



SST 43 – Diagnostic Profiles, Governance and Adaptive Learning



A city council is responsible for managing a growing urban area. Every year it reviews information about housing, transport, education, public services, economic development, and environmental conditions.

Some indicators are improving while others are deteriorating. Traffic congestion is increasing. Housing demand is rising. Public satisfaction with some services is falling. At the same time, economic activity remains strong and educational attainment is improving.

Council members understand that no single indicator can describe the condition of the city as a whole. Instead, they look for patterns across many different indicators.

By examining these patterns, they begin to identify areas that may require further investigation. Some problems appear isolated and limited in scope. Others seem connected to wider challenges affecting multiple aspects of city life.



The council does not simply collect information for its own sake. The purpose of monitoring is to support learning, decision-making, and adaptation. Information helps decision-makers understand changing conditions and adjust their actions accordingly.

The same principle applies to organisations, businesses, governments, and societies. Diagnostics is not an end in itself. It forms part of an ongoing process through which systems observe themselves, learn, and adapt to changing circumstances.

Formal Description

A diagnostic profile is the overall pattern formed by viability dimensions and diagnostic indicators when assessing system condition.

Governance involves the ongoing processes through which systems monitor their condition, investigate emerging concerns, learn from experience, implement interventions, and adapt to changing circumstances.

Effective governance integrates diagnostics, explanation, intervention, evaluation, and adaptation in order to maintain system viability over time.

Plain English Explanation

A single indicator rarely tells us very much about a complex system. To understand the condition of a system, we normally need to examine many indicators together.

When viewed collectively, these indicators create a diagnostic profile. A diagnostic profile is simply a picture of the system's overall condition.

Some profiles suggest broad systemic difficulties. Problems may appear across Potential, Flow, Capability, and Flexibility simultaneously. Such a pattern often indicates that investigation should be conducted at the level of the whole system.

Other profiles are more focused. A public service, for example, might show strong Capability but weak Flow and Flexibility. This suggests that resources and expertise exist, but coordination and adaptation may be causing difficulties.

Diagnostic profiles help decision-makers decide where investigation should be focused. They also help distinguish localised problems from broader systemic issues.

However, diagnostics alone is not enough. Conditions change continuously. New technologies emerge. Populations evolve. Economic and environmental circumstances shift. As a result, systems must continually observe themselves and respond to what they learn.

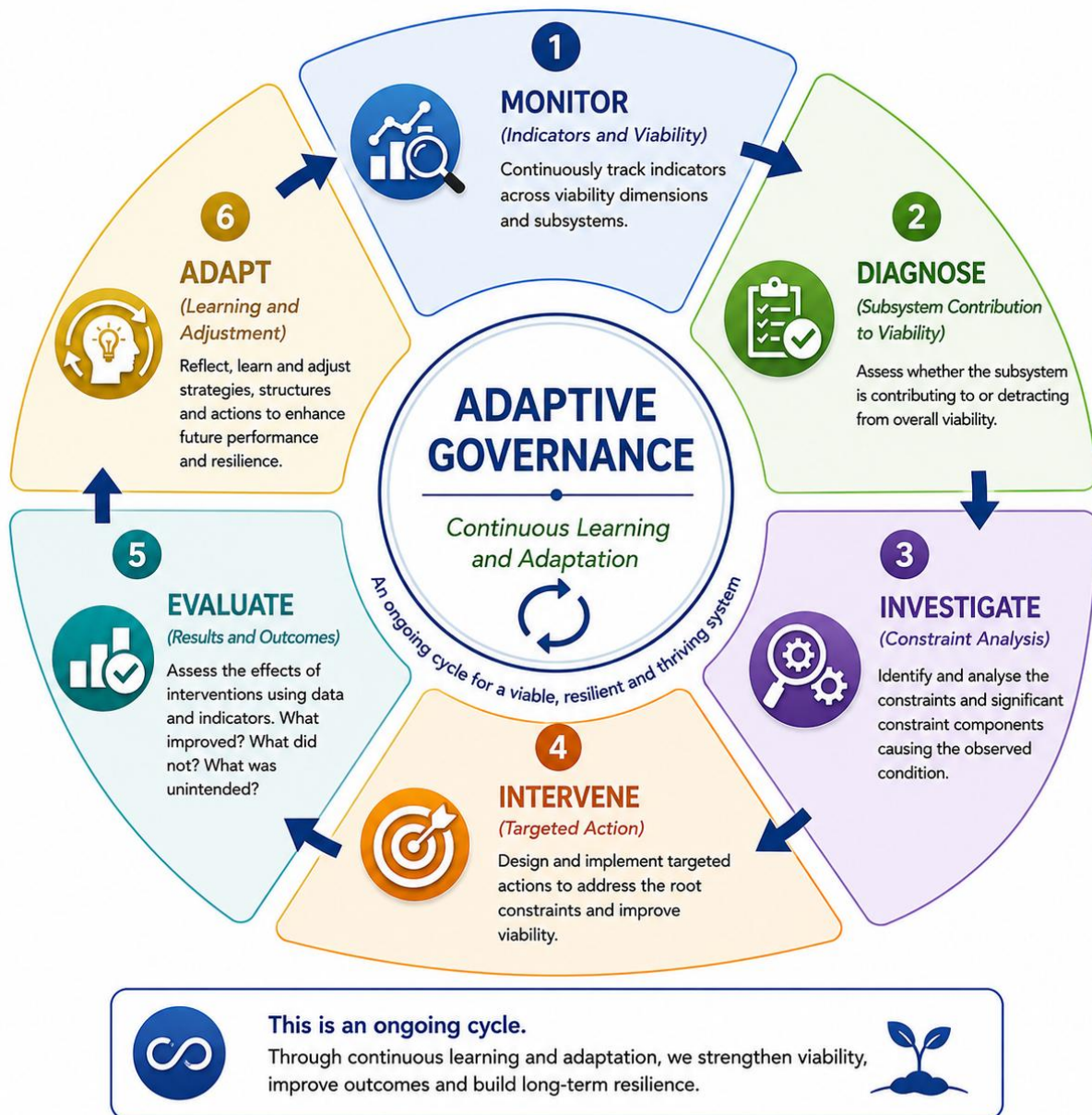
This is one of the central functions of governance.



Good governance involves more than making decisions. It involves monitoring conditions, investigating problems, learning from outcomes, and adapting behaviour when circumstances change.

In this sense, governance can be viewed as a continuous learning process. Diagnostics provides information. Constraint Analysis provides explanation. Intervention modifies constraints. Evaluation assesses outcomes. Learning and adaptation improve future performance.

Together, these activities help maintain viability in a changing world.





Example 1 – An Organisation

An organisation monitors membership levels, finances, participation, and project outcomes. Diagnostics identifies declining participation. Investigation reveals communication problems. New communication processes are introduced and their effectiveness is later evaluated.

Example 2 – A Public Service

A healthcare service monitors waiting times, patient outcomes, staff retention, and public satisfaction. Diagnostic patterns reveal emerging problems. Investigation identifies bottlenecks in administrative processes, leading to targeted improvements.

Example 3 – A Nation

Governments routinely monitor economic performance, educational attainment, infrastructure quality, innovation, public trust, and social wellbeing. These indicators help identify areas requiring investigation and support long-term adaptation.

Provenance and Links

The relationship between monitoring, feedback, learning, and adaptation has deep roots within systems theory, cybernetics, organisational learning, and governance studies. W. Ross Ashby highlighted the importance of adaptation in maintaining viability. Stafford Beer emphasised monitoring and feedback within viable systems. Peter Senge explored organisational learning as a mechanism for continuous improvement. Margaret Archer's work on reflexivity highlighted the importance of self-observation and adaptive response within social systems.

This module integrates the previous diagnostics modules into a unified framework for governance and adaptive learning. Diagnostic profiles help identify areas requiring investigation, while governance provides the mechanisms through which observation, explanation, intervention, evaluation, and adaptation are coordinated over time.

Practical Exercise

Choose an organisation, business, public service, community, or nation.

1. Identify three indicators that decision-makers might monitor regularly.
2. Explain what these indicators could reveal about system condition.
3. Describe how diagnostics could help identify areas requiring investigation.
4. Outline how the system could move from diagnosis to explanation and intervention.
5. Explain why continuous monitoring and learning are important for maintaining long-term viability.