



# Leveraging Organizational Change in Attaining Sustainable Development Goals During the Pandemic in Ghana, Kenya, and Nigeria

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**Abstract**

The United Nations (UN) has cautioned that only immediate action can prevent a lost decade of development for many countries due to COVID19 impacting the 2030 Sustainable Development Goals agenda. The pandemic crisis calls for organizational change informed by adaptive leadership skills around decision-making, innovative strategies, teamwork, and systemic change. This descriptive analysis study identifies shifts in organizational change pursued by Scientific Animations Without Borders (SAWBO) during the pandemic, including virtual collaboration and adaptive leadership. Specifically, this study focuses on the Scientific Animations Without Borders Responsive Adaptive Participatory Information Dissemination Program (SAWBO *RAPID*), a Scientific Animation Without Borders (SAWBO) project. Additionally, this study examines how some sustainable development goals and their targets during the SAWBO *RAPID* project were achieved. Lastly, chapter shares best practices identified during the project.

**Keywords**

COVID19 · Sustainable Development Goals · Organizational change · Partnership · Virtual collaboration · Practices

**Introduction**

Organizational change refers to the actions by institutions to alter their culture, technologies, infrastructure, and processes (Cummings and Worley 2015; French and Bell 1999). The implementation of organizational change includes facilitation by organization development facilitators or consultants who act as change agents and work with managers and employees to execute new approaches. These changes can be adaptive, small, and incremental changes that organizations adopt to address evolving needs or transformational changes that have a larger scale and scope than adaptive changes. During COVID19, organizational adaptation has led to more efficient transformations around how to access and use information technologies to benefit social well-being (Xiao and Fan 2020). Using digital tools to provide services to share information and address challenges has transformed innovation into more sustainable and impact-friendly forms.

Interacting with partners and collaborators virtually or online is not entirely new; in the pre-COVID world, project collaborations with partners on other continents were already in practice. Housed at a university, SAWBO embraced COVID19 guidelines given by the administration. Thus, the university partially mitigated the impact of the pandemic by shifting learning, research, and extension online and

shortening the semester while pursuing the World Health Organization (WHO) COVID19 prevention guidelines.

During pre-COVID, organizations were open to change and viewed change as a normal condition of organizational life but at a relatively slower rate compared to the immediate and far reaching shifts that COVID19 demanded (Choflet et al. 2021). According to Tsoukas and Chia (2002), “Traditional approaches to organizational change have been dominated by assumptions privileging stability, routine, and order. As a result, organizational change has been reified and treated as exceptional rather than natural” (p. 567).

The COVID19 pandemic changed the operation of organizations globally. All organizations made unanticipated changes in how and where they work apart from hospitals and other essential services institutions. During the lockdown periods, virtual working and working from home were adopted due to government orders, especially when employees were deemed non-essential (Xiao and Fan 2020). Similarly, international development workers faced an unprecedented challenge when trying to work with partners and collaborators in remote areas in other countries by leveraging technologies to ensure the continuity of projects because traveling across borders was not allowed.

Understanding how leaders drive organizational change is important because when faced with a natural disaster, a competitor’s moves, or a change in team dynamics, new behavior adaptable leaders can transform organizations into resilient organizations (Maor et al. 2020).

This descriptive analysis study explains the application of organizational change during COVID19 using the example of a digital program called Scientific Animations Without Borders (SAWBO). It examines the collective efforts, methods, tools and uses for fostering change and promoting resilience in local communities in selected African countries, Ghana, Kenya, and Nigeria, using organizational change theory and systems thinking theory. In line with the book’s objective, the authors examine how organizational change outcomes inform SDGs’ attainment.

## **About Scientific Animations Without Borders (SAWBO)**

Scientific Animations Without Borders (SAWBO) is a university-based research program focused on developing scalable behavior change tools with a specific focus on increasing inclusivity of indigenous and less commonly spoken languages, low-literate learners, women, youth, and those who live across digital divides (Payumo et al. 2021). These tools come from expertly created and vetted educational animations made available to entities that can use such content in their educational programs as they see fit. Cross-community expert input is highly multi-disciplinary and includes topic experts and experts in cultural appropriateness, to mention a few. Once animated, SAWBO works with linguistic experts globally to place that content into diverse languages. Content is then made freely available to other organizations for educational and scaling purposes. The resultant content is used in research studies ranging from randomly controlled design experiments (RCTs) testing the

acceptability of the content, learning gains, adoption of the educational content, and innovations that occur after adoption (Bello-Bravo and Pittendrigh 2018).

An estimated ten million NGOs exist globally, along with numerous governmental and intergovernmental organizations. A subset of these entities mentioned above have a goal of delivering behavior change educational content contributing to the United Nations Sustainable Development Goals (SDGs). Many entities do not have the necessary resources to create and test their educational interventions. Making inexpensive (e.g., freely available) locally applicable (e.g., in local languages and culturally appropriate) content available to these organizations, along with evidence that such interventions would result in behavior change outcomes, can have multiple impacts on the effectiveness of these organizations, as mentioned earlier.

## **Sustainable Development Goals and the COVID19 Crisis**

According to the United Nations (2020), the COVID19 pandemic has caused global crises leading to an economic recession, unemployment, movement restriction around the globe, sending the economy into a recession resulting in increased unemployment, restricted movement, and deprivation. Subsequently, this pandemic affected the impact of SDGs due to loss of jobs and livelihood opportunities.

The United Nations' 17 Sustainable Development Goals (SDGs), adopted in 2015, represent a universal call to protect the planet, end poverty, and ensure peace and prosperity for all people by 2030 (United Nations 2015). However, the advent of COVID19 as a global pandemic has significantly interrupted progress toward fulfilling the 17 SDGs. António Guterres, the Secretary-General of the United Nations, notes in his Foreword to the United Nations' Sustainable Development Goals Report 2021 (Guterres 2021):

Regrettably, the SDGs were already off track even before COVID19 emerged. Progress has been made in poverty reduction, maternal and child health, access to electricity, and gender equality, but not enough to achieve the Goals by 2030. In other vital areas, including reducing inequality, lowering carbon emissions and tackling hunger, progress had either stalled or reversed (2021, p. 2)

National and international organizations must work together to address Africa's SDG achievement lags and reversals to put development objectives back on track. The UN report has identified the impact of COVID19 on the SDGs and proffered specific areas to concentrate on: "Governance (building a new social contract), Social protection (uprooting inequalities), Green economy (rebalancing nature, climate, economy), and Digital disruption and innovation (for speed and scale)" (United Nations 2020, p. 10).

## Theoretical Framework

This chapter borrows from organizational change theory to understand how SAWBO *RAPID*'s leadership and team adapted how they work to implement projects. Additionally, the authors borrow from systems thinking theory to understand aspects of subsystems when implementing a system change in an organization. Systems thinking theory is germane to SAWBO's systems learning approach, which shapes and informs how SAWBO develops, disseminates, engages with and carries out research.

## Organizational Change Theory

Lewin (1947) was not the first to propose that life is never without change; nevertheless, organizations (like life) constantly change. Organizations can manage change in various ways. According to Lewin's change management framework, organizational change occurs in three phases: unfreeze, change, and refreeze. The underlying idea is that the current form of the organization must first be loosened (unfreeze) before change can be implemented (change) and then formalized and set permanently (refreeze) in its new form. In preparation for change, the management identifies the strategy to be deployed and prepares the organization members for change by providing information to gain buy-in. During the change or motion states, the plan for change takes place and action is implemented. Lastly, the change is incremental and reinforced; feedback is collected to identify gaps and manage resistance. Corrective measures are undertaken for success, and all milestones are celebrated.

Organizational change involves "a new state of things, different from the old state of things" (French and Bell 1999, p. 2). According to Cummings and Worley (2015), organizations are influenced by global events, an overflow of information, and complex, uncertain environments, subsequently requiring planned changes to survive. Furthermore, Cummings and Worley (2015) also add that the process interventions used by professionals target various levels within the organization, namely, individual, group, and organizational levels of analysis.

When instituted, organizational change can be incremental or transformational (Kotter 2012). Incremental change is relatively slow and small steps that cause an organization as little turbulence as possible (Bass and Avolio 1993; Bass and Riggio 2005; Kotter 2012). Eventually, it increases inefficiencies. These small changes in the organization allowed are not risky and costly, and yet they demonstrate improvement. Conversely, transformational change impacts the organizational structure as well as culture. Furthermore, transformational change is also referred to as revolutionary or strategic change because it shifts the attitudes and perspectives of the employees (Kotter 2012). For instance, Kotter (2012) described an eight-step process for change management: to create urgency, form powerful coalition, create a vision for change, communicate the vision, remove obstacles, create short-term wins, build on the change, institute the changes in the organization to become the

culture. In short, leaders who are engaged in organizational change have to be inclusive, give feedback, and monitor the change until it becomes the norm.

## **Systems Thinking**

Organizations operate in a complex world that managers can also understand in terms of a system (with internal and external systems). According to Lepore et al. (2016), the complex environment that organizations operate in makes it difficult for them to establish management methods. Senge (1990) described mental methods as “deeply ingrained assumptions, generalizations, or images that influence how we understand the world and how we take action” (p. 11). Mental models are abstract and influence the behavior of those within organizations and, therefore, a system. The lack of a shared mental model among system members means that a process has to be put in place to integrate them into the program; by doing so, their mental models are shaped and formed.

Systems-thinking approaches understand that organizations are nonlinear, contain subsystems, and have complexities. Therefore, when making organizational decisions, the solutions must consider the setting, context, and system. Concerning organizational change, the involvement of multiple system stakeholders is essential for buy-in and ensuring a shared mental model for implementing change (Cabrera and Cabrera 2019).

Since many organizations nowadays rely on technology, when systematic change includes technology, the new system must also meet the present and future needs of the institution (Watson and Watson 2013).

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## **Leadership and Organizational Change**

### **The Role of Leadership in Organizational Change**

Generally, leaders play the role of influencing others to achieve goals. Specifically, leaders diagnose, analyze, forecast, monitor, and solve problems. Further, leaders solve problems by scanning their environment’s internal and external problems and then spearhead the facilitation of this problem-solving (Northouse 2021). Leaders also encourage their employees and profit from the turbulence in their external environment by learning from them and innovating. According to Obrenovic et al. (2020), these leaders delegate authority and allow their employees to participate in decision-making thus building the employees’ confidence and securing their commitment to the organization or project.

Leaders pursuing organizational change while working in turbulent settings merge technology and human resources, which means that such settings require reliable digital infrastructure, connectivity, and technological proficiency on the part of employees. Dwivedi et al. (2020) observed that COVID19 increased the use of

instant messaging and social interaction while introducing others such as WhatsApp, Skype, Zoom, Teams, and more.

Presently and during pre-COVID19 times, organizational change could foment resistance and require buy-in activities that would lead to a shift in how things are done (Cummings and Worley 2015). Nevertheless, COVID19 was unique because it afforded an “organic” space for organizational change within institutions. After all, change became unavoidably necessary. Employees generally embraced the shift as it informed their health and well-being, while institutions required leaders to assist in driving and motivating continuous adaptive change. The task was difficult; resistance occurred when some citizens and leaders refused information from the government and health experts about decision-making. This information was not taken up as quickly as anticipated, and sometimes there was confusion, mainly because COVID19 was a new phenomenon.

## Leader Employee Relationship and Organizational Change

Understanding how leaders relate to their teams’ workers provides an understanding of leadership. According to Korte (2007), when it comes to the workplace, the kind of relationship individuals have with the leader also informs their relationships with co-workers. Understanding this relationship aligns with the Leader-Member Exchange (LMX) leadership framework, which positions interactions between leaders and any particular member of a work unit, team, or organization as the basic unit of analysis (dyad) (Graen and Uhl-Bien 1995).

Ideally, a leader will develop as many high-quality relationships as possible at the same time that subordinates’ job satisfaction, organizational citizenship, productivity, and attainment of organizational goals increase (Power 2013). The drawbacks of LMX include its potential to alienate some subordinates while favoring others (Luneberg 2010), not accounting for dynamic groups effects and social identity, and not offering pathways to developing high-quality relationships with leaders (Power 2013).

For COVID19, LMX is important for understanding how leaders related to their employees during the pandemic to make them feel safe and secure (Emmett et al. 2020). Trust is important in relationship-based processes such as collaboration and partnership (Dolan et al. 2020; Lutomia 2019); in the COVID19 context, trust necessitates the leader’s actions more than their words. Trust leads to increased relationship, social cohesion, and opportunities to motivate employees to perform (Dolan et al. 2020). In times of crisis, there is a particular need for a consensus between employees and leaders, especially around emotions; leaders’ emotional balance is also necessary to deescalate anxiety (APA 2022).

Skills necessary during a crisis include communication, as this influences the building of trust and stress reduction in employees (APA 2022), especially in the kind of remote work conditions imposed by COVID19. Leaders and managers often do not like remote work (by employees) as they are more difficult to monitor (de Cremer 2020), but the ensuing attempts at increased monitoring and surveillance

are bad for morale, decrease trust, and impact decision-making. Not surprisingly, “Commanding and controlling leadership without consultation or collaboration damages collaborative working and team relationships” (Chen and Sriphon 2021, p. 2).

In contrast, transformational leadership allows leaders to encourage and motivate followers to innovate and embrace positive change to grow and shape the organization’s future success (Bass and Avolio 1993). Transformational leadership involves leaders inspiring and encouraging employees to become innovative problem solvers, developing follower-leadership capacities through coaching, mentoring, and providing challenges and support by coaching and mentoring (Bass and Riggio 2005). Transformational leaders pursue innovations and opportunities, provide opportunities for taking risks, and create an organizational culture and climate to attain the understood goal. Transformational leaders orient organizations toward higher performance.

## **Adaptive Leadership and Organizational Change**

Adaptive leadership is germane to responding to situations like the COVID19 pandemic because new knowledge came to the fore, and there were unpredictable rises and falls. This form of leadership approach is an iterative process that takes an overall view of a situation, makes decisions, and provides new innovative directions in real time. According to Stefan and Nazarov (2020), a leader’s innovative approach is marked by the ability to inspire the employees to think creatively, come up with ideas, create, and innovate.

Northouse (2021) proffers that adaptive leaders put in place measures that motivate the employees to increase morale and performance, such as inspiring the workers to buy into the change, providing information, giving feedback and new ideas, and increasing the capacity of the employees through training. Similarly, Glover et al. (2002) indicate that adaptive leaders play the role of processing information and accommodation. Glover et al. (2002) and Northouse (2021) both write that the role of the leader is to process new information and knowledge and share it with the employees so that they can learn new skills and for efficient performance.

For example, Santra and Alat (2021) studied adaptive leadership competencies among six doctors in Kerala during COVID19. The findings of this study indicated that doctors perceive leaders as educators, learners, and social beings. Secondly, doctors faced challenges such as unusual occupational demands, information overload, sociocultural issues, and personal intricacies. Third, doctors adapted to new conditions due to the pandemic, for example, learning to address unique issues, changing perspectives, and establishing and maintaining a safe and engaging work environment. Fourth, leadership competencies that emerged are regulating distress, providing direction, maintaining disciplined action, fostering collaboration, empowering, understanding organizational linkages, strategic vision, and communication skills.



## The Case of SAWBO *RAPID* in Ghana, Kenya, and Nigeria During the Pandemic

COVID19 required a shift in international development work, especially in light of past practices by the Global North criticized for being asymmetric and dominating of Global South partners and collaborators through advantages they had as funders, initiators of project ideas, and decision-makers. From 2020 to the beginning of 2022, there were travel bans across continents; subsequently, international projects such as SAWBO *RAPID* were facilitated through old and new collaborators virtually. The leading project in the collaboration relied on the goodwill and trust of the organization in the global South to implement the projects and send reports. This was the practice before COVID19, with travel to the Global South during various points in the project.

For this project, collaboration and partnership can be defined according to Poole (1995) as follows:

an association between two or more persons, or organizations who join together to achieve a common goal that neither one alone can accomplish [and] characterized by ... shared responsibility. Each member agrees to contribute resources to the partnership with the understanding that the possession or enjoyment of the benefits will be shared by all. Partners work hard to strengthen each other and to endure conflict and change, because they recognize that their shared goal extends beyond the reach of any one member. (p. 2)

Funded through a grant from Feed the Future, the US Government's global hunger and food security initiative, the Scientific Animations Without Borders (SAWBO) Responsive, Adaptive, Participatory Information Dissemination (RAPID) scaling program served as an educational intervention effort to disseminate crucial information related to COVID19's secondary economic impacts, including disruption to trade, supply chains, and markets (SAWBO 2022).

The purpose of SAWBO *RAPID* was to ensure that crucial COVID19 information was delivered across borders, cultures, and literacy levels by quickly developing educational animations in local languages and using virtual dissemination platforms to reach remote and marginalized communities. The program was built on SAWBO's research-to-impact approach. With over 33 publications addressing research questions necessary to provide an evidentiary base for SAWBO strategies, this approach is cutting-edge, allowing land-grant institutions to translate research outcomes into powerful global impacts, even in a COVID19 world. Before SAWBO *RAPID*, the SAWBO program had created over 90 animated topics in over 145 languages. SAWBO videos can currently be found on TV stations in both West and East Africa, with over 50 million people known to have benefited from them. Likewise, SAWBO *RAPID*'s COVID19 response sets the groundwork for a systems approach of educational responses to future global catastrophes and further democratizes information critical to surviving these critical historical turning points. Like SAWBO, SAWBO *RAPID*'s content, once created, is immediately available for anyone or any group to use for educational purposes in any way that fits their needs,

circumventing costly delays and the significant inequalities of information that would occur if less developed parts of the world were left to create their own responses to crises. The SAWBO system is focused on (1) providing accurate educational information for people of all literacy levels across and as many language groups as possible, (2) content that can be used by other individuals and groups around the world to have an impact in their community in real-time, and (3) allowing for a RAPID response to emerging challenges.

SAWBO *RAPID* covered activities from May 18, 2020, to December 31, 2021. These included video animation selection, production, dissemination, and research. Over these four phases of the SAWBO *RAPID* scaling program, the project implemented the following activities:

- Worked with United States Missions and Innovation Labs to identify critical behavioral changes necessary to mitigate the secondary economic effects of the COVID19 pandemic crises.
- Produced ten animated videos for immediate and permanent distribution for use by individuals and groups in the target countries of Bangladesh, Ghana, Kenya, Nigeria, and across the globe.
- Disseminated the critical information available in the animated videos to over 20 million persons in four target countries with a two-tiered dissemination strategy consisting of funded pushes through available social media platforms and television as well as collaborative pushes through existing networks consisting of Government Organizations (GOs), Non-government Organizations (NGOs), and social media networks (SMNs).
- Carried out significant research through baseline and penetration studies on the reach and use of the videos as well as the adoption of the techniques explained in the videos.
- Refined our understanding of information dissemination in the four target countries and provided the Missions with information dissemination strategies.

## **SAWBO *RAPID* in Ghana**

To implement *SAWBO RAPID* in Ghana, SAWBO collaborated with a local Non-Governmental Organization (NGO) that helped recruit subjects for the interview and members of a WhatsApp group. This NGO had partnered with SAWBO on other activities pre-COVID19. Another organization was involved in defining dissemination strategies and hosted web events for groups interested in hosting SAWBO *RAPID* videos. Also included was a member of a university in Ghana who assisted in conducting the baseline study. The penetration study of the video animations in Ghana was a countrywide randomized sample conducted almost exclusively in marketplaces.

## **SAWBO *RAPID* in Kenya**

In Kenya, various organizations collaborated with SAWBO to implement the SAWBO *RAPID* project. A communication-consulting firm assisted with the implementation of the baseline study and the penetration study for the SAWBO *RAPID* videos in Kenya. In addition, this organization developed dissemination strategies in Kenya and hosted web events for organizations interested in hosting SAWBO *RAPID* videos. A farmer's television station that had worked with SAWBO prior to COVID19 hosted SAWBO *RAPID* videos on their television programs, which reach farmers throughout Kenya. Kataru Concepts is a knowledge management entity that actively disseminates digital content to improve various practices. A partner also referred to as a knowledge partner created a nationwide network of volunteers drawn from various professional backgrounds in Kenya who share, train, and use SAWBO *RAPID* digital content in their communities. This knowledge partner maintained a WhatsApp group where best practices for content sharing are shared. A youth organization was also involved in the adoption of SAWBO *RAPID* content and mobilized youth to work as translators, bloggers, and musicians. In Kenya, SAWBO used television, bloggers and social media (WhatsApp) networks in concert with a strong social media campaign (YouTube/GoogleAd). The promotional efforts were focused on the USAID Zones of Influence (ZOIs). The penetration study documented the reach and use of the videos in the Kenyan ZOIs.

## **SAWBO *RAPID* in Nigeria**

In Nigeria, SAWBO collaborated with a program based at the University of Ibadan. This program supported SAWBO *RAPID* efforts through video dissemination and market penetration research. In Nigeria, we focused on the USAID Zones of Influence (ZOIs). In Nigeria SAWBO conducted a television campaign combined with a community level showing of the videos through the existing Nigerian agricultural extension network. There were also some limited social media campaigns conducted through Facebook as well as YouTube/GoogleAd.

## **SAWBO and Attaining Sustainable Development Goals Under SAWBO *RAPID***

Concerning *Agenda 2030*s 17 SDGs specifically, SAWBO typically focuses on four elements: (1) commitment to education (knowledge transfer) as a way to solve the problems of the most vulnerable populations, especially women; (2) institutional (university) involvement in collaboration with other sustainability agents; (3) the beneficial deployment of innovative approaches and technologies; and (4) ending hunger by promoting healthier interactions between societies and ecosystems, especially favoring more environmentally friendly and sustainable solutions and working in collaborations and partnerships. This means that SAWBO covers Goals SDG 1, 2,

3, 4, 5, 10, 12, and 17. From 2019 to the present, SAWBO has been involved in a peace and justice project in Mali, bringing SAWBO's SDG support to SDG 13 as well.

Funded through a grant from Feed the Future, the United States Government's global hunger and food security initiative, SAWBO *RAPID* served as an educational intervention program to disseminate crucial information related to COVID19's secondary economic impacts, including disruptions to trade, supply chains and markets. SAWBO *RAPID* ensured that important COVID19 information was delivered across borders, cultures, and literacy levels by quickly developing educational animations in local languages and using virtual dissemination platforms to reach remote and marginalized communities.

Three categories of video animations were produced covering topics, namely: food storage, market safety, and food safety. An analysis of the information in these videos along the 17 SDGs indicates the SDG attained by SAWBO *RAPID* (see Table 1). The SDGs attained by the three topic areas are Goal 1: Reduce poverty, Goal 2: Zero hunger, Goal 3: Good health and wellbeing, Goal 4: Quality education, Goal 5: Gender, Goal 10: Reduced inequality, Goal 12: Ensure responsible consumption and production, and Goal 17: Partnerships for the goals.

**Food Storage:** These video animations demonstrated how to store food, prevent the loss of food, and increase efficient seed or root production for planting. The jerrycan technique discussed how to prevent insect damage when storing beans and other legumes postharvest for extended periods using the jerrycan method. Purdue Improved Crop Storage bags provide a simple, low-cost method of reducing post-harvest legume losses due to bruchid infestations. "The Sweet Potato Roots for Timely Planting Material" animation explains the steps for preparing and storing root vegetables. Specifically, this video animation attained the following SDGs –: Goal 1: Reduce poverty, Goal 2: Zero hunger, Goal 3: Good health and wellbeing, Goal 4: Quality education, Goal 5: Gender, Goal 10: Reduced inequality, Goal 12: Ensure responsible consumption and production, and Goal 17: Partnerships for the goals.

**Market Safety:** Five videos provided information about preventing the spread of COVID19 in markets and public spaces. These video animations aimed at market shoppers, market vendors, and the market manager by providing safe practices to limit COVID19 in the market. Other videos demonstrated how to wear a facemask and how public transport managers can ensure COVID19 does not spread inside a public transportation vehicle. These video animations attained the following SDGs –: Goal 2: Zero hunger, Goal 3: Good health and wellbeing, Goal 4: Quality education, Goal 5: Gender, Goal 10: Reduced inequality, Goal 12: Ensure responsible consumption and production, and Goal 17: Partnerships for the goals.

**Food safety.** Two video animations focusing on increasing food security through disease prevention and preservation were produced. One of the video animations discussed the Newcastle disease in chicken, how it spreads, the signs and symptoms in chicken, and how to keep them healthy for nutritious food. The second video animation provided guidelines for ensuring that each family member gets the nutrients they need, especially during times of crisis like a pandemic. It provides information on how to safely grow, access, prepare, preserve, and store various

**Table 1** Evidence of attaining Sustainable Development Goals within SAWBO *RAPID*

Video animation	Description of the video animation	Sustainable development goals attained
<b>Food storage</b>	<b>These videos showcase postharvest loss prevention and efficient seed or root production for planting.</b>	
The jerrycan technique	This animation explains how to avoid insect damage when storing beans and other legumes postharvest for extended periods using the jerrycan method.	Goal 1: Reduce poverty Goal 2: Zero hunger Goal 3: Good health and wellbeing Goal 4: Quality education Goal 5: Gender
The Purdue Improve Crops Storage Bag (PICS Bag) video	Purdue Improved Crop Storage bags provide a simple, low-cost method of reducing postharvest legume losses due to bruchid infestations	Goal 10: Reduced inequality Goal 12: Ensure responsible consumption and production Goal 17: Partnerships for the goals
Sweet potato roots for timely planting material: The triple S method on how to prepare and store roots	This animation explains the steps for preparing and storing root vegetables.	
<b>Marketplace safety</b>	<b>These videos provide information about preventing the spread of COVID19 in markets</b>	
The market shopper video	This animation outlines safe practices to follow when shopping in a marketplace during the COVID19 pandemic.	Goal 2: Zero hunger Goal 3: Good health and wellbeing Goal 4: Quality education Goal 5: Gender
The market manager video	This video explains to market leaders their role in ensuring safe practices to limit Coronavirus exposure in your market.	Goal 10: Reduced inequality Goal 12: Ensure responsible consumption and production Goal 17: Partnerships of the goals
The facemask video	This video shows how to use facemasks to minimize the impact of COVID19	
The transport manager	This video explains how to use public transportation during the pandemic to avoid the spread of COVID19.	
<b>Food safety and nutrition</b>	<b>These videos build food security through disease prevention and preservation</b>	
The Newcastle disease video	This video points to the spread of Newcastle disease in chicken, how it spreads, the signs and symptoms in chicken, and how to keep	Goal 1: Reduce poverty Goal 2: Zero hunger Goal 3: Good health and wellbeing Goal 4: Quality education

(continued)

**Table 1** (continued)

Video animation	Description of the video animation	Sustainable development goals attained
	them healthy for nutritious food	Goal 5: Gender Goal 10: Reduced inequality Goal 12: Ensure responsible consumption and production Goal 17: Partnerships for the goals
The optimal nutrition video	This video provides guidelines for ensuring that each family member gets the nutrients they need, especially during times of crisis like a pandemic. It provides information on how to safely grow, access, prepare, preserve, and store various foods.	

foods. Goal 1: Reduce poverty, Goal 2: Zero hunger, Goal 3: Good health and wellbeing, Goal 4: Quality education, Goal 5: Gender, Goal 10: Reduced inequality, Goal 12: Ensure responsible consumption and production, and Goal 17: Partnerships for the goals.

Here, the authors discuss the various video animations produced by the SAWBO *RAPID* project and link them to the goals they helped attain.

## Managing and Implementing Organizational Change at SAWBO During COVID19

Organizational change activities in the project and the institution led to the intended outcomes. Using change management structures, the consultants and SAWBO team were able to pursue project milestones. The program leaders, management team, SAWBO team, and consultants played different roles that were synergistic. To ensure that the project was completed smoothly, the following strategies practiced helped to institute:

- The program leader and management team connected the consultants and the SAWBO team using regular virtual meetings. These meetings were both planned and ad hoc. The members' availability and the urgency of completing tasks informed the spontaneous ones. Notably, there were tasks such as completing animation scripts that were team-based. The tracking of projects for follow-up during meetings was implemented using Smartsheet and Trello to track activities.
- Feedback channels (such as weekly team meetings) were not only spaces for working together but also times when organizational changes were agreed upon or observed. For instance, members' attendance at a remote working Zoom meeting signaled buy-in for working remotely during COVID19.

## Key Transitions in COVID19 Informed Change at SAWBO

- Pre-COVID19: In-person presence at the workplace and projects. Collaborations in person and virtual communication using Skype, WhatsApp, mobile phones, and traveling to project sites.
- Beginning of COVID19: University and Organization continuity with employee safety: Remote working, empowered virtual collaboration, and project management to support SAWBO *RAPID*.
- During COVID19: Adherence to new working processes such as virtual collaboration, remote work use of virtual technologies, collaboration, and accountability.
- Post/With COVID19: Changes in the organization with back-to-the-office and hybrid remote working. Meetings range from face-to-face among some members and virtual. International projects continue to be virtual. No project-related travel yet.
- The leadership at SAWBO has taken advantage of virtual technology to pursue a hybrid remote working process in the United States and virtual collaborations with its international partners. Working tools such as Smartsheet and Trello, WhatsApp and Zoom have become spaces for collaboration, democratic leadership, and accountability.

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## Discussion

### Best Practices for Organizational Change

The SAWBO *RAPID* end-of-project report was referred to for best practices for organizational change. The lessons learned here are three-pronged: organizational change, project implementation during the crisis, and technology. Along with organizational change, the authors learned that virtual networks could be used to (1) understand problems globally, (2) develop culturally and linguistically appropriate responses that are backed by the “best available science,” (3) deploy the content virtually, and (4) establish partnerships whereby the partners can develop and use countrywide networks to get content into people’s hands. This can all be done without the need for travel. This strategy removes the high carbon footprint costs of international development work that require significant international, regional, or local travel. COVID19 provided a paradigm shift in SAWBO’s international program management. It provided an impetus for speeding up SAWBO *RAPID* project activities since no traveling was required. All team members and consultants worked virtually, leading to robust collaborations in both developing and speeding up an ongoing trend of all teams moving in virtual spaces, with online – social networks and teams working extremely well. The twenty-first century and COVID19 expanded the infrastructure and shifted it toward virtual workplace interactions.

Secondly, project implementation lessons learned include how USAID Missions played a critical role in content development (co-creators) and an active role in

identifying needs and partners who could help deliver educational content. Missions were critical partners in the process. USAID's prior and ongoing research investments made this response system possible. At the level SAWBO, prior relationships also made this project possible – this speaks to the need for investments to build long-term and strong relationships in the country. These pre-existing relationships, collaborations, and networks include universities, television and radio stations, NGOs and government institutions in Ghana, Kenya, and Nigeria.

SAWBO developed a virtual pull strategy for understanding the problems of content development for problem solving. Specifically, at the beginning of the project, phone interviews were used to collect data for the project to understand the challenges they were facing with the lockdowns of COVID19. The product from the responses included creating COVID19-related videos to minimize its secondary effects. The project provided a space for in-depth discussion and learning experiences for participants, collaborative organizations, and the SAWBO team. The project provided a good forum for nurturing a postgraduate research associate, early-career researchers, professors, and new research teams using systems theory, interdisciplinary process and research methods, and data analysis. SAWBO leaders practiced leadership capable of adapting to the COVID19 pandemic changes in an interdependent and uncertain world. This means that learning, relationships, and collaboration informing the project enabled the team to solve problems using an interdisciplinary approach while considering the end.

Third, on technology, SAWBO *RAPID* offers lessons for the social media platforms, such as YouTube/GoogleAds as highly cost-effective ways to deliver educational content quickly. One can use a Google-based fee for YouTube/GoogleAds campaigns to push educational content into countries. These scalable educational strategies can allow for rapid deployment (e.g., delivery to a million people over a weekend). One can also target specific language variants to specific zones where the languages are primarily used. The costs of targeting Zones of Influence, specific regions, or countrywide are comparable. The use of the WhatsApp network worked well in Kenya because existing practices of relying on WhatsApp groups to share information, organize communities, and socialize easily allowed tapping into those practices.

Universities are currently not well structured for spending around social media. By sub-contracting with private sector partners, SAWBO has been able to work around such limitations. The project's public-private sector partner relationship developed around this approach. Local partners can engage TV stations toward scaling. In Nigeria, prior relationships with TV stations and the country contact provided a pathway toward using television to reach many states. In Kenya, KTN Farmers TV relied on SAWBO animations as content during COVID19 because they could not go to the field due to lockdowns.



## Conclusion

This chapter discussed how SAWBO contributed to reaching the SDGs during a pandemic by embracing organizational change. Following the guidelines from the WHO to prevent COVID19, enforcing institutional rules and pursuing organizational change as well as adaptive leadership skills not only facilitated the safety of the team but forged teamwork and collaboration to complete a highly impactful project and contribute to the SDGs. The chapter also highlighted leadership and collaboration shifts informed by external shifts and discussed the specific SDGs were attained, the outcomes, and the lessons learned from the project.

Today, although mandates around social distancing and masking are relaxed, organizations now rely on remote work and hybrid work; practices from the full-fledged COVID19 period are still in use. It is plausible to state that COVID19 was a watershed for internally and externally driven organizational change because it allowed for the use of virtual collaboration with less resistance to change. In our case, COVID19 increased, expanded, and gave impetus to virtual collaboration using relationships established pre-COVID19. SAWBO collaborated with consultants, knowledge managers, researchers, organizations in project countries, funders, and animators to increase food resilience in Ghana, Kenya, and Nigeria.

The limitation of this chapter is that we did not include data or narratives from the project collaborators. Future research will capture the voices of the various leaders and their team experiences in organizational change management during COVID19.

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