

REVOLUTIONIZING DATA COLLECTION

**WORLD FOOD PROGRAMME AND NIELSEN
USE SCALABLE MOBILE SURVEYS IN TODAY'S
CHANGING TECHNOLOGICAL LANDSCAPE**

nielsen
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SUPPORTS



EXECUTIVE SUMMARY

Nielsen, a global information and measurement company, and the United Nation's World Food Programme (WFP), the world's largest humanitarian agency fighting hunger worldwide, worked together on a year-long pro bono project to revolutionize WFP's mobile data collection. As part of Nielsen's commitment to skills-based volunteering and the in-kind giving of data and insights, a team of Nielsen measurement science associates worked to help WFP move from solely in-person interviews to incorporating remote mobile data collection into WFP's survey toolkit.

Data is critical to the success of WFP's ongoing relief and support efforts, as the organization plans its operations and prioritizes its assistance based on the information it collects. When physical access for face-to-face interviews is limited because of conflict, disease or other risks, carrying out its programs effectively and efficiently becomes difficult.

To assist in this effort, Nielsen provided guidance and support in four key areas: data collection, methodology, analysis, and in-country expertise. The team employed Nielsen measurement science methodology with a clear focus on maintaining the quality of WFP data to support its hunger relief efforts.

WFP now has the opportunity to scale and expand its mobile data collection globally, beyond the 10 countries where it is currently using this methodology in remote and conflict-affected areas.

PROJECT OVERVIEW

Since the early 1990s, the number of people across the world who are hungry has fallen by 200 million. Keeping this number going in the right direction requires sustained efforts and investments in programs proven to change people's lives, but understanding the changing nature of global food insecurity is no easy task. It's essential, however, to the everyday work of global organizations like WFP, the largest humanitarian agency focused on hunger relief in the world.

As part of its mission, WFP conducts surveys to assess food security and consumption in many countries and locations throughout the world. Each year, the agency reaches some 80 million people in around 75 countries with food and other assistance.

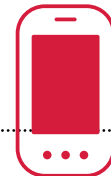
WFP's Vulnerability Analysis and Mapping (VAM) unit is the "eyes and ears" of the organization. The unit maintains a network of 150 specialists worldwide who monitor food security in the poorest communities in the world. In 2013, WFP launched the mobile VAM, or mVAM, project to collect data remotely using voice, interactive voice response (IVR) and text (SMS) surveys, delivered to people's own mobile phones. IVR surveys, or 'robocalls', involve listening to recorded questions and entering responses on the keypad.

Traditionally, WFP has conducted face-to-face interviews to collect information relating to hunger, but there are significant barriers with this mode of data collection. Beyond the costs of training and travel for interviewers going to multiple countries that speak many different languages, there are safety concerns for staff. Some of the regions in which WFP conducts food security assessments are war-torn, and others are devastated by natural disasters or disease. Because of this, WFP needs to leverage innovative technologies to efficiently collect data remotely and in real-time without compromising its quality. WFP took its first steps in this direction by piloting mVAM in the Democratic Republic of Congo (DRC) and Somalia to collect operational data.

The increase in mobile phone access among poor populations in developing countries in recent years is giving rise to the potential for more effective modes of data collection. For instance, according to a recent Nielsen study on rural India, in the 10 years spanning 2001-2010, the density of mobile phone use jumped from a mere 0.7% of the rural population to a healthy 21%.



FOOD ASSISTANCE
TO SOME **80 MILLION**
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When WFP was ready to adopt remote mobile data collection—particularly in areas where it is difficult or impossible to send staff into the field to collect data—it reached out to Nielsen. Mobile data collection is a key area of expertise for the global consumer information and measurement company, and Nielsen agreed to provide pro bono assistance under its global corporate social responsibility program, Nielsen Cares.

“WE WERE OPENING UP A NEW FRONTIER IN TERMS OF DATA COLLECTION AND MEASUREMENT. WHEN WE PICKED UP ON THAT, WE CONNECTED TO NIELSEN.”

JEAN-MARTIN BAUER, ANALYST, WFP

The collaboration focused on delivering results in four key areas: data collection, methodology, analysis, and in-country expertise. Nielsen provided guidance for developing a sound methodological approach and addressing potential sampling issues when collecting information through phone surveys, as compared to face-to-face interviews. Another aspect of the project was optimizing the techniques used for collecting food security information through IVR calls and SMS surveys, both in deploying this technology and determining who to reach out to.

WFP also sought a deeper understanding of the insights behind the data collected and the quality of the various collection methods, relying on Nielsen’s global footprint to understand how these methods could be applied in different regions. Beyond focusing on the short-term needs and the immediate deliverables of the project, Nielsen’s team also focused on providing flexible tools that WFP could continue to deploy in the future.



An operator at WFP Goma office calling mVAM survey respondents. WFP/ David Orr.

“

WE KNEW THAT WE HAD FOUR WAYS THAT WE COULD CONTRIBUTE. WHAT HAS VARIED A BIT WITHIN THE WORK STREAMS ARE THE SPECIFIC THINGS THAT WE BELIEVE TO BE HELPFUL—THROUGH COLLABORATION AND DIALOGUE WITH WORLD FOOD PROGRAMME—AS THEY ACHIEVE THEIR GOALS AND OBJECTIVES.

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**AMANDA WELSH
EXECUTIVE VICE PRESIDENT,
DATA SCIENCE, NIELSEN**

CHALLENGES

REAL-TIME RELIEF

WFP serves some of the most vulnerable communities in the world. In eastern DRC and central Somalia, WFP works with internally displaced populations forced to flee their homes because of conflict. In the case of Guinea, Liberia and Sierra Leone, food security had been a chronic problem that the recent **Ebola epidemic** worsened. When the Ebola crisis hit, entire districts were cordoned off from the rest of the country, greatly restricting markets and trade, reducing farming activity, and raising the specter of an **imminent food crisis**. For WFP, the question was how to radically change its programs on short notice to meet the emerging needs that Ebola was creating.

Nielsen and WFP had to remain flexible in responding to challenges as they came up, such as working through new measurement techniques in the midst of the Ebola crisis and changing survey schedules based on other factors outside of the team's control.

RESEARCH IN ACTION

One key challenge was the difference in respondents' answers to questions about food insecurity based on their gender and head of household status. Both aspects mattered: When the team had the opportunity to distinguish the respondent's sex and the sex of the head of the respondent's household, it found that women tended to report greater food insecurity than men—and this was especially true when women were heads of the household. Within this demographic, the team also found that there were differences in terms of how respondents answered these questions in face-to-face, SMS, and IVR interviews, and that these differences varied by country.

“We had to use SMS and IVR in certain countries. Having Nielsen's guidance in making that decision on whether or how to switch survey modes helped us do a better job of choosing the right mode,” said Bauer. In the case of Ebola, WFP switched from IVR to SMS as soon as it was technically possible, because SMS surveys performed better.

“The other actionable impacts [of the project], in terms of the best practices and recommendations that we received on how to manage a panel survey, allowed us to keep response rates up in the DRC and Somalia. The food consumption measure by SMS or IVR is something that we think will drive decision-making in the future. On the contracting side, Nielsen helped us identify and review vendors for SMS and IVR services internationally. There are a lot of different ways that we think these insights will help us in years to come.”

PROJECT OUTCOMES

This collaboration resulted in expected outcomes aligned with the initial project goals of digital capacity-building along with unexpected learning for both WFP and Nielsen. In providing the space to **test out new methodologies** and realize the impact of new applications, the Nielsen team learned innovative ways to apply its knowledge while WFP gained a more **sophisticated level of expertise in mobile data collection** that will continue to be used by its project teams around the world.

OUTCOMES FOR WFP

EFFECTIVENESS AND EFFICIENCY

For WFP, mobile surveys allow the organization to extend its reach by contacting people in what had been no-go areas previously. WFP is now able to collect information more frequently and expand the type of information that is collected. All of this is done quickly and at low cost, constituting a package of services that brings considerable value added.

As a result of this project, WFP has been able to **implement around 24,000 questionnaires in ten countries as of June 2015**, including in places where sending enumerators into the field was made impossible by conflict and the Ebola crisis.

Overall, WFP has found its situational awareness to be improved as a result of this project. Increased data has allowed the organization to better advocate for necessary funding and support on behalf of Ebola-affected communities and internally displaced people in the DRC.

Using traditional methods, WFP would have spent up to US\$200,000–300,000 on face-to-face questionnaires in the Ebola-affected areas. Thanks to the mobile data collection that WFP implemented with Nielsen's support, WFP can now collect data at a much lower price tag of **less than one-half the original cost**. WFP also saw a **survey turnaround time savings of 83%**, turning around its **mobile surveys in less than a week**—a significant reduction from the typical four-to-six-week timeframe.

 **50%**

COST SAVINGS
FOR WFP

 **83%**

TIME SAVINGS FOR
SURVEY TURNAROUND

6,000

QUESTIONNAIRES
IMPLEMENTED
PER MONTH

10

COUNTRIES NOW
USING REMOTE DATA
COLLECTION



SKILL AND LEADERSHIP
DEVELOPMENT FOR
NIELSEN ASSOCIATES

For the Ebola crisis in particular, it was an important insight that urban areas were less affected by food security than rural areas. As a result of understanding this information, WFP was able to **tailor its assistance strategy** in order to focus resources on rural areas, thereby resulting in **improved distribution of food assistance**.

“WE WERE ABLE TO SET UP AN ENTIRELY AUTOMATED FOOD-SECURITY MONITORING SYSTEM IN A MATTER OF WEEKS, THANKS TO IVR AND SMS DATA COLLECTION. WE WERE ABLE TO UNDERSTAND THE LIMITATIONS OF OUR DATA COLLECTION TOOLS, AND THEREFORE PROVIDE THE BEST ADVICE TO WFP FIELD MANAGERS.”

MARIE ENLUND
WFP FOOD SECURITY ANALYST

The WFP team has also worked on developing new indicators to measure hunger.

“MOBILE CAN ALLOW US TO COLLECT NEW AND SIMPLER KINDS OF INDICATORS THAT BETTER ILLUSTRATE FOOD CONSUMPTION. NIELSEN HAS PROVIDED GREAT SUGGESTIONS THAT WE HAVE BEEN ABLE TO APPLY IN THE FIELD. THE TEAM AT NIELSEN WAS ALSO A SOUNDING BOARD WHEN WE WERE THINKING PROBLEMS THROUGH AS WE BECAME MORE FAMILIAR WITH MOBILE DATA COLLECTION.”

GAURAV SINGHAL
DATA SCIENTIST AT WFP

WFP is now implementing mobile data collection in **10 countries, including the three Ebola affected countries and Iraq**. “In the case of Ebola, the data we collected by SMS was shared with the entire humanitarian community, providing critical information to the response. We hope that as a result of our work, **remote data collection will become a standard WFP emergency response tool**. The effect of this on the people we serve would be immense, as they will benefit from more responsive relief programs,” said Bauer.

OUTCOMES FOR NIELSEN

SKILL DEVELOPMENT & NEW METHODOLOGIES

In the more than 100 pro bono projects Nielsen associates around the world engage in throughout each year, employee skill development and collaboration is a recurring theme.

For the nine Nielsen associates who made up the core skills-based volunteering project team, this was a chance to not only test out new methodologies and apply their existing skill sets, but also to **work with data and insights in a new context**. In constructing surveys around the issue of food insecurity, the team was able to put their everyday Nielsen skills to use—like questionnaire design, sampling and survey methodology—in a totally different way.

WE HAD TO UNDERSTAND HOW FOOD INSECURITY METRICS WERE CONSTRUCTED, AND HOW THEY WERE TAILORED LOCALLY AND ABRIDGED FOR MOBILE MEASUREMENT. THERE WAS A LOT OF REALLY INTERESTING LEARNING ON OUR PART TO UNDERSTAND HOW ONE CONSTRUCTS A METRIC THAT ASSESSES FOOD INSECURITY ACROSS CONTEXTS.

BEATE SISSENICH
CLIENT SERVICE MANAGER, MEASUREMENT
SCIENCE, NIELSEN

One key example of **tailoring this learning to the needs of WFP** was the issue of how to adapt a survey for a particular device across methodologies, taking survey questions that worked in one context but needed to be tailored in another, because of length or the complexity of the question. Similarly, understanding the potential biases associated with a particular survey mode was critical to determining how best to act on the data.

“

THIS IS A GREAT EXAMPLE OF THE OPPORTUNITY FOR SKILLS-BASED VOLUNTEERING TO CONNECT EMPLOYEE SKILL DEVELOPMENT AND GROWTH IN A POWERFUL WAY. WE'RE FORTUNATE TO WORK WITH GREAT COLLABORATORS LIKE WFP, AND IT'S AN ADDED BONUS WHEN IT'S AN OPPORTUNITY FOR OUR ASSOCIATES TO DEVELOP NEW SKILLS AND TEST INNOVATIVE SOLUTIONS THAT WE CAN THEN APPLY TO FUTURE CLIENT SUCCESS.

”

CRYSTAL BARNES
VP OF CORPORATE
SOCIAL RESPONSIBILITY,
NIELSEN

IF WE KNOW THERE ARE SPECIFIC BIASES IN A PARTICULAR MODE, IT DOESN'T RULE IT OUT BUT YOU MIGHT MAKE ADJUSTMENTS TO OUTCOME VARIABLES BASED ON WHAT YOU KNOW. WE HOPE THAT WILL BE USEFUL TO WFP IN FUTURE APPLICATIONS OF THIS TECHNOLOGY.

ROBIN GENTRY
MANAGER OF DIARY METHODS RESEARCH,
NIELSEN AUDIO

The Nielsen project team included individuals with varying skill sets. This provided an opportunity for associates at all levels of the organization, and with different day jobs, to **come together and collaborate in an uncommon way**.

“I LEARNED HOW TO USE ‘R’ [A PROGRAMMING LANGUAGE AND SOFTWARE FOR STATISTICAL COMPUTING], HOW TO COMPLETE A DATA INTEGRATION USING R AND HOW TO COMPUTE A 95% CONFIDENCE INTERVAL. I ALSO LEARNED MORE ABOUT HOW WE INCENTIVIZE AND COMMUNICATE WITH OUR NIELSEN PANELS. WORKING ON THIS INITIATIVE HAD A PROFOUND EFFECT ON MY COMMUNICATION SKILLS. I LEARNED HOW TO BETTER PRESENT TECHNICAL RESULTS IN A MORE EASILY-DIGESTIBLE MANNER.”

STEPHANIE WAYNE
EMERGING LEADER,
GLOBAL BUSINESS SERVICES, NIELSEN

NIELSEN MEASUREMENT SCIENCE METHODOLOGY

This section details the methodological approach that Nielsen used to carry out this project, along with information about how both WFP and Nielsen tested their hypotheses throughout the project, on topics like the effect of mode on data collection and the difference between SMS and IVR surveys.

EFFECT OF MODE ON DATA COLLECTION

Changes in the mode of data collection should not be taken lightly. The data collection mode is fundamental to the survey process, and the choice of mode affects every facet of survey accuracy. One important goal in this collaboration was to evaluate the effect of changing from in-person interviews to cellular phone-based modes of data collection.

There may be future changes in coverage from people exiting the sample frame or not having access to the technology. **Mobile surveys open the possibility of including people from remote or conflict locations** not accessible to face-to-face interviewers. However, the proportion of the population that does not have mobile phones—and therefore cannot be reached—remains a concern.

The change in mode can also affect nonresponse error. Respondents may have more or less trust in answering questions in one mode or another. In many cultures, face-to-face interviews result in higher response rates (Harkness, 2003).

We also expected to see many differences due to changes in the measurement process. For one, **the presence of an interviewer can affect responses** especially when questions require clarifications or are subject to social desirability biases (Dillman & Tarnai, 1991; Kreuter, Presser & Tourangeau, 2008). Additionally, Tourangeau, et al. (2000) provides a model of the response process that consists of perception, comprehension, retrieval, judgment, and response. The mode affects the response process in several of these steps.

Perception refers to how the respondents see or hear the stimulus. In a face-to-face interview, they would hear the question asked by the interviewer. They would also be able to pick up on paralinguistic cues such as voice tone or inflection, and visual communication in the form of body language (Tourangeau, et al. 2000). In a survey on their mobile phone, they may see the question as a text message (SMS) or as a recorded voice (IVR). Judgment and reporting their response to a question can be affected by mode as well (Tourangeau, et al. 2000).

There were several changes to the survey process that we evaluated. We designed experiments to evaluate differences between face-to-face and SMS surveys, and also between SMS and IVR surveys.

SMS – IVR COMPARISON

Through two rounds of data collection in West African countries, we saw a large drop in the reduced Coping Strategies Index (rCSI)¹ for one of the countries: Liberia. One hypothesis for this reduction relates to the harvest season. However, there was also a change in the data collection mode from IVR to SMS for this country at the same time. We provide evidence that the change in data collection mode may have resulted in the decrease in coping strategies.

Every county surveyed in Liberia saw a drop in the rCSI from Round One to Two. At the county level, the average reduction in rCSI was 8.1. However, the county of Lofa maintained the same mode between the two time periods, and we saw almost no change in rCSI. The reduction was only a 0.82. Overall, the rCSI fell 26% in Liberia from 24.6 to 18.1. The change in the other countries was not nearly so dramatic.²

It is certainly plausible that answers differ between the two modes. Following a comparison of two rounds of data collected in Sierra Leone, Liberia, and Guinea, it appears that **collecting data via IVR results in higher estimates of rCSI than collecting data by SMS.**

Based on data collection to date, the following observations have been made: In Guinea, where IVR was used for Rounds One through Three of data collection (October–December 2014), higher rCSI scores are consistently observed compared to neighboring Liberia and Sierra Leone. When data collection in Liberia transitioned from IVR to SMS, an eight-point drop in the mean rCSI was observed between Round One and Round Two of data collection. In Lofa County, Liberia, where SMS was used during both Round One and Round Two, the drop in rCSI was below one point. In Sierra Leone, where SMS was used during both Round One and Round Two of data collection, a much smaller two-point drop was observed over the same timeframe. We are not be able to discern if observed differences in rCSI (and potentially price data quality) are due to recruitment differences between the two modes or due to differences induced by the response processes.

Based on these differences, **WFP believes that the mode used to conduct remote mobile surveys—SMS versus IVR—likely impacts the results.**

To test this theory, a mode experiment is due to take place. The idea is to conduct the same survey through SMS and IVR in the same area, and compare results. The results will be analyzed with support from the team at Nielsen to draw further conclusions vis-à-vis mode effects. This experiment provides a practical test of whether the IVR and SMS data collection modes produce different estimates of the rCSI for the same geographic region at the same time. We will not be able to discern if observed differences in rCSI (and potentially prices) are due to errors of non-observation (i.e., different respondents are likely to respond to the different modalities) or due to observational errors (i.e., respondents to the different data collection mode respond differently). However, if a large enough difference exists between the modes, we may be able to draw certain conclusions regarding mode effects on data collected remotely.

¹ The reduced Coping Strategies Index (rCSI) measures the frequency and severity of the behaviors households engage in when faced with food shortages. It assesses whether there has been a change in the consumption patterns of a given household. The rCSI is calculated using standard food consumption-based strategies and severity weighting. A higher score indicates that households are employing more frequent and/or extreme negative coping strategies. For more details on the calculation, please see the Coping Strategies Index Field Methods Manual.

² See Appendix: “Table 1: First Two Rounds Comparison,” “Table 1. West African Countries – Round 1,” and “Table 2. West African Countries – Round 2.”

SMS – FACE-TO-FACE COMPARISON

Another comparison presented itself in data from SMS surveys and face-to-face Food Security Outcome Monitoring (FSOM) surveys conducted in Kenya during May and September of 2014. There were five questions of interest that were asked consistently between the different surveys relating to coping strategies used by the households. Respondents were asked to indicate the number of days in the last week they had engaged in a particular strategy for coping with food shortage. The goal was to compare the data collected, and see whether improvements to the September versions of the SMS questionnaire made the responses more consistent with the FSOM survey.

Looking at the mean rCSI index calculated from all of the surveys, Nielsen could conclude that the May SMS survey was out of line with the other surveys. The September SMS survey results were much closer to the results obtained from the May and September FSOM surveys. Second, Nielsen looked at the distributions of the individual questions asked and examined differences between time periods and data collection modes, and found evidence of differences between the time periods and data collection modes.

DESIGNING EXPERIMENTS

Finally, to be sure about the differences between data collection modes, experiments were designed to test for these differences and to see whether a shorter recall period would result in more accurate data collection. Currently, the Food Consumption Score (FCS)³ and rCSI questions ask respondents to recall food security decisions over the past seven days. Part of this experiment was to test the assumption that recall over a shorter time (i.e. three days) would produce a more accurate measure of food consumption that could be modeled to achieve a comparable seven-day measure. The experiment was also designed to test for differences in face-to-face and SMS data.

³ Food consumption indicators are designed to reflect the quantity and quality of people's diets. The household Food Consumption Score (FCS) is a proxy for household food security used by WFP. The FCS is a measure of dietary diversity, food frequency and the relative nutritional importance of the food consumed. A high FCS increases the probability that a household's nutrient intake is adequate. For more information, please see: Food Consumption Analysis: Calculation and Use of the Food Consumption Score in Food Security Analysis.

The experiment was conducted in November 2014 in the DRC. Three survey collection modes were assigned to households: seven-day face-to-face, three-day face-to-face, and three-day SMS. Households assigned to the seven-day condition were given the normal questionnaire by an in-person interviewer. The questions ask the respondent to report on food consumption over the past seven days. Respondents assigned to the three-day conditions were instead asked to report about food consumption over the last three days. In order to account for potential day-of-the-week effects, households in the three-day conditions were given the survey twice in the same week.

The hypothesis being tested was: If a scaled three-day collection yields a higher FCS than the seven-day measure, the three-day collection was more successful. That is because, with the shorter recall period, respondents should be able to more accurately report what was actually consumed.

Nielsen found no evidence of different food consumption across days of the week in this case in the DRC, recognizing that this could change depending on the culture and location where the survey is conducted. In addition, Nielsen found that both of the three-day conditions resulted in higher consumption for most food groups. This confirms the original hypothesis and indicates that **a shorter recall period may result in higher food consumption scores**. Differences between the SMS and face-to-face modes were harder to discern, in part because of small sample size limitations for the SMS mode in the study. Additionally, without comparing SMS to face-to-face in a matched population or within the same person, it is difficult to make a recommendation on the best mode of data collection.

CONCLUSION

As a result of this collaboration, **WFP is better equipped to use remote data collection technologies with confidence.** WFP has acquired a stronger knowledge of the advantages and constraints of different survey modes (SMS/IVR/voice calls), and gained significant expertise on where and how to most appropriately use them. As a result, WFP has been able to **implement remote data collection in extremely complex contexts**, such as the Ebola (Guinea, Sierra Leone, and Liberia) and Iraq emergencies. As of June 2015, WFP is using this approach in 10 different countries, mainly in remote and conflict affected areas in which other types of analyses would have proved challenging.

WFP traditionally has planned its operations on the basis of data produced by face-to-face surveys and secondary information. This can be problematic in areas where physical access is limited because of insecurity or other risks to enumerators. Moving to mobile data collection has provided WFP's field managers with a stream of fresh information on the extent and severity of food insecurity that they can draw on and triangulate with other sources. For instance, the SMS data showed that food security was most affected in rural areas during the Ebola crisis, and that urban areas were faring better. This allowed WFP to **prioritize its assistance**, as well as to **establish that food markets remained functional in many areas.** These efforts supported, for instance, the organization's strategy to use cash and voucher assistance in its response to Ebola.

The data gathered was also used to inform the broader humanitarian community. In the case of Ebola, the data collected by WFP via SMS was used in the *cadre harmonisé*, an interagency analysis process that classifies the depth and severity of food insecurity in West Africa. This process involves government, UN agencies and NGOs, and is an essential step in the strategy. The only household food security information for the February 2015 analysis round was WFP data collected by SMS, providing an essential contribution to the process. Similarly, the data WFP collected in Iraq was a key component in the UN's common appeal to respond to humanitarian needs in that country. In these ways, the project is therefore **supporting advocacy and planning in the humanitarian community at large.**

WFP would not have been able to investigate these crucial methodological issues with the same level of precision without Nielsen's support. The successful outcomes of the project open up the concrete possibility of extending WFP remote data collection activities to the 30 chronically food insecure countries where WFP supports food security monitoring projects. The organization is now **well-placed to leverage these opportunities to inform global plans to fight hunger.**

9 TOTAL NIELSEN
CORE TEAM VOLUNTEERS



20 WFP SPECIALISTS IN
VULNERABILITY ANALYSIS
AND MAPPING

10

COUNTRIES WHERE WFP IS NOW USING
REMOTE MOBILE DATA COLLECTION

6,000

QUESTIONNAIRES IMPLEMENTED PER MONTH

50%
COST SAVINGS
FOR WFP



83%
TIME SAVINGS
FOR SURVEY
TURNAROUND



SKILL AND LEADERSHIP DEVELOPMENT

FOR NIELSEN ASSOCIATES

ABOUT FOOD SECURITY ANALYSIS AT WFP

Before intervening in a country, the first priority for WFP is to understand the food security situation of the population. WFP's food security analysis work is commonly known as Vulnerability Analysis and Mapping (VAM) and is carried out by over 150 food security analysts around the world. WFP's food security analysts work closely with national governments, UN partners and NGOs. Their work informs the policies and programs that WFP and its partners adopt in order to fight hunger in different circumstances.

To collect, manage and analyze data, advanced technologies are used; these include satellite imagery, Geographic Information Systems (GIS) and mobile data collection platforms (smart phones and tablets). Since 2013 under the innovative mobile Vulnerability Analysis and Mapping (mVAM) project, short surveys implemented through SMS, IVR and live phone calls have been used to collect food security data remotely.

For more information on the food security analysis work at WFP and the mVAM project, please visit http://vam.wfp.org/sites/mvam_monitoring/ and <http://vam.wfp.org/>.

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APPENDIX

TABLE 1. FIRST TWO ROUNDS COMPARISON

COUNTY	ROUND 1 RCSI	ROUND 2 RCSI	DIFFERENCE R1-R2
BOMI	24.35	19.76	4.59
BONG	25.83	19.44	6.39
GBARPOLU	25.25	18.93	6.32
GRAND BASSA	24.76	19.5	5.26
GRAND CAPE MOUNT	26.64	17.4	9.24
GRAND GEDEH	26.06	19.15	6.91
GRAND KRU	22.85	10.5	12.35
LOFA	21.73	20.92	0.82
MARGIBI	23	17.34	5.66
MARYLAND	23.13	18.15	4.98
MONTERRADO	24.76	15.92	8.84
NIMBA	30.34	17.1	13.24
RIVER GEE	48.5	21.33	27.17
SINOE	18.25	16.81	1.44

TABLE 2. WEST AFRICAN COUNTRIES - ROUND 1

COUNTY	RCSI	W RCSI	SAMPLE SIZE	DESIGN EFFECT
GUINEA	22.08	22.32	830	1.76
LIBERIA	24.58	25.59	624	1.62
SIERRA LEONE	18.04	18.05	853	1.89

TABLE 3. WEST AFRICAN COUNTRIES - ROUND 2

COUNTY	RCSI	W RCSI	SAMPLE SIZE	DESIGN EFFECT
GUINEA	22.92	22.75	532	2.7
LIBERIA	18.31	17.56	800	1.32
SIERRA LEONE	16.24	16.59	800	1.27

Notes:

- Sierra Leone weighted to the Province level (Eastern, Northern, Southern, and Western Area) as this was the only geographic region variable common between Round 1 and Round 2. This is a change from the first analysis where it was weighted to District. This geographic variable was only available for Round 2 however.
- Guinea is weighted to Region (Boke, Conakry, Faranah, Kankan, Kindia, Labe, Mamou, Nzerekore)
- Liberia is weighted to County (Bomi, Bong, Gbarpolu, Grand Bassa, Grand Cape Mount, Grand Gedeh, Grand Kru, Lofa, Margibi, Maryland, Montserrado, Nimba, River Gee, Rivercess, Sinoe)
- Observations missing either a geographic category or CSI variables were excluded. This resulted in some observations being excluded in Round 1. There were 46 observations excluded from Guinea in R1, 50 observations from Liberia, and 1 observation from Sierra Leone. No observations were excluded from Round 2.

ABOUT WFP

The World Food Programme is the world's largest humanitarian agency fighting hunger worldwide, delivering food assistance in emergencies and working with communities to improve nutrition and build resilience. Each year, WFP assists some 80 million people in around 75 countries. WFP is part of the United Nations system and is voluntarily funded.

Established in 1961, WFP pursues a vision of the world in which every man, woman and child has access at all times to the food needed for an active and healthy life. WFP works toward that vision with its sister UN agencies in Rome—the Food and Agriculture Organization (FAO) and the International Fund for Agricultural Development (IFAD)—as well as other government, UN and NGO partners.

For more information, please visit www.wfp.org.



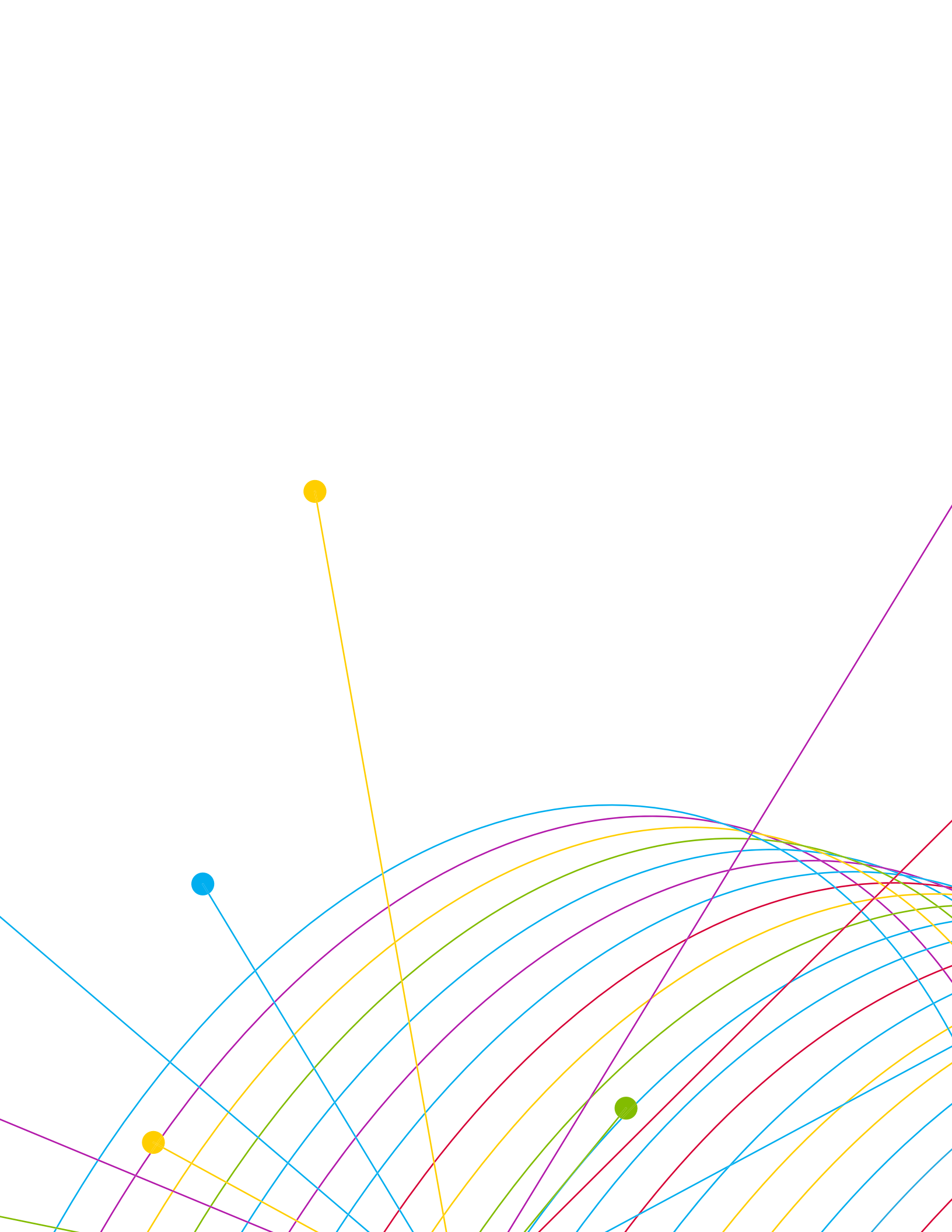
ABOUT NIELSEN

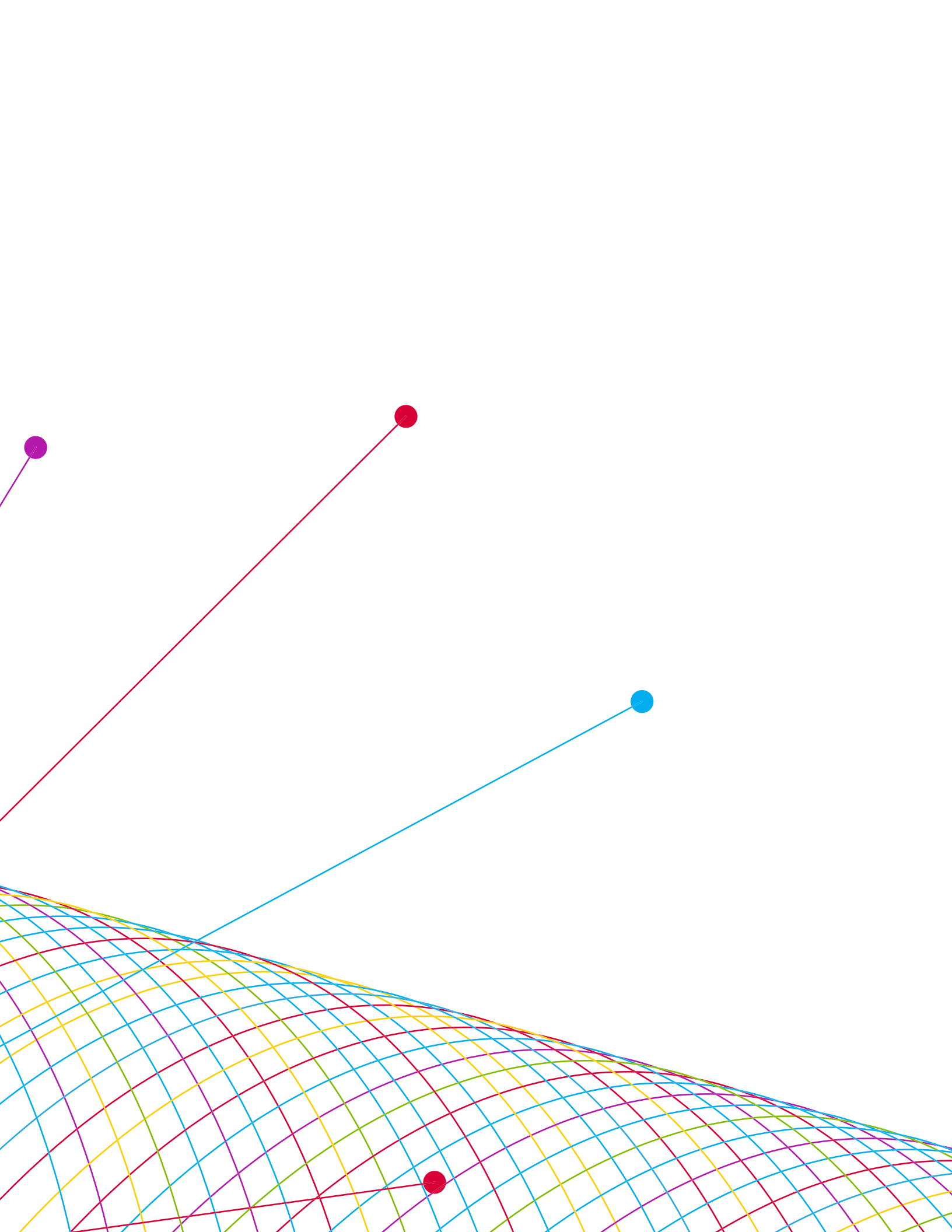
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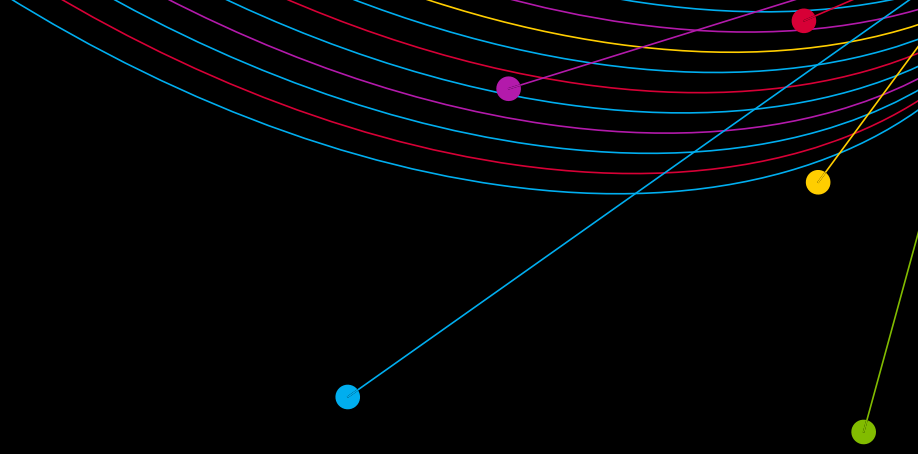
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