacy and research is the Christopher and Dana Reeve Foundation. Stakeholders from research, education, and rehabilitation disciplines, as well as government interaction, are fundamental to the Science and Consortium Advisory Panels of the foundation. Following the mission established by its founder, the foundation funds research for spinal repair as well as programs to improve the quality of life for people living with paralysis, through grants, information, and advocacy. Advocacy work continues through the momentum that has been built, and in 2009 was realized, with the signing of the Christopher and Dana Reeve Paralysis Act in the US. The Act promotes collaborative research and quality of life initiatives.

American Association of People with Disabilities

With a powerful complement of corporate partners and alliances with other GSNs, the American Association of People with Disabilities is one of the nation's largest disability rights organizations. AAPD promotes equal opportunity, economic power, independent living, and political participation using programs in education, employment, healthcare, housing, technology, and transportation (including promoting improved accessibility in public transportation and transit-oriented development).

International Disability Alliance

The International Disability Alliance (IDA) works to network regional and global organizations of people with disabilities including their families. The IDA's main focus is on ensuring the acceptance and application of the United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) internationally. It works at all levels: national, regional, and international.

Rehabilitation International

Founded in 1922, Rehabilitation International (RI) is a global network promoting the rights and inclusion of persons with disabilities and/or

health problems through advocacy, habilitation, and rehabilitation to achieve an inclusive world where all people can enjoy active participation and full human rights.

GSN Type: Watchdog

Watchdog networks scrutinize institutions to ensure that they behave appropriately. In a world of instant communication, whistleblowers, inquisitive media, and Googling, citizens and communities routinely put institutions under the microscope. Transparency is powerful leverage for good in the world, and when it comes to global networks there is now a massive network of networks scrutinizing the behavior of governments, corporations and other institutions.

Disability Rights International

With its mission of promoting the human rights and full participation in society for people with disabilities worldwide, the Disability Rights International (DRI) network has undertaken to shed light on some of the worst abuses of the disabled around the world. By observing and documenting abuses, training activists, and collaborating with advocacy networks, it has already realized the power of a "network of networks" and has brought attention to human rights abuses in twenty-two countries in Europe, the Middle East, and the Americas.

The network vision is to use the UN Convention on the Rights of Persons with Disabilities (UNCRPD) as leverage to hold governments and international donors accountable for the treatment of citizens with disabilities, particularly those that are improperly placed in institutions that cannot serve their needs. They also work on correcting media misperceptions including calling out a major news outlet for misguided promotion of orphanages as safe havens for children with disabilities. A "Donor Accountability Project" examines the funding of programs and institutions that fail to serve the disabled.

DRI is an example of a GSN that fits into more than one taxonomic type. It is also a policy type, involved in developing the policy that its watchdog work exposes as needing updating and reform, and an advocacy type, advocating for awareness and change. Working with the US disability rights community, its work was an important catalyst for the US signing of the UNCRPD.

GSN Type: Platforms

Some networks provide platforms on which other networks can organize. This category is reliant on and enabled by the Internet, which provides the technology infrastructure for platforms.

Platforms are more than technology. They also possess organizational capability that facilitates collective actions that hold the promise of further dropping the transaction costs of global problem solving. The power of crowdsourcing is fundamental to the success of many platform networks.

Sozialhelden (Social Heroes)

By identifying and analyzing everyday social problems, Social Heroes encourage innovation and collaboration. A loosely connected group that started by working with local challenges, its projects have scaled to global solutions. One of its projects is a mobile app that provides information on access to public spaces.

The Wheelmap mobile app was designed as a tool for Social Heroes founder Raul Krauthausen, a tech-savvy, disabled professional. The free app allows users to participate in crowdsourcing information about wheelchair access. The app then maps the input data for easy use in both planning and in operating on the go for wheelchair users. The online mapping app searches, finds, and highlights wheelchair accessibility for public spaces including businesses, restaurants, and public buildings.

In addition to serving the users, Wheelmap also informs building operators of access challenges, including mapping which portions of the built environment are not accessible even when the main areas of a building do accommodate access. Available in 22 languages and serving roughly 35,000 users per month, Wheelmap offers the most extensive data collection on the accessibility of public places and has been recognized with national and international prizes.

Accessible Public Venues

Similar to the Wheelmap project of Social Heroes, other networks are engaged in alleviating the problem of accessibility to public venues through crowdsourced platforms.

Rick Hansen Foundation's Planat

Planat is an online tool that allows people to view and rate the accessibility of places worldwide. People with accessibility needs can prepare their trips and outings beforehand and search while on the go. Businesses can also use it to promote their accessibility features while gathering valuable feedback with which to make improvements.

AXSMap

AXSMap is an app that can find, rate, or share a place. AXSMap organizes mapathons at which teams of people complete reviews of neighborhood locations.

AccessNow

Another online platform that gathers its information by crowdsourcing, AccessNow informs users about accessibility characteristics of entities in the built environment.

AccessTO

AccessTO is the collective effort of several individuals who write reviews into a blog-based website about the physical environments in the Toronto community. The criteria used for the reviews are based on the City of London 2007 Facility Accessibility Design Standards and include elements such as space for turning, floor surfaces, elevators and toilet amenities

Job Accommodation Network

The Job Accommodation Network (JAN) consults with leading employers on how to best accommodate people with disabilities in the workforce. Its services are free and its reports are confidential so that both sides can trust their advice. The emphasis is on pragmatic solutions to problems so that both employers and employees receive maximum benefit. Services are available online as well as by telephone. Stakeholders range from NGOs to people with disabilities to large and small corporations to government bodies. JAN's areas of expertise include rehabilitation counseling, education of stakeholders, and engineering.

GSN Type: Global Standards Networks

These are non-state networks developing standards and specifications in virtually every area of technical specification. Whether for brick size, rail gauges, electricity, telephones, or computers, standards have been critical to economic development, prosperity, and human civilization for millennia. When it comes to international standards, state-based institutions such as the International Standards Organization have led the way. However, given the growing domains requiring standards, the complexity of standards, the need for truly global standards, and the requirements for vast numbers of stakeholders to be involved, the new networked models of standards setting increasingly make sense.

World Standards Cooperation

The World Standards Cooperation is a high-level collaboration between the IEC (International Electrotechnical Commission), ISO (International Organization for Standards) and the ITU (International Telecommunication Union). Under this banner, the three organizations preserve their common interests in strengthening and advancing the voluntary consensus-based International Standards system.

International Organization for Standards

The ISO develops standards for accessible buildings and transportation—major barriers for people with disabilities who are seeking work—as well as digital inclusion. The ISO has even developed guidelines for standards developers to address accessibility of written standards.

ISO is working together with its partner organizations, the International Electrotechnical Commission (IEC), and the International Telecommunication Union (ITU), to raise awareness of accessibility solutions. Guide 71 is the first ISO/IEC guide to have also been adopted by the ITU. A new joint policy statement by IEC, ISO, and ITU on standardization and accessibility accompanied its publication.

GSN Type: Governance Networks

These networks have achieved or been granted the right and responsibility of non-institutional global governance. They are different from "government networks" as described by Anne-Marie Slaughter (non-state networks of government representatives addressing a global problem)[22] and include non-government players.

One of the most important is the Internet itself, which is curated, orchestrated and otherwise governed by an extensive collection of individuals, civil society organizations, and corporations, with the tacit and in some cases active support of nation-states. No government, corporation, or state-based institution controls it.

International Initiative for Disability Leadership

Expressing the need for leadership in the access and inclusion arena, the International Initiative for Disability Leadership has undertaken to provide a support network and technical assistance to enable network leaders to connect, share best practice, and build a capability for showcasing developments. By providing a leadership forum, the IIDL expects to both develop sustainable leadership and generate new networks of leaders and practitioners.

Conclusions and Implications

Real change in the face of the challenges of access and inclusion takes the efforts of all types of GSNs; advocacy networks to draw attention to the problems, operational and delivery networks to provide programs and equipment for the target audience, knowledge networks to develop, catalog, and dispense the most current learning and best practices, and so

on, as described above. Finally, the role of a platform network to draw all of the efforts and elements together into a "network of networks" will allow efficiency of effort, funding and results.

The three case studies illustrate the potential, capabilities, and challenges associated with organizations applying the new GSN model of cooperation, governance, and problem solving. What we learn from the examination of the case examples and other GSNs in the access and inclusion space can be applied to new accessibility initiatives.

All of the GSNs described here, and hundreds more around the world, are making important contributions to the movement for greater access and inclusion for people with disabilities. They engage stakeholders from every sector, exploit digital technology, and organize and re-invent themselves to address issues as they emerge. They are increasingly impacting government policies, influencing attitudes, increasing awareness, and sharing knowledge across borders. Here are a few of the lessons we can learn from these GSNs and apply to new initiatives:

Leverage diversity. Accessibility and inclusion require multi-stakeholder solutions just as diversity contributes to outcomes and the collective value exceeds the sum of its parts.

Develop and apply standards. Lack of access to many built environments, transport systems, and information is a critical barrier. GSNs enable the development of standards that help overcome barriers and create usable environments.

Access and inclusion are economic issues as well as social issues. People in poverty are more likely to have a disability, while people who have a disability are more likely to live in poverty. Disability is both a cause and consequence of poverty. Increasing access to the workplace and breaking the poverty cycle must be part of the access and inclusion solution.

Exploit the power of technology. There is opportunity to amplify the impact of GSNs with innovative uses of technology. The web based Global Access & Inclusion Hub will collect and amplify the voices of stakeholders and enable global dialogue and collaboration across the sector.

Engage the private sector. Raise the Floor emphasizes the impact of its private sector support. Other networks in the access and inclusion space are strong in terms of individuals and NGOs as stakeholders but the private sector stakeholder is often invisible. Private sector support could add impact and value to many GSNs

Give the individual a voice. People with Disabilities, DPI's World Assembly, leverages the huge human capital that it commands to steer the global disability movement toward a stronger grassroots movement. Its theme, "Building Human Capital: Realizing SDGs for People with Disabilities," addresses the crucial questions of access, knowledge transfer, monitoring,

and self-determination and representation in the global post-2015 process as well as in other human rights processes.

Financial stability comes from strong partnerships. Strengthening partnerships with state bodies and the private sector to facilitate sourcing of adequate resources can enable GSNs to maintain financial sustainability, enhance technological infrastructure, and better advance crucial issues.

Self-directed solutions engage everyone. GSNs are self-organizing and self-governing entities addressing a global problem through engaging diverse stakeholders and exploiting the digital revolution. The Rick Hansen Foundation is transforming itself into a GSN to reach a global audience and address the accessibility issues that affect all of us. Raise the Floor has orchestrated hundreds of partners to find innovative solutions to digital inclusion. Disabled People's International self-organizes and self-governs as it addresses the global challenge of disability rights issues.

It takes all types. This survey of effective GSNs illustrates the range of purposes identified by GSN program research and underscores the fact that it takes multiple types of networks to have the desired impact on urgent social issues. Their combined efforts result in real impact and sustainable change.

Endnotes

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About Global Solution Networks

Global Solution Networks is a landmark study of the potential of global web-based and mobile networks for cooperation, problem solving and governance.

Program Management

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The Global Solution Networks program offers unlimited web access to gsnetworks.org program deliverables including learning tools, research publications and multi-media presentations, all posted for review and feedback. Webinars on current research are held quarterly. Please visit our web site at www.gsnetworks.org or contact info@gsnetworks.org for information.

The Global Access and Inclusion Hub was created in partnership between Global Solution Networks and the Rick Hansen Foundation, whose mission is to inspire leaders, influencers and the public to join Rick Hansen in creating a global movement to remove barriers and liberate the potential of people living with disabilities. Please visit the website at www.globalaccessinclusion.org

Ten Types of Global Solution Networks