Hypothesis-driven approach
For problem-solving in the context of global public health

Introduction
Background: Why the hypothesis-driven approach?

More information has become available with the internet (such as journal articles, blogs, social media, massive datasets).

Causal relationships are complex (that is, not a 1:1 relationship).
Background: Why the hypothesis-driven approach?

More information has become available with the internet (such as journal articles, blogs, social media, massive datasets).

Causal relationships are complex (that is, not a 1:1 relationship).

New concepts and innovations are emerging, and solutions may not be strictly within the realm of “traditional” public health (such as in sociology, anthropology).

Member States have a shorter time frame for decisions (especially in emergencies) and request advice that is customized to their context.

WHO needs a problem-solving approach to quickly process information in different fields and deliver solutions that meet Member State expectations.
Hypothesis-driven approach

Traditional “data-driven” approach

Data → Analysis → Recommendation or solution

One can get lost in a huge amount of information and take a long time to reach a solution.

Hypothesis-driven approach

Recommendation or solution → Data → Analysis

Enables quicker solution development through targeted data collection, analysis and refinement of the hypothesis.
Traditional “data-driven” approach

Confused and don’t know where to look

Data collected with no structure

Too much data available... still confused
Two types of problem-solving

1. “Filling the gap” (Type A)
   - Gap
   - Ideal state
   - Solution
   - Current state
   - Step 1: Understand the reasons behind the gap
   - Step 2: Prioritize and implement actions

2. “Setting the vision” (Type B)
   - Gap
   - Ideal state
   - Solution
   - Current state
   - Step 1: Define the target
   - Jump in thinking
   - Step 2: Diagnose the current and ideal state
   - Step 3: Find a pathway to achieve the goal
   - Step 4: Prioritize and implement actions

Neptune

Assignment: Summarize key facts and numbers about Neptune on a poster.

- Include necessary data, photos and descriptions.
- Indicate the information source.
## NASA website: Planet Compare

### Source:

### Table: Comparison of Planets

<table>
<thead>
<tr>
<th>Planet</th>
<th>Size</th>
<th>Mass</th>
<th>Radius</th>
<th>Density</th>
<th>Surface Gravity</th>
<th>Year of Revolution</th>
<th>Year of Revolution</th>
<th>Year of Revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mars</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Venus</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Legend:***
- **Size**: Relative size compared to Earth
- **Mass**: Relative mass compared to Earth
- **Radius**: Relative radius compared to Earth
- **Density**: Relative density compared to Earth
- **Surface Gravity**: Relative surface gravity compared to Earth
- **Year of Revolution**: Relative year of revolution compared to Earth
### NASA: 10 things you need to know about Neptune

| 1. GIANT | Neptune is about four times wider than Earth. If Earth were a large apple, Neptune would be the size of a basketball. |
| 2. EIGHTH WANDERER | Neptune orbits our Sun, a star, and is the eighth planet from the Sun at a distance of about 2.8 billion miles (4.5 billion kilometers). |
| 3. SHORT DAY, LONG YEAR | Neptune takes about 16 hours to rotate once (a Neptunian day), and about 165 Earth years to orbit the sun (a Neptunian year). |
| 4. ICE GIANT | Neptune is an ice giant. Most of its mass is a hot, dense fluid of "icy" materials – water, methane and ammonia – above a small rocky core. |
| 5. GASSY | Neptune's atmosphere is made up mostly of molecular hydrogen, atomic helium and methane. |
| 6. MOONS | Neptune has 14 known moons which are named after sea gods and nymphs in Greek mythology. |
| 7. FAINT RINGS | Neptune has at least five main rings and four more ring arcs, which are clumps of dust and debris likely formed by the gravity of a nearby moon. |
| 8. ONE VOYAGE THERE | Voyager 2 is the only spacecraft to have visited Neptune. No spacecraft has orbited this distant planet to study it at length and up close. |
| 9. LIFELESS | Neptune cannot support life as we know it. |
| 10. ONE COOL FACT | Because of dwarf planet Pluto’s elliptical orbit, Pluto is sometimes closer to the Sun (and us) than Neptune is. |

**Source:** NASA [Internet]. 2023. Overview | Neptune. Available from: https://solarsystem.nasa.gov/planets/neptune/overview/#otp_ten_things_to_know_about_neptune
Neptune assignment

Long distance from the Sun
- Most distant planet from the Sun
- Approximately 165-year orbital period

Extreme weather
- Very cold (average temperature of -218 °C)
- Winds reaching speeds of nearly 600 m/s

Many moons
- Has 14 known moons
- Triton is the largest Neptunian moon

Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

Upper atmosphere, cloud tops
Atmosphere (hydrogen, helium, methane gas)
Mantle (water, ammonia, methane ices)
Core (rock, ice)
Hypothesis-driven approach: How to do it?

Step 1: Identify the question
- Define the most important question to address (that is, which question drives actions and impact?)

Step 2: Develop and validate the hypothesis
- Break down the question into its components
- Develop a hypothesis
- Validate and refine the hypothesis

Step 3: Synthesize findings and make recommendations
- Reconstruct findings into recommendations
- Tailor the message to the audience’s interests and needs
- Support the main message with facts/findings
Thank You!
Hypothesis-driven approach
For problem-solving in the context of global public health

Identify the question
Step 1: Identify the question

**Goals**
- Define the most important question to address (that is, the question that drives actions and impact)

**Common pitfalls**
- Trying to answer too many questions at once – “boiling the ocean”
- Not devoting enough time to determine the right question
- Focusing on low-quality questions

**Strategies/tools**
- Double-loop learning
- The 5 whys
- 80/20 rule
Step 1: Identify the question

Objectives of this step

- Grasp the situation and question assumptions
- Define the target or ideal state
- Conduct root-cause analysis
Common pitfall 1 – Trying to “boil the ocean”

Instead of “boiling the ocean”...

- Identify the most important problem.
- Usually, this is the root-cause of the issue.
Common pitfall 2 – Not determining the right question/problem

“If I had an hour to solve a problem, I'd spend 55 minutes thinking about the problem and five minutes thinking about solutions.”
Common pitfall 3 – Focusing on low-quality questions/problems

Work tasks often answer low-quality questions that produce low-quality answers.

Quality of answer

The few questions/problems worth addressing immediately

Quality of question

- If we work on the wrong problem, we will almost never produce anything valuable.
- So, we should first identify the right problem to solve, then focus on the quality of the solution.

Common pitfall 3 (cont.) – Barriers to identifying good problems

- The goal is not clear*
- Reasons for the gap are not well understood
- The status quo is not well understood

*Ideally, the goal should be “SMART” – Specific, Measurable, Attainable, Relevant, Time-bound
What is a “high-quality” question?

Definition

A high-quality question is:

▪ One for which the answer will change actions and/or
▪ One that needs to be resolved now.
**What is not a high-quality question?**

**Examples of low-quality questions***

- What is the genotype of cancer Y in country A? *(Requires no change in action)*

- What is human consciousness? *(Not feasible to answer in a reasonable timeframe and does not require change in action)*

- What are the barriers to multisectoral collaboration and policies in country X? *(Trying to address too many topics in one question with an unclear goal, as we do not know the purpose of the multisectoral collaboration)*

*For the purposes of problem-solving*
Strategies and tools

- Double-loop learning
- 5 whys
- 80/20 rule

These tools can help you understand the real problem.
Strategy/tool 1 – Double-loop learning

Why?

Reflection: Underlying assumptions

How?

Single-loop learning: Doing things right

Techniques, tactics, tools (action strategy)

Results (for example, product)

Is this way of working the most effective way to reach our goals?

Double-loop learning: Doing the right things

How can we make our work more efficient?
Example: Questioning the assumption – Copernican Revolution
Example: Questioning the assumption

What is the best way to avoid the rain?

A. Umbrella
B. Raincoat
C. Rain boots
Example: Questioning the assumption

What is the best way to avoid the rain?

A. Umbrella
B. Raincoat
C. Rain boots
D. Stay inside
Example: Questioning the Assumption and Reframing the Problem

**Problem framing**

The elevator is too slow

**Solution framing**

- Make the elevator faster
- Upgrade the motor
- Reprogram the algorithm
- Buy a new elevator

Leads to
Example: Questioning the Assumption and Reframing the Problem

**Problem framing**

- The elevator is too slow
- Waiting for the elevator is annoying

**Solution framing**

- Leads to
- Make the wait time more enjoyable
  - Make the elevator faster
  - Upgrade the motor
  - Reprogram the algorithm
  - Buy a new elevator
- Put up artwork
- Install a mirror
Strategy/tool 2 – The 5 whys

The best solution is found here.
Problem: The NTD programme does not include WASH activities.

Government WASH stakeholders did not participate in the last NTD planning process.

Example: The 5 whys

Why?

WASH activities were not included in the annual plan of NTD Department.

Why?

NTD = neglected tropical disease
WASH = water, sanitation and hygiene
Problem: The NTD programme does not include WASH activities.

- **Why?** Government WASH stakeholders did not participate in the last NTD planning process.
- **Why?** The meeting was not in the planning schedule of the WASH Department.
- **Why?** The WASH Department is not accountable for contributing to NTD goals.
- **Why?** NTD progress indicators are not part of the accountability framework of the WASH sector.

**Example: The 5 whys**

- NTD = neglected tropical disease
- WASH = water, sanitation and hygiene

WASH activities were not included in the annual plan of NTD Department.
Strategy/tool 3 – The 80/20 rule

The 80/20 rule: Vital versus trivial tasks

Many trivial tasks

80% of time spent on these tasks

20% of time spent on these tasks

Few vital tasks

20% of results

80% of results
Example: The 80/20 Rule

Malaria in Cambodia

Cumulative number of cases in Cambodia, Jan–Sep 2017, 100% = 26,712 cases

Top 20 districts account for 85% of the cases

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Develop & validate the hypothesis
Step 2: Develop & validate the hypothesis

- Break down the question into its components and develop an issue tree
- Develop, validate and refine the hypothesis

Common pitfalls
- Jumping into the details too soon without a clear direction

Strategies & tools
- Issue tree
- Hypothesis tree
- Issue analysis worksheet
Common pitfall – Jumping into the details too soon

Usually the question is high-level and too broad (for example, “reasons for low mortality rate of disease X in Asia”)
Common pitfall – Jumping into the details too soon

First, we must understand the scope of the problem and the priorities by engaging in high-level thinking, before going into details.

Interviews with experts

Literature search

Check with stakeholders

Priorities always change (especially in an emergency), so it is important to critically review them periodically to ensure we are working on the right issue.
Step 2 – A) Break down the question

A) Develop an issue tree

- Collect **minimum** information required to break down the question (for example, through expert interviews, literature search, and observation)
- Draw an issue tree to show the components of the issue
- Prioritize components

B) Develop & validate the hypothesis

- Develop a hypothesis
- Collect data and evidence to prove or disprove the hypothesis
- Check the hypothesis with experts and stakeholders

Modify or redevelop the hypothesis, as needed
Example: Importance of breaking down the issue

How do you put an elephant into a refrigerator?

This task seems impossible
Example: Importance of breaking down the issue

This at least clarifies the specific tasks to be done

1. Open the refrigerator
2. Put in the elephant
3. Close the door
**Bottom-up – Brainstorming**

- Record and categorize all possible ideas.
- Review literature and seek experts’ input.

**Top-down – Logic Tree**

- Break down the problem logically (using the “MECE” method) to cover all possibilities.

**Observation**

- Observe the actual situation and trends associated with the issue to develop ideas.

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**Strategy/tool 1 – Issue tree**

A) Develop an issue tree.

B) Develop & validate the hypothesis.
Example: Issue tree – bottom-up

Should we use a new vaccination device in the polio vaccination campaign?

Frameworks to help break down the problem usually exist (for example, from the literature, experts).

- **Technical**
  - Effectiveness
  - Safety

- **Operational**
  - Training
  - Logistics

- **Business**
  - Cost
  - Benefit

**Source/activities**

- Review clinical studies. Review results of field pilot.
- Check experience in clinical studies. Ask experts experienced in the field.
- Investigate any pilot using this device.
- Ask companies. Check reports (PATH, GAVI, etc.).
- Validate the savings in vaccine cost.
How can we achieve herd immunity?

- Improve vaccine efficacy
  - Reduce risk factors in current vaccine
  - Introduce new vaccine options
- Deliver more doses
  - Increase campaign coverage
  - Increase number of campaigns
  - Expand target population
Example: Logic tree – top-down

Reasons for increases in reported COVID-19 cases:

Why did reported cases in country X increase?

- Is it due to increased surveillance?
- Is it due to increased transmission?

Are imported cases increasing?

- Is domestic transmission increasing?

Is human-to-human contact increasing?

Is contact tracing working?
Example: Logic tree – top-down

Reasons for increases in reported COVID-19 cases:

- Why did reported cases in country X increase?
  - Is it due to increased surveillance?
    - Are imported cases increasing?
      - Is human-to-human contact increasing?
        - Is contact tracing working?

- Is it due to increased transmission?
  - Is domestic transmission increasing?
    - Other reasons*

- Other reasons*

How to assess quickly

- Positivity rate
- Number of tests
- Changes in testing policy
- Number of hospitalizations, severe cases and mortality

- Number of imported cases
- % of cases linked to imported cases (through genetic sequencing or contact tracing)
- Major changes in cross-border migration

- Changes in population movement
- Major events (such as holidays, elections)
- Changes in non-pharmaceutical interventions
- Anecdotal episodes of non-compliance and clusters

- Performance indicators (coverage, speed, number of contacts traced)
- Retroactive vs prospective tracing

* Other reasons may not be noted in this example for the sake of simplicity.
Example: Using observations to develop a hypothesis

Smallpox vaccination
- Observation: Milk maids exposed to the cowpox virus were immune to smallpox.
- Hypothesis: Inoculating people using cowpox virus can prevent smallpox.

Crows using observation to solve problems
- Observation: Crows observe that if they put stones into the container, the water level rises.
- Hypothesis: If the water level rises, the food floating on the water moves closer to the top of the container.
A) Develop an issue tree

- Comprehensive research to identify what is important (or ask the client what they want)
- Summarize it in a mutually exclusive, collectively exhaustive (MECE) format

B) Develop & validate the hypothesis

- Targeted research to validate the hypothesis
- Talking to stakeholders and experts to validate specific points

Iterative process: hypothesis adjusted throughout

Move from issues to hypothesis as soon as possible, even if not 100% sure of the solution.
Example: Data-Driven Approach in Determining Public Health Measures

Table: Possible Indicators to Determine Non-Pharmaceutical Interventions for COVID-19

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Evolution of indicator increase/decreased/stable</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of confirmed COVID-19 cases (trend over the past 2 weeks, using 7-day moving average)</td>
<td>Indicator represents the trend in detecting and reporting COVID-19 infections in an area. Caution is advised when changes in case definitions and capacity have occurred. Confirmed cases typically represent infections that occurred more than 1 week prior.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of deaths (1-week cumulative number compared to previous 3-week average)</td>
<td>Indicator represents the level of transmission in an area, taking into account the limitations of case detection, confirmation and reporting. Current proportion of fatal cases for COVID-19 (1−2%) implies that each COVID-19 fatality represents 50−100 cases.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of laboratory-positive tests (trend over the last 2 weeks) compared to the trend in the number of tests conducted over the same period (that is, the trend in positivity with consideration for the trend in the denominator)</td>
<td>Indicator represents the level of transmission in an area and takes into account changes in testing, clinical suspicion and health-care-seeking behaviour.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syndromic surveillance (trend over at least 1 week)</td>
<td>Indicator represents non-specific symptomatic infections obtained through sentinel or rational surveillance. Trends may represent the state of COVID-19 transmission. This indicator is influenced by changes in health-care-seeking behaviour.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of fever or respiratory visits to emergency clinics or urgent care centres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of influenza-like (or COVID-like) illnesses</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In previously published guidelines (now updated) on calibrating non-pharmaceutical interventions for COVID-19, there were nine different indicators, with many possible ways to measure them.

Being data-driven in this scenario can lead to...

- Lots of time passing without action which can lead to harm, as analysis of all indicators is very time-consuming
- Missing indicators crucial to this particular context

**Example: Hypothesis-driven approach in determining public health measures**

**Question:** Should country A strengthen its public health measures?

**Answer:** Yes, it should strengthen public health measures against COVID.

**Supporting arguments**
- Number of reported cases is increasing
- A big holiday associated with significant movement is coming soon
- Current NPIs are implemented well with good adherence
- % of variant of concern is increasing
- Health-care capacity is reaching its limit.

**Examples of required data**
- Number of reported cases
- Total tests performed
- ILI/SARI surveillance
- Expected movement
- Case study of last year
- Mobility trends
- Social media data
- Public opinion poll
- Genome sequencing data
- Health-care system capacity

Reviser the hypothesis if the data do not justify the hypothesis (rather than distorting reality to fit the hypothesis).
### Strategy/tool 3 – Issue analysis worksheet

<table>
<thead>
<tr>
<th>Issue</th>
<th>Hypothesis</th>
<th>Supporting rationale</th>
<th>Analysis</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key issue or unresolved question that the project will address</td>
<td>Statement of the likely resolution of the issue</td>
<td>Elements you have to validate for the hypothesis to be true. Detailed supporting rationales make the transition to analysis easier.</td>
<td>Models that should be explored in order to confirm or refute the hypothesis</td>
<td>Likely location of or means of obtaining data to carry out analysis</td>
</tr>
</tbody>
</table>

#### Example

Should country X introduce a tax on sugar-sweetened beverages (SSB)?

<table>
<thead>
<tr>
<th>Issue</th>
<th>Hypothesis</th>
<th>Supporting rationale</th>
<th>Analysis</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should country X introduce a tax on sugar-sweetened beverages (SSB)?</td>
<td>Yes – a tax on sugary drinks would improve the health of the population in country X</td>
<td>A tax reduces consumption of sugar and helps prevent obesity&lt;br&gt;Tax revenue can be spent on health promotion&lt;br&gt;Low-income consumers receive greatest health benefits</td>
<td>Review of the outcomes of SSB tax in other countries&lt;br&gt;Modelling to simulate tax revenue&lt;br&gt;Situational analysis of current SSB expenditure by household income</td>
<td>Public health and epidemiology literature&lt;br&gt;Economic experts&lt;br&gt;Household income and expenditure surveys</td>
</tr>
</tbody>
</table>
Collecting data to test and change the hypothesis

**Test hypothesis**
- Collect information to validate or negate the hypothesis.
- Assess each supporting rationale behind the hypothesis (in order to assess the strength of the argument).

**New information**
- Explore the broader topic to ensure no critical aspect is missing (such as a component of the issue tree).
- For new information, consider where it belongs (such as a new branch of the issue tree, reorganizing the structure of the issue tree, validating the hypothesis).
Practice: Polio vaccine example

Consider the earlier example of the polio vaccine issue tree.

Should we use a new vaccination device in the polio vaccination campaign?

### Technical
- Effectiveness
- Safety

### Operational
- Training
- Logistics

### Business
- Cost
- Benefit

**Source/activities**

- Review clinical studies. Review results of field pilot.
- Check experience in clinical studies. Ask experts experienced in the field.
- Investigate any pilot using this device.
- Ask companies. Check reports (PATH, GAVI, etc.).
- Validate the savings in vaccine cost.
Hypothesis:
We should consider the use of the new vaccination device in our polio campaign.

Supporting argument:
- **Effectiveness**: Device can deliver vaccines as well as needles and syringes.
- **Safety**: There is no major side effect from vaccination with the device.
- **Training**: Health-care workers can easily be trained to use the device.
- **Logistics**: It is possible to distribute the devices to clinics.
- **Cost**: Cost is about US$ 0.5–1.0 per dose.
- **Benefit**: Vaccination with new device requires only one fifth of dose compared to standard injection.
Practice: Using the evidence from the pharmacist interview

<table>
<thead>
<tr>
<th>Validate hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety: The new device is safe to administer (no evidence).</td>
</tr>
<tr>
<td>Training: It is easy to learn how to use the device (confirmed in interview).</td>
</tr>
<tr>
<td>Cost: The device is cost-effective (no evidence).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New information</th>
</tr>
</thead>
<tbody>
<tr>
<td>The new device does not use needles – categorize as safety or logistics?</td>
</tr>
<tr>
<td>The new device administers vaccines much more quickly – categorize as logistics?</td>
</tr>
<tr>
<td>Patients prefer needle-free injection – new category?</td>
</tr>
</tbody>
</table>
We should consider the use of the new vaccination device in our polio campaign.

### Supporting argument

**Effectiveness**
- Device can deliver vaccines as well as needles and syringes.

**Safety**
- No major side effect from injection.
  - Using device presents no risk for health-care workers (for example, no needlestick injuries).

**Feasibility**
- Health-care workers can easily be trained to use the device.
  - Using new device is quicker, due to easier disposal.
  - It is possible to distribute the devices to clinics.

**Patient acceptability**
- Many patients prefer needle-free experience.

**Cost**
- Cost is about US$ 0.5–1.0 per dose.

**Benefit**
- Vaccination with new device requires only one fifth of dose compared to a standard injection.
When to Stop

- We can move to the next step of the hypothesis-driven approach once interviews with stakeholders and experts, as well as analysis, reveal no additional points.
- Good hypotheses may seem self-evident, but a lot of work goes into developing and testing them.
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Synthesize findings & make recommendations
Step 3: Synthesize findings & make recommendations

- Reconstruct the findings into recommendations
- Tailor the message to the audience’s interests and needs
- Support the main message with facts/findings

- Walking the audience through every step of the research process

- Summary versus synthesis framework
- Situation-complication-question framework
- Pyramid framework
- Why-what-how framework
Common pitfall 1: Walking the audience through every step of the research

No need to walk through the process
- We did A, B and C
- We found X, Y and Z
- So we conclude...

Recommendations include:
- The most important messages to the audience
- Main points
- Supporting data/more details
### Strategy/tool 1 – Summary versus synthesis framework

**Where should company X host their 2025 conference?**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>City A</th>
<th>City B</th>
<th>City C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of hotel venue</td>
<td>XXX</td>
<td>XX</td>
<td>XXX</td>
</tr>
<tr>
<td>Affordability of hotel</td>
<td>XX</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>View from the room</td>
<td>X</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Entertainment (such as restaurant, theatre)</td>
<td>XXX</td>
<td>X</td>
<td>XXX</td>
</tr>
</tbody>
</table>
Strategy/tool 1 – Summary versus synthesis framework

**Synthesis**

Where should the team go for a conference?

City C has places to visit in the evening.
- There are many restaurants.
- There are many theatres.
- There are many live music venues.

City C has many good meeting venues.
- There are many hotels with good conference rooms, restaurants and spas.
- The view is amazing.
- Prices are reasonable.

**Summary**

The team should hold the next retreat in city C.

**Findings**
Practice: Determine the headline for the student paper

Task:
A teacher asked students to write a headline for their student paper.

Facts:
The entire school faculty will travel to the state capital on Thursday for a meeting with Governor Margaret Mead, as well as a number of other public officials.

THERE WILL BE NO SCHOOL
NEXT THURSDAY
Strategy/tool 2 – Situation-complication-question framework

Situation, complication, question

Answer

Why or how

Supporting argument 1
- Supporting argument 1.1
- Supporting argument 1.2
- Supporting argument 1.3

Why or how

Supporting argument 2
- Supporting argument 2.1
- Supporting argument 2.2
- Supporting argument 2.3

Let’s look at some common scenarios and build an SCQ for each of them.

SCQ framework: Scenario 1

1. What should we do?

R1: Current state  R2: Desired state

Questions or problems

S: We are doing something (R1).
C: We have some problem.
Q: How should we solve the problem (how to move from R1 to R2)?
A: We should do A, B, C...

SCQ framework: Scenario 2

2. Should we implement our plan?

R1: Current state  R2: Desired state

Questions or problems

S: There is a problem or challenge (R1).
C: Someone is suggesting a solution (how to move from R1 to R2).
Q: Is it the right solution?
A: Yes (because X, Y, Z) or No (you have to change A, B, C).

SCQ framework: Scenario 3

3. Which option should we choose?

R1: Current state  R2: Desired state

Questions or problems

S: There is a problem or challenge (R1).
C: We have a few options (to move from R1 to R2).
Q: Which option should we choose?
A: We should take option 1, because A, B, C.

Note – Do not say: “We should take option 1 because option 2 is bad, option 3 is bad,...etc.” Instead, demonstrate why option 1 is the best option.

Strategy/tool 3 – Pyramid framework

Situation, complication, question

Your answer

Why or how?

Supporting argument 1

Supporting argument 2

Supporting argument 3

Supporting argument 1.1
Supporting argument 1.2
Supporting argument 1.3

Supporting argument 2.1
Supporting argument 2.2
Supporting argument 2.3

Supporting argument 3.1
Supporting argument 3.2
Supporting argument 3.3

Three rules of the pyramid framework

1. Ideas at any level must be summaries of the ideas grouped below them.

2. Ideas in each grouping must be the same type of idea.

3. Ideas in each grouping must be in a logical order.

Countries in the Region should take action in four strategic areas to achieve global tobacco control goals

Prioritize tobacco control in all relevant policies

- Incorporate and prioritize tobacco control in the national development agenda
- Use strategic communications to build public support
- Strengthen multisectoral surveillance and evidence-based research

Accelerate implementation of tobacco control measures

- Strengthen national capacity and infrastructure to fully implement control measures
- Protect tobacco control policies and national efforts from tobacco industry interference
- Implement the policies set out in WHO FCTC

Gear up for emerging challenges in tobacco control

- Ban or regulate ENDS/ENNDS and emerging tobacco products
- Develop innovative approaches to address new challenges in tobacco control

Apply whole-of-government and whole-of-society approaches

- Apply a whole-of-government approach through engagement of health and non-health sectors
- Engage subnational governments in tobacco control
- Engage and empower civil society, academia, health and other professionals, and community groups

RULE 2 – Ideas in each grouping must be the same type of idea

- All boxes in each grouping should be of the same type (e.g., problems, steps in a process, recommendations, etc.)
- Can all the ideas in one grouping be categorized with the same noun?

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RULE 3 – Ideas in each grouping must be in a logical order

Four ways to order ideas

Deductively – major premise, minor premise, conclusion

Chronologically – first, second, third
RULE 3 – Ideas in each grouping must be in a logical order

Four ways to order ideas

**Deductively** – major premise, minor premise, conclusion

**Chronologically** – first, second, third

**Structurally** – unit A, unit B and unit C (of division X)

**Comparatively** – first most important, second most important, etc.

Tip: The vertical relationship

The Question/Answer Dialogue

Use questions followed by answers to achieve a narrative

<table>
<thead>
<tr>
<th>How can the Western Pacific Region move toward becoming a healthy, tobacco-free Region?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries in the Region should take action in four strategic areas to achieve global tobacco control goals</td>
</tr>
</tbody>
</table>

### How?

#### Prioritize tobacco control in all relevant policies
- Incorporate and prioritize tobacco control in the national development agenda
- Use strategic communications to build public support

#### Accelerate implementation of tobacco control measures
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**Source:** World Health Organization. Regional Office for the Western Pacific. Regional action plan for tobacco control in the Western Pacific (2020-2030): working towards a healthy, tobacco-free Region. WHO Regional Office for the Western Pacific; 2020.
Tip: The vertical relationship

Example – Developing vertical questions

**Why?**

- Member States request customized technical advice
- Local policies have more influence on people on the ground
- Quality of our recommendations depends on inputs from the field

WHO should strengthen engagement with sub-national organizations
Tip: The vertical relationship

Example – Developing vertical questions

How?

- Agree on a national policy with Member States
- Develop tailored implementation plans with inputs from local communities
- Review and adjust national policy based on experience in local implementation

WHO should strengthen engagement with sub-national organizations
Strategy/tool 4 – Why-what-how framework

Recommendation
(such as, country A should do X,Y,Z)

Why
(situation analysis, etc.)

What
(goals, key actions, etc.)

How
(next steps, etc.)

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Supporting argument

Further reading
Thank You!