White Paper

Benefits Evaluation Model and Estimation Tool for a Process Orchestration Solution in Healthcare

October 2026

Authors:
Paolo Locatelli, *Osservatori Digital Innovation - School of Management, Politecnico di Milano*
Marco Paparella, *Osservatori Digital Innovation - School of Management, Politecnico di Milano*
Alessandro Spolaor, *Osservatori Digital Innovation - School of Management, Politecnico di Milano*
Virginia Porro, *Osservatori Digital Innovation - School of Management, Politecnico di Milano*

With the contribution of Nina Borsche Zoric, Hedda Sofie Borgen *(DNV Imatis) and Claudio Franzoni, Stefano Michelini, Giuseppe De Lillo, Rosaria Cecere (Digital360 Gov)*

POLIMI SCHOOL OF MANAGEMENT | osservatori.net digital innovation | DNV Imatis | DIGITAL 360 GOV

Contents

Executive summary 3

1. Introduction: why the value of orchestration is complex to demonstrate 4

2. Process orchestration platforms: what they are and which processes they support 4

3. Approach and methodology 5

4. The Benefit Evaluation Model 6

KPI Cards 7

5. Application to healthcare processes 8

6. The Estimation Tool: from framework to a first quantitative estimate 9

Inputs and multipliers 9

From operational change to economic value 10

7. From estimate to evidence: a self-reinforcing lifecycle 10

8. Benchmarking and pre-validation in the field 11

9. Conclusions, limitations and recommendations 11

Assumptions 11

Recommendations for healthcare organisations 12

Final remarks and acknowledgements 12

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

Executive summary

Hospitals and territorial health organisations increasingly invest in digital solutions that orchestrate clinical, healthcare, and operational processes. Yet the value of these solutions is hard to prove: benefits are spread across many actors, are often organisational rather than financial, and are rarely measured in a structured way before and after adoption.

To address this gap, the Osservatori Digital Innovation of the School of Management of Politecnico di Milano, together with Digital360 and DNV Imatis, developed a **Benefit Evaluation Model** for process orchestration solutions, using DNV Imatis Fundamentum as the reference platform. The project ran from June to September 2026 in two phases: the definition of the model, and its benchmarking and pre-validation through interviews with three Italian healthcare organisations.

The main outputs of the project are:

- **A structured benefit evaluation framework** organised in 8 benefit domains, 23 variables and 49 benefit KPIs, complemented by a set of descriptive indicators dedicated to tracking adoption;
- **56 KPI Cards**, one per indicator, specifying formula, measurement frequency, data sources before and after adoption, enabling factors, interpretation and measurement level;
- **The application of the model to six specific processes,** selected with DNV Imatis for their relevance to hospital and territorial care;
- **An Excel-based Estimation Tool** that translates hospital-specific inputs into an ex-ante estimate of a subset of operational and economic benefits (released hours, FTE, €, ROI, payback) under adjustable planning scenarios;
- **An operational lifecycle** linking ex-ante estimation, baseline measurement, periodic re-assessment and continuous enrichment of the tool with real-world data.

Together, these components offer healthcare organisations and solution providers a common, transparent language to plan, measure and communicate the value of process orchestration, while keeping the scope strictly on organisational, procedural and logistical benefits. The interviews confirmed the relevance and practical applicability of the approach. Field measurement and the calibration of estimates against realised benefits are the natural next step.

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

1. Introduction: why the value of orchestration is complex to demonstrate

Healthcare delivery is a sequence of activities crossing multiple processes. A surgical patient moves through waiting lists, pre-admission workup, operating room scheduling, recovery, ward transfer and discharge. A chronic patient is followed for years by hospital specialists, community care points and the general practitioner. At every step, information must travel between actors who often use different systems, or none at all, **while some cares are time dependent.**

Today, much of this coordination still relies on phone calls, physical whiteboards, paper forms and manual chasing. The consequences are well known to hospital managers: idle beds waiting to be cleaned, same-day surgery cancellations caused by missing checks, no-shows, duplicated exams, delayed communications to GPs and staff time absorbed by low-value coordination.

Process orchestration solutions address these frictions, acting as a **process layer** that **connects people, tasks, resources and information,** giving **real-time visibility on patient journeys** and **automating task routing, reminders and status updates**. Crucially, they do not intervene in clinical decisions: they orchestrate the organisational structure around care, not care itself.

Despite their potential, the adoption of these solutions faces a recurring obstacle: **the difficulty of demonstrating their value**. Three factors make this particularly challenging:

- **Distribution across many actors**, making gains hardly reconcilable to a single budget line;
- **Non-financial nature of benefits**, which are mostly translated in time saved, coordination quality, traceability and experience, aspects rarely captured by traditional ROI analyses;
- **Missing baselines on current performance** that make any before/after comparison fragile.

The project *Benefits Evaluation Model of a Process Orchestration Solution in Healthcare* was launched in June 2026 to address these challenges. Its objective was to define a model enabling the evaluation of both quantitative and qualitative benefits of a clinical, healthcare and operational process orchestration system, in both hospital and territorial settings.

The evaluation focuses **only** on procedural, organisational and logistical changes. The orchestrator **does not** act upon clinical decisions, treatment choices or clinical acts, which remain the responsibility of healthcare professionals.

This scope matters for interpreting value. For example, less time spent on coordination may release capacity for care, but it does not automatically reduce expenditure. For these reasons, the framework combines operational measures, economic interpretation and the perspectives of staff, patients and caregivers.

2. Process orchestration platforms: what they are and which processes they support

A **process orchestration platform** is a digital layer that spans and connects the clinical and administrative information systems already in use in a healthcare organization and coordinates the work that happens between them. These may include the electronic health record, admission-discharge-transfer (ADT), laboratory, radiology, scheduling and logistics systems. Rather than replacing these systems, the platform receives events from them (e.g. an admission, a completed exam, a discharge, a bed released), turns them into tasks for the right people and resources, tracks their execution in real time and propagates every change of status to those who depend on it.

The typical capabilities of a process orchestration platform include:

- **Real-time visibility:** shared boards and dashboards showing the status of patients, beds, rooms, resources and tasks across wards and care settings;
- **Workflow and task automation:** pathways modelled as sequences of steps, with tasks automatically created, assigned by role and location, tracked until completion and escalated when targets are missed;
- **Capacity and resource management:** planning and allocation of beds, operating rooms, staff, equipment and appointment slots;

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

- **Communication and alerts:** structured notifications, reminders and handovers between professionals, teams and organisations, replacing phone calls and informal messages;
- **Patient and caregiver engagement:** appointment reminders, status updates and educational content delivered to patients and their families;
- **Integration and process data:** interoperability with existing systems and a timestamped record of every step, which is also what makes process performance measurable over time.

Because it acts on the organisation of care rather than on care itself, a process orchestration platform can support very different processes: clinical pathways, patient flow and bed management; surgical, oncology and other diagnostic-therapeutic pathways; chronic care shared between hospital, community services and general practitioners; ancillary and logistics services such as patient transport, cleaning and meals; and the governance of pathways and of their performance. The six processes analysed in this paper (chapter 5) cover all these areas.

Terminology. In this paper, the terms *orchestrator* and *process orchestration platform* refer to this category of solutions in general: the Benefit Evaluation Model, the KPI Cards and the Estimation Tool are designed to be vendor-neutral. DNV Imatis Fundamentum was used as the reference solution throughout the project; where specific functionalities are mentioned, such as the Visit module for appointment reminders or the Engage module for patient education, they are cited as examples of how these capabilities can be delivered.

3. Approach and methodology

The project was structured in two phases:

- **Phase 1 - *Definition of the Benefit Evaluation Model and Estimation Tool***: Definition of benefit domains and variables, KPIs and their metrics, and identification of the KPIs relevant to specific processes;
- **Phase 2 - *Benchmarking and pre-validation***: Discussion of the model and the Estimation Tool with a large private hospital, a large public hospital and a territorial healthcare organisation.

Development began with a broad definition of the areas in which orchestration could create value, based on the analysis of available literature and on the previous experience of the research team. These areas were progressively translated into observable changes and measurable indicators. The work combined a **top-down** view of benefits with a **bottom-up** review of documented use cases and available evidence, and was refined through periodic alignment sessions between Politecnico di Milano, Digital360 and DNV Imatis. The resulting model is structured on three nested levels:

1. **Domains** – broad areas of benefit grouping related capabilities, functions or activities (e.g. personnel, organisation, technology).
2. **Variables** – measurable and actionable value levers within each domain, describing concrete and observable changes (e.g. process lead time, resource turnaround time, avoided costs).
3. **KPIs** – indicators that quantify each variable through standardised technical definitions (formula, frequency, data source, interpretation), enabling a methodical AS-IS / TO-BE comparison.

Three methodological principles guided the work:

- **Organisational scope only:** every benefit considered in the Benefit Evaluation Model or the Benefit Estimation Tool must be procedural, organisational or logistical in nature, consistently with the orchestrator's role and scope. **The model does not assess clinical decisions, clinical acts or clinical outcomes.**
- **Measurable baseline:** each KPI should be measurable before adoption, including where the current process relies on paper checklists, boards or phone calls, so that the AS-IS value is measured from existing practice, rather than assumed to be zero.

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

- **Selective activation in different processes:** when applying the model to processes, not every KPI should be applicable to every process, but in each process only the domains relevant to it, the variables that reflect changes the organisation can influence, and the KPIs with clear ownership and practical value for decision-making, should be activated.

Once the framework was defined, three steps made it ready for practical use: first, each KPI was specified in operational terms through detailed KPI Cards; next, process mapping on selected healthcare processes identified where orchestration could change the workflow and which indicators applied to each process; finally, interviews gathered qualitative feedback on the model, the process maps and the Estimation Tool.

4. The Benefit Evaluation Model

The resulting model distinguishes between **internal benefits**, which accrue to the healthcare organisation itself, and **external benefits**, which reach patients, caregivers, the territorial network and institutional stakeholders.

Overall, it comprises 8 domains (Personnel, Organisation, Technology, Finance, Users, Territory, Reputation, Law-makers & insurances), 23 variables (e.g. Personnel Organisation, Personnel Education, ...) and 49 benefit KPIs, grouped into internal and external benefits.

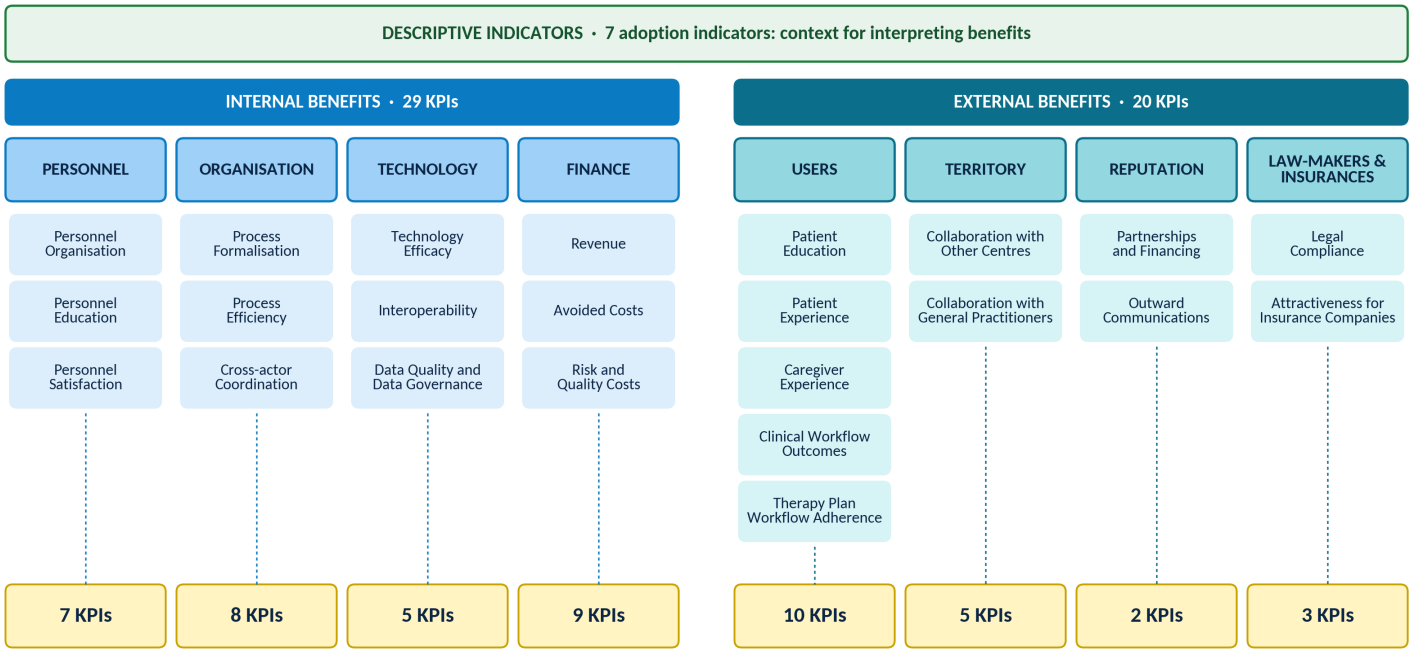


Figure 1 – Structure of the Benefit Evaluation Model: 8 benefit domains and 23 variables, grouped into internal and external benefits. Each yellow box shows the number of benefit KPIs associated with the domain (49 in total); descriptive indicators track adoption and support the interpretation of results.

In addition, **7 descriptive indicators** monitor the adoption of the solution rather than its benefits: training hours per FTE, personnel certified on pathway protocols, share of process steps digitally orchestrated, user adoption rate, system uptime, share of patients receiving digital education and share of systems integrated with the orchestrator. They act as preconditions: if adoption is low, benefits cannot be expected to materialise, and this helps interpret the benefit KPIs correctly.

Table 1 – Domains, variables and example KPIs of the Benefit Evaluation Model

Area	*Domain*	*Variables*	*Examples of KPIs*	*KPIs*
Intern	Personnel	Personnel Organisation Personnel Education	Personnel Resource Utilisation Rate Perceived Workload Level	7

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

Area	*Domain*	*Variables*	*Examples of KPIs*	*KPIs*
		Personnel Satisfaction	...	
	Organisation	Process Formalization Process Efficiency Cross-Actor Coordination	Process Lead Time Resource Turnaround Time ...	8
	Technology	Technology Efficacy Interoperability Data Quality and Data Governance	Operational Error Rate Average Data Exchange Latency ...	5
	Finance	Revenue Avoided Costs Risk and Quality Costs	Revenue per Available Resource Duplicate Diagnostic Tests Cost …	9
External	Users	Patient Education Patient Experience Caregiver Experience Clinical Workflow Outcomes Therapy Plan Workflow Adherence	Average Patient Waiting Times Caregivers Burden Perception Percentage of Scheduled Therapy Touch-Points Executed and Tracked …	10
	Territory	Collaboration with Other Centers Collaboration with General Practitioners	Average Time-To-Handover Between Centers Structured Hospital-GP Communications Rate …	5
	Reputation	Partnerships and Financing Outward Communications	Active Research and Clinical Partnerships Media Appearances/Scientific Publications	2
	Law-makers & Insurances	Legal Compliance Attractiveness for Insurance Companies	Privacy/Data-Protection Incidents Insurance Audit or Accreditation Scores …	3
Total	**8 domains**	**23 variables**		**49**

KPI Cards

To move from a catalogue of indicators to actual data collection, each of the 56 indicators (49 indicators from the model, plus the additional 7 descriptive indicators) is documented and operationalised in a **KPI Card**, a standardised reference sheet containing detailed descriptions, calculation methods, units, measurement frequency and sources, and guidance on trend interpretation and levels of aggregation. For measurement sources, an **explicit distinction is made between sources available before adoption** (AS-IS) **and after adoption** (TO-BE), showing what can already be measured today, often through labor-intensive periodic studies, and what becomes continuously and passively measurable once process data is generated by the orchestrator.

For a practical example: *Resource Turnaround Time*, a KPI of *Process Efficiency* in the *Organisation domain*, when applied in the bed management process, measures the time from a bed being vacated to being cleaned and ready for another patient. The KPI card specifies the two timestamps needed to calculate the interval and where to obtain the information both before adoption, when teams may need to reconcile discharge records with cleaning logs or manual observations, and after adoption, when the orchestrator can record bed release and readiness events as part of the workflow. Finally, it offers insight on both factors needed to enable the calculation of the specific KPI and on value interpretation.

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

Table 2 – Example of a KPI Card: Resource Turnaround Time

Resource Turnaround Time	Average time needed to make a key resource available again (e.g. bed turnaround, operating room turnover)
Domain and variable association	**Macro-category:** Internal benefits · **Domain:** D02 – Organisation **Variable:** D02.V2 – Process Efficiency · **KPI ID:** D02.V2.K3
Formula	**TAT (min) = (1/N) · Σ ($t_{ready,i} - t_{freed,i}$)** *where t_{freed} is the time at which the resource becomes free (e.g. discharge, transfer) and t_{ready} the time at which it is cleaned and marked as available. Resource types should be specified and targets differentiated accordingly.*
Measurement frequency	**Operational dashboard:** real-time / daily aggregation **Management reporting:** weekly and monthly **Target review and benchmarking:** quarterly
Measurement sources and enabling factors	**AS-IS source (before adoption):** ADT discharge event plus manual or phone notification that the bed is ready; operating room system for turnover. **TO-BE source (after adoption):** the orchestration platform (e.g. Fundamentum), which captures and timestamps events such as "bed freed" and "bed ready". **Enabling factors:** unique resource identifier; standardised "freed" and "ready" events; synchronised timestamps; resource-type mapping; exclusion rules for atypical turnaround cases.
Value interpretation	**Shorter turnaround times** return constrained resources to service sooner, potentially increasing capacity. Results should be compared across the same resource types, ensuring that safety and quality standards are maintained.
Measurement level	Individual resource (e.g. bed, operating room) · Ward / unit · Hospital / network

5. Application to healthcare processes

The model was applied to **six processes** selected with DNV Imatis and Digital360 for their **relevance to hospital and territorial community care**. For each process, the team mapped an illustrative workflow, identified where orchestration could contribute and selected the domains, variables and KPIs relevant to assessing those contributions. The aim **was to test the model's applicability across different processes**, and the expectation was that only a pertinent subset of indicators would be activated, rather than the full model every time: the **percentages of activation** here shown represent the **share of the model's benefit KPIs relevant to each process** and are not to be intended in anyway as related to the scale of expected improvement or benefits already achieved through the orchestrator**.**

1. **Management of the Clinical Pathways (Oncology Use Case):** From screening to long-term follow-up, the oncology pathway connects multiple specialists, departments and care settings through a journey that requires timely activities and reliable handovers. An orchestrator can **support continuity by connecting steps, actors and care settings, and making pending steps visible.** As a result, within the Benefit Evaluation Model, **the pathway activates 92% of the KPIs**, covering process efficiency, collaboration across care settings and patient and caregiver experience.

2. **Management of the Surgical Pathway:** From a hospital staff perspective, the surgical pathway is a tightly coordinated workflow involving different actors, each with distinct clinical and logistical responsibilities, under capacity and time constraints. The presence of an orchestrator can make **readiness visible in real-time, coordinate transfers and turnaround activities** and help teams respond to unexpected schedule changes. For this pathway **82% of the model's benefit KPIs are activated**, across nearly all domains, both internal and external.

3. **Bed Management:** A key function for the governance of patient flows within hospitals. Bed management aims at managing capacity and available resources both for planned care and emergency care processes. An orchestrator can provide **shared visibility of capacity and connect to bed requests, cleaning and readiness updates**, reducing reliance on manual status checks and chasing, and informal phone negotiations. The process activates **69% of the benefit KPIs**, mainly within internal domains, with selected external measures for patient experience and

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

collaboration with general practitioners.

4. **Management of Chronic Conditions:** Chronic care requires sustained coordination between hospital teams, territorial community services and general practitioners around a shared care plan. By acting as the connective layer between hospital, territory and GP, a digital orchestrator can support scheduled follow-ups, track pending activities and improve visibility of examinations and handovers, helping teams address gaps and unnecessary duplication. This results in the activation of **63% of the model's benefit KPIs**, focusing on continuity, communication across settings, patient and caregiver experience, and the tracking of planned touchpoints.
5. **Management of Ancillary Services:** Patient transport, cleaning and meal distribution run full-time to support care delivery through recurring schedules and individual requests. An orchestrator substantially **replaces manual chasing, informal coordination and phone call negotiations**, by enabling **automated task routing and real-time status propagation**. Benefits that can be reaped from the implementation of an orchestrator for these processes are reflected exclusively within internal domains, with a total activation of **45% of the model's benefit KPIs**.
6. **Value-Based Healthcare (VBHC) Governance:** Governance employs evidence from care pathways to monitor performance and guide improvement. An orchestrator can **make execution traceable, flag deviations from agreed plans, providing operational information for review**. This process activates **39% of the model's benefit KPIs**, a lower share in respect to other processes but with a strong focus on reputation, compliance and insurance-related measures.

Together, these process profiles show how the model can be tailored to different workflows, helping organisations select which processes to orchestrate and identify where to focus an evaluation, selecting the KPIs worth measuring in each setting.

6. The Estimation Tool: from framework to a first quantitative estimate

During the project, a further need emerged: a practical, customer-facing instrument that could give a prospective client a first numerical estimate of expected benefits before any implementation. This resulted in the **Estimation Tool**, an Excel workbook that translates a selected part of the evaluation framework into an initial estimate of operational and economic potential. Its current scope is centered on patient flow, bed management and task management, and it combines 11 benefit drivers, 9 assumptions and 29 inputs. It supports early feasibility discussions by making assumptions explicit and showing how local inputs affect the result.

Inputs and multipliers

The basic logic is deliberately simple and transparent:

Estimated benefit = Input data × Multiplier

- **Input data** is entered by the hospital: activity volumes, organisational scale and operational baselines such as time spent on selected activities. Prefilled baseline values offer a starting point where local information is unavailable but require review before use in a local assessment.
- **Multipliers** describe the expected change in each driver, such as a reduction in coordination time or in bed turnaround time. They are estimated based on documented DNV Imatis use cases and on available literature and will be updated as new evidence and cases are gathered (real world evidence approach). Their transferability must be assessed locally, especially when the original setting or workflow differs.

Because benefits reported in the literature and in DNV Imatis use cases are often expressed as a range rather than a single value (e.g. a 10–15% reduction in time), each multiplier used in the model is defined by a lower and an upper value and has its own adjustment parameter. This parameter lets the user decide where to position the multiplier within its range,

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

from the most conservative to the maximum value. These ranges are planning assumptions, not statistical confidence intervals. A first-year realisation factor scales the estimate to reflect incomplete adoption.

From operational change to economic value

Monetisation happens in two steps. The tool first quantifies the operational change in physical units: released working hours (also expressed as FTE), released bed-days and recovered appointment slots. It then converts each result into money through a local unit value: the hourly cost of the role involved for staff time and the value of the additional capacity for beds and appointments. The drivers are summed into an annual benefit and compared with implementation and recurring costs to obtain net value, ROI and payback.

The result is an **opportunity value**, not an automatic cash saving: it becomes a financial gain only when the organisation reinvests the released capacity, for example by absorbing more activity or reducing overtime.

Double counting is avoided by design, since each driver relies on an independent base and aggregate benchmarks are used only as cross-checks. The estimate covers only benefits for which a multiplier already exists; benefits that cannot yet be estimated reliably, such as caregiver experience or collaboration with GPs, remain within the Evaluation Model.

Note: data extracted from existing use cases was provided by DNV Imatis and they mostly refer to healthcare organizations in Northern Europe; Politecnico di Milano did not verify the methodological validity or scientific correctness.

7. From estimate to evidence: a self-reinforcing lifecycle

The Estimation Tool and the Evaluation Model are designed to work together throughout the whole lifecycle of an orchestration project. Each implementation produces real-world data that makes the next estimate more reliable.

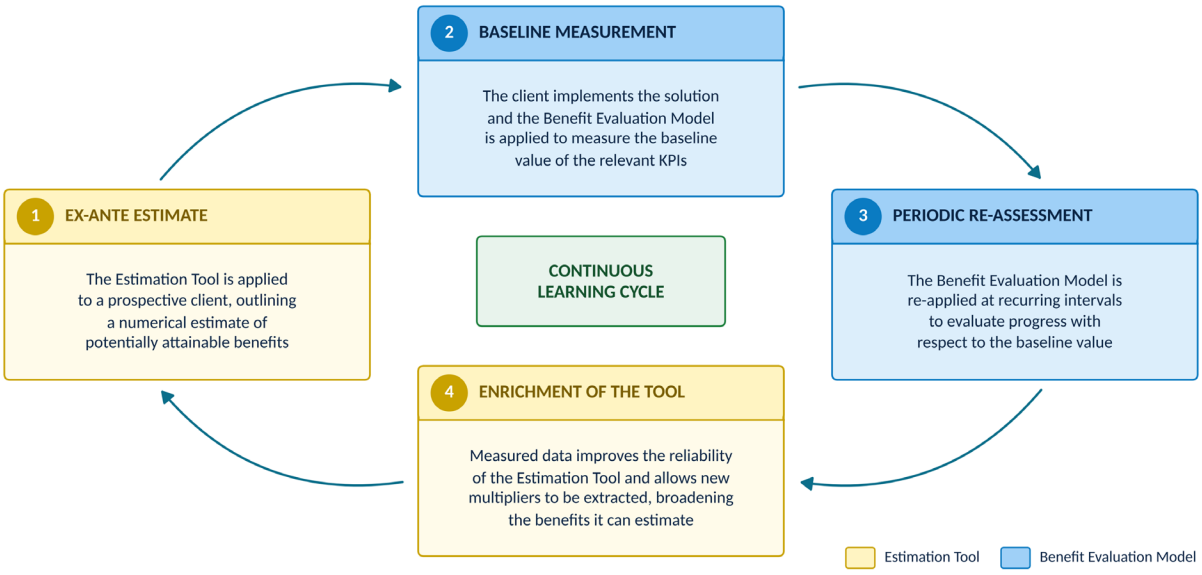


Figure 2 – Operational lifecycle linking the Estimation Tool (ex-ante estimate) and the Benefit Evaluation Model (baseline and periodic measurement), with measured data feeding back into the estimation multipliers.

This loop turns benefit evaluation from a one-off business case into a **continuous learning process:** estimation defines where improvement is expected and which assumptions matter most; the evaluation framework identifies the evidence needed to test them; repeated measurements show where expected changes occur, where they do not and which additional effects deserve attention. Over time, sufficiently comparable evidence may shift the basis of estimates from literature and vendor use cases towards results measured in comparable organisations in terms of size, scope and geographical location. The intended evolution of the approach is **completion through field application, which** is the necessary next step beyond the current project.

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

8. Benchmarking and pre-validation in the field

The second phase sought feedback on the Benefit Evaluation Model, its application to selected processes and the Estimation Tool. Interviews were held with representatives of three types of Italian healthcare setting: a private hospital with more than 500 beds, a public hospital with more than 500 beds and a territorial healthcare organisation serving about one million citizens.

Their purpose was to test relevance and practical applicability through qualitative feedback on the approach, without a specific validation of the numerical assumptions or evidence of realised benefits. Four key aspects emerged from the discussions:

- **A broader view of value:** Respondents appreciated that the Benefit Evaluation Model covers organisational and human benefits alongside financial performance, while retaining quantitative indicators for monitoring;
- **A reliable basis for comparison:** Respondents valued the distinction between AS-IS and TO-BE measurement sources, seeing it as helpful for identifying baseline data and for performing meaningful comparisons before and after adoption;
- **A need for dedicated estimates grounded in local conditions:** Respondents emphasized that multipliers in the Benefit Estimation Tool need to reflect local resources, specialties and working arrangements, identifying the need for dedicated studies to assess and refine these assumptions as critical;
- **Adoption as context for results:** Respondents appreciated the inclusion of adoption measures alongside benefit indicators, as they noted that some indicators may temporarily worsen as teams adjust to new workflows, making it crucial that early changes are interpreted in light of how the solution is being used.

Comparing a private hospital, a public hospital and a territorial organisation assessed generalizability of the model enabling application across settings, while the process-based activation logic allows each organisation to focus on the subset of indicators that matters in its own context.

9. Conclusions, limitations and recommendations

The project delivered a structured independent view and a transparent way to answer a question that healthcare organisations increasingly ask before investing in digital orchestration: *what value will it create, and how will we know?* The Benefit Evaluation Model provides an answer to "*how will we know",* through 49 benefit KPIs and 7 adoption indicators documented in operational KPI Cards. The Estimation Tool provides a first, scenario-based answer to "*what value will it create*", for a limited set of benefits that can already be quantified.

Assumptions

The project's outputs are subjected to a series of assumptions. The Estimation Tool currently provides an initial quantitative view of a selected set of benefits, with a primary focus on patient flow, bed management and task management. Its estimation multipliers draw on the evidence currently available from vendor use cases, most of which relate to healthcare organisations in Northern Europe. They should therefore be interpreted as transparent starting assumptions to be reviewed and contextualised against the characteristics of each organisation and healthcare system. Applying the Estimation Tool alongside the Benefit Evaluation Model in real implementations, including in the Italian context, will progressively strengthen this evidence base, support the calibration of multipliers with locally measured data and enable additional benefits to be incorporated over time.

The interviews with three healthcare organisations provided a review of the approach's relevance and applicability. They did not validate individual multipliers or establish that orchestration caused any observed change. Implementation and measurement against a reliable baseline are needed to test the model in practice and strengthen its estimates.

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE

Finally, although the model considers benefits beyond financial performance, it deliberately excludes clinical decisions, clinical activities and clinical outcomes (Quality of Care) from its assessment. This keeps the evaluation aligned with the orchestrator's organisational role, but means it does not capture the full value of care improvements that orchestration might indirectly support.

Recommendations for healthcare organisations

For an initial application of the model, healthcare organisations can follow six practical recommendations:

1. **Start from the processes, not from the platform -** Select the processes with the highest expected impact and use the activation logic to define a focused KPI set;
2. **Review data availability early -** Many AS-IS sources already exist (HR, payroll, ADT, scheduling systems), but others are hard to reconstruct: an initial data review with operational and clinical stakeholders is the precondition for a credible baseline;
3. **Measure the baseline before go-live** and compare like with like after implementation;
4. **Monitor adoption alongside benefits -** Descriptive indicators such as user adoption and share of orchestrated steps explain why benefits do or do not materialise, including temporary dips during the transition;
5. **Treat estimates as hypotheses -** Use conservative and maximum assumptions to frame expectations, distinguish released capacity from cash savings and revise estimates as measured data becomes available;
6. **Share evidence -** Contributing measured results to the evaluation cycle improves the reliability of estimates for the whole community of adopters.

Final remarks and acknowledgements

The project *Benefits Evaluation Model of a Process Orchestration Solution in Healthcare* was carried out between June and September 2026 by the **Osservatori Digital Innovation of the Politecnico di Milano School of Management**, in collaboration with **Digital360** and **DNV Imatis**. DNV Imatis Fundamentum, a clinical, healthcare and operational process orchestration platform, was used as the reference solution.

The authors thank Giancarlo Bizzarri, General Director at AULSS Marca Trevigiana; Angelo Croatti, Digital Transition Manager at AUSL Romagna and Emilio Meneschincheri, Chief Information Officer at IRCCS Policlinico Gemelli, as representatives of the three healthcare organisations involved in the interviews for their contribution to the pre-validation of the model.

COPYRIGHT © POLITECNICO DI MILANO / DIPARTIMENTO DI INGEGNERIA GESTIONALE