Data DENT

Data for Decisions to Expand
Nutrition Transformation

Best practices and lessons
for data visualization tools
in Nutrition

Results for Development

Why visualize data and why are data visualization tools helpful?

1 **Why visualize data?**

- Human brains more rapidly process visuals compared to text
- Data are more persuasive as graphs compared to tables

2 **Why are data visualization tools (DVTs) helpful?**

- DVTs are **interfaces between data systems and data users**, making them useful in facilitating decision-making, advocacy, and communication
- Indicator choices and visuals in DVTs can ensure **focus on key priorities and facilitate data interpretation** to better support decisions
- Different types of DVTs are usually associated with different types of goals, objectives, and decisions

The following recommendations stem from several DataDENT workstreams on DVTs in nutrition at the global and country levels

Landscaping of Global Nutrition DVTs
We conducted a review of existing global DVTs in nutrition and examined how they contribute to the nutrition landscape

Global Nutrition DVT User Research
We unpacked the context of use of global DVTs in nutrition and identified strengths and challenges of existing DVTs

Online Survey of Nutrition data use and needs
We assessed the use of nutrition data by stakeholders including their use of global nutrition DVTs

Country-Level Work in India and Nigeria
In India, we completed a landscaping of DVTs and in Nigeria, we developed a nutrition scorecard with the Nigeria Governor's Forum

For details of the individual studies, please refer to the links in the descriptions.

Recommendation #1

Many global nutrition DVTs already exist; ensure that any new or improved DVT has a unique value add

There are a growing number of global data visualization tools in nutrition (22 as of 2019)

GLOBAL HUNGER INDEX

CONTINENTAL NUTRITION ACCOUNTABILITY SCORECARD 2019

Nutrition for Growth Accountability Tool

Global targets tracking tool

HANCI

NLiS NutritionLandscape InformationSystem

Vitamin A supplementation interactive dashboard

GLOBAL FOOD SECURITY INDEX 2017

ScalingUp NUTRITION ENGAGE • INSPIRE • INVEST

SUN Movement Monitoring, Evaluation, Accountability, Learning (MEAL)

Investing in Nutrition

Country Indicators

The State of Food Security and Nutrition in the World

Countdown Country Dashboards

Global Scorecard of Iodine Nutrition

MEASURING PROGRESS TOWARDS ENDING MALNUTRITION

Global Fortification Data Exchange

THE WORLD BANK Nutrition Country Profiles

ACCESS TO NUTRITION INDEX

GLOBAL BREASTFEEDING SCORECARD, 2017

National Anemia Profile

UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates
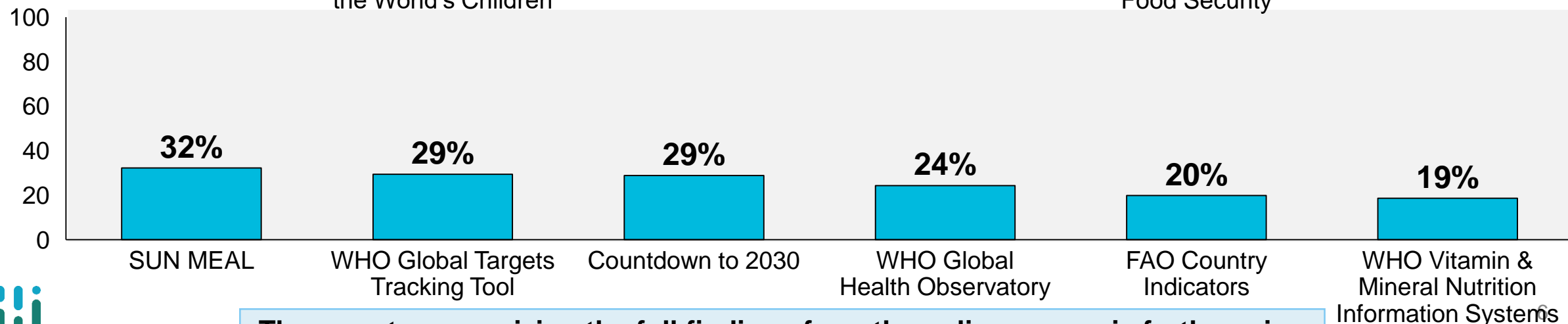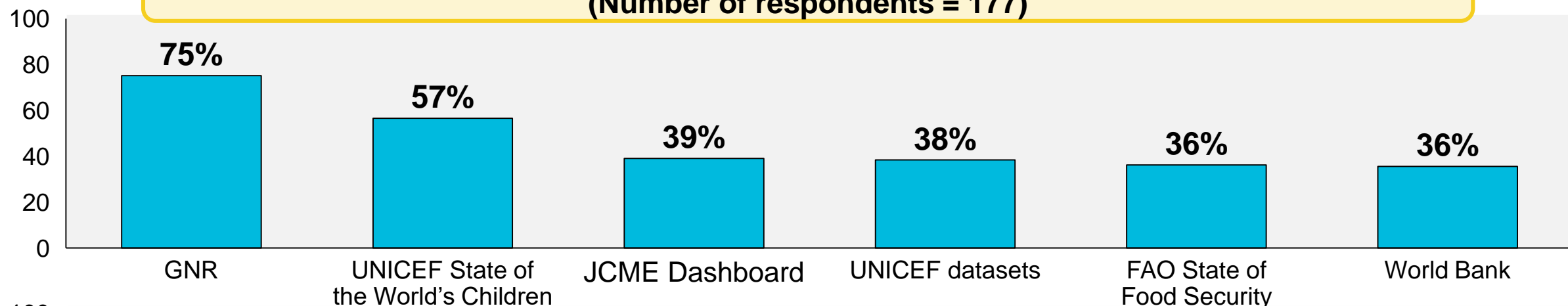
GLOBAL NUTRITION REPORT NUTRITION COUNTRY PROFILE

State of the World's Children Report Dashboard

For more information, please see the full landscaping report

Our online survey showed that while there are many DVTs, only a select few appear to be accessed by a number of nutrition stakeholders

**% of global nutrition community respondents who report accessing nutrition DVTs
(Number of respondents = 177)**

75%	57%	39%	38%	36%	36%
GNR	UNICEF State of the World's Children	JCME Dashboard	UNICEF datasets	FAO State of Food Security	World Bank

32%	29%	29%	24%	20%	19%
SUN MEAL	WHO Global Targets Tracking Tool	Countdown to 2030	WHO Global Health Observatory	FAO Country Indicators	WHO Vitamin & Mineral Nutrition Information Systems

The report summarizing the full findings from the online survey is forthcoming
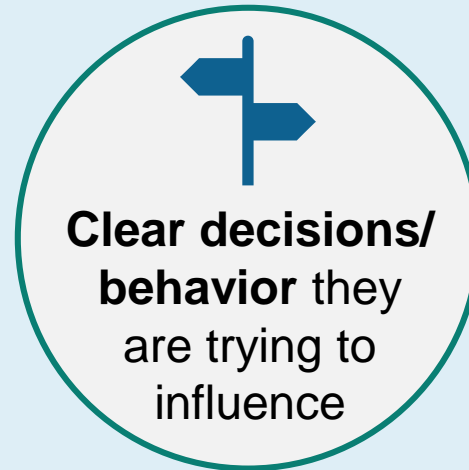
Recommendation #2

Every DVT needs a clear theory of change guiding its design and use

A clear theory of change helps ensure the DVT will lead to the intended action

A strong theory of change means having:

Target Audience

Clear decisions/ behavior they are trying to influence

Pathway of how their data/actions **lead to change**

While most global nutrition DVTs have a broad or unclear theory of change, there are a few exceptions including the African Leaders Malaria Alliance (ALMA) scorecard

✓ **A focused theory of change** with a very **targeted set of decision-makers** (i.e., African Heads of States)

✓ **Actionable indicators** that align with their agenda, provide action loops (i.e., color coding; arrows) and recommended actions

✓ A **strong engagement strategy** with their targeted decision-makers, provide quarterly reports on progress, meet regularly, and facilitate TA

Second Quarter 2020	Commodities financed			Financial control	Monitoring and Management	
Country	LLIN/IRS financing 2020 projection (% of need)	Public sector RDT financing 2020 projection (% of need)	Public sector ACT financing 2020 projection (% of need)	World Bank rating on public sector management and institutions 2018 (CPIA Cluster D)	Insecticide classes with mosquito resistance confirmed since 2010	Insecticide Resistance Monitoring and Management (Monitoring since 2015 / National IRM Plan)
Angola	100	100	100		3	
Benin	98	100		3.3	4	
Botswana	100	100	100		1	

For more information, please see the full landscaping report

An example of a country nutrition DVT with a clear theory of change includes the Nigeria Governors' Forum (NGF) scorecard

- ✓ The NGF's nutrition scorecard focuses on influencing actions that can be taken by the Governors to **improve the enabling environment for nutrition**
- ✓ The Governors meet on a **regular basis to review their states progress** using the scorecard
- ✓ The red/green colors of the scorecard **are straightforward and inspire competition among the states**

Commitment	Indicator	Abia	Anambra	Ebonyi	Enugu	Imo
To set-up/revitalize State Committee on Food & Nutrition	SCFN Quarterly meeting held and chaired by the SCFN Chair	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🟢 ↑↓
	At least 75% of necessary funding for SCFN workplan released quarterly (% released located to the left of circle if available)	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓
To establish a multisectoral nutrition plan	MSPAN approved	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓
To promote maternity protections	Six months maternity leave with full pay	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓
	A functional creche registered in the State Secretariat	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓	🔴 ↑↓

A case study detailing the scorecard development process and key reflections is forthcoming

Recommendation #3

Include actionable indicators that align with the DVT's theory of change

DVTs should include more actionable indicators for their target audience to influence their behaviors & decisions

Actionable indicators for policy change generally fall within 3 domains:
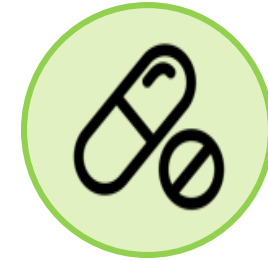

Enacted Legislations

Example:

Indicators about the <u>existence and quality of nutrition policies</u> could help identify gaps and strengthen nutrition policies

Other Enabling Environment

Example:

Indicators about <u>monitoring effectiveness of BMS code legislation</u> can pinpoint areas for improvement of implementation

Program Coverage

Example:

Indicators on <u>food fortification coverage</u> can identify regions for scaling up fortification programs

Actionable indicators can be short-listed after consulting the target audience on their specific needs

For more information, please see the <u>full landscaping report</u>

Recommendation #4

When selecting indicators for a DVT be mindful of how the definitions compare with other indicators in common use

Some DVTs use different indicator definitions and methodologies for similar measures – which may send mixed messages to users

Country	ScalingUp NUTRITION — SUN Movement Monitoring, Evaluation, Accountability, Learning (MEAL) **All SUN Countries Dashboard** 2017 — Inclusion of WHA targets in nutrition plans	MEASURING PROGRESS TOWARDS ENDING MALNUTRITION 2017 — Inclusion and quality of WHA targets in national policies, as well as progress towards meeting WHA targets	HANCI Country Scorecards 2017 — Political commitment for hunger reduction and addressing undernutrition
Cambodia	3-4 targets = Moderate	High	Low commitment
Bangladesh	3-4 targets = Moderate	Low	Low commitment
Burkina Faso	3-4 targets = Moderate	Medium	Moderate commitment
Nigeria	5-6 targets = Good	Medium	Very low commitment
Ethiopia	5-6 targets = Good	Medium	Very low commitment

For more information, please see the _full landscaping report_

DVTs reporting common indicators is especially problematic when they use different definitions that can lead to different conclusions

As an example, differences in the definition of coverage of interventions **can lead to different and confusing results**

Diarrhea treatment coverage for children under 5 in Bangladesh by different intervention types (%)

Countdown DHS 2014	GNR DHS STATcompiler 2014	SUN MEAL DHS via UNICEF database 2007[3]
77%	44%	18%
Percentage of children with diarrhea in the past two weeks receiving oral rehydration salts[1]	Percentage of children with diarrhea in the past two weeks receiving zinc supplements[2]	Percentage of children receiving oral rehydration salts (**ORS** packets or pre-packaged ORS fluids) **and** Zinc[3]

Recommendation #5

Be transparent about data source and ensure data are up to date

Provide users with complete and up-to-date information

The four challenges identified in our user researcher were:

Unknown Metadata

*"**What is missing? That metadata is the first thing that I come back to…**the indicator name, full definition, type of data…is not always clear from other sources" – CSO/INGO*
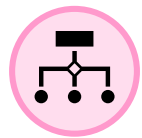
Lack of Current Information

*"**If you're going to use it, you want to be sure it is continually updated** and hosted by something like FAO, WHO, or the WB where you know [they]…will be sustaining it" – Donor*

Lack of Historical Data

*"I would want to **look at change over time and what specific changes have been made**" – CSO/INGO*

Lack of Disaggregated Data

*"You don't always get all the extra bits with it, like being able to **understand [the data] by different classifications and different levels of disaggregation**" – Donor*

For more information, please see the <u>user research findings</u>

Note:
1 Few respondents also cited lack of historical and disaggregated data as key challenges with underlying data.

Recommendation #6

Test visualization formats with targeted users to ensure formats align with users' data literacy levels and preferences

For example, in our research, we identified key features liked by users, such as ease of use and interactivity

THE WORLD BANK IBRD · IDA

The visualization is quite good because…**it allows you to modify it a little bit** and do quick comparisons. – UN Agency

I like that rather than having to search in the MEAL, it **gives it to me in an efficient way**…you know where to find things. – CSO/INGO

ACCESS TO NUTRITION INITIATIVE

I like the aesthetics…It needs to look pretty and **I think the aesthetic makes a difference**. Clear and simple are my biggest criteria. – CSO/INGO

I like really **clear data points that show a message** in a very obvious way. – CSO/INGO

GLOBAL NUTRITION REPORT NUTRITION COUNTRY PROFILE

The **GNR is more user friendly** for the comms sections, and that's where they [the comms team] go. – Donor

It's useful to bring together progress against targets and it's **clearly presented**. – Donor

UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates

They have these **amazing infographics** that break it down by geographic region. – Academia

The JCME is quite clear. It's easy to navigate. – CSO/INGO

For more information, please see the <u>user research findings</u>

Recommendation #7

Provide user support to understand, interpret, and use the data correctly

As an example of user engagement, in our India DVT work, we found that DVT producers are providing support to users in three ways

1

User Guides

Example: Tata NIN has documentation on their webpage explaining what content is available on each tab of their DVT, how they aggregated data, indicator definitions, and sources

2

Training

Example: Champions of Change held a two-day training during their launch for District Magistrates and District Information Officers (NIC officers)

3

WhatsApp Group

Example: Champions of Change said they use WhatsApp groups to follow up and address problems of their team at state and district level

For more information, please see the India DVT findings

Recommendation #8

Finally, address broader sector-wide issues with data availability and quality that can constrain the usefulness of global nutrition DVTs

The usefulness of specific global nutrition DVTs is constrained by broader sector-wide issues with nutrition data availability and quality

Timeliness of Data

*"You look for DHS information for one country and the latest information is from 8 years ago. **Those kind of gaps make it not as current**." –Academia*

Quality of Data

*"There are challenges with data quality, especially with routine monitoring systems… **they may be unreliable**" – Donor*

Many Sources with Conflicting Data

*"Sometimes it can **get confusing to figure out what's the best source if something contradicts** something else." – CSO/INGO*

Lack of Specific Indicators

*"**The financing data has a huge deficit there.** You have to piece things together" – UN Agency*

Lack of Disaggregated Data

*"[We are missing] **having data that's disaggregated at state** or district or province level." – CSO/INGO*

For more information, please see the <u>user research findings</u>