Systems Thinking and Policy Development
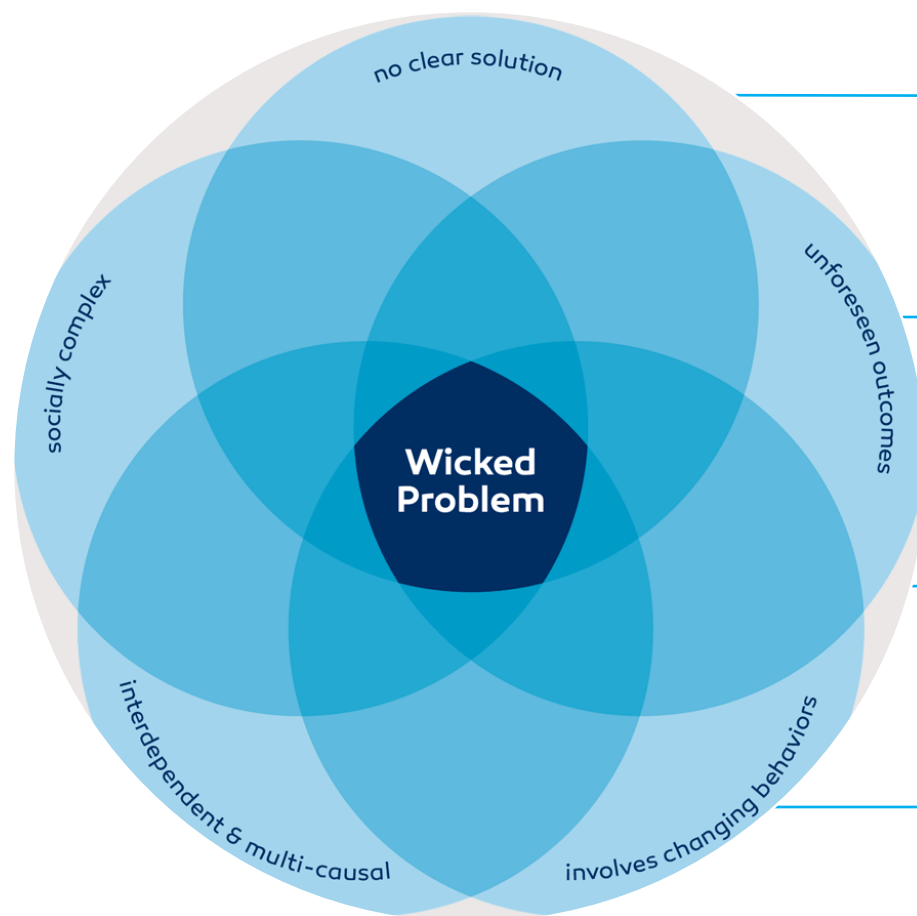
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A crisis of public legitimacy: Are we creating the public solutions and institutional capacity that can deal with the challenges we are facing?

Building Block 3: System Thinking and Policy Linkages

3
- One-Stop-Shop policy directly affects service delivery policies of all participating agencies, and hence requires system-thinking.

Systems thinking is a powerful methodology for addressing complex challenges. It focuses on understanding the interactions and interdependencies within a system rather than isolating individual components.

This perspective allows for a more holistic and nuanced understanding of development issues and enables the creation of more effective national development plans.

System thinking, and efforts to establish policy linkages, will contribute to building a whole-of-government service delivery ecosystem.

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The Need for New Approaches in Governance

Governments today face **complex, interconnected challenges** that require **new thinking and adaptive governance**.

- Climate Risks
- Economic Shifts
- Digital Transformation

Why is Change Needed?

- Issues are **interconnected**—climate change impacts economies, which affect social stability.
- **Siloed decision-making** weakens governance; **collaboration and foresight** are essential.
- **Governments must anticipate and adapt**, rather than react to crises.
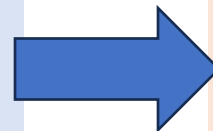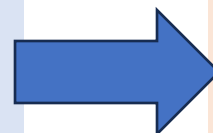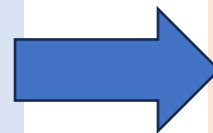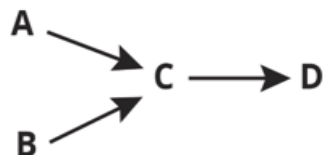
New Approaches for Better Governance:

Systems Thinking helps map complexities and avoid unintended policy impacts

Strategic Foresight enables forward-looking, resilient decision-making.

Anticipatory Governance ensures policies remain future-ready, adaptive, and integrated across sectors

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Traditional Thinking: Linear, cause-effect problem-solving.

Why Do We Need Systems Thinking?

- **Modern challenges are complex and interconnected (e.g., SDGs).**
- **Sectoral approaches are insufficient**—policies in one area affect others.
- **Holistic, integrated solutions** are needed for sustainable impact.

Systems Thinking: Recognizes **interconnections, feedback loops, and unintended consequences**.
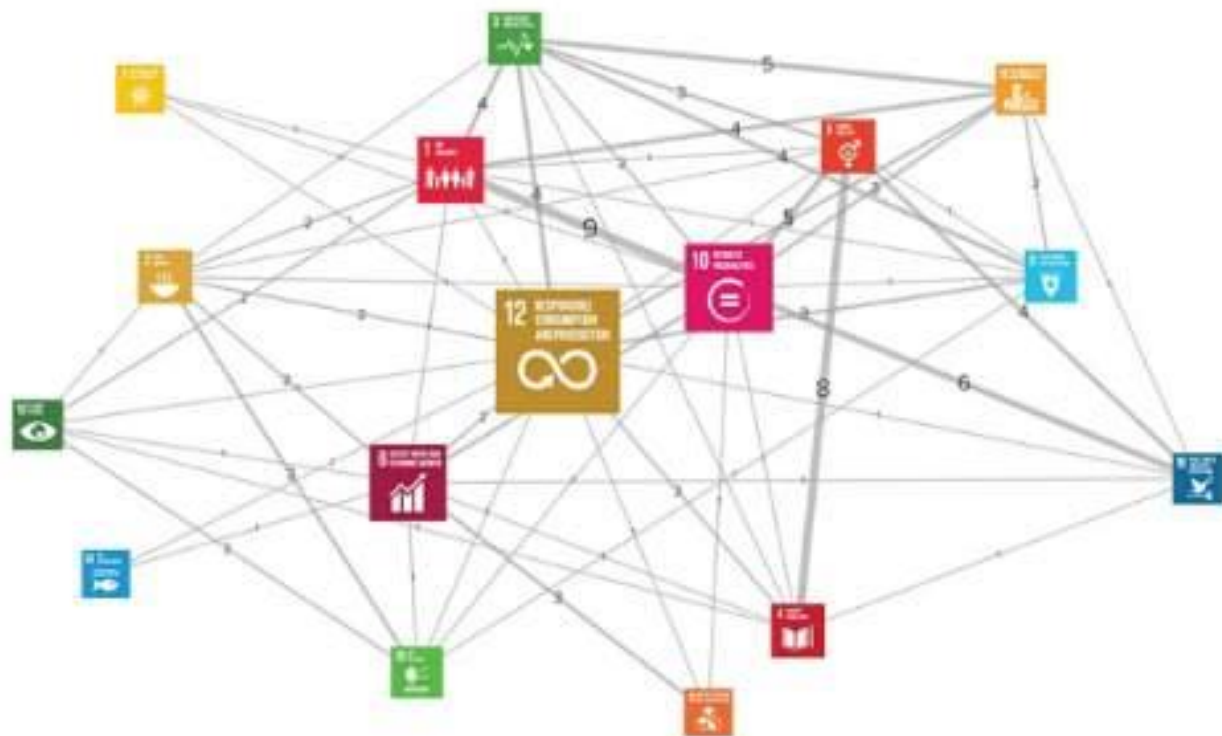
Systems Thinking Foundation

Views complex phenomena as **interconnected systems**, not isolated components
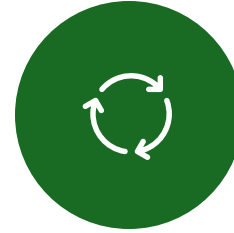
Focuses on **relationships, patterns, and feedback loops**

Helps see **interrelationships and patterns of change** rather than static snapshots
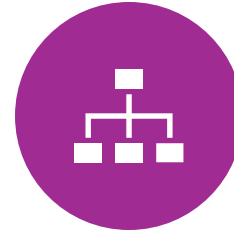
Organizations as **open systems** - external environment impacts internal functioning

Essential for understanding **long-term implications of policy decisions**

The Iceberg Model of Systems Thinking

Most people react to visible **events**, but these are just the tip of the iceberg—the real causes lie beneath the surface.

Systems Thinking *helps us move beyond surface-level events and uncover deeper causes:*

- **Patterns & Trends:** Recurring events that indicate systemic behaviors over time.
- **Underlying Structures:** Policies, institutions, and power dynamics that shape those trends.
- **Mental Models:** Deep-seated beliefs and assumptions that guide decision-making.

Delving below the surface of events helps us see a bigger picture of how a system actually works. With this understanding we can makes choices about how best to intervene to effect change such as modifying our mental models.

REACT

EVENTS
Observable behaviours; what has happened

ANTICIPATE

PATTERS OF BEHAVIOUR
The trends, or what has been happening over time

DESIGN

UNDERLYING SYSTEMATIC STRUCTURE
What are the structural forces at play contributing to these patterns?

TRANSFORM

MENTAL MODEL
What is it about our thinking that creates the systems and supports them persisting?

Causal Loop Diagrams
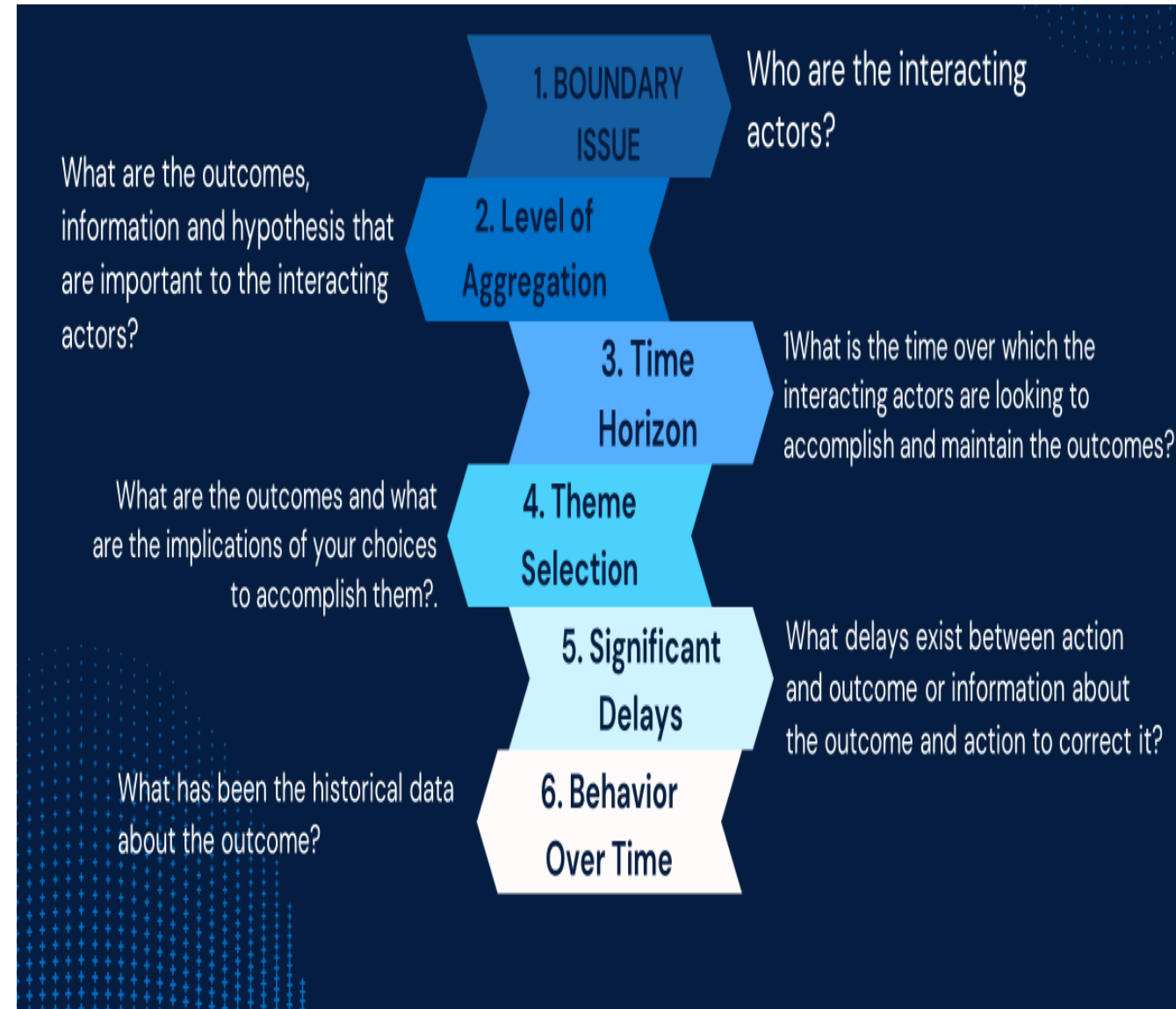
Mapping System Relationships

- Visual tool for mapping relationships between variables in a system (cross gov. collaboration).
- Shows how variables influence each other (positive/negative relationships).
- Identifies two types of feedback loops:
  - **Reinforcing loops**: Change amplifies in same direction
  - **Balancing loops**: Change countered by opposite forces
- Creates shared understanding of how systems work.
- Helps identify leverage points for effective intervention.

What are the outcomes, information and hypothesis that are important to the interacting actors?

1. BOUNDARY ISSUE — Who are the interacting actors?

2. Level of Aggregation

3. Time Horizon — 1What is the time over which the interacting actors are looking to accomplish and maintain the outcomes?

What are the outcomes and what are the implications of your choices to accomplish them?.

4. Theme Selection

5. Significant Delays — What delays exist between action and outcome or information about the outcome and action to correct it?

What has been the historical data about the outcome?

6. Behavior Over Time

Allows for holistic planning and problem solving:

- **Moving beyond silos**: National development plans often involve multiple sectors. Systems thinking helps policymakers to recognize and analyze the crucial linkages between these sectors, moving beyond fragmented approaches.

- **Addressing complex issues**: It allows us to understand complex issues like poverty, climate change, or health disparities by analyzing the interplay of different factors. This helps to identify root causes and design comprehensive solutions.

- **Identifying leverage points**: Systems thinking helps to pinpoint areas within a system where interventions can have the most significant impact.
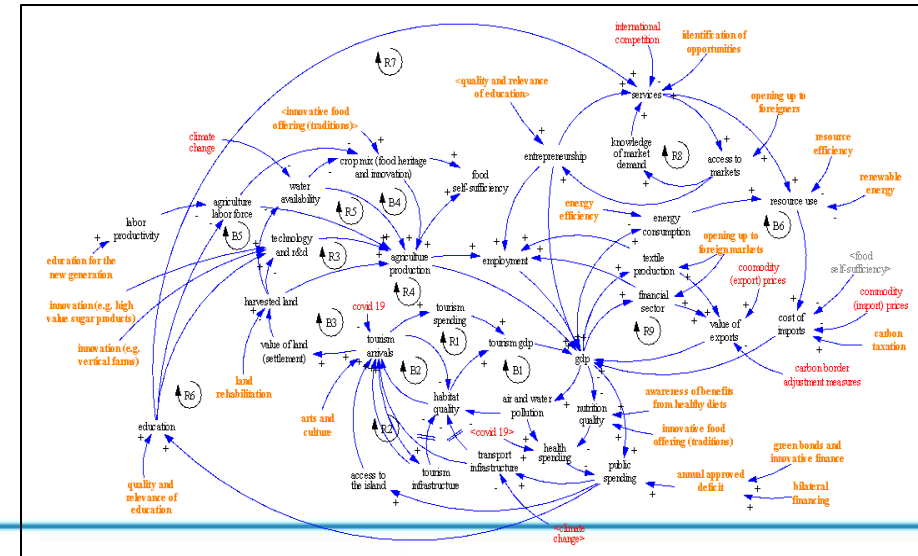
Link between Systems Thinking and NDP (cont.)

Improved Policy Design and Implementation:

- **Understanding system dynamics:** Systems thinking allows for a better grasp of how systems change over time and respond to various inputs. This understanding is crucial for designing policies that are effective and sustainable.

- **Considering multiple perspectives:** It encourages taking into account the different perspectives and needs of various stakeholders, leading to more inclusive and well-rounded policies.

- **Anticipating consequences:** Systems thinking helps policymakers to anticipate potential unintended consequences of their decisions and policies, ensuring that they contribute positively to the overall system.

In Concluding

System Thinking is a way of approaching complex issues by acknowledging them as a network of interlinked subsystems and elements.

When we think and act with the whole system in mind, we are more likely to identify the root causes of problems and find lasting solutions.

Systems Thinking is an analytical framework that engage the policymakers of different disciplines and backgrounds. Helps to brake silos.

It is applied through causal systems mapping of the systems dynamics, which is used to understand the connections between different elements and components of a system—be these environmental, social, economic, or policy-related—and understand the behavior or interests these connections generate.

Systems Thinking encourages curiosity. One needs to be willing to go beyond surface explanations.

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Taking a Systems Thinking approach in implementing the 2030 Agenda for Sustainable Development allows practitioners, analysts, and policy makers to visualize how improvement in one area of the system can either positively or adversely affect another area of the system.

It can help leverage synergies for greater effect or mitigate trade-offs and turn them into opportunities for the benefit of the entire system while reducing the possibility of producing unintended responses and consequences

The systems framework allows policy makers and stakeholders to shift from a conventional, siloed and linear policy and decision-making approach towards integrated planning scenarios and pathways.

Systems Thinking encourages curiosity. One needs to be willing to go beyond surface explanations.

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🎓 **Learning Opportunities**

➢ **Free introductory online course on Systems Thinking**
by DESA (Digital Learning Centre)

👉 https://capacity.desa.un.org/digital-learning-centre

➢ **DESA and UNITAR** are developing a **comprehensive course on Systems Thinking and Strategic Foresight** with a special focus on SIDS — *coming soon*.

*UNDESA stands ready to support countries in applying ST through **training, practical tools, and in-country advisory support**—helping countries design and deliver **resilient, future-ready national development plans**.*

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Thank you!

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