

WHY BEYOND-GDP EFFORTS FAIL

From Measurement Architecture to Institutional Transformation

A diagnostic white paper on ten recurrent implementation gaps, calibrated against twelve leading beyond-GDP frameworks

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GDP succeeded not only as a measurement innovation, but as an institutionally embedded change project.

Executive Summary

For more than five decades, the beyond-GDP field has refined what societies should measure. It has not developed an equally mature and transferable account of how alternative measures enter budgets, political narratives, decision routines, accountability systems, and institutional practice. A recent systematic review of 1,211 publications found that only 27, approximately 2 per cent, directly addressed barriers to adoption (Taylor & O'Hara, 2026). This imbalance is the starting point for the present diagnosis.

KEY FINDINGS

- The dominant public framing remains technical: indicator design, data quality, statistical capacity, harmonisation, communication, coordination, and policy uptake.
- Some implementation capabilities are probably present downstream, but they are rarely endogenous, integrated, and reproducible components of the frameworks themselves.
- Presence is not the same as sufficiency. A technique may be used without being strong enough, early enough, coordinated enough, or politically supported enough to produce transformation.
- The M3 Innovation Topology supplies a missing scale logic by distinguishing micro, mini, and macro innovation and explaining how change can cascade across systems.
- The 5D Metatheory shows why a framework may have a compelling telos but weak praxis, broad data but an unchanged ontology, or explicit values without mechanisms for resolving conflict.
- The Balanced Economic Dashboard provides a worked design example of how telos, temporal intelligence, reverse scoring, and decision relevance can be incorporated more deliberately into framework architecture.
- Governance-integrated systems such as Wales, New Zealand, the SDGs, and SEEA address more of the implementation challenge than standalone indices, but none fully integrates all ten capacities.

The paper's strongest claim is therefore not that implementing bodies have done nothing beyond technical work. It is that implementation capability is generally less systematic, less endogenous, and less transferable than measurement capability. The next generation of beyond-GDP work should make change architecture explicit, testable, and adaptable across contexts.

1. The Fifty-Year Paradox

The limitations of gross domestic product are no longer obscure. GDP records market production, but it does not by itself distinguish between activities that enhance flourishing and activities that repair damage, deplete natural systems, or respond to social breakdown. In response, scholars and institutions have produced more than a thousand alternatives and complements, ranging from compact indices to multidimensional dashboards, global goal systems, and environmental-economic accounts.

The intellectual case for moving beyond GDP is consequently mature. The implementation record is not. Taylor and O'Hara's (2026) systematic review found that only 2 per cent of the 1,211 publications examined addressed adoption barriers. Their synthesis identified paradigm resistance, data and public-sector misalignment, resource constraints, communication barriers, and insufficient user training. The imbalance is revealing: the field has concentrated on producing more valid representations of progress while devoting comparatively little attention to the institutional work required for those representations to govern.

The first Human Development Report explicitly reoriented development from production towards enlarging people's choices (United Nations Development Programme [UNDP], 1990). The OECD Well-being Framework now organises more than 80 indicators across current well-being, inequalities, and resources for future well-being (OECD, 2024). The SDGs provide 17 goals and 169 targets for people, planet, prosperity, peace, and partnership (United Nations, 2015). SEEA has become an international statistical standard for integrating environmental and economic data (United Nations et al., 2014). These are substantial achievements. Yet measurement sophistication does not

automatically generate political sponsorship, institutional ownership, changed incentives, or durable administrative routines.

GDP itself illustrates the difference. It gained traction through wartime urgency, state demand, institutional ownership, standardisation, recurring reporting, and integration into fiscal and economic decision systems. Its success was not merely analytical. GDP became embedded in how governments narrated national progress and coordinated action. Beyond-GDP initiatives frequently reproduce the measurement logic without reproducing the change machinery.

2. What Exactly Is Being Diagnosed?

A defensible diagnosis must distinguish among four layers. Conflating them can lead either to unfairly crediting a framework for what capable implementers added later, or to claiming absence where important downstream work was simply not publicly visible.

Layer	Definition	Diagnostic question
1. Framework architecture	Concepts, indicators, relationships, values, decision rules, and causal assumptions formally built into the framework.	Can a competent user infer the required implementation logic from the framework itself?
2. Formal implementation guidance	Manuals, toolkits, strategies, training materials, and recommended governance processes attached to the framework.	Are the required capacities explicitly recognised and operationalised in official guidance?
3. Institutional arrangements	Laws, mandates, agencies, reporting duties, budgets, accountability mechanisms, and political sponsorship surrounding adoption.	Has the framework been embedded in authoritative structures?
4. Downstream practice	What leaders, civil servants, statisticians, consultants, facilitators, and stakeholders actually do during implementation.	Were the capacities sufficiently enacted in practice?

2.1 Endogenous and exogenous implementation capacity

Endogenous implementation architecture is present when the framework itself specifies how adoption should proceed: how pilots will be selected, how diffusion will be supported, how resistance and losses will be diagnosed, how indicators connect to decision routines, how implementation will be sequenced, who owns each transition, and how feedback will alter the intervention. Exogenous implementation support is supplied from outside through project managers, political sponsors, legislation, consultants, organisational-development practitioners, stakeholder processes, or unusually capable public institutions.

This distinction is the paper's central conceptual contribution. A government may introduce SEEA through excellent programme management, or use a well-being dashboard through a sophisticated budget process. Those accomplishments do not automatically make programme management or budget integration inherent properties of the measurement framework. Successful implementation may demonstrate the competence of the implementing institution as much as the completeness of the framework.

Dependence on exogenous capacity creates portability problems. When implementation succeeds only where institutions already possess exceptional capability, lessons are difficult to reproduce. When implementation fails, the result may be attributed to political will even though the framework never specified how commitment would be cultivated, how losses would be managed, or how new measures would acquire authority.

2.2 From categorical absence to implementation insufficiency

The low rate of institutionalisation cannot prove that change management, adaptive leadership, project management, stakeholder engagement, or other relevant capabilities were wholly absent from every implementation. Internal practices are incompletely visible, and some or all of these capacities were almost certainly present to varying degrees downstream.

The more defensible inference is that implementation density was frequently inadequate. Implementation density refers to the number of required capabilities present, their strength, timing, ownership, resourcing, authority, and integration. A project may have good stakeholder consultation but weak project governance; strong political sponsorship but no temporal feedback architecture; sophisticated indicators but no decision rules; or competent programme management but no adaptive diagnosis of loss and resistance.

The issue is not necessarily zero presence. It is inadequate implementation density and integration.

3. The Technical Framing of an Adaptive Challenge

Public statements and implementation documents commonly frame beyond-GDP adoption through indicator selection, data availability, statistical capacity, harmonisation, interagency coordination, communication, training, and policy uptake. All are necessary. None, alone or in combination, constitutes a complete adaptive-change architecture.

A technical problem can be addressed through existing expertise and established authority. An adaptive challenge requires changes in values, identities, loyalties, habits, power relationships, and definitions of success (Heifetz et al., 2009). Beyond-GDP reform is adaptive because it asks governments and societies to reconsider what progress means, which outcomes deserve priority, what economic activity is for, whose losses count, and how present gains should be weighed against future flourishing.

The phrase “political commitment” illustrates the distinction. In a technical framing, commitment appears as a missing input alongside funding, data, or trained personnel. In an adaptive framing, weak commitment is an outcome requiring diagnosis. Which constituencies expect to lose? Which professional identities are threatened? Which institutional routines privilege GDP? Which leaders depend on a growth narrative? Which value conflicts are displaced into apparently technical disputes over indicators?

The Welsh system is a partial exception because the Well-being of Future Generations Act gives public bodies a legally binding common purpose and specifies five ways of working: long-term thinking, prevention, integration, collaboration, and involvement (Welsh Government, 2024). This moves substantially beyond a standalone dashboard. Yet even a statutory governance framework can struggle when implementation encounters political turnover, insufficient capacity, competing mandates, and losses that guidance alone cannot resolve.

4. Ten Recurrent Reasons Beyond-GDP Efforts Underperform

4.1 Diffusion of innovations

Beyond-GDP initiatives rarely analyse adoption through a complete diffusion architecture. Some frameworks possess diffusion-friendly properties such as simplicity, compatibility, visibility, localisation, or international sponsorship. The HDI, for example, benefited from a clear narrative and observable country comparison. The SDGs gained legitimacy through universal adoption and a highly recognisable global vocabulary. These attributes matter, but they are seldom converted into an explicit design specifying adopter groups, perceived relative advantage, trialability, observability, reinvention, and communication channels (Rogers, 2003).

The diagnostic gap is therefore not that diffusion never occurs. It is that diffusion is often an outcome to be hoped for rather than an architecture to be designed. A framework may be analytically superior yet incompatible with existing budget cycles, professional identities, reporting systems, or political narratives. Without deliberate adaptation to different adopter groups, uptake remains contingent.

4.2 Scale sequencing through the M3 Innovation Topology

Beyond-GDP reform is commonly framed at the macro level: replacing GDP, redesigning national accounting, or transforming the dominant conception of economic progress. This emphasis often bypasses the micro and mini scales through which institutional innovations become testable, visible, adaptable, and politically credible.

The M3 Innovation Topology distinguishes micro, mini, and macro innovations (Raei, 2026c). Micro innovations modify bounded practices, indicators, routines, or decision points. Mini innovations reorganise a meaningful subsystem, such as a municipal planning process, government agency, budget procedure, or regional reporting system. Macro innovations alter the governing architecture or dominant paradigm of the larger system.

The scales are not interchangeable, and local experiments should not be treated merely as incomplete national reforms. Micro and mini innovations can generate evidence, expose resistance, build implementation capability, improve observability, and create institutional precedents. Their accumulation and interaction may eventually generate a qualitative shift, producing a difference in kind rather than merely a difference in degree. Beyond-GDP initiatives sometimes use pilots and local applications, but rarely locate them within an explicit theory of cascading scale transition.

4.3 Change management

Many frameworks offer technically robust solutions to what are partly organisational transformation problems. They may specify indicators and reporting responsibilities without fully designing sponsorship, coalition building, communication, capability development, resistance management, reinforcement, and institutionalisation. These functions may be added downstream by implementing bodies, but their external and variable character makes outcomes dependent on local competence.

Change management does not substitute for political analysis or adaptive leadership. It does, however, provide operational disciplines for mobilising stakeholders, establishing ownership, sequencing implementation, and reinforcing new routines. The recurring gap is that these elements are often appended as implementation support rather than integrated into framework design from the beginning.

4.4 Adaptive leadership

Beyond-GDP reform is often described as a technical correction to an inadequate metric. In practice, it redistributes attention, legitimacy, and sometimes resources. Actors may lose status, authority, budget protection, narrative control, or the convenience of a single growth-centred account of success. Resistance is therefore not merely misinformation or lack of training. It may express real losses, value conflict, and institutional loyalties.

An adaptive architecture would identify factions, losses, competing commitments, authority dynamics, and the productive level of disequilibrium required for learning. It would also distinguish between problems that experts can solve and challenges that require stakeholders themselves to revise values and practices. Public beyond-GDP materials rarely make this distinction explicit.

4.5 Adult development and the assumed evidence user

Beyond-GDP frameworks generally assume that decision-makers will respond to a more complete representation of social, ecological, and human conditions by making correspondingly better decisions. This embeds an undifferentiated model of the policymaker as a rational evidence user. It gives limited attention to differences in meaning-making capacity, complexity handling, temporal perspective, value coordination, or the ability to examine the assumptions through which economic performance is interpreted.

Adult-development theory need not be established as a direct cause of past implementation failure for this omission to matter. Its absence reveals a structural limitation in design. A dashboard that requires leaders to coordinate competing systems, question inherited definitions of progress, recognise long-term interdependence, and act beyond immediate institutional incentives presupposes capacities that cannot simply be inferred from technical authority or professional expertise (Kegan, 1994).

Adult development is therefore best treated as an omitted implementation variable and design consideration, rather than as a proven single-cause explanation. *It raises questions about the developmental demands a framework places on its intended users and the scaffolding needed to meet those demands.*

4.6 Theory of change and the missing praxis dimension

Many beyond-GDP frameworks articulate an end state and measure movement towards it but do not explain how measurement changes governance. Their implicit pathway is often linear: better indicators produce better awareness, which produces better policy, which produces better outcomes. *This is an expectation, not a sufficient theory of institutional change.*

The 5D diagnosis clarifies why. A framework without a developed praxis dimension cannot possess a complete theory of change. Telos can define the destination, epistemology can organise knowledge, ontology can identify what exists, and axiology can identify what matters. Praxis must specify how knowledge enters authoritative action: decision rules, institutional routines, budget processes, accountability mechanisms, stakeholder roles, experimentation, and adaptive correction (Raei, 2026b).

Goals, targets, and indicators can form a results chain without explaining how entrenched decisions will change. A robust theory of change must identify causal mechanisms, assumptions, feedback loops, political conditions, intermediate outcomes, and failure points. It must also distinguish changing a measurement system from changing the institutions that use it.

4.7 Project and programme execution

Implementation is often discussed as adoption rather than designed as an executable programme. A credible programme requires ownership, scope, phases, dependencies, milestones, resources, risk management, governance, quality assurance, and benefits realisation. Some initiatives, particularly SEEA and statutory systems, provide substantial formal guidance. Yet execution disciplines are not consistently integral to the measurement frameworks themselves.

This matters because under-resourcing may be interpreted as an external barrier when the work was never adequately scoped. Without a programme architecture, institutions may underestimate data integration, legal change, capability building, communications, systems redesign, and the time required to embed new decision routines.

4.8 Temporal intelligence

Many frameworks include time series, sustainability measures, future capitals, deadlines, or intergenerational concerns. That is not the same as possessing a causal temporal architecture. Dashboards frequently mix current conditions, inputs, activities, leading indicators, intermediate outcomes, lagging outcomes, stocks, and emerging risks without clarifying their temporal role.

Temporal intelligence distinguishes what is happening now, what predicts future movement, what confirms that change has occurred, and what signals that implementation itself is on or off course. Without this structure, political leaders may not receive timely feedback, causal pathways remain difficult to test, and long-term consequences remain weakly connected to current decisions.

The Balanced Economic Dashboard explicitly addresses this gap through current, leading, and lagging indicators and multiple time horizons, enabling a clearer relationship between present conditions, anticipatory signals, and delayed outcomes (Raei, 2026a).

4.9 Disciplinary formation

Beyond-GDP work is frequently led by economists, statisticians, policy analysts, and subject-matter experts whose professional formation emphasises measurement, validity, comparability, and analytical rigour. Those capabilities are indispensable. Institutional transformation also requires competence in organisational change, political strategy, facilitation, implementation science, project and programme management, adaptive leadership, systems thinking, and evaluation.

This is a field-level and ecosystem-level explanation rather than a property of any single index. It helps explain why measurement architectures are systematically sophisticated while change architectures are more variable. Reason 9 is therefore the proximate generative cause of many omissions, while Reason 10 identifies the deeper structural incoherence they produce.

4.10 Five Dimensions misalignment

The deepest problem is not universal absence of ontology, epistemology, axiology, praxis, or telos. Many leading frameworks are strong in one or more dimensions. The problem is insufficient alignment among them. A framework may articulate human flourishing as its purpose yet retain decision routines centred on output growth. It may broaden the data used to understand progress while assuming that information automatically changes action. It may make values visible without specifying how value conflicts are resolved.

Dimension	Core question	Typical advance	Recurrent misalignment
Telos	What is the economy for?	Human development, well-being, sustainability, or flourishing is made explicit.	Purpose is not translated into priorities, trade-off rules, or institutional obligations.
Axiology	What is valued, by whom, and how are conflicts resolved?	Values become more visible than in GDP.	Weights and trade-offs remain implicit, technocratic, or insufficiently contestable.
Epistemology	What counts as valid knowledge?	Social, environmental, subjective, and distributional data are incorporated.	Better information is assumed to generate better decisions through a linear model.
Ontology	What is an economy, and what entities and relationships matter?	Natural, social, human, and cultural dimensions are recognised.	They may be appended to a production-centred ontology rather than transforming it.
Praxis	How does knowledge enter action?	Some frameworks link indicators to policy appraisal, reporting, or statutory duties.	The signal-to-decision pathway, authority, accountability, and adaptive response remain underspecified.

The Five Dimensions Metatheory provides an uncommitted analytical framework for making these assumptions explicit and examining their coherence (Raei, 2026b). Applied to beyond-GDP reform, it shows that a technically advanced indicator system can remain structurally incomplete when its account of knowledge, value, reality, action, and purpose do not mutually reinforce one another.

5. Calibration Against Twelve Prominent Frameworks

There is no authoritative ranking of the twelve “most popular” beyond-GDP frameworks. The present selection reflects international visibility, institutional influence, scholarly prominence, and diversity of type: compact indices, dashboards, accounting standards, global goal systems, and governance-integrated frameworks. Because these are not equivalent objects, the purpose is diagnostic comparison rather than league-table ranking.

The calibration uses four codes. E means that a capacity is substantially endogenous to the framework or governance architecture. G means it is present mainly in formal guidance or an attached implementation system. P means it is plausibly present downstream in some settings but not reliably visible or inherent. A means absent or minimally visible in the public framework and guidance. The codes are reasoned judgements, not validated empirical scores.

Table 1. Framework-level implementation calibration

Framework	Diff.	Scale	Change	Adaptive	Adult dev.	ToC	Project	Temporal	Formation	5D
Human Development Index	P	A	A	A	A	P	A	P	P	P
OECD Well-being Framework	P	G	G	P	A	G	P	E	G	P
UN Sustainable Development Goals	E	G	G	P	A	G	G	E	G	P
Genuine Progress Indicator	P	P	A	A	A	P	A	P	P	P
Inclusive Wealth Index	P	A	A	A	A	P	A	E	P	P
SEEA	E	G	G	P	A	G	G	G	G	P
Social Progress Index	P	G	P	A	A	P	P	G	P	P
Happy Planet Index	P	A	A	A	A	P	A	P	P	E
Doughnut Economics	E	E	G	P	A	G	G	G	G	E
Gross National Happiness	P	G	G	P	A	G	G	G	G	E
New Zealand LSF	P	E	G	P	A	E	G	E	G	E
Wales Future Generations	P	E	E	G	A	E	E	E	E	E

Legend: E = substantially endogenous; G = present mainly in guidance or attached governance arrangements; P = plausibly present downstream or implicit; A = absent or minimally visible. “Formation” refers to interdisciplinary implementation formation. ToC = theory of change.

5.1 What the calibration shows

First, the strongest implementation architectures appear in governance-integrated systems rather than standalone indices. Wales embeds well-being goals in law and prescribes ways of working. New Zealand's Living Standards Framework is connected to policy analysis, budget processes, and a regularly updated dashboard. The SDGs and SEEA possess extensive international implementation systems. These cases materially qualify any claim that beyond-GDP work contains no implementation architecture.

Second, even the stronger systems depend on exogenous political, administrative, and professional capability. Statutory duties do not automatically resolve value conflict. Guidance does not ensure execution. Reporting cycles do not necessarily create causal learning. Multilevel localisation does not by itself provide a theory of scale transition. The calibration therefore supports a continuum rather than a binary judgement.

Third, adult development and explicit adaptive leadership remain the least visible categories. Public materials generally treat users as capable evidence processors and resistance as an obstacle to be managed through communication, coordination, or commitment. The deeper demands placed on meaning-making, identity, and value coordination are rarely acknowledged.

5.2 A four-level maturity model

Level	Primary achievement	Typical examples	Remaining limitation
1. Measurement innovation	Broadens or corrects what is measured.	HDI, HPI, GPI, IWI	Little inherent architecture for institutional adoption or decision integration.
2. Dashboard and monitoring architecture	Adds multidimensional comparison, trends, disaggregation, and policy relevance.	OECD Well-being Framework, Social Progress Index	Use remains dependent on external authority, routines, and implementation capability.
3. Standardised implementation system	Adds targets, standards, localisation, capacity building, and formal monitoring.	SDGs, SEEA	Execution and adaptive change remain uneven across jurisdictions.
4. Governance-integrated well-being system	Embeds well-being in policy appraisal, legal duties, budgeting, reporting, or accountability.	New Zealand LSF, Wales	Still vulnerable to politics, capability gaps, weak enforcement, and incomplete adaptive architecture.

The maturity model does not imply that every framework must become a statutory governance system. It clarifies that claims about implementation must be calibrated to framework type. A compact index can be valuable while remaining intentionally incomplete. Problems arise when measurement tools are expected to produce institutional transformation without complementary change architecture.

6. From Diagnosis to Constructive Architecture

The critique is not a call to abandon measurement work. It is a call to pair measurement design with an explicit account of diffusion, scale, organisational change, adaptive work, user capacity, execution, temporality, and 5D coherence. Three of the author's frameworks contribute complementary elements to this constructive agenda.

6.1 M3: a pathway across scale

M3 addresses the tendency to jump directly from conceptual innovation to macro reform. It provides language for identifying the locus and scale of innovation, sequencing bounded experiments, and examining how innovations cascade across systems (Raei, 2026c). For beyond-GDP initiatives, this means designing micro changes in specific decision routines, mini transformations in agencies or jurisdictions, and macro changes in national governance as related but distinct interventions.

6.2 5D: structural alignment

The 5D Metatheory provides the design review that prevents indicator expansion from being mistaken for paradigm transformation (Raei, 2026b). It asks whether the framework's ontology, epistemology, axiology, praxis, and telos are explicit and mutually reinforcing. In beyond-GDP work, the most common weak link is praxis: the architecture connecting knowledge to authoritative action.

6.3 BED: a worked design example

The Balanced Economic Dashboard provides a worked conceptual example of how several missing capacities can be made more endogenous (Raei, 2026a). It begins with a positive telos, human flourishing or eudaimonia, rather than defining itself only in opposition to GDP. It distinguishes current, leading, and lagging indicators, incorporates short-, medium-, and long-term horizons, and uses reverse scoring for harmful or defensive economic activity. These choices make values and temporal assumptions more explicit and create a clearer basis for linking measurement to anticipatory action.

BED should not be presented as empirical proof that all ten implementation gaps have been solved. Diffusion, adaptive leadership, project execution, and institutional governance still require context-specific design and testing. Its significance is architectural: *it demonstrates that a beyond-GDP framework can be constructed from telos, temporal intelligence, value hierarchy, and decision relevance rather than treating these as later additions.*

6.4 The combined contribution

Together, M3, 5D, and BED provide a preliminary *transdomain response* to the implementation gap. M3 clarifies where change occurs and how it can cascade. 5D clarifies what dimensions must be aligned. BED demonstrates how selected principles can be embodied in measurement architecture. None substitutes for empirical implementation research, but together they move the discussion from critique towards a more complete design language.

7. Confidence Calibration and Limits of Inference

The argument deliberately distinguishes what is strongly evidenced from what remains a plausible inference. This is particularly important because public documents reveal framework architecture and formal guidance more reliably than downstream implementation practice.

Claim	Confidence	Basis
Measurement capability is more systematically developed than implementation capability.	High	The volume and content of the literature and public framework documentation consistently support this asymmetry.
The dominant public diagnosis is technical rather than adaptive.	Moderate to high	Public materials emphasise indicators, data, resources, training, coordination, and communication far more than loss, identity, power, and competing commitments.
Implementation capacities are rarely fully endogenous to beyond-GDP frameworks.	High	Most capacities appear in attached guidance, governance arrangements, or downstream practice rather than in core measurement architecture.
All ten capacities were absent from most implementations.	Low	Internal practice is not sufficiently visible, and several capacities were almost certainly present in some settings.
Implementation capabilities were frequently insufficiently integrated, timed, resourced, or authoritative.	Moderate	This is the most plausible inference from weak institutionalisation combined with evidence of partial downstream activity.
Adult-development differences directly caused implementation failure.	Low	The evidence supports a design-assumption critique, not a direct causal attribution.
Better endogenous change architecture	Moderate	Strong theoretical logic and comparative indications exist, but prospective

Claim	Confidence	Basis
would improve adoption.		implementation testing is required.

7.1 Limitations

The selection of twelve frameworks is purposive rather than the result of a formal popularity ranking. The frameworks differ in type and scope, which limits direct comparison. The calibration is based on publicly available documents and therefore cannot capture confidential strategy, informal leadership work, or tacit practitioner competence. The coding represents analytical judgement rather than a validated instrument. Finally, weak institutionalisation has multiple causes, including political economy, vested interests, fiscal constraints, legal structures, data limitations, and geopolitical conditions that cannot be reduced to framework design.

These limitations do not invalidate the central argument. They constrain it to a more precise claim: public beyond-GDP architecture has developed measurement more systematically than institutional transformation, while downstream implementation capacity remains uneven and incompletely visible.

8. Design Principles for the Next Generation

1. Pair every measurement architecture with a change architecture

Specify diffusion, stakeholder mobilisation, political sponsorship, adaptive diagnosis, implementation governance, capability building, and institutionalisation at the design stage.

2. Diagnose the adaptive challenge before selecting technical remedies

Identify anticipated losses, threatened identities, conflicting values, entrenched loyalties, and distributions of authority. Do not treat commitment as an unexplained input.

3. Use M3 to sequence scale

Design micro changes in bounded decision routines, mini changes in agencies or jurisdictions, and macro changes in national systems. Define how learning and legitimacy will cascade between scales.

4. Build a causal temporal dashboard

Separate inputs, activities, implementation indicators, leading indicators, current outcomes, lagging outcomes, capital stocks, and emerging risks.

5. Make praxis explicit

Specify how indicator movement affects budget review, policy appraisal, regulation, public reporting, executive attention, accountability, and corrective action.

6. Build interdisciplinary implementation teams

Combine economists and statisticians with project and programme managers, change practitioners, political strategists, facilitators, systems thinkers, behavioural specialists, and evaluators.

7. Design for developmental demands

Assess the complexity, time horizon, and value-coordination demands placed on intended users. Provide scaffolding, deliberative structures, and distributed decision arrangements where necessary.

8. Evaluate implementation density

Assess not only whether a capacity appears, but its strength, timing, ownership, resourcing, authority, and integration with other capacities.

9. Use 5D alignment as a design review

Test whether ontology, epistemology, axiology, praxis, and telos are explicit and mutually reinforcing before large-scale implementation.

10. Treat institutionalisation as the outcome

Do not define success as publication, dashboard launch, or formal endorsement. Track changed decisions, routines, incentives, budget allocations, accountability, and persistence across political cycles.

9. Practical Diagnostic Checklist

Domain	Diagnostic question
Diffusion	Is the framework visibly advantageous, compatible with existing routines, triable, observable, and adaptable for distinct adopter groups?
Scale	Is there an explicit pathway linking micro experiments, mini institutional applications, and macro adoption?
Change management	Are sponsorship, coalition building, communication, resistance, reinforcement, and institutionalisation designed as a system?
Adaptive leadership	Have losses, identity threats, value conflicts, power relations, and competing commitments been diagnosed?
Adult development	What complexity, temporal, and value-coordination capacities does the framework demand from users, and how are these capacities supported?
Theory of change	Are causal mechanisms, assumptions, intermediate outcomes, feedback loops, and failure points explicit?
Project execution	Are ownership, scope, phases, milestones, dependencies, resources, risks, and benefits realisation defined?
Temporal intelligence	Are leading, current, lagging, stock, risk, and implementation indicators clearly distinguished?
Formation	Does the team possess implementation, political, organisational, and facilitative competence alongside measurement expertise?
5D alignment	Do ontology, epistemology, axiology, praxis, and telos reinforce rather than contradict one another?
Institutionalisation	Are indicators connected to authoritative decisions, budgets, accountability mechanisms, and recurring routines?
Learning	Can feedback from implementation modify the framework, governance arrangements, and scale strategy?

10. Conclusion

GDP succeeded not only as a measurement innovation, but as an institutionally embedded change project. It acquired political sponsorship, institutional ownership, standardisation, reporting rhythms, administrative routines, and a powerful narrative of national progress. Beyond-GDP initiatives have frequently reproduced the measurement ambition without reproducing the full change machinery.

This does not mean that implementing bodies have ignored change management, project execution, stakeholder engagement, or political strategy. Some or all of these capacities are probably present to varying degrees in many downstream efforts. The more defensible conclusion is that measurement sophistication has become systematic while implementation sophistication remains contingent. Relevant capabilities are often external to the framework, unevenly distributed, insufficiently integrated, weakly resourced, or introduced after major design decisions have already been made.

The endogenous-exogenous distinction changes how success and failure should be interpreted. Success may reflect exceptional institutional capability rather than a portable framework architecture. Failure may reflect not simply resistance or lack of commitment, but an incomplete pathway from knowledge to action. The problem is therefore neither purely technical nor purely political. It is architectural.

M3, 5D, and BED offer complementary elements of a constructive response. M3 provides a theory of scale and cascading innovation. 5D identifies the structural dimensions that must be aligned. BED illustrates how telos, value, temporal intelligence, and decision relevance can be built more deliberately into measurement design. The next step is empirical: to test whether more endogenous, integrated change architecture improves adoption, institutionalisation, and policy consequence.

The central challenge is no longer simply to produce a better account of progress. It is to design the institutional conditions through which a different account of progress can govern.

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