

# Integrating Mandated Planning: Action Research in a Public Hospital

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## Abstract

**Purpose:** This paper investigates how an interventionist action research process can transform a normatively mandated planning instrument PIAO from a siloed compliance document into a cross-organizational performance management system oriented toward community accountability.

**Design/methodology/approach:** An interventionist action research study was conducted at a northern Italian research hospital over eight months (May 2023–January 2024). Twenty-nine participants across clinical, administrative, research, and managerial functions engaged in three structured phases. Two researchers maintained differentiated roles, process conductor and analytical observer, producing independent reflective notes analysed through a framework analysis approach.

**Findings:** Three enabling mechanisms are identified through which the transformation was achieved: shared value anchoring, interdependence visibility, and progressive accountability. In this intervention, these mechanisms unfolded in a consistent sequence: each appeared to produce the organizational conditions that supported the next. The intervention extended the organization's pre-existing Balanced Scorecard infrastructure toward the public value dimensions required by the PIAO, achieving indicator consolidation, relational document architecture, and Gender Equality Plan integration.

**Research limitations/implications:** The single-case design, justified on theoretical sampling grounds, limits direct generalization to organizations with different measurement infrastructures or governance cultures. The absence of longitudinal data leaves the sustainability of the integration achieved as an open empirical question. Future research should test the enabling mechanisms in contexts without pre-existing planning infrastructure and follow organizations through multiple PIAO cycles.

**Practical implications:** Regulatory compliance alone cannot produce an integrated PIAO. Facilitated organizational processes activating the three mechanisms in sequence appear, in this case, to be conditions for substantive integration.

**Originality/value:** The paper's primary contribution is a mechanism-based account of how a mandated planning architecture can be transformed into a functioning, integrated performance

management system in an organization with mature measurement infrastructure. This account extends the Ferreira and Otley framework to normatively mandated performance management system design and yields a replicable action research design for the redesign in mature measurement environments.

**Keywords:** PIAO; Management Control System; Performance Management Systems; Public Value; Action Research; IRCCS; Community Health.

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## 1. Introduction

Public hospitals occupy a distinctive position among community-serving organizations. They operate under statutory mandate and public funding, yet their primary purpose is the direct delivery of health services to citizens and communities. An Italian IRCCS (Istituto di Ricovero e Cura a Carattere Scientifico, a publicly recognized scientific research hospital) combines this community health mission with responsibilities for scientific research and clinical teaching, making it one of the most institutionally complex actors in the Italian public sector. Its contribution to community well-being extends beyond the clinical encounter: it encompasses the generation and translation of medical knowledge, the development of health professionals, and the maintenance of public trust in health institutions (Rubino et al., 2026).

Since its introduction in 2022 (DPCM 30 June 2022), the *Piano Integrato di Attività e Organizzazione* (PIAO) has been positioned as an attempt to move Italian public administration beyond the fragmented planning logic that characterized previous instruments. Unlike its predecessors, which assigned separate planning obligations to different functional areas, the PIAO is explicitly designed as an integrated document requiring coherence across performance objectives, anti-corruption measures, workforce planning, gender equality, and organizational development. For a community-serving institution, this integrative ambition has a clear normative purpose: a planning document that connects all dimensions of organizational activity to a shared conception of public value offers citizens, communities, and oversight bodies a transparent account of what the institution is doing, why, and how its performance will be measured (Biancone et al., 2022; Dal Mas et al., 2022).

In practice, implementation of this ambition has proved elusive. The limited literature on the PIAO describes a consistent pattern of formal compliance without substantive integration. De Nicola and Fratini (2024), in the most directly relevant study published to date, examine the presence of Sustainable Development Goals in PIAO documents produced by Italian universities, finding that connections between strategic commitments and operational planning are typically superficial and inconsistent, a pattern equally present in the hospital context. The PIAO remains, in the terms of Ferreira and Otley (2009), a design artefact rather than a used system.

Three gaps in the existing literature motivate this study. First, the management control system (MCS) and performance management system (PMS) literature has developed analytically powerful frameworks for diagnosing and redesigning performance management systems, but has applied these almost exclusively to contexts where the design of the PMS is an organizational choice. The PIAO represents a structurally different case: its design is normatively mandated, and the analytical problem shifts entirely to use and coherence. Ferreira and Otley's (2009) framework has not been adapted to this configuration, and the implications of normative design for which dimensions become analytically actionable have not been theorized. Second, the PIAO has not been studied as a management control system. The limited existing literature treats the document as an object of content analysis rather than as an organizational instrument, and the process conditions that determine whether it functions as a genuine MCS or remains a compliance exercise have received no scholarly attention. Third, action research in management accounting has documented the introduction of new control instruments in organizations that lacked them. The present case is structurally different: the organization already possessed a mature, embedded Balanced Scorecard, and the intervention concerned the redesign and extension of an existing system rather than the introduction of a new one. The dynamics, resistances, and success criteria of this type of AR intervention differ from those of introduction studies, but the distinction has not been theorized.

This paper reports an action research study conducted at a northern Italian IRCCS that had been producing PIAO documents since the instrument's introduction, always with a siloed logic. The organization's existing Balanced Scorecard (BSC) infrastructure, formally adopted since 2012 with five adapted perspectives, resources, activity, organization, quality and safety, and research, became the pivot of the intervention: rather than building a new system from scratch, the research process extended and connected this established measurement architecture toward the public value dimensions required by the PIAO. The intervention was designed with differentiated researcher roles, one author as process conductor and one as analytical observer, allowing the study to combine the depth of insider engagement with the analytical distance required for rigorous theorization. The study's central question is how an interventionist action research process can transform the PIAO from a normatively mandated, siloed compliance document into a cross-organizational management control system, leveraging a pre-existing BSC infrastructure to connect strategic planning, public value measurement, and performance control.

The remainder of the paper proceeds as follows. Section 2 develops the theoretical background across three frameworks and derives an integrative analytical proposition. Section 3 describes the research context and methodology. Section 4 presents the empirical setting and structural artefacts. Section 5

analyses the three enabling mechanisms. Section 6 discusses contributions relative to the three identified gaps. Section 7 concludes.

## **2. Theoretical Background**

### *2.1 Performance Management Systems: The F&O Framework and Its Application to Normatively Mandated Design*

Ferreira and Otley (2009) developed an extended framework for the analysis of performance management systems comprising twelve interrelated dimensions: vision and mission; key success factors; organizational structure; strategies and plans; key performance measures; target setting; performance evaluation; reward system; information flows, systems and networks; PMS use, distinguishing diagnostic from interactive use; PMS change; and the strength and coherence of PMS linkages. The framework is explicitly dynamic, concerned not only with what a PMS contains but with how it operates, whether its components are mutually consistent, and whether the information it produces is substantively used in organizational decision-making.

Three dimensions are of particular analytical relevance for this study. Dimension 2 concerns key success factors: in a fragmented planning system, each organizational unit defines its success factors independently, without a mechanism for their alignment into a shared strategic logic. The result is a system that is locally coherent but globally incoherent, generating measurement activity without producing a consistent account of organizational performance. Dimension 10 distinguishes between diagnostic use, in which a PMS monitors compliance with predetermined standards, and interactive use, in which the system actively shapes strategic learning and organizational dialogue. A siloed PIAO tends exclusively toward the former: it is completed, filed, and consulted only under regulatory scrutiny. Dimension 12, the strength and coherence of PMS linkages, captures the degree to which the components of a PMS reinforce rather than contradict each other. High coherence produces an integrated performance narrative; low coherence produces noise.

The framework has been applied productively in public healthcare settings. Dal Mas et al. (2022) demonstrate that output and outcome measurement in the public sector remains structurally fragmented, with organizational domains deploying incommensurable performance logics, a finding that maps directly onto the PIAO problem. Rizzo (2025), studying budgetary processes in healthcare, shows that goal clarity in planning instruments significantly mediates their effectiveness as performance management tools: documents that specify success criteria explicitly produce better performance alignment than those that leave objectives implicit.

However, the F&O framework was developed for contexts in which the design of the PMS is an organizational choice. Its application to an instrument whose design is normatively mandated requires

a conceptual adaptation. When design is imposed by regulation, dimensions 1 and 4 are partially pre-defined and cannot be freely redesigned. The analytical problem concentrates on dimensions 2, 10, and 12, precisely those governing the passage from formal compliance to substantive use and from fragmented to coherent measurement. This reweighting of the framework is a theoretical contribution of this paper: it specifies which dimensions of F&O are actionable in conditions of normative design.

## *2.2 Public Value Management: Value Orientation and Operational Gap*

Moore's (1995) foundational argument is that public managers should orient their organizations toward the creation of public value, defined as the improvement of the economic, social, environmental, and health conditions of citizens, businesses, and other stakeholders relative to prior conditions. This represents a departure from New Public Management, which had reduced public organizational purpose to efficiency, cost control, and customer satisfaction. Public Value Management reorients the measurement apparatus from metrics of internal process efficiency toward metrics of external social impact.

Moore's strategic triangle requires that a valid public strategy produce value for its intended beneficiaries, be legitimated by political and public authorization, and be operationally feasible given available resources. For a community-serving institution such as a public hospital, this framework translates directly into the architecture of the PIAO: each section should specify what value that area of organizational activity generates and for which community stakeholders, how that value is legitimated, and what operational capacity the organization possesses to deliver it. Biancone et al. (2022), studying public value creation in hybrid organizations at the intersection of public and third sector, show that public value is most credibly generated when organizational planning explicitly connects operational activities to community outcomes, rather than treating community accountability as a separate reporting obligation.

Moore's value scorecard (2013) operationalizes these principles across dimensions including mission achievement, client outcomes, equity of access, efficiency, staff legitimacy, and contribution to public trust. For an IRCCS, these dimensions correspond to the PIAO's chapters: clinical outcomes and research quality, equity of access and waiting times, appropriateness of resource use, organizational wellbeing and gender equity (Naciti et al., 2024), and transparency and anti-corruption. The PIAO, understood through a public value lens, is an attempt to institutionalize Moore's framework in a normative planning instrument.

Moore's theory has a recognized operational gap: it specifies what public managers should pursue but says relatively little about how to build internal organizational consensus around what public value means for a specific institution, or how to translate that consensus into a coherent measurement

system. This gap is distinct from but complementary to the F&O diagnostic problem: F&O tells us that the PMS is fragmented and how to assess its coherence; Moore tells us what it should cohere around. The two frameworks operate at different levels of the same problem, with F&O providing the architectural logic and Moore providing the normative content. An integrated PMS in a public hospital must satisfy both.

### *2.3 Action Research in Management Accounting: The Dual Role as Analytical Resource*

Kaplan (1998) argued for innovation action research as a mode of inquiry in which researchers develop, implement, and refine management accounting innovations in partnership with organizations, generating theoretical insights from the intervention process rather than from the observation of existing practices. The value of this approach lies in its iterative character: theory and practice co-develop through cycles of action and reflection, producing insights that neither pure theorizing nor pure observation could generate.

Jönsson and Lukka (2006) elaborate the methodological foundations of interventionist research, distinguishing it from clinical case study research and from consulting. The key distinction is that interventionist research is oriented toward theory building: the researcher intervenes not merely to solve an organizational problem but to generate theoretically generalizable insights. The organizational outcome and the research outcome are produced simultaneously and are mutually constitutive.

In this study, the dual role of the researchers, simultaneously agents of organizational change and analysts of that change, is an analytical resource rather than merely a methodological limitation. A researcher inside an intervention has access to data that external observation cannot produce: the dynamics of group resistance and engagement, the moments at which organizational understanding shifts, the implicit assumptions that surface under the pressure of cross-functional dialogue. The risk associated with the dual role is managed through the structural separation of conductor and observer roles described in Section 3. This structural solution is consistent with Lukka and Suomala's (2014) argument that interventionist research must balance the intellectual virtues of relevance, rigour, and reflexivity, rather than treating researcher involvement as a threat to be minimized.

The existing AR literature in management accounting has studied almost exclusively the introduction of new control instruments in organizations that lacked them. The case reported here is structurally different. The organization already possessed a mature, operationally embedded PMS; the intervention concerned the redesign and integration of that system rather than its introduction. The dynamics of redesign differ from those of introduction: the relevant challenge is not adoption of something unfamiliar but the transformation of established routines and the reconfiguration of

established boundaries. The AR literature has not yet theorized this distinction, and the methodological implications of working with and through an existing system rather than introducing a new one remain unexplored.

#### *2.4 An Integrative Analytical Framework*

The three theoretical frameworks form a nested analytical structure. Ferreira and Otley (2009) provide the diagnostic architecture: they identify where the PIAO fails as a PMS and specify what an integrated version must achieve, particularly with respect to shared key success factors, interactive use, and coherence of linkages. Moore (1995, 2013) provides the normative content: he specifies what the integrated PMS should measure and in service of which public value commitments, anchoring the technical exercise of PMS redesign in a conception of organizational purpose. The action research methodology provides the mechanism of transformation: it specifies how a fragmented, compliance-oriented PMS can be redesigned into a coherent, value-oriented system within a real organization on a real timeline, while generating theoretical insight. This is not a simple combination of existing frameworks: the normatively mandated character of the PIAO requires each framework to be extended beyond its original scope, F&O beyond its assumption of organizational design discretion, and Moore beyond its silence on how internal consensus around public value is built, rather than merely applying them side by side.

From these three frameworks the following analytical proposition is derived to guide the findings: in a public PMS whose design is normatively mandated and whose measurement infrastructure is already mature, the passage from formal compliance to substantive use and coherence requires deliberate enabling mechanisms that operate in a consistent sequence. In the case examined here, this sequence was not incidental: each mechanism appeared to produce the conditions that supported the next, and no mechanism substituted for one that preceded it. The empirical task of Sections 4 and 5 is to identify these mechanisms and examine the sequence in which they operated.

### **3. Research Context and Methodology**

#### *3.1 Case Selection and Organizational Context*

The selection of this case follows a theoretical sampling logic (Yin, 2018) rather than one of convenience. The organization combines the conditions that make the analytical problem maximally visible: a mature, operationally embedded BSC that creates a high-definition baseline against which change can be assessed; a normative obligation to produce an integrated PIAO; a complex institutional mission that generates genuine tensions between organizational domains; and the additional requirement of a Gender Equality Plan as a cross-cutting planning instrument. These

features make the case theoretically extreme in Yin's sense, meaning the mechanisms, if present, will be observable with high resolution.

The organization is a northern Italian IRCCS with a triple mission of clinical care, scientific research, and teaching. As a community health actor, it serves not only its direct patients but the broader population of the region: it trains the health professionals who staff the regional health system, conducts the research that informs clinical practice across institutions, and maintains specialized capacity in oncology, neurosciences, and cardiovascular care that would otherwise be inaccessible to citizens in its catchment area (Rubino et al., 2026). The PIAO, in this context, is not merely an internal planning document: it is the instrument through which the organization accounts to its community for the use of public resources.

The organization had formally adopted a Balanced Scorecard in 2012, following an experimental phase that began in 2004. The BSC was unique for the entire organization across all professional roles, and was operationally embedded in the annual target-setting cycle: it structured budget negotiations with each operational unit, informed the performance evaluation of senior managers through a weighted scoring system, and was published monthly in a navigable management dashboard accessible at departmental, unit, and organizational levels. Its five perspectives, resources, activity, organization, quality and safety, and research, had been adapted to the IRCCS context, going beyond the standard Kaplan and Norton model to accommodate the specificities of a public research hospital. Monitoring was continuous, supported by quarterly review meetings with each operational unit and a business intelligence tool enabling drill-down analysis.

However, the BSC in its existing form did not fully cover the public value dimensions required by the PIAO. Equity of access was present as a narrative commitment but not systematically measured as a standalone dimension. Gender equality was addressed through a separate Piano Triennale delle Azioni Positive, which the organization itself described in its 2022 PIAO as requiring complete redesign, since many planned actions had proved unrealizable during the pandemic and the monitoring system was inadequate. Anti-corruption culture was managed through a standalone PTPCT referenced by link rather than integrated into the planning logic. The PIAO chapters had been written without reference to the BSC, and the 2022 document explicitly chose not to duplicate the contents of existing instruments, remanding instead to external links. This was framed as a simplification strategy, but its effect was structural disconnection: two parallel planning and measurement logics that did not speak to each other.

### *3.2 Research Design*

The study follows an interventionist action research design (Jönsson and Lukka, 2006). The research team engaged with the organization as active participants in the redesign of its planning and control process, with the explicit orientation of generating theoretically generalizable insights from the intervention.

The two researchers maintained differentiated roles throughout. One author (P.S.) served as process conductor: designing and leading the plenary sessions and working group meetings, managing the dynamics of cross-functional engagement, and guiding the groups through the analytical steps required to move from siloed chapters to an integrated document. The other author (A.M.) maintained an analytical observer role: attending all sessions without conducting them, producing independent reflective notes after each session documenting the mechanisms and dynamics observable in the process, and maintaining the critical distance required to theorize from within the intervention. Between sessions, the conductor also carried out design activities, including reading draft documents, preparing working mandates, and identifying integration points, while the observer produced analytical notes on patterns emerging across sessions. The two sets of notes were produced independently without prior discussion and were compared in the analysis phase: points of convergence were treated as robust observations, while discrepancies were treated as analytically productive tensions requiring further examination.

### *3.3 Ethics and Positionality*

The organization approached the research team on the basis of prior work on PIAO implementation in other contexts; neither researcher had a pre-existing consultancy, employment, or governance relationship with the IRCCS. Participants engaged with the intervention through enrolment in a training course, rather than through a bespoke consultancy engagement commissioned by the organization.

Participants' consent to the use of the intervention as research material was conditional on anonymity and non-traceability: no session was audio- or video-recorded, and the authors verified that no individual participant could be identified, directly or indirectly, in the published material. In the process materials and reflective notes, participants and their organizational roles are recorded explicitly, as this level of detail was necessary for the analysis; all identifying information was removed or generalized before inclusion in this paper. The organization itself is referred to only by its institutional classification (IRCCS) rather than by name.

The study was not submitted to a formal ethics committee for review or exemption, as the authors' institution did not operate one at the time the intervention was conducted. The safeguards described

above, participant consent conditional on anonymity, the absence of recordings, and the anonymization of all identifying detail, were applied in its place.

### *3.4 Participants*

The community of practice comprised 29 participants drawn from across the organization's functional and professional areas. Participants included senior institutional leadership from the General Direction and Scientific Direction, unit directors and operational managers from Controlling, Human Resources, Training, Anti-corruption and Transparency, and ICT, and professional staff from the Gender Equality Committee, clinical psychology, and nursing coordination. The composition was deliberate: each working group combined the senior professional with primary ownership of the relevant PIAO chapter with colleagues from functionally connected areas, ensuring that the groups combined strategic authority with operational knowledge. A subset of participants, including the heads of ICT, Controlling, and Scientific Direction, were designated as cross-cutting contributors present across multiple groups to facilitate horizontal integration.

### *3.5 Data and Analysis*

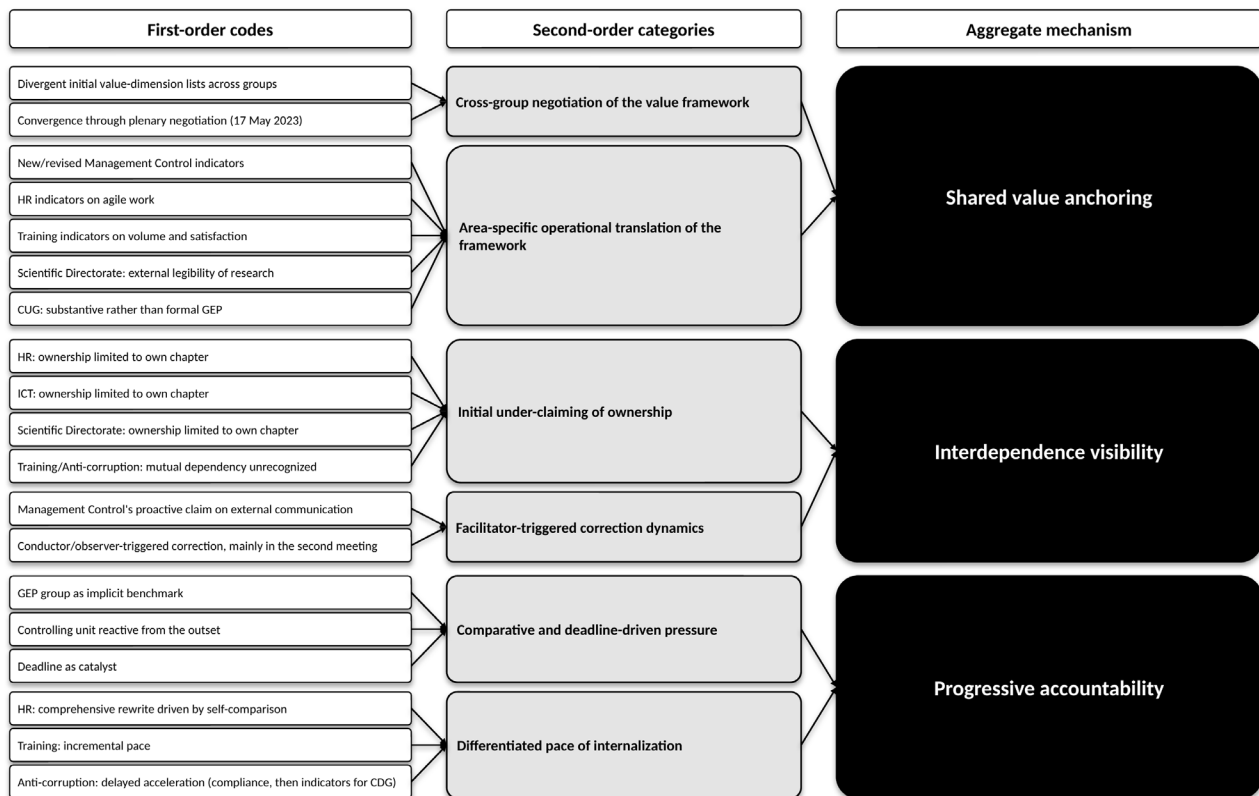
The primary data sources comprise three categories. Process materials produced by the conductor include session slides, working group briefs, ownership matrices, and progress checklists, which constitute an audit trail of the intervention and provide material evidence of the integration achieved at each stage. Independent reflective notes from both researchers, produced after each of the eight sessions in the intervention, constitute the primary source for the mechanism analysis. Sessions were not audio- or video-recorded; both researchers took contemporaneous handwritten notes during each session, producing two to four pages for two-hour group sessions and four to ten pages for four-hour plenary sessions. The pre-intervention PIAO document and the successive versions produced during the intervention provide a comparative baseline. Each chapter was drafted and revised through a sequence of versions tied to the number of sessions devoted to it, progressing from a summary outline, to an analytical outline, to a first full draft, a second revised draft, and a final version; the structural and substantive distance between the initial and final versions is the observable evidence of the integration achieved.

Analysis followed the framework analysis approach (Ritchie and Spencer, 1994), with analytical categories derived deductively from the three theoretical frameworks described in Section 2 and subsequently validated against the empirical material. Coding was conducted manually, without dedicated qualitative analysis software. Initial coding of the reflective notes identified recurring patterns of organizational behaviour across sessions; these patterns were then mapped against the theoretical categories, and the mechanisms were refined through successive passes across the

complete corpus, following the framework method's approach to charting and interpreting data (Gale et al., 2013). Because the corpus was bounded, comprising all reflective notes and document versions produced by a finite, already-concluded intervention rather than an open-ended sample from a larger population, saturation in the classical sense of a stopping rule for further data collection does not apply. What was achieved is more accurately described as analytic sufficiency, closer in spirit to the information power that Malterud, Siersma and Guassora (2016) propose as an alternative adequacy criterion to saturation: the coding categories stabilized once every session's notes and every document version had been coded against the three deductive frameworks, with no segment of the bounded corpus left unaccounted for by the resulting category set. The trustworthiness of the analysis rests on triangulation between the conductor's and observer's reflective notes, which provided two epistemically distinct perspectives on the same events, and between those notes and the documentary record of successive document versions. Discrepancies between the two note sets were resolved through direct discussion between the two researchers. Member checking was not performed. While the coding categories were derived deductively rather than through the inductive Gioia methodology, the coding procedure followed comparable standards of transparency and traceability between raw data and analytical categories (Gioia, Corley and Hamilton, 2013).

Figure 1 presents the resulting data structure, showing how the first-order codes identified in the reflective notes were grouped into second-order categories and aggregated into the three enabling mechanisms discussed in Section 5, following the visual convention for representing the coding trail from raw data to theoretical constructs (Gioia, Corley and Hamilton, 2013).

**Figure 1. Data structure: from first-order codes to the three enabling mechanisms.**



### 3.6 Intervention Architecture and Timeline

The intervention ran from May 2023 to January 2024 in three phases, comprising eight sessions in total. Phase 1, conceptual alignment, comprised two full-day plenary sessions (eight hours each) in May 2023. The first introduced the theoretical framework, including Moore's public value model, the BSC adapted to the non-profit healthcare context, and the F&O design-use distinction, to all participants. The second operationalized this framework: working groups were constituted around the PIAO's substantive chapters and began a critical reading of the existing document against the shared analytical vocabulary established in the first session. The explicit purpose of Phase 1 was to build a common referent before any revision work began.

Phase 2, working group cycles and plenary integration, comprised three cycles between June 2023 and January 2024. The first two cycles were generative: online parallel working group sessions (two hours per group) were followed by a dedicated online plenary session (four hours) at which outputs were presented, discussed, and coordinated. A third, unplanned cycle followed: the discussion at the second cycle's closing plenary surfaced residual gaps that required refinement rather than further independent elaboration, and groups incorporated this feedback directly into their chapters through further online group sessions (two hours per group) between late November and mid-December 2023, submitting final contributions ahead of the closing session. Five groups addressed the PIAO's substantive chapters throughout: Group 1 on public value and performance indicators, led by the Head

of Management Control; Group 2 on anti-corruption and transparency, led by the RPCT (the Anti-corruption and Transparency Officer); Group 3 on human capital, led by the Head of Human Resources; Group 4 on training and communication, led by the Head of Training; and a fifth, cross-cutting group on the Gender Equality Plan, coordinated by the Scientific Director's office. Each group also included cross-cutting participants from ICT, Controlling, and other functionally connected units. Phase 3, closure and restitution, comprised a single half-day plenary session (four hours) in January 2024, attended also by the organization's top management, which also served as the integration point for the third cycle's outputs. This session presented the integrated document, reviewed the changes achieved relative to the pre-intervention version, identified residual measurement gaps requiring new data infrastructure, and established an agenda for the subsequent annual cycle. Following this session, the integrated document was formally adopted by board resolution before the end of January 2024, and subsequently published on the organization's institutional website and uploaded to the relevant ministerial repository, in fulfilment of statutory transparency requirements.

#### **4. Empirical Setting and Structural Artefacts**

##### *4.1 The Pre-Intervention Document: A Diagnosis*

The 2022 PIAO provides a precise baseline against which to assess the integration achieved by the intervention. The document was structured around the normatively required sections, but its internal logic was explicitly non-integrative. The organization stated in the preamble that it had chosen not to duplicate the contents of existing instruments, instead remanding to those instruments via hyperlink, an approach framed as simplifying administrative burden. In practice, this meant that the anti-corruption section referenced the standalone PTPCT, the performance section referenced the standalone Piano della Performance, the workforce section referenced the standalone Piano del Fabbisogno, and the gender equality section referenced the standalone Piano Triennale delle Azioni Positive. Each section was coherent within its domain but had no structural connection to the others. The public value section, nominally the strategic hub of the PIAO, contained no indicators of its own: it presented the BSC's six performance areas as the organizational expression of public value, but without articulating any explicit connection between these areas and the other sections of the document. The BSC indicators for equity of access, for instance, did not appear in the section on organizational wellbeing or gender equality, and the GEP's equity commitments had no corresponding measurement in the performance section. The document was a technically adequate collection of separately authored chapters, but it was not a system.

#### *4.2 Evidence of Integration Achieved*

Before analysing the mechanisms through which integration was produced, it is necessary to establish that integration was in fact achieved, that is, to specify the observable differences between the 2022 document and the post-intervention version. This establishes the outcome that the mechanism analysis in Section 5 seeks to explain.

Four categories of change are observable in the successive document versions. First, indicator consolidation: dimensions that had been measured independently in multiple sections with inconsistent definitions were consolidated into shared indicators with defined ownership and a single measurement routine. Organizational wellbeing, previously scattered across the human capital, training, and performance sections without coordination, was restructured around a common indicator set with explicit cross-section references. Second, new cross-section indicators emerged from the cross-functional dialogue that no single group working in isolation could have produced, including indicators connecting GEP commitments to research design practices and to the performance monitoring cycle. Third, the document structure shifted from parallel chapters to an explicitly relational architecture: each section contained systematic references to related objectives in other sections, replacing the independent monologue structure with a document in which chapters constitute a coherent strategic argument. Fourth, the GEP was transformed from a separately produced document attached as an appendix to a cross-cutting dimension with its own position in the ownership matrix, shared indicators with the human capital and research sections, and an explicit connection to the performance monitoring cycle. In the 2022 document, the gender equality section acknowledged that planned actions had largely been unrealizable and that the monitoring system was inadequate; in the post-intervention version, the GEP had a constituted team, 22 updated and monitored actions, and a prospective agenda for participatory redesign of the 2026 cycle.

#### *4.3 Structural Artefacts as Boundary Objects*

The intervention produced three structural artefacts that both embodied the integration achieved and functioned as the instruments through which the enabling mechanisms operated. These are not merely outputs of the process but boundary objects (Star and Griesemer, 1989), that is, objects sufficiently plastic to adapt to local needs while sufficiently robust to maintain a common identity across domains, enabling actors with different institutional positions and knowledge bases to coordinate.

The first artefact was the organization-specific public value framework. Rather than importing a generic taxonomy, the intervention facilitated a co-construction process in which participants from all functional areas defined the public value dimensions most relevant to their IRCCS: equity of access, clinical appropriateness, efficiency of resource use, research applicability, organizational

sustainability, patient experience, and organizational wellbeing. This framework became the reference standard against which every chapter of the PIAO was subsequently evaluated.

The second was the structural coherence matrix: a table mapping all PIAO chapters against a common four-column structure of context analysis, strategic objectives and public value, initiatives and responsibilities, and expected results and indicators. This matrix made the structural heterogeneity of the previous document visible and created a common grammar enabling systematic cross-chapter comparison.

The third, and analytically most consequential, was the cross-functional ownership matrix: a table mapping all PIAO chapters against all relevant organizational functions, assigning each cell an OWNER designation for primary responsibility, an X designation for a contributing role, or a blank for no involvement. The construction and public presentation of this matrix was the primary site of the second enabling mechanism described in Section 5.2.

## **5. Findings: Three Enabling Mechanisms**

The analysis of the reflective notes, process materials, and successive document versions identifies three enabling mechanisms through which the transformation documented in Section 4.2 was produced. The mechanisms appeared to be more than merely temporally sequential: each produced organizational conditions that supported the next, and, in this case, the absence of any one would plausibly have limited the subsequent mechanisms' effectiveness. Section 5.4 formalizes the sequential structure.

### *5.1 Shared Value Anchoring*

The first mechanism was the co-construction of a public value framework specific to the organization. In the reflective laboratory that structured the first plenary session, participants were asked to specify what public value meant for their IRCCS, not as an abstract principle but as a set of concrete organizational commitments. The question was addressed in deliberately heterogeneous groups mixing clinical, administrative, research, and managerial perspectives, and the results were debated and negotiated in plenary.

The process was generative in ways that a top-down value assignment would not have been. Clinicians emphasized equity of access and clinical outcome quality; research directors emphasized the translational applicability of research findings to community health; human capital managers emphasized organizational wellbeing and professional development as preconditions for sustained performance; the gender equality committee emphasized the structural dimensions of institutional equity. The negotiation of these perspectives produced a framework richer and more organizationally grounded than any single domain's contribution.

The observer's notes document a qualitative shift in participation between the first and second plenary sessions. In the first session, contributions were predominantly domain-specific: participants spoke from within their area of competence and referenced their own chapter's concerns. By the second session, participants were speaking across domains, referencing other groups' objectives when discussing their own. A particularly notable instance was the spontaneous identification by the anti-corruption unit of training objectives that had previously been treated as entirely separate from its mandate, a first sign that the shared value framework was producing cross-domain awareness. This shift from parallel domain-specific contributions to cross-domain dialogue was the observable manifestation of shared value anchoring.

In the terms of the F&O framework, this mechanism directly addresses dimension 2. Without a shared map of what the organization needs to succeed at, each chapter of the PIAO continues to be evaluated against locally defined implicit standards, making dimension 12 coherence structurally unachievable. In the terms of Moore's strategic triangle, the mechanism operationalizes the legitimation vertex: the public value framework was not imposed by researchers or by senior management but authorized through a process in which the relevant professional communities recognized their priorities in the shared output. Biancone et al. (2022) observe that public value in community-serving organizations is most durable when co-constructed with the professional groups responsible for delivering it, and the design of Phase 1 was consistent with this principle.

### *5.2 Interdependence Visibility*

The second mechanism was activated through the construction and presentation of the cross-functional ownership matrix. The matrix did not merely assign responsibilities; it made visible structural interdependencies that had been present but invisible within the siloed working logic of the previous PIAO process.

A preliminary sign of this mechanism emerged even before the matrix was formally presented. As the working groups began their first cycle of work, the Management Control unit, whose head led Group 1, found itself immediately engaged by all other groups as a natural reference point for indicator questions. The observer's notes from the first cycle document this dynamic explicitly: for the other groups, the BSC and performance measurement were experienced as the Management Control unit's domain, a technical obligation managed by specialists. For Management Control, coordinating across organizational domains was already part of ordinary professional work. The intervention began to make this asymmetry visible and organizationally consequential from the first working sessions onward.

The full force of the mechanism became apparent in the second plenary of Phase 2, when the partially completed ownership matrix was presented as a visual stimulus for discussion. The observer's notes record that the room fell quiet for a perceptible interval as participants read the matrix, followed by several participants simultaneously identifying cells they considered misassigned or incomplete. The discussion that followed was the most substantive of the entire intervention, lasting well beyond the allocated time. The most analytically significant revelation was the structural position of the GEP. The ownership matrix revealed that GEP objectives had direct implications for the human capital chapter, the training chapter, the performance section, and the research section. Once these connections became visible and were formally assigned, the GEP group, which had been noted in the observer's records as among the most intrinsically motivated participants from the outset, intensified its work and produced the most substantively revised section of the document. Naciti et al. (2024) observe that gender equality planning produces the most durable organizational change when structurally embedded in core management processes rather than maintained as a parallel compliance document; the ownership matrix operationalized precisely this embedding.

The self-assignment dynamic observed during ownership matrix construction was also analytically significant. When participants first populated the matrix, most units restricted their claimed connections narrowly to their own chapter: Human Resources initially claimed ownership only over the performance and training chapters; the training and anti-corruption groups each failed to register their mutual dependency; ICT initially claimed only the remote and agile work chapter; the Scientific Directorate engaged only with the Gender Equality Plan. Management Control was a partial exception, proactively claiming a connection to external communication on the reasoning that data left unused have no organizational value. The conductor and observer served as the trigger for revising these initial, narrower self-assignments: encouragement toward cross-group thinking began in the first round of meetings, but the correction of specific blind spots, prompting the training and anti-corruption groups to recognize their mutual dependency, and ICT and the Scientific Directorate to extend their engagement beyond their initial chapter, took place substantially in the second meeting, explicitly in order to overcome the organization's silo structure. This process of cross-referencing systematically revealed connections that had not previously been recognized. In the terms of F&O dimension 12, the ownership matrix was the structural instrument through which coherence of PMS linkages was built and made actionable rather than merely aspired to.

### *5.3 Progressive Accountability and Organizational Learning*

The third mechanism emerged from the rhythmic structure of Phase 2. The first two cycles of working group sessions and plenary integration created a regime of progressive accountability: at each plenary,

groups presented the state of their chapter against a progress checklist distinguishing completed sections from drafts and blank spaces. The checklist carried no formal consequences; its effects operated entirely through social accountability.

The observer's notes document a consistent pattern across these two generative cycles. In the first cycle, most groups produced preliminary drafts that partially addressed the shared analytical framework but remained largely within the domain logic of the previous version. The plenary exposed these limitations, not punitively, but through contrast with groups that had advanced further. The GEP group was particularly notable: it had engaged with the process as a strategic opportunity from the first session and produced the most substantively developed output in each cycle, functioning as an implicit benchmark that raised the ambition of other groups. By the second cycle, groups that had been slower to start were explicitly referencing the GEP group's approach as a model.

A contrasting dynamic was observable in the initial engagement of certain groups. For units that experienced the PIAO primarily as a regulatory obligation, the initial phase required managing the transition from a compliance orientation, in which completing the chapter was the goal, to a strategic orientation, in which the chapter's connection to organizational purpose was the goal. This transition was gradual and uneven across groups: the Management Control unit, whose professional identity was most closely aligned with performance measurement and strategic integration, engaged with the systemic perspective from the outset. For other units, the proximity of the annual PIAO submission deadline proved to be the effective catalyst: the recognition that integration required cross-group coordination, and that this coordination had not yet occurred, created a productive urgency that compliance-based motivation alone had not generated.

The pace and character of this transition varied by group. Human Resources fell furthest behind: rather than revising its existing chapter incrementally, it rewrote it comprehensively relative to the previous year's version, a choice that required more time but was driven primarily by the group's own comparison against the shared value framework established in the May plenaries, rather than by direct comparison with faster-moving groups. Training followed a more stable, incremental trajectory throughout. The anti-corruption group showed a distinct pattern of delayed acceleration: having first brought its chapter into regulatory compliance, it then developed a set of indicators specifically designed to feed the Management Control unit's data infrastructure, extending its engagement from compliance to cross-functional data provision only in a second phase.

A third, unplanned round followed the second cycle's closing plenary: rather than a further round of independent parallel elaboration, groups incorporated the issues surfaced in that discussion directly into their chapters, ahead of the January closing session. This round extended the accountability

regime beyond its originally planned two cycles, through consolidation rather than further generative work.

More consequential than the accountability effect was the learning effect. As the working groups moved through these cycles, they developed a progressively richer understanding of the document as a whole. By the final plenary session, group members were fluent in the shared public value framework, could interpret the ownership matrix without guidance, and could identify BSC indicators relevant to their section without prompting. Several working groups identified, through the process of specifying their objectives with precision, that the organization was committed to dimensions of public value for which it had no data. This recognition, that measurement gaps were a problem requiring active resolution rather than an acceptable feature of the system, was itself a product of the learning mechanism. By the end of the intervention, the organization had produced a specific agenda for measurement development that constituted an investment in its future capacity to use the PIAO as a management tool rather than a compliance document.

In the terms of Ferreira and Otley's (2009) dimension 10, this mechanism created the organizational conditions for a passage from diagnostic to interactive use, a distinction applied here in Ferreira and Otley's sense rather than Simons's (1995) levers-of-control formulation, since the available data speak to the use of formal information within a single planning process rather than to the four levers Simons identifies. The progress checklist activated diagnostic monitoring; the plenary discussions activated interactive engagement with performance information during the intervention. The alternation of these two modes across the first two cycles, consolidated through the third refinement round, created a use spiral: each round of accountability feedback generated a round of organizational learning that raised the quality of subsequent work. This evidence documents interactive engagement within the bounded workshop setting of the intervention; it does not by itself establish that this mode of use persisted as an institutionalized practice after the intervention ended. This is consistent with Rizzo's (2025) finding that goal clarity in healthcare planning instruments is a significant driver of performance alignment, a dynamic that the iterative accountability cycles described here appear to reinforce.

Table 1 summarizes the evidentiary basis for each of the three enabling mechanisms and for the discrepant case discussed in Section 5.4, linking each to the episodes documented in the conductor's and observer's reflective notes.

**Table 1. Evidence linking illustrative episodes to each enabling mechanism, and one discrepant case.**

| Mechanism                                | Illustrative episode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Source                                                                                                             |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Shared value anchoring                   | 17 May 2023 plenary: three working groups produced divergent initial lists of public value dimensions (two converging on equity, appropriateness, and research quality; one centred on patient satisfaction and access). Once negotiated into a shared framework, each area translated it operationally in Cycle 1: Management Control developed new or revised indicators for public value measurement, HR developed indicators on agile work, Training developed indicators on volume and satisfaction, the Scientific Directorate worked to make research value externally legible, and the CUG worked toward a substantive rather than formal Gender Equality Plan.                  | Phase 1 plenary (17 May 2023) and Cycle 1; conductor's and observer's reflective notes; Phase 1 training materials |
| Interdependence visibility               | Ownership matrix construction: most units initially restricted claimed connections to their own chapter (Human Resources to performance and training only; Training and Anti-corruption each missed their mutual dependency; ICT to remote and agile work only; the Scientific Directorate to the Gender Equality Plan only), with Management Control as a partial exception, proactively claiming a connection to external communication. The conductor and observer prompted revision of these narrow self-assignments, substantially in the second meeting.                                                                                                                           | Ownership matrix construction, second plenary of Phase 2; conductor's and observer's reflective notes              |
| Progressive accountability               | Across the two generative cycles, the Gender Equality Plan group functioned as an implicit benchmark from the first session and the Controlling unit engaged with the systemic perspective from the outset, while other groups were catalyzed by the approaching submission deadline. Trajectories then diverged: Human Resources rewrote its chapter comprehensively rather than incrementally, driven by comparison against the May framework rather than against other groups; Training proceeded incrementally; Anti-corruption showed delayed acceleration, developing indicators to feed Management Control's data infrastructure only after first securing regulatory compliance. | Generative Cycles 1-2 and the third refinement round; conductor's and observer's reflective notes                  |
| Discrepant case (qualifies the sequence) | The Anti-corruption and Transparency group entered the process anchored in a compliance logic, line-by-line conformity with ANAC directives, rather than the shared value framework negotiated in Phase 1. Its shift toward managerial reasoning and facilitation of other groups' work emerged only in the second generative cycle, qualifying rather than contradicting the general sequence.                                                                                                                                                                                                                                                                                          | Second generative cycle; conductor's and observer's reflective notes                                               |

#### *5.4 The Sequential Logic of the Mechanisms*

The three mechanisms did not operate in parallel, and in this intervention their sequence was consistent rather than incidental. Each mechanism produced a specific organizational condition that supported the mechanism that followed.

This account documents the order in which the mechanisms were observed to operate in this intervention, and the organizational conditions that each appeared to create for the next mechanism to take hold. A single-case design of this kind can establish a consistent temporal ordering and a plausible account of mechanism activation; it cannot, on its own, establish that this order was causally necessary in the strict sense of admitting no alternative sequence. The claim advanced in this paper is therefore one of a consistent, theoretically grounded process, not of demonstrated causal necessity. One episode qualifies this pattern. The anti-corruption and transparency group entered the process anchored in a compliance logic: work began from ensuring line-by-line conformity with ANAC directives, rather than from the shared value framework negotiated in Phase 1. This group's engagement with the strategic, cross-functional reasoning that the enabling mechanisms were intended to produce emerged only in the second generative cycle, and became evident specifically in its capacity to reason in managerial terms and to facilitate other groups' work, rather than only in its own chapter's content. This case does not contradict the sequence described above, but it qualifies it: shared value anchoring did not anchor every group on the same timeline, and for this group the transition to a genuinely cross-functional orientation appears to have depended on sustained exposure to the accountability regime across two cycles, rather than on the initial value-anchoring session alone.

Shared value anchoring produces the common referent, that is, the shared map of what organizational success means across domains, without which interdependence visibility has no analytical content. If different organizational units are operating against different implicit conceptions of strategic priority, making their interdependencies visible produces not coordination but conflict over whose priorities should govern the shared spaces. The ownership matrix is an effective coordination instrument only when the parties using it share a conception of what they are coordinating toward.

Interdependence visibility produces the structural map, that is, the explicit account of which units depend on which for which data and decisions, without which progressive accountability has no actionable object. Accountability without a map of interdependence creates pressure on each unit to perform against its own local standard, reinforcing silos rather than dissolving them. The progress checklist functions as an integration instrument only when the groups it monitors are aware of their structural connections to each other.

The implication for practice is that, in this case, the sequence did not appear reducible to a shorter path. Organizations that attempt to integrate their PIAO by beginning with coordination mechanisms or reporting structures, without first establishing a shared public value framework, are likely to produce a more systematically organized but still strategically incoherent document. The available evidence suggests that the mechanisms are best activated in this order. Furthermore, because the

PIAO is a rolling instrument updated annually, the sequence plausibly needs to be reactivated in each cycle. The artefacts described in Section 4.3 function as infrastructure that lowers the cost of reactivating the sequence in subsequent cycles, but they do not eliminate the need for it.

## 6. Discussion

This paper's central contribution is a mechanism-based account of how a normatively mandated planning architecture can be transformed into a functioning, integrated performance management system in an organization with mature measurement infrastructure, formalized through the three enabling mechanisms and their sequential logic identified in Section 5. The extension of the Ferreira and Otley framework developed below (Section 6.1) operationalizes this contribution theoretically. The discussion of public value and community accountability (Section 6.2) and of the methodological design (Section 6.3) develop implications of this central contribution rather than standing as independent contributions in their own right.

### *6.1 Contribution to Gap 1: F&O Applied to Normatively Mandated PMS Design*

The F&O framework, applied to the PIAO context, requires a conceptual adaptation that constitutes this paper's central theoretical contribution. When the design of a PMS is normatively mandated rather than organizationally chosen, the analytical weight of the framework shifts. Dimensions 1 and 4 are partially pre-defined by regulation and are not available as design levers. The actionable dimensions become 2, 10, and 12, those governing shared strategic focus, substantive use, and coherence of linkages. This is not a minor adjustment: it changes the diagnostic questions that the framework prompts, the organizational interventions it recommends, and the criteria by which success is assessed.

The three enabling mechanisms identified in Section 5 are the operational response to this configuration. Shared value anchoring addresses dimension 2 in conditions where the strategic framework is partially given but requires organizational operationalization. Interdependence visibility addresses dimension 12 in conditions where structural connections between PMS components are not designed but must be discovered and made explicit. Progressive accountability addresses dimension 10 in conditions where the transition from diagnostic to interactive use cannot be mandated but must be cultivated through sustained engagement. These mechanisms extend the F&O framework toward a class of PMS contexts, normatively mandated planning instruments, that it did not previously address.

## *6.2 Contribution to Gap 2: The PIAO as Integrated MCS and Community Accountability Instrument*

The central empirical finding is that the PIAO can function as a genuine cross-organizational management control system, closing the cycle of planning, measurement, control, and accountability that normative compliance approaches leave incomplete. This function becomes possible only when the three enabling mechanisms have produced the organizational conditions described in Section 5.

These claims operate at different analytical levels, which this paper distinguishes explicitly following an outcome ladder: (a) redesigned artefacts, (b) cross-functional routines and performance-information use, (c) organizational decisions, and (d) public and community outcomes. Level (a), redesigned artefacts, is directly observed: the integrated PIAO document, the coherence matrix, and the ownership matrix are evidenced in the process materials and in the successive document versions described in Section 4.2. Level (b), cross-functional routines and performance-information use, is observed within the intervention itself: the plenary discussions and the progress checklist activated interactive engagement with performance information during the eight sessions, as described in Section 5.3, though this paper does not claim that this use persisted beyond the intervention's timeframe. This distinction between the design and the use of a performance management system, and their separable effects on organizational outcomes, follows Speklé and Verbeeten (2014). Level (c), organizational decisions, is observed as a discrete outcome: the integrated document was formally adopted by board resolution and published, as described in Section 3.6. Level (d), public and community outcomes, that is, whether the integrated PIAO actually improved conditions or accountability for patients and citizens, is not observed in this study and is left to future longitudinal research. The community accountability claim developed below should be read against this ladder: it rests on levels (a) to (c), not on a demonstrated level (d) outcome.

To make the claimed integration auditable rather than purely narrative, Table 2 reports two representative performance objectives before and after the intervention, drawn from two distinct chapters of the PIAO. Table 3 reproduces the full coherence matrix produced by the intervention, linking each consolidated performance objective to the public value dimensions it addresses. Table 4 reproduces the full ownership matrix, showing which organizational unit is accountable for each chapter.

**Table 2. Two representative performance objectives before and after the intervention.**

| Domain                                     | Before (2022 PIAO)                                                                                                                                                                                                                                                                                           | After (2024-2026 PIAO): objective and indicators                                                                                                                                                                                                                                                                                       | Coherence matrix links                              | Ownership                                                                      | Monitoring                                                                                                                                                                              |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gender equity and organizational wellbeing | Addressed only within the Piano Triennale delle Azioni Positive (positive actions plan), as a qualitative list of initiatives; the organization's own 2022 document acknowledges that the planned actions had proved largely unrealizable during the pandemic and that the monitoring system was inadequate. | Promoting a culture of gender equality, equal opportunity, non-discrimination, employee wellbeing, and anti-mobbing measures, including work-life balance tools. Indicators: percentage of positive feedback on smart-working arrangements; implementation rate of positive actions proposed to the Equal Opportunity Committee (CUG). | Efficiency, effectiveness, organizational wellbeing | Human Resources and the Scientific Directorate (joint)                         | As with all PIAO indicators, incorporated by right into the organization's management dashboards, with periodic updates (monthly or quarterly depending on the underlying data source). |
| Anti-corruption                            | Managed as a standalone triennial anti-corruption and transparency plan (PTPCT), referenced by external link rather than integrated into the planning logic.                                                                                                                                                 | Implementation of anti-corruption measures. Indicators: first-level monitoring of general measures via questionnaire; second-level monitoring of general and specific measures via audit.                                                                                                                                              | Equity, appropriateness, efficiency                 | Anti-corruption unit (owner), with Human Resources, Training, and ICT involved | As with all PIAO indicators, incorporated by right into the organization's management dashboards, with periodic updates (monthly or quarterly depending on the underlying data source). |

**Table 3. Coherence matrix: performance objectives mapped to public value dimensions.**

| Performance objective                                       | Equity | Appropriateness | Efficiency | Effectiveness | Org. wellbeing |
|-------------------------------------------------------------|--------|-----------------|------------|---------------|----------------|
| Deliver services within priority-class time limits          | X      |                 |            | X             |                |
| Concentration of caseload in units with specific competence | X      | X               | X          | X             | X              |
| Ensure adequate professional skill levels                   |        | X               | X          | X             | X              |

|                                                                                                    |   |   |   |   |   |
|----------------------------------------------------------------------------------------------------|---|---|---|---|---|
| Increase productive capacity in high-complexity core areas                                         | X | X | X | X | X |
| Optimize bed occupancy                                                                             | X | X | X |   |   |
| Optimize operating theatre use                                                                     | X | X | X |   |   |
| Optimize use of diagnostics for inpatients                                                         | X | X | X |   |   |
| Reduce incidence of repeated treatments                                                            | X |   | X | X |   |
| Monitor and improve outcomes                                                                       | X |   | X | X |   |
| Ensure adequate research activity volume                                                           |   |   |   | X | X |
| Research output quality                                                                            |   | X |   | X | X |
| Implement anti-corruption measures                                                                 | X | X | X |   |   |
| Promote anti-corruption culture                                                                    | X | X | X |   |   |
| Promote transparency culture                                                                       | X | X | X |   |   |
| Promote employee health                                                                            |   |   | X |   | X |
| Promote gender equality culture, equal opportunity, anti-mobbing, work-life balance                |   |   | X | X | X |
| Control safety of facilities and processes                                                         |   |   | X | X | X |
| Maintain effective health and safety training                                                      |   |   | X | X | X |
| Maintain effective training on relational skills, humanization of care, wellbeing, gender equality |   |   | X | X | X |
| Increase reports delivered to patients via web portal                                              | X |   | X | X |   |
| Digital exchange of clinical/administrative documentation                                          | X |   | X | X |   |
| Digitalize administrative acts to reduce costs                                                     | X |   | X | X |   |

**Table 4. Ownership matrix: organizational unit accountable for each PIAO chapter.**

| Chapter                            | Mgmt Control | HR    | Training | Anti-corruption | ICT | Scientific Dir. | Strategic Dir. |
|------------------------------------|--------------|-------|----------|-----------------|-----|-----------------|----------------|
| Public value                       |              |       |          |                 |     |                 |                |
| Performance                        | OWNER        | X     |          |                 |     | X               |                |
| Anti-corruption                    |              | X     | X        | OWNER           | X   |                 |                |
| Transparency                       |              |       | X        | OWNER           | X   |                 |                |
| Organizational structure           |              | OWNER |          |                 |     |                 |                |
| Remote/agile work                  |              | OWNER |          |                 | X   |                 |                |
| Staffing needs                     |              | OWNER |          |                 |     | X               |                |
| Gender equity and positive actions |              | OWNER |          |                 |     | OWNER           |                |
| Training                           |              | X     | OWNER    | X               | X   |                 |                |
| Internal/external communication    | X            | X     | OWNER    |                 |     |                 |                |
| Monitoring                         | OWNER        | X     | X        | X               | X   | X               |                |

These exhibits show that the integration claimed in this paper operated at the level of concrete, cross-referenced organizational artefacts rather than as a purely narrative construct.

From the perspective of this journal's focus on community-based activities and their impact on general well-being, the study's most significant contribution may be its reframing of the PIAO as an instrument of community accountability rather than internal compliance. A public hospital that constructs its PIAO through the process described here is not simply satisfying a regulatory requirement: it is making an explicit, structured, and measurable commitment to the community it serves. The GEP, when integrated into the PIAO as a cross-cutting dimension with shared indicators and defined ownership, becomes a genuine institutional commitment to gender equity measurable through indicators of access, organizational composition, and research design (Naciti et al., 2024). The anti-corruption section, when connected to the performance section and the training chapter through the ownership matrix, becomes a component of civic accountability rather than a compliance checklist. As argued in Section 2.2 with reference to Biancone et al. (2022), public value is most durable when accountability mechanisms are substantively connected to community outcomes; the integrated PIAO described in this paper is precisely such a mechanism.

This institutional embedding is not merely rhetorical. Following the closing plenary, the integrated PIAO and GEP were formally adopted by board resolution and subsequently published on the organization's institutional website and uploaded to the relevant ministerial repository, entering the public domain as an accountability instrument accessible to any external observer. This publication

step distinguishes the present case from settings in which planning documents remain internal artefacts: the community accountability claim advanced here rests on the document's entry into a formal, publicly accessible transparency circuit, not on direct participation by external stakeholders in its drafting. As discussed in the limitations below, the structured, researcher-facilitated co-construction process itself was conducted entirely within the organization; specific chapters were separately informed by external institutional and community consultation carried out by group leads in their ordinary professional roles, but this consultation was not designed or directly observed as part of the intervention. The claim advanced here is therefore one of accountability architecture and public availability, anchored to the regulatory environment through the professional roles described below, rather than of structured community co-construction.

This institutional embedding extends beyond formal publication. Two of the chapter leads held institutional roles that connect the document to actors beyond the organization as a matter of professional mandate rather than incidental contact. The lead of the anti-corruption and transparency chapter serves as the regional referent for RPCTs, providing a direct institutional channel to ANAC and the national anti-corruption and transparency working group; the content of that chapter is therefore anchored to the regulatory environment through an established coordination role, not an ad hoc consultation. Similarly, the lead of the Gender Equality Plan group serves as the organization's CUG referent, a role for which engagement with patients and patient associations is a core institutional function in a hospital setting rather than a peripheral one. These channels connect specific chapters of the integrated PIAO to the regional regulatory environment and to patient representation, even though they operate through the ordinary professional mandates of the relevant leads rather than through the structured, researcher-facilitated co-construction process analysed in this paper.

The operationalization of Moore's strategic triangle in this context also addresses the gap identified in Section 2.2: the participatory co-construction of the public value framework provides a process for building internal consensus around what public value means for a specific complex institution, filling the operational space that Moore's theory leaves open. The measurement development agenda produced by the intervention represents a concrete organizational commitment to measuring the public value the institution is already committed to delivering but had not previously been able to demonstrate.

### *6.3 Contribution to Gap 3: Action Research for PMS Redesign*

The methodological contribution of this paper concerns the application of interventionist action research to a context that the existing literature has not addressed: the redesign and integration of a fragmented PMS built on a mature measurement infrastructure. This differs from introduction AR on

three dimensions. The starting point is not absence of measurement but the presence of established routines, consolidated indicators, and organizational habits structured around existing data, and the relevant challenge is transformation rather than adoption. The source of organizational resistance is not unfamiliarity with new tools but attachment to existing domain boundaries and measurement practices, and the intervention must work with and through these boundaries rather than around them. The criterion of success is not adoption but integration and coherence, and the relevant evidence is not usage rates but the structural properties of the redesigned system.

The conductor-observer structure addresses the reflexivity challenge through a structural rather than procedural solution. Rather than requiring the researcher to maintain distance from a process they are simultaneously managing, the design assigns distance and engagement to different people, producing two epistemically distinct perspectives on the same process. The contrasting observations documented in the notes, the conductor's awareness of the facilitation dynamics and the observer's attention to organizational patterns invisible from within the management role, proved analytically productive. Dal Mas et al. (2022) call for more process-oriented research on how public sector performance measurement systems are actually built and used; this study responds with both a methodological design and an empirical account of the mechanisms through which such systems are transformed.

#### *6.4 Sustainability of the Integrated System*

Whether the integration achieved in this intervention persists across subsequent annual PIAO cycles is a question that the present data cannot answer. There are theoretical reasons to expect structural durability: the three artefacts produced by the intervention constitute organizational infrastructure that does not depend on researcher presence for its continued existence. The ownership assignments create accountability relationships that persist beyond the intervention; the Management Control unit's role as system integrator is now formally recognized; the GEP's embedded position in the PIAO structure is codified in the ownership matrix. The rolling character of the PIAO, updated annually, creates institutional occasions at which the mechanisms must be reactivated, potentially deepening the organizational routines established in the initial cycle.

Against these structural factors, it must be acknowledged that sustained integration requires continued organizational investment and leadership commitment that the intervention did not itself produce. The measurement development agenda requires resource allocation; the cross-functional dialogue requires institutional occasions to continue. Whether the organization can sustain these without external facilitation is an empirical question that future longitudinal research should address.

## 7. Conclusions

This paper has reported an interventionist action research study that transformed the PIAO of an Italian IRCCS from a collection of siloed compliance documents into a cross-organizational management control system oriented toward community accountability. Three enabling mechanisms were identified through which this transformation was achieved: shared value anchoring, which produced the common referent without which cross-chapter integration is structurally impossible; interdependence visibility, which transformed implicit structural connections between organizational units into explicit coordination objects; and progressive accountability, which created the conditions for a transition from diagnostic to interactive use of the PMS and generated the organizational learning through which measurement capacity was extended. In this intervention, these mechanisms unfolded in a consistent sequence that did not appear reducible to a shorter path.

This paper's central contribution is a mechanism-based account of how a normatively mandated planning architecture can be transformed into a functioning, integrated performance management system in an organization with mature measurement infrastructure: the identification of three enabling mechanisms and the sequence in which they operated, extending Ferreira and Otley's (2009) extended PMS framework to an instrument whose design is normatively mandated. This reveals a reweighting of the framework's dimensions toward key success factors, interactive use, and coherence of linkages that has implications for the application of F&O to other public sector planning instruments, and provides a theoretically grounded account of how an integrated MCS can be built from a fragmented planning system. Two further implications follow from this central contribution. The first concerns public value and community accountability: the case shows how a mandated planning instrument can be reframed as an accountability architecture, with the qualifications on that claim set out in Section 6.2. The second is methodological: the conductor-observer structure in interventionist AR offers a design template for managing reflexivity in contexts where deep researcher engagement and analytical distance are both required.

For policy makers, the paper provides evidence that the integrative ambition of the PIAO cannot be achieved through normative requirements alone. The regulatory framework specifies what an integrated PIAO should contain but does not provide the process conditions through which integration is produced. Investment in facilitated organizational processes of the type described here would yield planning documents that function as genuine management control systems and as substantive instruments of community accountability, fulfilling the public value ambition embedded in the original legislative design.

Some limitations of this study merit explicit acknowledgement. The single-case design, justified on theoretical sampling grounds, does not support direct generalization. Organizations with less mature

measurement infrastructures, less complex institutional missions, or different governance cultures may require different mechanisms or different sequencing. The dual researcher role, while managed through the conductor-observer structure, introduces a reflexivity risk that cannot be entirely eliminated: both researchers were familiar with the organizational context and invested in the success of the intervention. The discrepancies between the two note sets provided analytical mitigation, but this limitation is inherent to the design. Finally, the absence of longitudinal data on subsequent PIAO cycles means that the sustainability analysis in Section 6.4 is theoretically grounded rather than empirically verified.

A further limitation concerns the scope of the structured co-construction process itself: the researchers' facilitated intervention involved only the 29 internal participants, and the institutional channels connecting specific chapters to the regional and national regulatory environment and to patient representation (described in Section 6.2) operated through the ordinary professional roles of the relevant group leads rather than through a process designed, facilitated, or observed by the authors. Future PIAO cycles could formalize this engagement into a structured component of the co-construction process itself, directly involving regional and national regulatory bodies and patient and citizen representatives in the working sessions rather than relying on the informal channels of individual chapter leads. Extending co-construction to these actors would move the process closer to the public value governance model of an actively engaged authorizing environment described by Bryson, Crosby and Bloomberg (2014).

Future research should test the enabling mechanisms in organizations without pre-existing BSC infrastructure, to determine whether the sequence remains necessary when the measurement starting point is less mature. Longitudinal studies following organizations through multiple PIAO cycles would address the sustainability question that this study leaves open. And studies examining the relationship between PIAO integration and community health outcomes would connect the organizational mechanism identified here to its ultimate justification.

### **Ethics declaration**

This study was conducted as part of an interventionist action research project on the Piano Integrato di Attività e Organizzazione (PIAO) of an Italian IRCCS (Scientific Institute for Research, Hospitalization and Healthcare). At the time the intervention was conducted, the authors' institution was in the process of establishing an Institutional Review Board. Participation in the intervention was voluntary, and participants were informed of its academic and research purpose before the sessions began. Consent to the use of the intervention as research material was conditional on anonymity and non-traceability: no session was audio- or video-recorded, and no individual participant is

identifiable, directly or indirectly, in the manuscript. The organization is referred to only by its institutional classification (IRCCS) rather than by name; more than fifty-five organizations in Italy share this classification. The study was conducted in accordance with the ethical principles set out in the Declaration of Helsinki.

## References

- Biancone, P., Chmet, F., Iannaci, D., & Oppioli, M. (2022). The creation of public value from the action of hybrid organisations. *European journal of volunteering and community-based projects*, 1(3), 15-36.
- Bryson, J. M., Crosby, B. C., & Bloomberg, L. L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public Administration Review*, 74(4), 445-456.
- Dal Mas, F., Massaro, M., Lombardi, R., and Biancuzzi, H. (2022). Output and outcome measures in the public sector performance: A structured literature review. *European Journal of Volunteering and Community-Based Projects*, 1(3), 16–29.
- De Nicola, M., & Fratini, S. (2024). La presenza degli SDGs nei PIAO 2023-2025 delle università italiane. *European journal of volunteering and community-based projects*, 1(1), 82-91.
- Ferreira, A., & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management accounting research*, 20(4), 263-282.
- Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC medical research methodology*, 13(1), 117.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31.
- Jönsson, S., & Lukka, K. (2006). There and back again: doing interventionist research in management accounting. *Handbooks of management accounting research*, 1, 373-397.
- Kaplan, R. S. (1998). Innovation action research: creating new management theory and practice. *Journal of management accounting research*, 10, 89.
- Lukka, K., & Suomala, P. (2014). Relevant interventionist research: Balancing three intellectual virtues. *Accounting and Business Research*, 44(2), 204-220.
- Malmi, T., & Brown, D. A. (2008). Management control systems as a package—Opportunities, challenges and research directions. *Management accounting research*, 19(4), 287-300.
- Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies: guided by information power. *Qualitative health research*, 26(13), 1753-1760.

Moore, M. H. (1995). *Creating public value: Strategic management in government*. Harvard university press.

Moore, M. H. (2013). *Recognizing public value*. Harvard University Press.

Naciti, V., Noto, G., Pulejo, L., & Vermiglio, C. (2024). Gender equality plan development in universities: A strategic management perspective. *European journal of volunteering and community-based projects*, 1(1), 34-57.

Ritchie, J., and Spencer, L. (1994). Qualitative data analysis for applied policy research. In A. Bryman and R.G. Burgess (Eds.), *Analysing Qualitative Data* (pp. 173–194). Routledge.

Rizzo, M. G. (2025). Budget goal clarity as a mediator in the relationship between budgeting practices and budgetary performance in healthcare. *European journal of volunteering and community-based projects*, 1(3), 1-29.

Rubino, F. E., Sicoli, G., Rija, M., & De Luca, E. (2026). Smart Hospitals and Digital Innovation: Comparative Insights from Two Italian Case Studies. *European journal of volunteering and community-based projects*, 1(1), 29-49.

Simons, R. (1995). *Levers of control: How managers use innovative control systems to drive strategic renewal*. Harvard Business School Press.

Speklé, R. F., & Verbeeten, F. H. M. (2014). The use of performance measurement systems in the public sector: Effects on performance. *Management Accounting Research*, 25(2), 131-146.

Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social studies of science*, 19(3), 387-420.

Yin, R. K. (2018). *Case study research and applications* (Vol. 6). Thousand Oaks, CA: Sage.