Why did we develop the tool?

Spending

Safe operations

Sustaining learning

Supporting emotional wellbeing

Reaching the marginalized

Funding

?

What is this tool for?

1. Guide budgeting and financing

a. Identify the additional resources needed for all four *pillar*s

b. Specify funding sources

c. Assess whether a funding gap exists

Safe operations

Sustaining learning

Supporting emotional wellbeing

Reaching the marginalized

What is this tool for?

2. Guide planning and implementation by specifying *measures* and *resources*

Safe operations
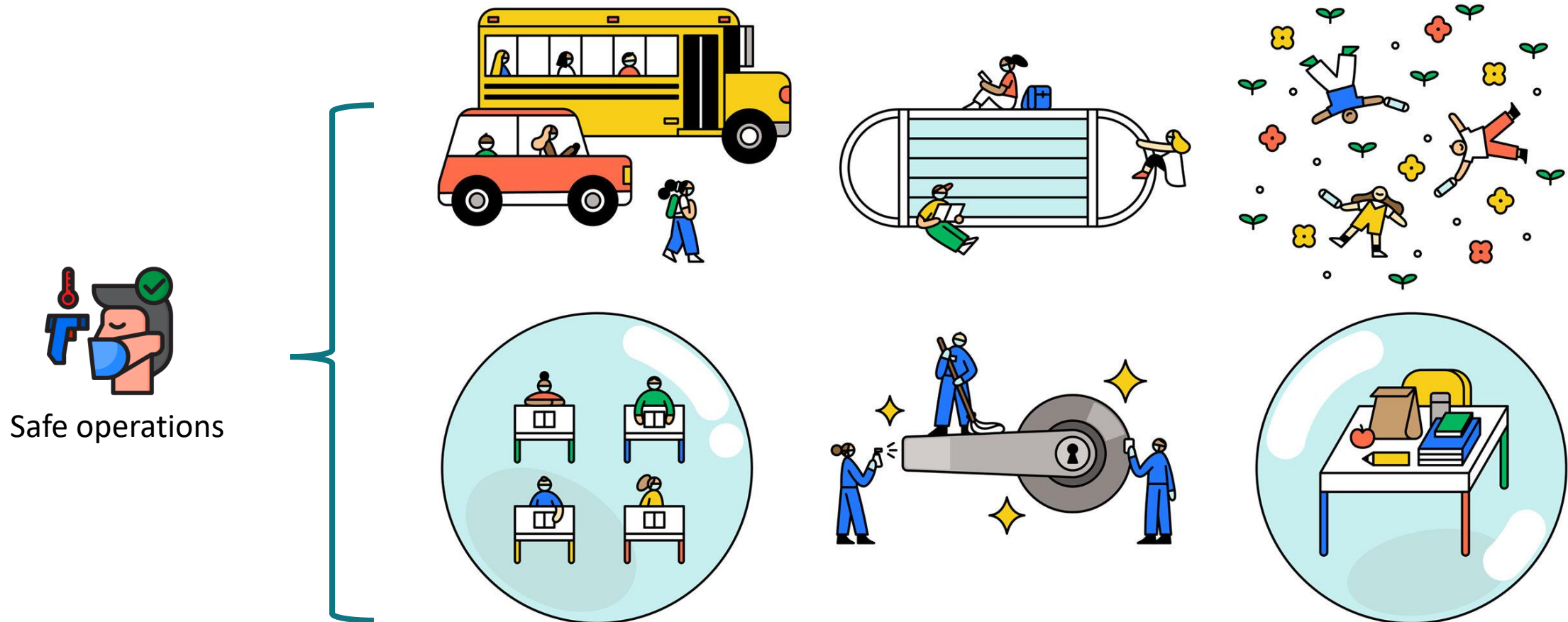
What can you get from the tool?

Product 1:
A report in the format of a dashboard

- Automatically generated
- Easy to print out

How much does it cost to reopen schools safely in Storyland?

Location
Neverland region

Education levels
Pre-primary education (Ages 3-5)
Primary education (K-3)

Time period
The Spring sesmeter of 2021
(90 school days in total)

Population to serve
50 schools
10000 students

School reopening status
72% of all schools provide in-person
77% % all students attend in-person

Notes
1) The baseline is the budget for the same student population in the pre-COVID-19 era.
2) Financial cost captures the resources that are paid for. Economic cost takes into account the fact that some resources can be used beyond this time period of interest.

Cost, funding and financial gap to reopen schools safely during the spring sesmeter of 2021
(Expressed in Bea in 2021 values)

- Additional cost: 3,335,923
- Additional funding available: 931,000
- Funding gap: 2,404,923
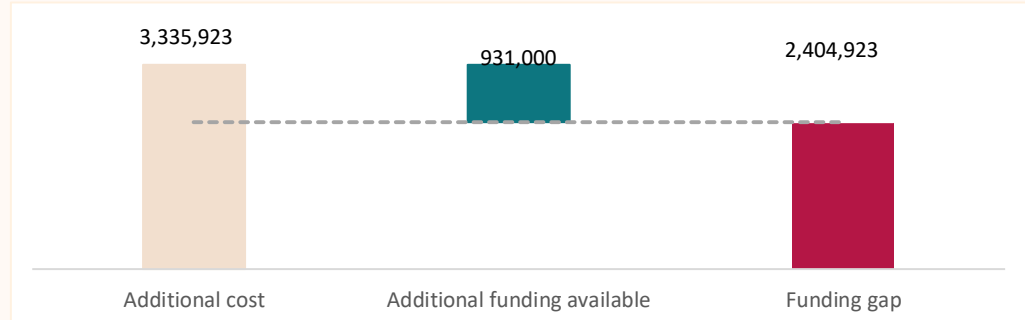
The financial cost of the additional resources needed to reopen schools safely by pillar
(Expressed in Bea in 2021 values)

- Safe operations: 1,065,257
- Sustaining learning: 1,390,439
- Supporting emotional wellbeing: 273,944
- Reaching the marginalized: 606,283

Pie chart:
- Safe operations 32%
- Sustaining learning 42%
- Supporting emotional wellbeing 8%
- Reaching the marginalized 18%
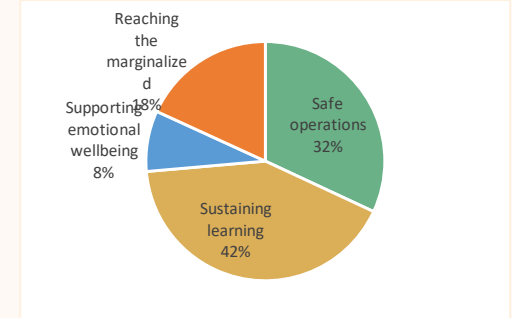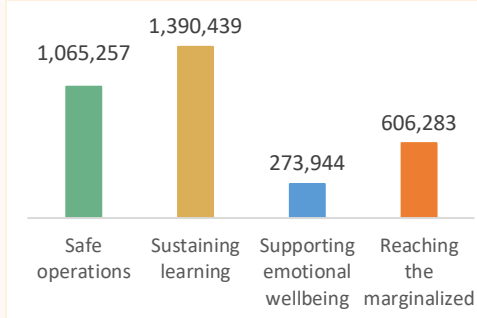
The economic cost of the additional resources needed to reopen schools safely by pillar
(Expressed in Bea in 2021 values)

- Safe operations: 1,018,290
- Sustaining learning: 685,905
- Supporting emotional wellbeing: 273,942
- Reaching the marginalized: 477,700

Pie chart:
- Safe operations 42%
- Sustaining learning 28%
- Supporting emotional wellbeing 11%
- Reaching the marginalized 19%

What can you get from the tool?

Product 2:
A list of items to purchase

- Automatically generated
- Useful for planning and procurement

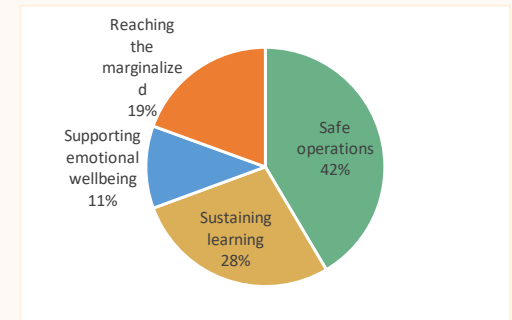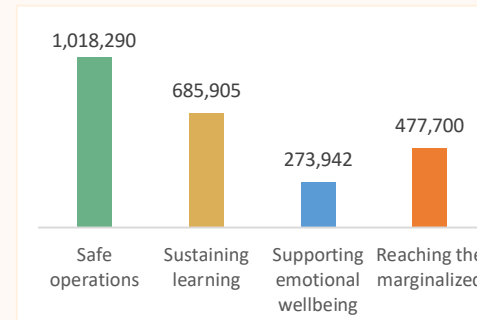| Items to purchase (materials and equipment)	Quantity	Unit
Disinfectant	3,628	liter(s)
Empty containers for diluting cleaning and disinfection products	46	piece(s)
Electrostatic disinfectant sprayers	46	piece(s)
Mops, buckets and brushes	269	set(s)
Soap bars	538	piece(s)
Rubber gloves for cleaning staff	92	pair(s)
Disposable gowns for cleaning staff	7,095	set(s)
Reusable gowns and caps for cleaning staff	92	set(s)
Reusable masks	1,605	piece(s)
Disposable masks	103,544	piece(s)
Face shields	1,605	piece(s)
Alcohol-based antiseptic (at least 70 percent alcohol)	12,517	liter(s)
Antiseptic dispensers	538	piece(s)
Liquid soap	8,345	liter(s)
Paper towels	41,724	roll(s)
EPA-registered disposable wipes	41,724	package(s)
No-touch/foot-pedal trash cans	538	piece(s)
Hand dryer	0	piece(s)
Automatic temperature sensors	72	piece(s)
Oximeter	72	piece(s)
Protective masks and disposable gloves for screening staff	6,450	set(s)
Physical barriers in the classrooms	5,733	piece(s)
Physical barriers between restroom sinks	344	piece(s)
Tapes to mark signs on floors or sidewalks	358	roll(s)
Posters or signs on walls	358	poster(s)
Gowns or white scrubs for school nurses	99	piece(s)
PPE needed to address suspected cases	6,450	set(s)
Fog machines for buses	36	piece(s)
Disinfectant for buses	6	liter(s)
Automatic temperature sensors to screen student temperature before boarding	72	piece(s)
Alcohol-based antiseptic (at least 70 percent alcohol)	1,242	liter(s)

Who would use the information in the products?
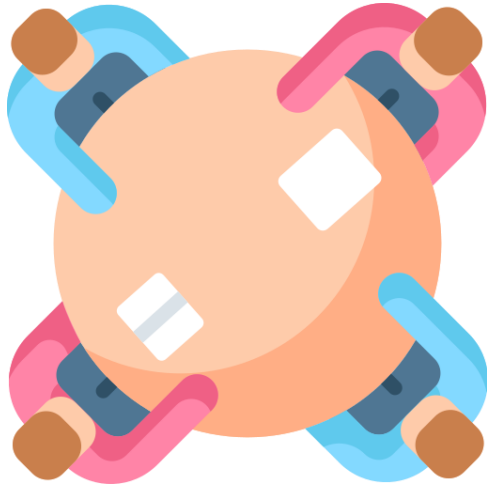
Government officials, school leaders, international organizations and donors involved in the planning, budgeting and financing of school reopening

Who would fill out the spreadsheets?

- Government officials or school leaders in the budget unit
- Researchers, donors and international organizations to provide technical assistance

How is the tool structured?

Introduction

Planned measures for reopening

Basic information about schools

School reopening status

These three spreadsheets require your inputs on measures and context.

Qty of additional resources

Calculators

Prices of additional resources

Funding

These four spreadsheets lead you to specify the quantities and prices of the additional resources and the funding available from different sources.

Report

Items to purchase

These two products are prepopulated based on your inputs.

How flexible and adaptable is the tool?

Can I use the tool if…..

Can I use the tool if....?

Can I use the tool if we do not have a **concrete** school reopening plan beyond a brief guideline?

YES!

We provide a comprehensive list of measures under four pillars. Once you check the measures that apply to your context, the associated resources will pop up.

| 4 Pillars | 25 Measures | 80+ Resources | Cost |

Framework for reopening schools

June, 2020

Jointly published by UNESCO, UNICEF, the World Bank, World Food Program and UNHCR

Planned measures for reopening

Qty of additional resources

Prices of additional resources

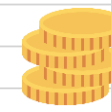| Measures	Explanation of the measures	Applicable to	Cost implications
Pillar 1: Measures related to safe operations			
☑ Establish cleaning and disinfecting measures	Schedule regular cleaning of the school facilities. Clean and disinfect classrooms and spaces used for instruction, common spaces, gyms, toilets, as well as frequently touched surfaces such as door handles, desks, toys, supplies, light switches, doorframes, play equipment, teaching aids used by children, and covers of books.	Reopened schools	Increase in cost
☑ Provide personal protective equipment	Enforce the school policy on wearing a mask or a face covering in line with national or local guidance. Provide sufficient medical masks for students and personnel. Introd[...] students with sensory concerns/tactile sensitivities to face coverings that are most [...] comfortable for them.		
☑ Provide hand hygiene materials	Create a schedule for frequent hand hygiene, especially for young children. Ensure [...] handwashing strategies include washing with soap and water for at least 20 secon[...] Handwashing/hand hygiene stations should be set up at school entrances and throughout the school (e.g., entrances and exits of gym and sports facilities, bathrooms, cafeteria, and classrooms).	Reopened schools	Increase in cost
☑ Provide on-site health screenings	Conduct simple health screening for body temperature and high-risk symptoms on entry into the building for all staff, students and visitors.	Reopened schools	Increase in cost
☑ Monitor symptoms through parent-reported surveys	Develop questionnaire/health survey to monitor history of fever and other symptoms. Parents, guardians, and caregivers can self-report the answers to these questions through existing school health portals or school communication platforms. Schools can also share the results with parents and aid in daily reporting.	Reopened schools	Increase in cost
	Ensure adequate supplies to minimize sharing of high touch materials to the extent possible (e.g., assigning each student their own art supplies, equipment) or limit use of		

> Suppose one of the measures that applies to your context is to "provide on-site health screenings". Check the box in front of this measure.

Quantities of additional resources

<Check whether the default settings make sense to you. If not, revise based on your context>

Checked measures	Additional resources	Parameter settings		Notes
🌡️👨 Pillar 1: Actions related to safe operations				
Provide on-site health screenings	Automatic temperature sensors			*See Calculator 5 for details*
	Oximeters			*See Calculator 5 for details*
	Overtime payment for screening staff who are sufficiently trained in screening procedures	1	hour(s) per screener per day	*See Calculator 5 for the number of screeners needed in a school*
	Protective masks and disposable gloves for screening staff	1	sets per screener per day	
	Newly hired full-time nurses	10	FTE(s)	
	Overtime payment for full-time nurses	1	hour(s) per nurse per day	
	Emergency room/health clinic/isolation rooms	2	room(s) per school	
Monitor symptoms through parent-reported surveys	Overtime payment for technicians to i) set up the online health monitoring and reporting platform and ii) prepare and disseminate daily reporting	0	hour(s) per technician per day	
Limit sharing objects				*Please specify what teaching or learning materials need to be purchased. Add more rows at the end of the table if needed.*
Ensure spaces, materials, and strategies to maintain physical and	Rental cost of community unused spaces	0	square meters per school per day	*Rules of thumb to determine the area of space needed:* *1) Maintain a distance of at least 1 square meters between everyone present at school.*

The list of resources associated with one-site screening will prepopulate in following spreadsheets.

The applicability of the tool is not restricted to a type of users or a specific education level.

You can specify the context to cost out by location, education level, and time period.

Time period

Spring 2022

Fall 2021

Spring 2021

Education Level

Pre-primary   Primary   Lower Secondary   Upper Secondary

Location
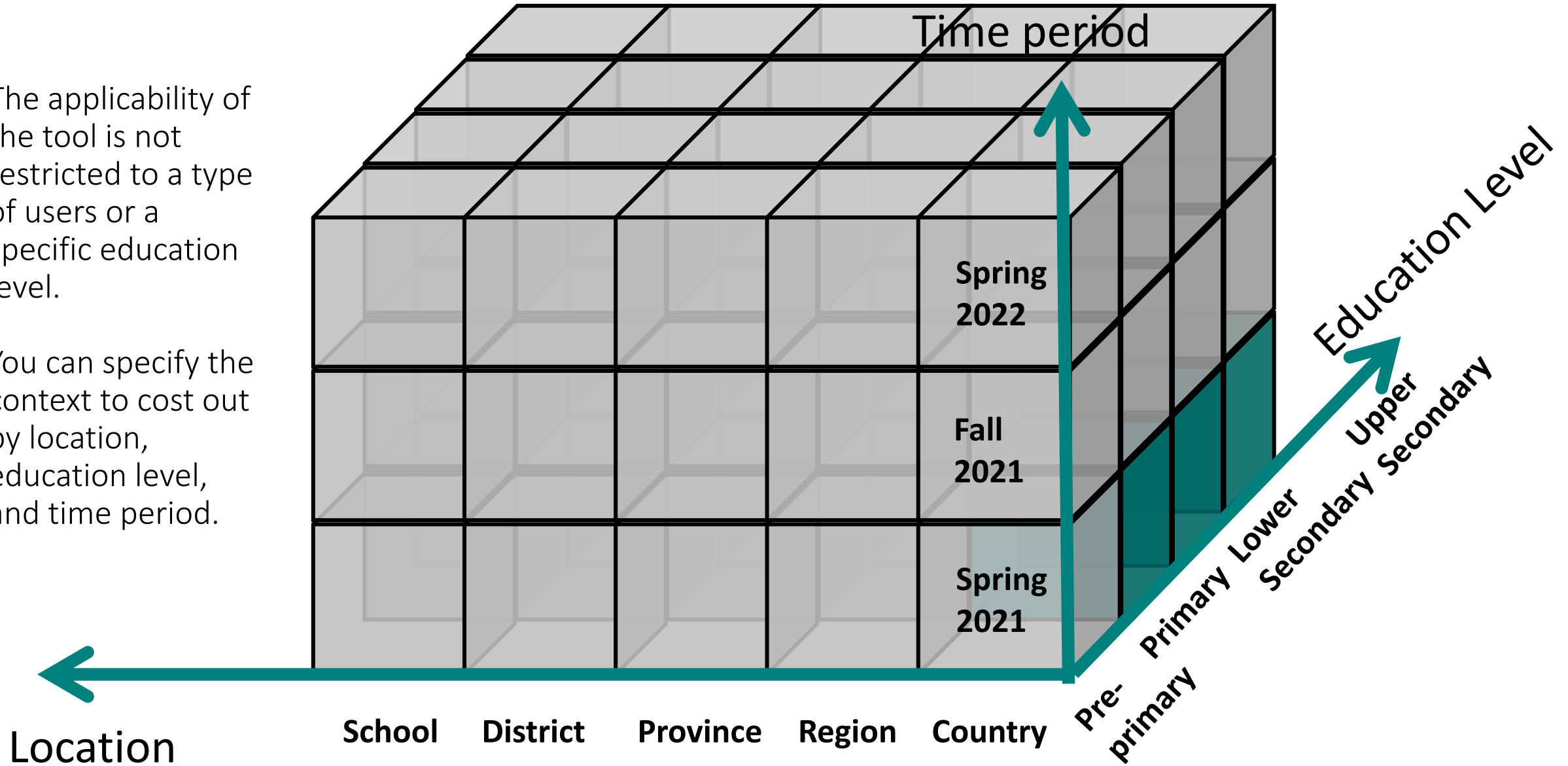
School   District   Province   Region   Country

Basic school information

3. Which cost estimate is of interest to you?

1) Are you interested in estimating the cost of reopening schools for the whole country, a region/province/district, or a school?

○ The whole country		
● A specific region	Neverland region	*<Please specify the name of the region>*
○ A specific province/state		*<Please specify the name of the province/state>*
○ A specific district		*<Please specify the name of the district>*
○ A specific school		*<Please specify the name of the school>*

2) Which education level(s) do you want to cost out? For each education level you check, please specify the grade levels that provide in-person classes.

☑ Pre-primary education	*Ages 3-5*	*<Please specify the grade levels or age groups>*
☑ Primary education	*K-3*	*<Please specify the grade levels>*
☐ Lower secondary education		*<Please specify the grade levels>*
☐ Upper secondary education		*<Please specify the grade levels>*
☐ Tertiary education		*<Please specify the grade levels>*

Just a few clicks to achieve it!

3) Which time period does the cost estimate apply to, e.g., January - December 2021, the spring semester of 2021, the first quarter of 2021, academic year 2021-2022?

The Spring sesmeter of 2021

Number of school days during the time period of

Can I use the tool if….?

Since the trajectory of the pandemic is unpredictable, we do not know how many schools can actually reopen next semester.

Can we still use the tool?

YES!

School reopening status during the spring sesmeter of 2021

<If schools or students return to in-person classes in phases, please specify the percentage of schools that provide in-person classes, the percentage of students who attend in-person classes, and the number of school days for each phase. If not, just fill out the three parameters in Phase 1.>

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Average cross the spring sesmeter of 2021
% of schools that provide in-person classes	40%					72%
% of students who attend in-person classes	50%					77%
Number of school days (in days)*	30	30	30			
% of teachers and school staff that are present in school **	40%	80%	95%	0%	0%	72%

You can check how the cost estimates change in response to your assumptions on school reopening status.

<*The number of school days in all phases should sum up to 90.>

<**The default setting assumes that the number of teachers and school staff that are present in school is proportional to the number of schools that provide in-person classes. You may revise it based on your context. For example, if larger schools are more likely to reopen, the % of teachers and school staff that are present would be higher than the % of schools that provide in-person classes. If only certain grades go back to in-person classes in these reopened schools, the % of teachers and school staff that are present in schools would be approximate to the % of students who attend in-person classes.>

Can I use the tool if….?

Can I use the tool in the next stage of the pandemic, for example, after the vaccines are well rolled out?

YES!

The consequences of the pandemic may linger for a while....

Safe operations

Sustaining learning

Supporting emotional wellbeing
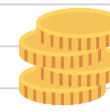

Reaching the marginalized

Checked measures	Additional resources		Parameter settings	Notes
	Pillar 1: Actions related to safe operations			
	Disinfectant			*See Calculator 2.1 for details*
	...ucts	1	container(s) per cleaner (goal)	
		0.5	container(s) per cleaner (current availability)	
	...ers	1	sprayer(s) per cleaner (goal)	
		0.5	sprayer(s) per cleaner (current availability)	
		1	set(s) per classroom/restroom/office (goal)	
		0.5	set(s) per classroom/restroom/office (current availability)	
	...cts	1	soap bar(s) per classroom/restroom/office	
Establish cleaning and disinfecting measures	Water	4	time(s) more than the water usage in the pre-COVID-19 era	*The increase in water usage is mainly caused by higher frequency of cleaning and higher frequency of handwashing . For example, if cleaning was conducted weekly in the pre-COVID-19 era but daily during the COVID-19 era, 4 times more water would be needed (i.e., 1 / (1/5) - 1). If students were required to wash their hands twice a day in the pre-COVID-19 era but five times now, 1.5 times more water would be needed (i.e., 5/2 - 1). The default value is the larger number of these two ratios.*
	Rubber gloves for cleaning staff	2	pair(s) per cleaner (goal)	
		1	pair(s) per cleaner (current availability)	
	Disposable gowns for cleaning staff	1	set(s) per cleaner per day	

The "must-have" list only covers big-ticket items that tend to be expensive, resources that can not be compromised (e.g., disinfectants for cleaning), and personnel. You can switch between the short list and the full list with one click.

Calculators

Table of Contents

Calculator 1. How to estimate the demand of new teachers and staff to hire

<Note that the populated numbers only represent the demand of new teachers and staff. The actually numbers that can be newly hired are determined by both the demand and the supply of new teachers and staff. When finalizing these estimates, plea   *staff in a large scale within a short period of time in your context.>*

We build calculators to assist you in estimating the quantities of these resources.

1.1. Teachers	a) Ensure smaller class size		
	Current class size		
	Targeted cohort size	10	students/cohort
	Number of new teachers to hire for this purpose	1000	teachers

<Cohorting denotes having the same small group of students (

	b) Substitute sick teachers		
	% of current teachers who may take sick leave during the spring sesmeter of 2021	5%	
	The average days of sick leave	20	day(s)
	Number of hours per working day	8	hour(s)
	Total number of hours that need to be substituted	8000	hour(s)

Calculator 3. How to calculate the quantity of antiseptic and liquid soap for handwashing

3.1. Antiseptic for handwashing in school

Factor 1: Amount of antiseptic per handwash

3 mL	*<3 mL is recommended>*

Factor 2: Frequency of using antiseptic

In the COVID-19 era — 5 times per day per person
In the pre-COVID-19 era — 2 times per day per person

The quantity of antiseptic needed per person per day

In the COVID-19 era — 15 mL
In the pre-COVID-19 era — 6 mL
Gap — 9 mL

3.2. Antiseptic for handwashing before boarding school buses

Factor 1: Amount of antiseptic per handwash

3 mL	*<3 mL is recommended>*

Factor 2: Frequency of using antiseptic

In the COVID-19 era — 2 times per day per person
In the pre-COVID-19 era — 0 times per day per person

The quantity of antiseptic needed per person per day

In the COVID-19 era — 6 mL — *<Factor 1 * Factor 2 for the COVID-19 era>*
In the pre-COVID-19 era — 0 mL — *<Factor 1 * Factor 2 for the pre-COVID-19 era>*
Gap — 6 mL

3.3. Liquid soap for handwashing in school

Factor 1: Amount of liquid soap per handwash

2 mL	*<A reasonable range is 1-3 mL>*

Factor 2: Frequency of handwashing

In the COVID-19 era — 5 times per day per person
In the pre-COVID-19 era — 2 times per day per person

The quantity of liquid soap needed per person per day

We set up default settings when guidelines, benchmarks or recommendations are available.

How could the tool be useful for a UNESCO project in Peru?

Context

- The UNESCO Horizons Project supports the development of rural secondary schools
- Serving 41 schools in six regions (5,457 students and 463 teachers)

Costing Tool

- For budget planning
  - Identifying the resource needs of schools
  - Guiding budget planning for 2022

Data collection

- Customization
  - The resource list
  - Language
- Scale
  - A few large schools
- Capacity
  - A consultant

How could the tool be useful for the World Bank projects in Sudan?

Context

- Each public school receives a **school grant** for Covid-19 response

- Covering ~16,500 public schools

Costing Tool

- For **monitoring** by the World Bank team
  - Actual spending vs. spending plan
  - Spending patterns
- For **planning** by schools

Data collection

- Customization
  - The resource list
  - Paper-based
  - Language
- Capacity
  - A data firm
  - Consultants
- Scale
  - ~300 schools

Summary

Usefulness

- To cost out a school reopening plan
- To identify whether a financial gap exist
- To guide the implementation of the school reopening plan

Usability

- Wizard interface
- Automated calculations and prepopulated reports
- Flexibility to adjust to different types of scenarios

Thank you!

If you are interested in testing the tool with us, please get in touch.

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Nobuyuki Tanaka: ntanaka1@worldbank.org

(To quickly record our emails,

take out your phone -> open your Camera app -> scan the QR code)