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Introducing Continuity Governance: A Missing Stage in Business Continuity Management for Enhanced Organizational Resilience

Nur Aisyah Rahman[1], Ahmad Fauzi[1], Siti Mariam[1]*, Farah Zainal[1]

1. Department of Management, Faculty of Business and Economics, Universiti Malaya, Kuala Lumpur, Malaysia.

Abstract

Organizational resilience is vital for limiting the impact of major disruptions, including pandemics, geopolitical tensions, and climate-related emergencies. Traditional business continuity management (BCM) and its continuity plans often provide an essential foundation, yet may not fully meet operational needs. This paper proposes and applies an innovative Continuity Governance (CG) framework, positioned as an additional BCM stage. The CG approach reinforces resilience by improving routine operational performance, lowering dependence on contingency activation, and supporting stable functioning during non-crisis periods. The study utilizes a contextual evaluation of the CG framework, supported by a case study conducted in a Research Technology Organization (RTO) using interviews and survey instruments. Findings confirm the model's value in decreasing continuity-related incidents, with observable benefits in the participating RTO. Designed for flexibility and transferability, the CG framework can be adopted by diverse organizations across multiple industries. This contribution advances existing knowledge by embedding continuity practices into everyday operations, reducing excessive reliance on formalized plans, and strengthening resilience capabilities. The results offer practical guidance for organizations seeking improved preparedness for disruptions and more robust operational stability within increasingly complex environments.

Keywords: Continuity Governance, Business continuity management, ISO 22301, Resilience, Research-technology organization, Knowledge economy

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Corresponding author: Siti Mariam

E-mail ✉ sitimariam.research@gmail.com

Introduction

The European Commission has highlighted the strategic relevance of effectively managing business continuity and resilience under the current volatile market context [1, 2]. Challenges such as pandemics, climate-driven events, talent shortages, and ongoing armed conflicts have intensified the need for BCM and resilient organizational systems. As organizational environments evolve rapidly, uncertainty has become a common managerial condition. The core issue emphasized in these warnings is that many organizations exhibit insufficient resilience due to limited awareness, partial or absent BCM implementation, or shortcomings within existing BCM frameworks. To address this gap, this article presents a validated Continuity Governance (CG) model designed to reinforce resilience by embedding continuous learning and improvement into daily management practices. By leveraging routine operations, CG considerably enhances organizational adaptive capacity.

In academic research, resilience is generally associated with ensuring organizational survival amid disruptive shifts and transformation [3, 4]. Studies acknowledge that resilience arises within settings marked by uncertainty and unpredictability, requiring a comprehensive and multidimensional management perspective [5, 6]. Various elements influence resilience simultaneously. Organizations may draw on lessons from past disruptions (though sometimes too late) or adopt more proactive continuity practices. This involves not only assessing critical activities through Business Impact Analysis (BIA) and evaluating disruption risks as described in ISO 22301 standards [7], but also embedding these considerations into day-to-day operational processes.

Recent research underscores the need for sustainable organizational resilience—an intangible capability tested during high-impact, exceptional events [8-12]. Other contributions highlight the benefit of anticipating disruptions by examining routine occurrences, which can serve as indicators for preparing for more serious incidents [13, 14].

This case study introduces a significant advancement to BCM through the CG model, which emphasizes the management of continuity incidents during daily operations, thereby reducing the activation of formal continuity plans and enhancing overall resilience. Within organizations, BCM systems following ISO 22301 certification function as structured tools—assuming they are well designed—while resilience represents an organization's internal strength. Consequently, this model aligns with recent scholarly discussions stressing BCM effectiveness and long-term resilience as central concerns for both theory and practice.

The CG framework was validated in an RTO that holds multiple quality certifications, uses data-driven management approaches, and specializes in artificial intelligence (AI). RTOs operate within highly complex settings, dealing with uncertainties, interdependencies, and heterogeneous interests [15]. The nature of research and development (R&D) work also introduces risk, as some contracted tasks may begin with unclear scopes and uncertain outcomes. Similarly, the value generated from R&D initiatives is often unpredictable and may fail to meet intended goals [16].

The rest of this article is structured as follows: Section 2 presents the background and benchmarking activity. Section 3 outlines the research questions. Section 4 explains the research design and methodology, including the construction, design, implementation, and validation of the CG model. This section also includes key insights collected over four years from personnel surveys conducted during the CG process, including those from the pandemic period. Finally, Section 5 offers conclusions and encourages adoption of the model in organizations with knowledge-intensive or technology-oriented profiles.

Literature Review

This section explores how organizational resilience is conceptualized, clarifies the nature of BCM, and reviews empirical findings on its performance to position the CG model. It also outlines a benchmarking activity carried out with national and international RTOs and comparable institutions through two research-technology networks.

Organizational resilience

The earliest appearance of organizational resilience in management studies is attributed to Meyer [17], who described it as how organizations react when confronted with external shocks. Since then, research has expanded the idea across numerous fields—organizational theory [4], information technologies [18], labor relations [19], HRM [5], engineering [20], cultural studies [21], organizational learning [22], and supply-chain analysis [23, 24]. This wide adoption enriches interpretation but also creates ambiguity in how the term is defined [25].

In contemporary contexts marked by constant disruption, resilience is increasingly understood as an ongoing organizational capability rather than a fixed condition. Consequently, scholarship highlights internal competencies, learning systems, cultural factors, and procedural routines as central elements shaping resilience [12, 25]. Research also suggests that resilience is more closely embedded in organizational systems than in the actions of individual managers [26].

A newer direction in the field emphasizes sustainable resilience [8, 10, 11, 27]. Mehta *et al.* [11] identify preparedness, responsiveness, adaptability, and learning as foundational elements of a sustainable BCM approach. Astuty *et al.* [8] propose a sustainability-oriented model for micro-enterprise continuity, where survival, continuity, reorientation, and synergy form core SRS themes. Lestari *et al.* [10] examine SME resilience in Malaysia and Indonesia, finding that technology plays a defining role. Bastan *et al.* [27], studying the banking industry, integrate resilience thinking with risk and BCM structures through system-dynamics simulations, developing a DSS capable of forecasting the outcomes of multiple crisis-management options. Collectively, these studies aim to help organizations foresee potential challenges and strengthen their resilience foundations ahead of time.

The present case study adds to this evolving line of inquiry by proposing a model aligned with ISO 22301 and various certification frameworks, supported by organizational, technological, and workforce-related components. It aligns routines and resources to reinforce organizational performance and decision-making, even when dealing with minor events, single cases, or small-scale project processes.

BCM

Interest in continuity planning dates back to the 1960s during the era of centralized computing, when "disaster recovery planning" first appeared in professional discussions [28-30]. The idea of business continuity as a structured managerial discipline emerged later—in the late 1990s and early 2000s—when organizational risk, crisis, and disaster management became prominent topics in business research [31, 32].

In the present environment—shaped by pandemics, climate-driven disruptions, cyber incidents, and rapid technological change—BCM has become a critical organizational function [33-35]. ISO 22301 has since become a widely used standard, providing a common management framework for continuity activities [36]. In academic settings, BCM is usually described as a broad managerial practice designed to prepare for, manage, and minimize operational interruptions [31, 32, 37, 38], emphasizing mitigation, coordinated response, and post-event recovery [7, 39].

Most studies focus on BCM processes and the advantages they create [37], while also indicating that additional empirical work is needed to understand what conditions make BCM function effectively [36]. Research tends to concentrate on specific regulated industries—such as chemicals, pharmaceuticals, and finance—with far less attention devoted to knowledge-driven organizations [38].

Given the complexity of current operational environments, organizations must rethink continuity practices so they can adjust to shifting conditions [40]. Wong [40] outlines three strategic approaches for strengthening BCM: a process-centered outlook, a program-oriented perspective, and a resilience-driven strategy.

A large-scale review by Pinto *et al.* [41], analyzing 889 publications, shows that continuity research often revolves around planning activities and risk-management issues. The authors suggest that future work should also investigate leadership in BCM and everyday practices that reduce exposure to future disruptive events.

BCM effectiveness: Continuity Governance as a concern

Although research consistently stresses the relevance of business continuity, many organizations still lack clarity on how to deploy BCM in a meaningful way—especially when ISO 22301 certification is not part of their objectives. Several issues contribute to this situation, including heterogeneous organizational activities, insufficient resources, and limited awareness [30, 42]. Sawalha's [30] review shows that various studies have assessed BCM familiarity and perceived performance in different countries and sectors; however, while most organizations acknowledge having some form of BCM framework, evidence on how well these systems function remains scarce.

Continuity Governance (CG) is a relatively new idea in academic discourse. In this study, CG is described as an additional operational stage within the BCM framework in which routine organizational capabilities are examined in depth to improve them and strengthen overall resilience. The approach incorporates procedures from other certification schemes and draws from daily inefficiencies, routine failures, and minor incidents occurring under stable conditions, preparing the organization for future disturbances that could threaten its equilibrium. Establishing CG formally within the BCM structure aims to enrich existing standards, contribute new insights to the literature, and support organizations in applying BCM more effectively.

Benchmarking exercise

To support the research, a benchmarking activity was carried out with comparable institutions, primarily mid-sized organizations such as RTOs and collaborative research entities. Participants included organizations affiliated with the Basque Research Technology Alliance (BRTA) and the International Artificial Intelligence Centers Alliance (IAIC). The RTO examined in this study participates in both groups. BRTA consists of 17 centers employing close to 4,000 researchers with a combined budget of around 350 million euros. The IAIC comprises 7 RTOs with approximately 2,000 researchers and a joint annual turnover of 250 million euros. Our analysis revealed that none of these centers or institutions held business continuity certification, meaning their continuity practices were handled without a unified standard. This highlights a significant underrepresentation of RTOs in BCM-related academic work, indicating a gap in the literature.

Overall, although numerous studies discuss resilience and BCM in various industries and international contexts, the contributions presented here—particularly concerning CG—are largely absent in existing publications. The proposed CG framework fills this gap by introducing a new stage that extends ISO 22301 and reinforces resilience through the integration of processes derived from other certification systems. In addition, the study underscores the relevance of managing recurrent incidents that could escalate into broader disruptions.

Research Questions

This study aims to evaluate how effectively a CG model operates within an organization certified under ISO 22301. Accordingly, the following research questions are addressed:

1. What factors positively influence CG within projects or processes?
2. Does CG reduce continuity-related incidents that do not originate from external sources?
3. Does CG contribute to modifying essential elements of BCM plans or routine managerial activities?

Research Approach and Methodology

The study employs a contextual analysis methodology [43], focusing on the CG model as the end result. This approach ensures accuracy by examining each event in the process and providing guidance to the project leader or responsible manager. The methodological structure involves the following stages:

- CG model construction
- CG model design and implementation
- Validation process
    - Description of the validating organization
    - Data-collection activities
    - Interviews with IT specialists and quality-system managers
    - Presentation of findings

The authors affirm compliance with the journal's ethical requirements, and approval was secured from the RTO's internal ethics committee. The RTO participating in the study is Vicomtech, where two authors are employed; the third author serves as the ISO 22301 external auditor for Vicomtech. Since the research included human participants, written informed consent was obtained in accordance with the journal's policies.

CG model construction process

The reference CG model outlined in this paper was built through a four-phase research effort carried out between 2021 and 2024 **(Figure 1)**. The development was based on a process model proposed by Ahlemann [44].

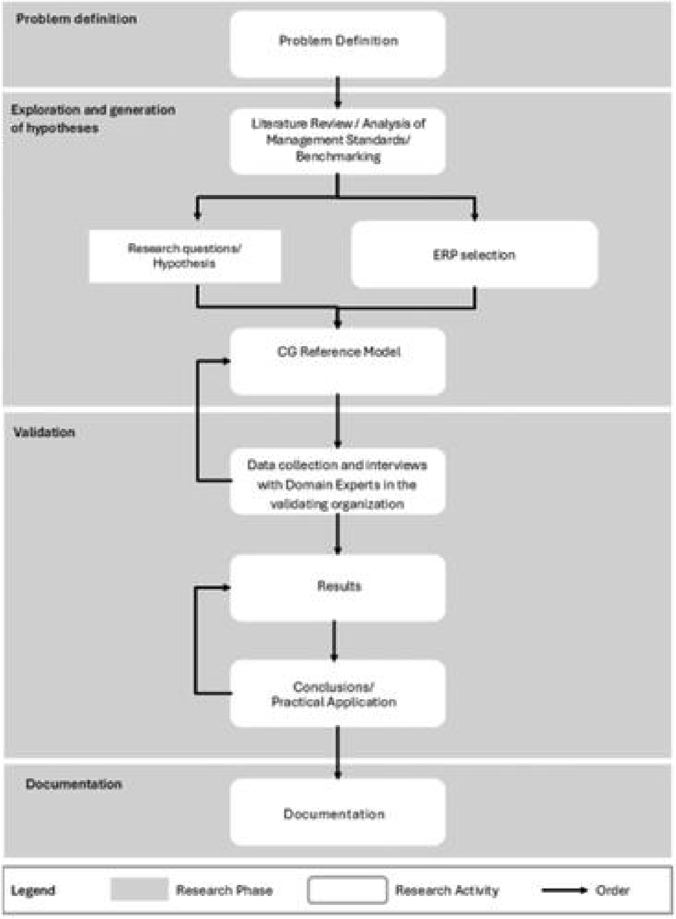
Problem definition
Problem Definition
Exploration and generation of hypotheses
Literature Review / Analysis of Management Standards/ Benchmarking
Research questions/ Hypothesis
ERP selection
CG Reference Model
Validation
Data collection and interviews with Domain Experts in the validating organization
Results
Conclusions/ Practical Application
Documentation
Documentation
Legend
Research Phase
Research Activity
Order

Figure 1. The CG reference model construction process (adapted from Ahlemann [44])

The research was structured into the following components:

- Problem definition. The purpose of the study was clarified, and the scope of the issue was established, as described in the opening section of this article.
- Exploration and Hypotheses Generation. The second stage incorporated:
    - A review of academic contributions, relevant standards, and a benchmarking activity, all presented in Section 2, served as the basis for building the model.
    - The development of the research questions is discussed in Section 3.
    - The choice of an internally developed enterprise resource planning (ERP) tool.
    - The actual creation of the CG model, including its architecture and deployment is explained in Section 4.2.

- Validation. During this stage, the authors carried out several assessments to determine the performance of the model, as described in Section 4.3:
  - Identification of the organization used for validation
  - Data acquisition through questionnaires
  - Interviews with subject-matter specialists
  - Analysis of findings
  - Final conclusions and practical implications
- Documentation. The full model and its operational procedures were integrated into the BCM framework, and this article reports the overall study.

Continuity Governance model design and implementation

This additional BCM stage was integrated into the ISO 22301 workflow in 2020. To support its implementation, project structures were redesigned so that CG became embedded in project management practices, covering continuity-related risks, contingency measures, deviation handling, and knowledge management throughout project execution. The research evaluates how effectively the CG-enhanced continuity system has performed, together with its contribution to organizational resilience, across a three-year period (2020–2023). Insights stem from accumulated project experience and outline the adjustments needed to keep the system aligned with a rapidly evolving environment.

Figure 2 illustrates how adding CG reduces the magnitude of disruptions compared to situations without CG. In the evaluated organization—where routine learning is emphasized and processes have been reinforced through automated redundancies—interruptions may have no adverse effect on key operations. For activities relying on manual redundancy, some disruption may still occur, but typically remains less severe than in a BCM-only environment lacking CG. Entities with no BCM at all risk halting essential operations when a disruption arises.

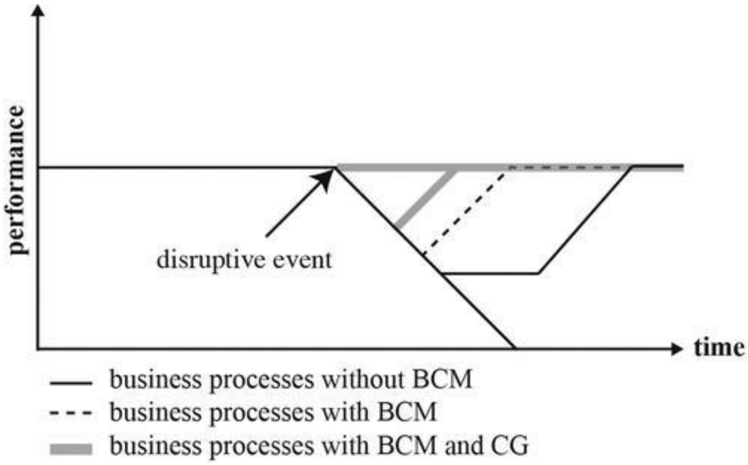

Figure 2. Business processes with BCM and CG (adapted from Schätter *et al.* [45])

Organizations that incorporate CG can potentially lower their Recovery Time Objective (RTO1) to zero or near zero, thereby keeping downtime minimal and well within their Maximum Tolerable Period of Disruption (MTPD). Institutions operating solely under ISO 22301 or similar standards typically achieve an RTO shorter than their MTPD, whereas organizations without BCM may experience recovery periods that surpass their MTPD, potentially resulting in unacceptable operational failure **(Figure 2)**.

To reinforce the continuity framework, this approach integrates an extra layer beyond the ISO 22301 baseline. As shown in **Figure 3**, CG is inserted between the continuity strategy definition and the training stage. Thus, while the strategy identifies which continuity plans require implementation, the governance layer ensures continuous operational strengthening and sustained resilience.

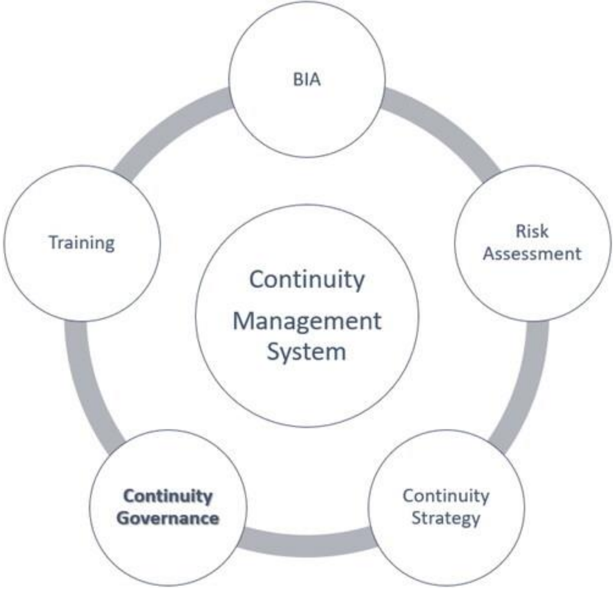

Figure 3. CG is included in the BCM process

More precisely, **Figure 4** outlines the CG flow and how the activation of a continuity plan is assessed. This includes:

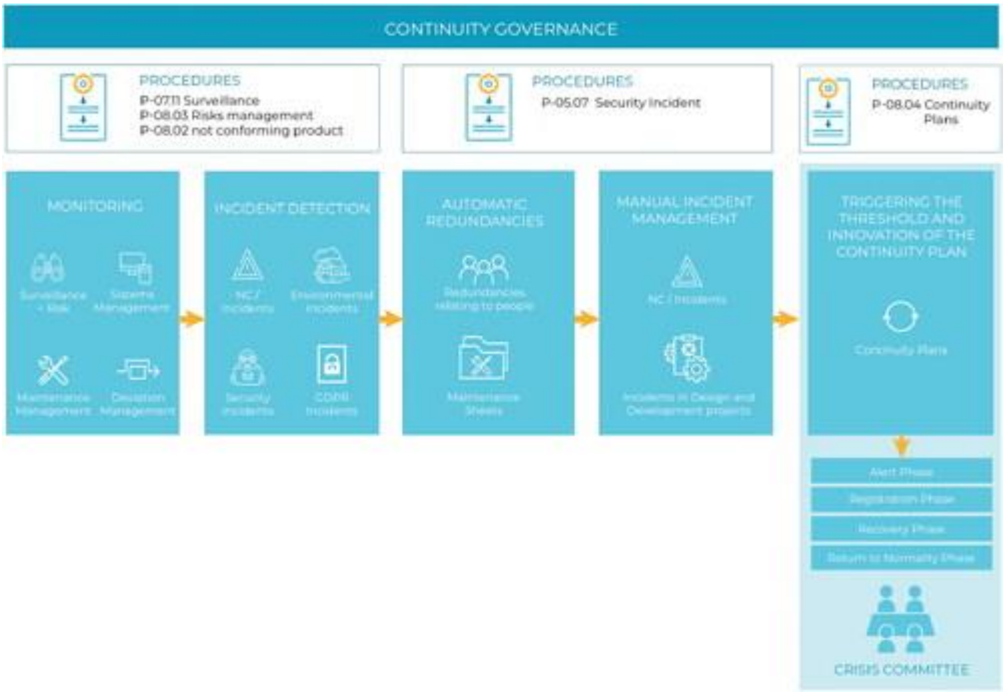

Figure 4. Continuity Governance for organizational resilience in an RTO

- Monitoring and early alerts
- Detection and evaluation of incidents
- Automatic redundancy activation
- Manual handling of incidents
- Threshold assessment and decision to trigger continuity plans

The corresponding actions and procedural elements for each stage are summarized below.

Monitoring: early warning

This stage introduces preventive tools designed to recognize deviations that could escalate into incidents. It includes:

- Monitoring of technological, commercial, competitive, socio-economic, regulatory, and environmental indicators relevant to the organization
- IT oversight following predefined preventive documentation
- Maintenance activities are aligned with preventive maintenance protocols
- Oversight and correction of deviations occurring during projects or operational processes

Incident detection and evaluation

The organization strengthens its routine resilience by addressing incidents identified across different layers. Their assessment follows a sequence of planning corrective actions, closing the incident, and completing an evaluation. The procedure titled "Control of Non-Compliant Product and Incidents" specifies the required responses when any deviation or non-conformity arises. For certain categories, additional protocols outline the specific steps to follow:

- Environmental Management: detailing operational responses when environmental-related events occur.
- Security Incident: establishing instructions and related contingency measures for incidents of this nature.
- Notification, management, and response to personal data protection incidents: defining how to proceed when an event compromises—or could compromise—the confidentiality or integrity of personal data.

Automatic redundancies (Automatic incident management)

These redundancies allow predefined and automated reactions to incidents affecting staff or ICT assets. Examples include:

- People Management (HRM) and Knowledge Maps: managing workforce-related redundancies and using competency maps that capture each researcher's technological expertise. If an incident emerges, these maps locate equivalent profiles to ensure project continuity.
- Preventive Maintenance Sheets for IT Systems: controlling ICT infrastructures and applying technical redundancies according to established protocols.
- Maintenance Management: addressing building and physical facilities, with preventive routines designed to mitigate potential failures.

Manual incident management

Certain events require manual intervention. For these, the incident management procedure governs the planning, implementation, closure, and evaluation of actions. Since R&D projects undergo constant monitoring and verification, deviations can be quickly identified and managed, ensuring that appropriate corrective measures are introduced.

Triggering threshold and invocation of the continuity plan

If an incident exceeds the predefined impact threshold, the corresponding continuity plans must be activated to contain the disruption. These plans specify the actions associated with each critical resource, depending on the nature of the disturbance. The operational stages follow the ISO 22301 business continuity lifecycle:

- Alert Phase
- Transition Phase
- Recovery Phase
- Return to Normality Phase

As shown in **Figure 4**, the governance framework is intended to reinforce resilience in day-to-day operations while preparing the center for unexpected events. The model is fully integrated into the ERP platform used to oversee project management, personnel processes, and all internal workflows.

Validation

This section outlines the characteristics of the organization used for validation and describes the study designed to evaluate the model's performance. The validation process produced several insights and resulted in updates to BCM plans, which are also detailed here.

Validating organization

The assessment was performed in a regional RTO located in the Basque Country, accredited with several recognized certifications [46-50]. Its core activity is R&D aimed at improving industrial and societal innovation. As a non-profit foundation, it produces outputs spanning basic research through prototype development, covering technology readiness levels 3–7. The RTO specializes in digital solutions related to visual computing and artificial intelligence. It employs approximately 250 staff members, 40% of whom hold PhDs across multiple fields, and focuses on transferring research outcomes to relevant stakeholders.

Data collection

The study sample consisted of R&D projects that encountered continuity-related incidents, deviations, or disruptions between 2020 and 2023. During this period, the organization executed 470 R&D projects and recorded 32 non-conformities (27 project-related and five concerning systems and processes), along with 7 security incidents. Additionally, 62 risks were monitored, with 4 classified as continuity risks.

Project data was extracted in April 2024 from a range of areas, technological fields, funding schemes (e.g., industrial contracts and grants), and contexts—including initiatives carried out during the COVID-19 pandemic. Data processing was performed using the internal ERP tool, Ekhi. To examine the selected projects, a digital questionnaire—administered through an internal system—was used to evaluate CG effectiveness. Surveys were sent to 32 technical and managerial project leads, with 27 responses received.

The study aims to determine how CG supports project and process management and to identify factors that strengthen CG, BCM, and overall resilience (see Annex I). Each construct was measured using a five-point Likert scale from (1) "strongly disagree" to (5) "strongly agree."

In line with the research questions, the questionnaire was divided into four parts:

1. Characterizing the CG-related disruption;
2. Examining how these disruptions affected BCM-related aspects of the projects;
3. Assessing the performance of the BCM system with CG;
4. Gathering project leaders' views on how CG contributed to improving their continuity management.

Interviews with IT and quality system leaders

Interviews were carried out to corroborate the data gathered through the questionnaires and to pinpoint incidents in which recovery actions for isolated disruptions were essential in reinforcing the organization's ability to withstand larger disturbances. This analysis made it possible to generalize lessons from individual cases to broader organizational contexts. The interviews were conducted within the RTO and addressed events recorded between 2020 and 2023.

Results

This part reviews several dimensions of the CG outcomes: the questionnaire findings, the insights from IT and management system personnel, and the adjustments incorporated into the BCM plans based on these results and accumulated experience.

Questionnaires' results

The main outcomes drawn from the questionnaires are summarized below:

- From the 32 distributed questionnaires, 27 were completed (84% response rate).
- According to **Figure 5**, the most common disruptions in R&D initiatives were requirement-related issues with customers (37%), financial or budget-related limitations (30%), and talent shortages (22%). The remaining disruptions involved IT services (7%) and infrastructures (4%). Given the naturally uncertain nature of R&D work, the link between budgetary setbacks and unclear requirements needs attention to prevent client dissatisfaction. Talent shortages were particularly significant during the pandemic, when researcher turnover increased substantially (around 15% of researchers left during the pandemic period).
- These incidents had major adverse effects on task execution, representing 46% of the total negative impact. As shown in **Figure 6**, problems linked to talent shortages caused the greatest harm, followed by client requirements and financial issues. IT and infrastructure-related disruptions had comparatively limited impact.
- Regarding the assessment of CG model effectiveness:
  - The most influential factors in reducing the consequences of incidents were the identification of risks and the presence of contingency plans, followed by deviation-handling procedures and support from the management system department **(Figure 7)**. Project leaders emphasized that these organizational mechanisms and knowledge-sharing practices are essential to avoiding continuity plan activation. The ability to recruit staff with similar expertise—using the knowledge map—also proved important.
  - In 93% of cases, incidents were resolved effectively, allowing projects to be delivered without delays, external repercussions, or the need to activate continuity plans. For the remaining 7% (two processes), the crisis committee, together with the continuity plans, had to intervene.
  - As shown in **Figure 8**, most project leaders consider that the CG model improves project oversight, fosters preventive actions, and helps reduce disruptions. Overall, the CG approach receives broad support from the project leaders.

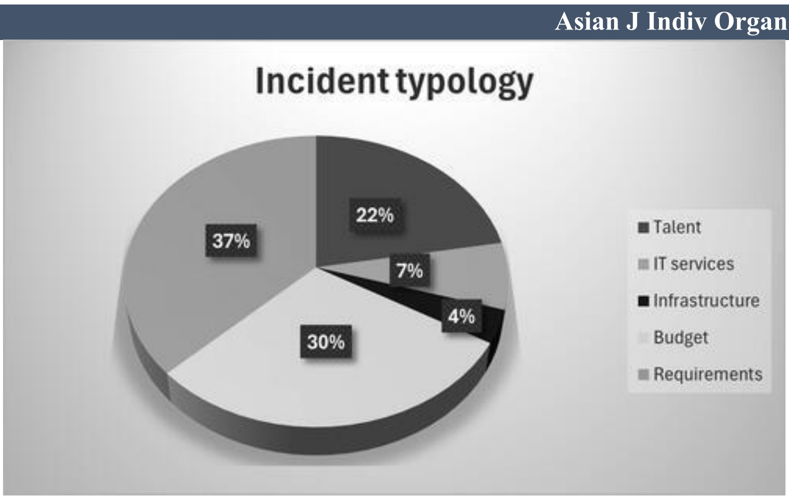

Figure 5. Continuity incidents typology

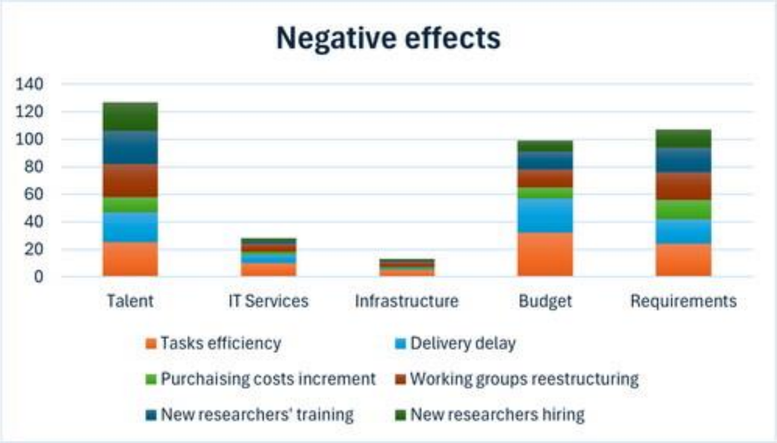

Figure 6. Negative effects caused by continuity incidents

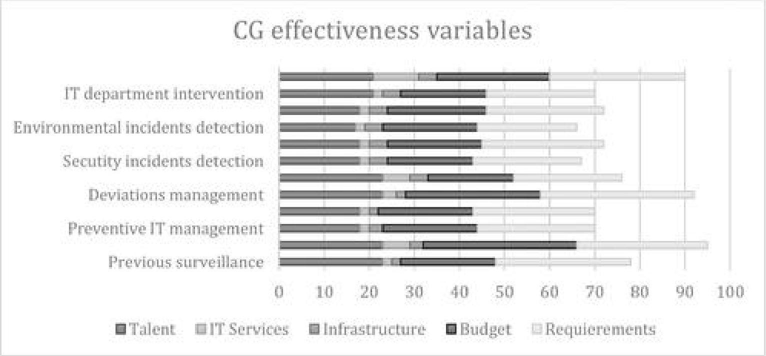

Figure 7. CG effectiveness variables

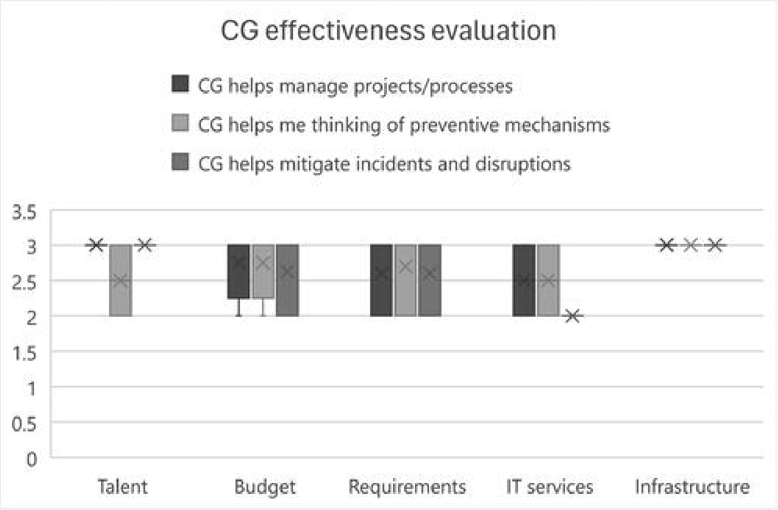

Figure 8. CG effectiveness evaluation

Interviews with individuals responsible for IT and the management system

During these discussions, the interviewees highlighted the actions that most contributed to enhancing organizational resilience. Security-related events and human resource challenges were considered particularly critical, as both had the potential to jeopardize project delivery. In recent years, the RTO encountered several events that significantly strengthened its preparedness for future disruptions. Key examples include:

- COVID-19 (March 2020): With widespread illness risk and the need for remote work infrastructure, a knowledge map was created describing the technological expertise of all critical researchers. This served as a contingency tool, allowing identification of individuals with unique or equivalent skills to ensure continuity during large-scale illness scenarios.
- 2021 server failure: Two servers supporting virtualized critical services malfunctioned. Operations continued with degraded performance until repairs were completed. Afterwards, continuous monitoring and systematic backups were implemented to reduce vulnerability.
- 2022 data loss in the computing laboratory: Two R&D projects were affected by the loss of data during computational processes. Although work continued without major disruption, the laboratory strengthened its backup mechanisms to protect all experiments in progress.

BCM plans improvements

Based on the insights obtained, several upgrades were made to the BCM plans to enhance the CG model's effectiveness:

- To address talent-related disruptions, a catalog of continuity solutions was incorporated into the talent management plan. These solutions are structured around the lessons learned from preventive actions and isolated incidents. Considering the importance of expertise in an RTO environment, this addition offers structured responses to personnel shortages.
- For incidents related to IT services, the BCM plan for IT was updated by adding an extensive list of critical suppliers, their service scopes, and equivalent backup providers. This ensures the organization can maintain essential digital services even if primary suppliers are affected.
- The data loss events prompted further revisions to the IT services plan. Incident reports were included, and plan thresholds were reassessed to evaluate their effect on the RTO's resilience. Preventive procedures were also reinforced to further minimize the possibility of data-related failures, thereby consolidating the effectiveness of the CG model.

Conclusion

Drawing on the research questions and the examination of the findings, it becomes clear that the CG model functions as a highly effective tool for reducing continuity-related incidents and strengthening overall organizational resilience. In the cases reviewed, 93% were resolved without any external repercussions for clients, demonstrating the model's usefulness in project and process oversight, as also acknowledged by leadership.

In addition, the CG model proved instrumental in prompting essential updates to BCM plans and everyday management routines, as described earlier. Using the CG model in this proactive manner generated measurable benefits for both the organization's resilience posture and its BCM framework.

The model also underwent extensive internal and external scrutiny, including reviews by internal teams (supported by independent professionals) and assessments by external auditors during ISO 22301 evaluations. In both situations, it was identified as a new organizational strength, confirming that the RTO successfully leveraged the system to enhance resilience and significantly reinforce the BCM program.

To gain a complete understanding of continuity challenges and resilience levels, the governance approach adopted should incorporate the following elements:

- A structured catalog of continuity solutions grouped by strategy, derived from preventive insights and small-scale disruptions, allowing continuous enhancement of continuity practices.
- Refinements to operational routines that enable ongoing optimization and improved robustness. In this sense, the CG model acts as a form of process redesign that introduces new angles for protecting stakeholder interests.
- Consideration of the model's influence on:
- The ability to interpret emerging patterns that could lead to incidents
- Faster response capability
- A more integrated approach to handling incidents and executing strategies
- Increased organizational awareness and broader engagement, including key supply-chain partners

Based on the study, it can be concluded that the CG model reinforces organizational resilience by demonstrating its usefulness in reducing or postponing the activation of continuity plans. Organizations certified under ISO 22301 [7, 48] often hold additional certifications such as ISO 9001 [47], ISO 14001 [46], and ISO 27001 [49]. Leveraging the continuous-improvement culture and insights derived from these standards—together with lessons learned—can substantially contribute to resilience and, in turn, support business continuity.

The CG model presents noteworthy implications for both academics and practitioners. From a research standpoint, it constitutes an innovative contribution, with the RTO analyzed serving as an early adopter. As an initial framework, it opens the door to further debate and future research. Practically, the model is thoroughly detailed and highly replicable, offering organizations a means to significantly strengthen their BCM landscape. Its application is not limited to RTOs and could be extended to virtually any type of organization.

This approach is likely usable in similar environments, especially where complex, uncertain, and difficult-to-manage projects are common (e.g., RTOs, consulting firms, financial institutions, service providers, etc.). Nevertheless, this research design has certain constraints:

• Validation of the CG model was carried out in an RTO with a data-centric orientation and multiple quality standards. The model relies on information gathered from numerous events, projects, and processes consolidated in a single ERP system. Applying it elsewhere may require modifying how relevant information is selected and evaluated.

• Although the study could have included a broader theoretical review, the priority was to focus on practical, transferable work. The goal was to enrich the literature on resilience and business continuity by incorporating the most recent publications (2023–2024) and illustrating the real-world use of standards and regulations. While the study design is straightforward and reproducible, putting it into practice requires considerable effort and time.

For future research, we suggest exploring the model within AI-related projects, following the guidelines of the Artificial Intelligence Act of the European Parliament [51], particularly for both technological and management initiatives [52]. Such a study would assess whether risks inherent to AI projects could be classified as continuity risks and, if so, incorporated into the system.

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