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Rethinking Management Control: From Process Improvement to Managerial Decision-Making in a Multinational Organisation

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Internship Report

Master in Economics of Business and Strategy

Supervised by

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FACULDADE DE ECONOMIA UNIVERSIDADE DO PORTO

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Reaching the end of this chapter inevitably makes me look back. And when I think about the last five years or, in truth, all the years that came before, it becomes impossible to tell this story alone. This report marks the end of my academic journey, but every step that brought me here carries something from the people who, in very different ways, walked alongside me.

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This work may have my name on its cover, but the story that brought me to it was never mine alone.

Resumo

O presente relatório analisa criticamente o contributo da melhoria de processos para o controlo de gestão e a tomada de decisão num contexto organizacional multinacional. O relatório baseia-se num estágio curricular realizado no Departamento Financeiro do National Shared Centre da Eurofins Lab Environment Testing Portugal. As atividades desenvolvidas incluíram iniciativas de redesenho, normalização e automatização de processos, bem como projetos relacionados com o reporte de desempenho, a elaboração de previsões e a validação de informação de gestão. Estas experiências constituem a base prática para analisar as relações entre a Gestão de Processos de Negócio, a gestão do desempenho e os Sistemas de Controlo de Gestão.

A reflexão crítica demonstra que o contributo da melhoria de processos ultrapassa a eficiência operacional. Os processos através dos quais os dados são gerados, estruturados e validados influenciam a qualidade e a utilidade da informação posteriormente disponível para o controlo de gestão. Simultaneamente, informação tecnicamente fiável não constitui, por si só, suporte suficiente à ação dos gestores, uma vez que a sua relevância depende também da interpretação contextual e do julgamento de gestão. O contexto multinacional evidencia ainda a necessidade de equilibrar normalização e flexibilidade: estruturas comuns podem facilitar a coordenação e a comparabilidade, enquanto diferenças entre unidades organizacionais podem exigir adaptação às respetivas circunstâncias operacionais.

O estágio sustenta, assim, uma compreensão integrada do controlo de gestão assente nas relações entre o desenho de processos, a informação, o julgamento de gestão e a coordenação organizacional. A melhoria de processos contribui para o controlo de gestão não apenas através do aumento da eficiência, mas também pelo reforço das condições que permitem transformar informação organizacional em suporte relevante para a tomada de decisão.

Palavras-chave: Controlo de Gestão; Gestão de Processos; Melhoria de Processos; Medição de Desempenho; Tomada de Decisão; Coordenação Organizacional.

Abstract

This report critically examines the contribution of process improvement to management control and managerial decision-making within a multinational organisational context. It draws on a curricular internship undertaken within the Financial Department of the National Shared Centre at Eurofins Lab Environment Testing Portugal. The activities developed included process redesign, standardisation and automation, together with projects involving performance reporting, forecasting and the validation of management information. These experiences provide the practical basis for examining the connections between Business Process Management, performance management and Management Control Systems.

The critical reflection demonstrates that the contribution of process improvement extends beyond operational efficiency. The processes through which data are generated, structured and validated influence the quality and usefulness of the information subsequently available for management control. At the same time, technically reliable information does not automatically provide sufficient support for managerial action, as its relevance also depends on contextual interpretation and managerial judgement. The multinational setting further highlights the need to balance standardisation and flexibility: common structures can facilitate coordination and comparability, while differences between organisational units may require adaptation to specific operational circumstances.

The internship ultimately supports an integrated understanding of management control based on the connections between process design, information, managerial judgement and organisational coordination. Process improvement contributes to management control not only by increasing efficiency, but also by strengthening the conditions through which organisational information can be transformed into meaningful support for managerial decision-making.

Keywords: Management Control; Business Process Management; Process Improvement; Performance Measurement; Managerial Decision-Making; Organisational Coordination.

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1. Introduction

Contemporary organisations increasingly depend on their ability to generate reliable information for planning, performance monitoring and managerial decision-making. As organisational activities become more complex and increasingly supported by digital technologies, effective management control requires more than the measurement of financial results. It also depends on the processes through which information is generated and structured, the mechanisms through which performance is monitored and evaluated, and the way information is interpreted and used by managers. Management Control Systems (MCSs) provide a broader framework through which these mechanisms can be considered in relation to organisational objectives and managerial action (Otley, 1999; Malmi & Brown, 2008).

These requirements become particularly relevant in multinational organisations, where activities and information are distributed across different entities and business units. Common processes, reporting structures and performance mechanisms can facilitate coordination and comparability, while differences in operational circumstances may require practices to remain sufficiently adaptable to the realities of individual organisational units (Sageder & Feldbauer-Durstmüller, 2019). Digitalisation, automation and process standardisation create additional opportunities to improve how activities and information flows are organised, but their contribution depends on how they respond to the processes and organisational requirements in which they are implemented (Dumas et al., 2018; Verhoef et al., 2021). Management control in this context consequently involves not only monitoring organisational performance but also creating the informational and organisational conditions through which performance information can effectively support managerial action.

Against this background, the curricular internship undertaken at Eurofins Lab Environment Testing Portugal provided the practical setting for the present report. The internship was conducted within the Financial Department of the National Shared Centre (NSC), which supports different entities within the Portuguese Eurofins network. Operating within the broader context of the Eurofins Group, the department provided direct exposure to processes through which financial and operational information was collected, structured, validated and subsequently used for performance monitoring, planning and reporting. This setting enabled management control to be observed not only through its visible outputs, such

as reports, budgets and forecasts, but also through the processes and organisational interactions underlying their production.

The internship was predominantly project-oriented and combined process improvement initiatives with activities directly associated with performance management. The projects developed involved the redesign, standardisation and automation of organisational processes, as well as the preparation and validation of management information used in reporting and forecasting activities. Although these initiatives responded to different organisational needs, recurring connections emerged between them. Improvements to processes affected how information was generated and structured, while reporting and forecasting activities demonstrated that the availability of financial information alone was insufficient for managerial purposes without appropriate validation and interpretation. The multinational organisational setting further highlighted the need to combine common structures with sufficient flexibility to accommodate differences between business units. The internship thus provided an opportunity to examine how activities that initially appeared distinct could contribute jointly to the effectiveness of management control.

The objective of this report is to critically examine the contribution of the activities developed during the internship to management control and managerial decision-making within a multinational organisational context. Particular attention is given to three interconnected dimensions. The first concerns how process redesign, digitalisation, automation and standardisation can improve the processes through which organisational information is generated and communicated. The second considers how performance measurement, budgeting, forecasting and performance review structure this information for monitoring and planning, while requiring managerial interpretation to become meaningful for action. The third addresses organisational coordination, particularly the role of common structures and practices in supporting different business units while preserving sufficient flexibility to reflect relevant operational differences. Rather than treating these dimensions independently, the report considers their interaction as the analytical thread connecting the practical activities undertaken during the internship with their subsequent theoretical and critical interpretation.

The report is structured accordingly. Following this introduction, Chapter 2 presents the organisational context of the internship, beginning with the Eurofins Group and

progressively focusing on its presence in Portugal, Eurofins Lab Environment Testing Portugal, the National Shared Centre and its Financial Department. The activities developed during the internship are then described, providing the practical basis for the subsequent analysis. Chapter 3 establishes the theoretical framework through four interconnected areas: Business Process Management, process standardisation, digitalisation and information quality; performance measurement and organisational planning; management control in multinational corporations; and contemporary perspectives on Management Control Systems. Chapter 4 critically reflects on the internship experience in light of this literature, examining the informational foundations of management control, the role of managerial judgement in the use of performance information, and the appropriate level of standardisation in organisational coordination. These dimensions are subsequently brought together into an integrated interpretation connecting process design, information, managerial judgement and organisational action. The final chapter presents the main conclusions, limitations and implications emerging from the internship experience.

2. Company Description and Activities Developed

2.1 Company Description

2.1.1 Eurofins Scientific[1]

Founded in 1987 by Dr. Gilles Martin, Eurofins Scientific began as a small laboratory specialising in food authenticity testing. Since then, it has grown into one of the world's largest laboratory testing groups, while maintaining its core purpose of providing reliable scientific information to support decisions concerning product quality, public health and environmental protection.

Today, Eurofins operates more than 950 laboratories across 59 countries, employs over 65,000 people and performs more than 450 million analytical tests annually using a portfolio of more than 200,000 analytical methods. The Group provides testing services across multiple areas, including food and feed, pharmaceuticals, clinical diagnostics, environmental testing, agrosciences, genomics, forensic sciences and consumer products.

Figure 1 - Geographic presence of the Eurofins network.



Source: Eurofins Scientific, Annual Report 2025 (2026, p. 11)

Eurofins' international expansion has been supported by continuous investment in research and development and the acquisition of specialised laboratories, integrating complementary expertise into a global network while preserving local know-how. This strategy has strengthened both the Group's scientific capabilities and geographical presence,

[1] Unless otherwise indicated, the information presented in this subsection is based on the Eurofins Scientific Annual Report 2025 (Eurofins Scientific, 2026)

while simultaneously increasing the organisational complexity associated with coordinating a large international network.

A defining characteristic of Eurofins is its decentralised organisational model. Individual companies retain considerable operational autonomy and responsibility for their activities while operating within a broader Eurofins network and benefiting from shared scientific expertise, technological resources and quality standards. This structure allows local entities to remain responsive to the specific characteristics of their markets and areas of competence while simultaneously drawing on the scale and capabilities of an international laboratory network.

2.1.2 Eurofins in Portugal

Eurofins' international expansion is reflected in Portugal through a diversified presence comprising laboratory operations and support-service entities. Rather than concentrating its activities within a single national company, the Group operates through legally distinct entities associated with different business areas. This structure reflects Eurofins' broader decentralised model, combining specialised local operations with access to the scientific, technological and organisational capabilities of the wider international network (Eurofins Portugal, n.d.).

The Group's Portuguese perimeter includes Eurofins Lab Environment Testing Portugal, Eurofins Food Testing Lisboa, Laboratório de Análises Clínicas J. Pinto de Barros, Lagra – Laboratório Agrícola do Alentejo, Confidentia – Tecnologías Informáticas Aplicadas, and Eurofins Business Services Portugal. These entities illustrate the diversity of Eurofins' presence in the country, which extends beyond laboratory testing to include technological and business support activities (Eurofins Scientific, 2026).

Within its laboratory operations, Eurofins maintains activities in environmental testing, food and agricultural analysis, and clinical diagnostics. Food-testing activities are present in the Lisbon and Porto districts, while agricultural laboratory services are represented by Eurofins Lagra in the Beja district. These activities provide analytical support across the food and agricultural value chains, including areas related to food quality and safety, agricultural production, irrigation water, fertilisers, olives and olive-derived products. Eurofins also maintains agroscience activities in the Viana do Castelo district, supporting studies associated with the development and registration of agricultural products (Eurofins Portugal, n.d.). Taken together, these different areas demonstrate that Eurofins' presence in

Portugal reproduces, at a national scale, the structure of the wider Group: distinct entities operate in different scientific and service areas while remaining part of the same international network (Eurofins Scientific, 2026).

Given its direct relevance to the organisational context of this report, Eurofins Lab Environment Testing Portugal is examined in greater detail in the following subsection.

2.1.3 Eurofins Lab Environment Testing Portugal and the National Shared Centre

Eurofins Lab Environment Testing Portugal is one of the specialised entities within the Portuguese Eurofins network, dedicated primarily to environmental laboratory testing. Its activities support both public and private organisations through analytical services covering water, wastewater, soil, waste, air emissions and other environmental matrices. By providing scientifically validated analytical results, the company assists clients in complying with environmental legislation, monitoring environmental quality and supporting decision-making related to environmental management and sustainability (Eurofins Lab Environment Testing Portugal, n.d.).

The laboratory operates within the Group's quality management framework, applying harmonised analytical procedures while responding to the specific regulatory and operational requirements of the Portuguese market. As part of the wider Eurofins network, it benefits from shared scientific expertise, technological resources and common quality standards, enabling it to deliver reliable analytical services while maintaining consistency with the Group's international practices (Eurofins Portugal, n.d.; Eurofins Scientific, 2026).

Beyond its laboratory activities, Eurofins Lab Environment Testing Portugal also hosts the National Shared Centre (NSC), which centralises a range of support activities for the Portuguese Eurofins entities. The NSC comprises different functional areas, including the Financial Department, Payroll, Accounts Payable and Accounts Receivable. Through this shared structure, activities that support multiple Portuguese entities are coordinated within a common organisational setting rather than being performed independently within each individual company.[2]

[2]The information regarding the organisational structure of the National Shared Centre and its role within Eurofins Lab Environment Testing Portugal is based on direct observation and organisational knowledge acquired during the curricular internship.

This organisational arrangement gives Eurofins Lab Environment Testing Portugal a dual role within the Portuguese network: alongside its core environmental laboratory activities, the company hosts a shared-services structure supporting the broader national organisation. The curricular internship was undertaken within the NSC, specifically in its Financial Department, which was internally organised into Accounting and Controlling functions. The organisation and activities of this department are presented in the following subsection.

2.1.4 The Financial Department[3]

The curricular internship was undertaken within the Financial Department of the National Shared Centre (NSC), which provides financial support services to all Portuguese Eurofins entities. The department is responsible for producing, validating and analysing financial information according to both local management requirements and Eurofins Group reporting standards, supporting the monitoring of financial and operational performance.

The department comprised two complementary functions: Accounting and Controlling. The Accounting team was responsible for recording financial transactions, performing reconciliations, and producing the financial statements of each Portuguese entity. Building upon this information, the Controlling team analysed and validated financial results and prepared management information for local and Group reporting. Accounting outputs therefore constituted an important input for Controlling activities throughout the reporting cycle.

The Controlling function extended beyond the validation of financial figures to the analysis of the business reality underlying reported results. Significant deviations and unexpected variations were investigated before information was communicated to management, requiring financial results to be considered alongside operational circumstances of the respective entities and business units.

The department operated according to a structured monthly reporting cycle. Following the preparation of financial information by Accounting, Controlling validated the reported figures and prepared the Income Statement versus Budget (IS vs Budget), a central

[3] Unless otherwise indicated, the information presented in this subsection is based on direct observation, organisational documentation made available during the curricular internship and knowledge acquired throughout the placement.

management reporting document used to monitor actual performance against planned results across entities and business units. The resulting information was subsequently reported to the Group through its corporate reporting system. Outside the monthly reporting cycle, the department's activities included budgeting, forecasting, performance monitoring and continuous improvement initiatives.

2.2 Activities Developed during the Internship

Although the primary objective of the internship was the development of projects aimed at improving management control processes, the activities performed were not limited to these initiatives. Throughout the internship, collaboration with different members of the Financial Department provided opportunities to support a variety of ad hoc tasks related to reporting, budgeting, payroll and other departmental activities. This continuous involvement provided a broader understanding of the department's day-to-day operations and, importantly, of the processes underlying the information used for financial and management control processes.

Building upon this experience, several projects were developed in response to different organisational needs. Despite their distinct objectives, the projects shared a common emphasis on understanding and improving the processes through which information was generated, structured, validated and ultimately made available for organisational use. Depending on the characteristics of each process, this involved different combinations of redesign, standardisation, automation and validation. The following subsections present the context in which each emerged, the activities performed and the resulting improvements.

2.2.1 Optimisation of the Income Statement versus Budget Reporting Process

Among the various activities developed during the internship, the redesign and automation of the Income Statement versus Budget (IS vs Budget) reporting process represented one of the most significant projects undertaken. This initiative aimed not only to reduce the manual effort associated with the monthly preparation of the report, but also to improve the quality and analytical usefulness of the information available to decision-makers.

The IS vs Budget constituted the main management reporting instrument used by Eurofins Portugal to monitor the monthly financial performance of its business units. Prepared for each business unit within every Portuguese entity, the report consolidated the values of the Income Statement accounts for the current financial year alongside the corresponding budget figures previously approved. Updated monthly following the financial closing process, it provided management with a continuous comparison between actual and budgeted performance, supporting the monitoring of operational results, the identification of significant deviations, investment decisions and the preparation of information required for Group reporting. Given its strategic importance, the report required the coordinated contribution of the Accounting, Controlling and Management teams, becoming the central document supporting monthly performance analysis.

Despite its importance, the existing reporting process presented several operational limitations. From a technical perspective, monthly preparation relied heavily on manual procedures, including duplicating and renaming files and folders and updating links between interconnected Excel workbooks. Besides being time-consuming, these activities increased the risk of human error and broken links, while simultaneous use of interconnected files frequently affected their performance and made the reporting process difficult to manage.

From a managerial perspective, the report also presented limitations in how financial information was communicated. Its structure consisted primarily of large tables comparing monthly actual and budget values, requiring users to consult and consolidate information from multiple supporting documents to obtain a broader view of business performance. The fragmentation of management information therefore limited the report's usefulness for rapid performance analysis.

In response to these challenges, the project focused simultaneously on the automation of the reporting process and the redesign of the report's analytical structure.

Regarding process automation, a VBA macro was developed to replicate automatically the monthly folder creation procedure previously performed manually by the department. Activated through a single "Close Month" command, the macro automatically generated the folder structure for the subsequent reporting period, renamed the required files, prepared the new reporting templates and recreated all workbook links necessary for the following month's reporting cycle. The solution therefore replaced a repetitive sequence of manual tasks with a fully automated procedure, substantially reducing preparation time while improving process reliability.

Beyond automation, the project sought to enhance the report's analytical capabilities. Considering that management discussions frequently focused on quarterly rather than solely monthly performance, a new analytical section was incorporated into the report. For each Income Statement account and key performance indicator, four additional quarterly comparison columns were introduced, presenting the previous year's quarterly results, the current year's actual performance, the corresponding budget and the Monthly Current Estimate (MCE). This redesign enabled managers to evaluate financial performance from a broader perspective without requiring additional calculations or consultation of multiple documents, substantially improving the report's capacity to support decision-making. An anonymised representation of the redesigned IS vs Budget report is presented in Annex I. While all company names, business units and financial values have been replaced with fictional information, the annex preserves the report's original structure and analytical layout developed during the project.

During the development phase, Microsoft Power BI was considered as an alternative for creating a more dynamic reporting tool. However, discussions with the Financial Department and the Continuous Improvement team indicated that its implementation would require an intermediate database, additional technical resources and the parallel maintenance of the existing reporting process during the transition. Given the internship's timeframe, preference was therefore given to a solution that could be integrated directly into the existing workflow and remain compatible with Group reporting requirements.

The redesigned process was implemented and tested for one Portuguese entity and its respective business units. Following validation, the solution could be transferred to the remaining Portuguese entities through the addition of a control worksheet enabling the automatic preparation of subsequent reporting periods.

Overall, the project improved both the efficiency of the monthly reporting process and the structure of the information presented in the IS vs Budget. The automation reduced the manual activities required to prepare each reporting period, while the introduction of quarterly comparisons consolidated additional performance information within the existing report. The redesigned process therefore reduced the operational effort associated with report preparation and provided management with a more comprehensive view of financial performance within the same reporting structure.

2.2.2 Supporting the Monthly Current Estimate (MCE) Process

In addition to the recurring monthly reporting activities, the internship involved supporting the preparation and validation of Monthly Current Estimates (MCEs). Unlike the standard IS vs Budget process, which compares actual financial performance with the budget approved for the financial year, the MCE process was only initiated when predefined Group validation criteria indicated that the original budget no longer provided a realistic representation of the company's expected performance. Under these circumstances, the purpose of the MCE was to revise the forecast for the remaining months of the financial year, ensuring that management decisions were based on updated and more reliable expectations.

The preparation of an MCE followed a structured process. Following the monthly financial closing, the Controlling team compared actual results against the approved budget and applied a set of consistency rules established by the Eurofins Group. These rules assessed whether the relationships between key financial and operational variables remained coherent. Whenever the predefined criteria were not satisfied, the company was requested to prepare a revised forecast for the remainder of the financial year. Rather than simply adjusting isolated values, this exercise required a comprehensive reassessment of the company's expected performance, incorporating updated operational assumptions and revising the projected evolution of the main financial accounts. Once completed, the revised forecast was submitted to the NSC for validation before being incorporated into the IS vs Budget report, replacing the original budget as the reference for future monthly performance comparisons.

Within this process, the activities performed included preparing the working files used during the validation stage, consolidating the relevant financial information and supporting the verification of the revised forecasts before their submission to the CFO.

Although the validation criteria had been previously defined at Group level, a new validation worksheet was developed to automatically assess whether the revised forecasts complied with these requirements. The redesigned control sheet presented the validation results in a more intuitive manner, highlighting potential inconsistencies through conditional formatting and facilitating the review process performed by the department. While relatively simple from a technical perspective, this improvement enhanced the clarity of the validation process and reduced the likelihood of overlooking inconsistencies during the review stage.

The project also highlighted practical challenges associated with the preparation and validation of management information. The MCE relied on information received from different organisational units and files, occasionally revealing discrepancies between the data available within the NSC and the versions used by individual companies. Although these differences were generally resolved during validation, they reinforced the importance of verifying the consistency of financial information before incorporating it into management reports. As the project was undertaken during the initial stages of the internship, an additional challenge involved understanding the managerial rationale underlying each adjustment and recognising that financial values reflected specific operational assumptions rather than simply numerical results.

Finally, the MCE process involved not only the preparation of revised financial projections but also the validation of the assumptions underlying them. Projected values were reviewed for internal consistency and assessed against the operational information provided by the respective business units before being incorporated into the management reporting process. This validation enabled inconsistencies or unrealistic assumptions to be identified and clarified before the revised estimates were submitted to management.

2.2.3 Preparation of the First-Quarter 2027 Forecast

One of the most demanding projects undertaken during the internship involved supporting the preparation of the first-quarter forecast for 2027, an exceptional planning exercise requested directly by the Country Chief Executive Officer. Unlike the recurring reporting and forecasting activities performed within the Financial Department, this exercise did not form part of the organisation's standard planning cycle. Instead, it arose from a strategic request aimed at providing management with an early assessment of the expected financial performance during the first quarter of 2027. The objective was to reduce

uncertainty surrounding the forthcoming financial year and enable management to anticipate potential operational and financial requirements.

The forecasting exercise covered the period from January to March 2027 and was prepared for all mature core business units within the Portuguese entities. The forecasts incorporated selected financial and operational indicators and once completed, were reviewed by the respective management teams before being submitted through the Group reporting platform for subsequent analysis by senior management.

The preparation of the forecasting model required the integration of multiple information sources, including historical and current financial performance, budget information and relevant external assumptions. However, the forecasting process extended beyond the extrapolation of historical financial data, as several projected values depended on operational drivers and business-specific assumptions. Consequently, the preparation of the forecasting templates required not only financial analysis but also an understanding of the operational logic underlying each business unit.

Within the project, the activities performed focused on preparing and adapting the Excel forecasting models subsequently completed by the Business Unit Managers (BUMAs). Building upon an existing forecasting structure, the templates were adapted and replicated for each business unit, incorporating the historical financial information, current-year performance and budget data required for the exercise. Formulas were also introduced to automate calculations based on predefined assumptions, allowing projected financial results and key performance indicators to update automatically as operational inputs were provided. This reduced manual calculations while promoting greater consistency across the forecasting templates.

The project also required extensive interaction with multiple stakeholders. Throughout its development, discussions were held with senior controllers, Business Unit Managers and members of the payroll team in order to clarify assumptions, understand operational specificities and resolve inconsistencies identified during the preparation of the forecasting templates. The diversity of the business units represented one of the project's main challenges. Although a common forecasting structure was required, each business unit operated according to different operational dynamics and therefore relied on different forecasting assumptions. Consequently, several calculations could not simply be replicated

across the organisation and instead required an understanding of the underlying business processes before appropriate forecasting formulas could be implemented.

From a project management perspective, the forecasting exercise was particularly challenging due to communication difficulties and severe time constraints. During its development, aspects of the scope and deadlines changed, additional entities were incorporated shortly before delivery, and uncertainty remained regarding the required reporting level and template structure. At the same time, the department sought to design the forecasting structure so that it could subsequently support the annual budgeting process. This additional objective increased the complexity of the project within an already limited timeframe, requiring some elements of the immediate forecast to be completed through simplified solutions.

Despite these challenges, the forecasting models were prepared and delivered within the required timeframe, enabling the participating entities to complete and submit their forecasts. The preparation of the models required operational expectations and business-specific assumptions to be translated into financial projections, with the underlying calculations adapted where necessary to reflect the characteristics of each business unit.

2.2.4 Redesign and Automation of the Employee Onboarding Data Collection Process

During the internship, a process improvement initiative was developed to redesign the collection of employee information required for payroll processing and statutory reporting. The project originated from a practical problem identified by the head of Payroll within the National Shared Centre. Although newly recruited employees already completed an onboarding form, the information collected was insufficient for subsequent payroll and administrative processes. Consequently, the Payroll team frequently needed to contact employees again to obtain additional information, creating duplicated work, delays and unnecessary administrative effort.

The existing process also affected the quality of the information entering the organisation's information systems. Employee data ultimately needed to be imported into the Primavera payroll software according to predefined structures and coding conventions, requiring manually collected information to be reformatted before importation. This created additional manual interventions, increasing the risk of errors and the administrative workload of both Payroll and Human Resources.

To address these limitations, the process was redesigned by transferring the collection of required information directly to its original source: the new employee. Rather than collecting only a limited number of details during the initial onboarding stage and requesting the remaining information later, a new Microsoft Forms questionnaire was developed to capture all the information required throughout the entire payroll registration process. The form contained approximately forty-five fields and incorporated conditional logic, ensuring that employees were only presented with questions relevant to their individual circumstances. This approach maintained the comprehensiveness of the information collected while preserving a user-friendly experience.

Form submissions were automatically transferred through Microsoft Power Automate to a raw data table in Excel. Since the information collected did not directly correspond to the structure required by the payroll software, a second table was developed to automatically transform the responses into the appropriate coding structure and field sequence for importation into Primavera. This enabled the resulting file to be uploaded without additional manual reformatting. The redesigned workflow and anonymised examples of the raw and formatted data tables are presented in Annex II.

Throughout the project, close collaboration was maintained with the Head of Payroll and representatives from the Human Resources department to ensure that the redesigned process captured all the information required across different employment situations. Since some information could not reasonably be provided by new employees, a limited number of fields remained the responsibility of the Human Resources department, preserving the accuracy of organisation-specific data while ensuring that most of the process became fully automated. Upon completion of the project, training sessions were also delivered to both Payroll and Human Resources personnel to facilitate the implementation of the new process.

The redesigned workflow reduced manual intervention by collecting the required information at the beginning of the process and automatically transforming it into the format required by the payroll software. This reduced repeated communication between Payroll, Human Resources and new employees while improving data consistency and reducing manual data entry. Following implementation within one Portuguese entity, the solution received positive feedback and was considered as a basis for future standardisation across the remaining Portuguese entities.

Overall, the redesigned process reduced the manual activities associated with employee onboarding and payroll registration. Collecting the required information at the beginning of the process reduced the need for subsequent communication with employees, while the automated transformation of responses into the structure required by Primavera eliminated much of the manual reformatting previously performed by Payroll. The resulting workflow provided a more direct and standardised flow of employee information from its initial collection to its subsequent import into the payroll system.

2.2.5 Standardisation and Automation of the Project Monitoring System

The final project developed during the internship focused on redesigning and automating the project monitoring system used by the Financial Department to manage continuous improvement initiatives. Unlike the previous projects, this initiative focused on the planning, monitoring and visualisation of project execution. Developed in collaboration with the Continuous Improvement Department, the project aimed to transform a highly manual monitoring tool into a more standardised and efficient project management system.

Prior to the redesign, project monitoring was performed through an Excel workbook composed of two worksheets: an activity table and a Gantt chart representing the project timeline. Although this structure enabled project managers to monitor progress, updates to activities, deadlines or task sequencing required both worksheets to be manually adjusted, including the formatting of the visual timeline. As projects evolved, maintaining the tracker therefore became increasingly time-consuming, reducing its efficiency and limiting its adoption within the department.

Recognising these limitations, the CFO initiated a process improvement project in collaboration with the Continuous Improvement Department. Within this collaboration, the activities performed during the internship focused on the management perspective and the practical requirements of the tracker's future users, complementing the technical automation expertise of the Continuous Improvement team. The project therefore began by reconsidering the underlying information structure before proceeding with its automation.

The primary contribution to the project consisted of redesigning the Activities worksheet, which served as the foundation of the monitoring system. The previous structure was reorganised around a hierarchical decomposition of the project activities into macro, meso and micro tasks, allowing users to monitor projects at different levels of detail while maintaining a clear overview of their overall progression. Additional fields were introduced

to distinguish between expected and actual start and end dates, automatically calculating the planned and actual duration of each activity. Furthermore, conditional formatting was incorporated to compare planned and actual execution times, immediately highlighting whether activities had been completed within, below or above, the expected timeframe. To further support project monitoring, status indicators identifying whether each activity had not yet started, was in progress, had been completed or was temporarily on hold were also incorporated into the redesigned structure.

Building upon this redesigned information structure, the Continuous Improvement Department developed a VBA macro that automatically generated and updated the visual project tracker. Based on the information entered into the Activities worksheet, the macro produced the project timeline, displaying the main activities, milestones and respective durations. Changes to the underlying activity table were therefore automatically reflected in the visual representation, eliminating the need for repetitive manual formatting and ensuring consistency between both worksheets. An anonymised representation of the redesigned Activities worksheet, which provides the underlying information used to generate the project tracker, is presented in Annex III.

The project underwent several iterative development cycles, requiring close collaboration between the Financial and Continuous Improvement Departments. A central challenge was balancing the amount of information required for effective project monitoring with the need to maintain an intuitive tool for its users. Consequently, the structure of the Activities worksheet was progressively simplified and refined before the automation of the visual tracker was finalised.

Following successful testing on an active project, the redesigned tracker was implemented within the department for future continuous improvement initiatives. The solution reduced the manual effort required to maintain project schedules while providing a clearer overview of activities, responsibilities, deadlines and project status. The standardised structure also facilitated the monitoring and comparison of projects through a consistent information framework.

The project combined process redesign, standardisation and automation within the project monitoring system. The redesigned Activities worksheet established a common structure for recording project activities, deadlines and status information, while the

subsequent automation enabled this information to be transferred automatically to the visual tracker. The resulting system reduced the manual effort required to update project schedules and maintained consistency between the underlying activity information and its visual representation.

Despite addressing different organisational needs, the projects developed throughout the internship revealed several recurring challenges. Across reporting, forecasting, payroll and project monitoring activities, process design consistently influenced the way information was generated, structured and subsequently used. Automation and standardisation emerged as recurring mechanisms for reducing manual intervention and improving consistency, but their implementation depended on understanding the supporting processes and the requirements of their users. At the same time, the reporting and forecasting projects demonstrated that the availability of financial data alone was insufficient: information required validation, interpretation and consideration of the operational context before it could effectively support performance monitoring and managerial decision-making.

These recurring themes provide the basis for the literature reviewed in the following chapter. The practical importance of understanding and redesigning organisational processes motivates the examination of Business Process Management, process standardisation and digitalisation, while the recurring use of reports, performance indicators, budgets and forecasts requires consideration of the literature on performance measurement and management information. Furthermore, the coordination of activities across different business units and organisational actors, together with the need to reconcile common structures with distinct operational realities, raises questions regarding shared services, organisational coordination and the balance between standardisation and flexibility. These perspectives ultimately converge within the broader literature on Management Control Systems, providing the theoretical framework through which the internship experience is subsequently analysed.

3. Literature Review

3.1 Business Process Management: Process Standardisation, Digitalisation and Information Quality

3.1.1 Business Process Management and Process Standardisation

In increasingly dynamic organisational environments, improving performance requires organisations to look beyond individual tasks and consider how interconnected activities collectively contribute to organisational outcomes. Business Process Management (BPM) provides a systematic approach to understanding, designing, executing, monitoring and continuously improving these processes, treating them as organisational assets rather than isolated operational activities (Dumas et al., 2018). This process-oriented perspective shifts attention from individual tasks towards the relationships between activities and the way they collectively transform inputs into outputs.

BPM therefore considers processes as dynamic rather than static organisational arrangements. Process management involves identifying and modelling existing processes, analysing their performance, redesigning and implementing improvements, and subsequently monitoring their effectiveness (Dumas et al., 2018). This cyclical perspective implies that process improvement is not a one-time intervention. Processes require continuous evaluation as organisational objectives, technologies and operational requirements evolve, making improvement an ongoing managerial activity rather than an isolated organisational initiative.

Within this context, process standardisation establishes common procedures, responsibilities and information structures to reduce unnecessary variation and improve consistency. Standardised processes can facilitate coordination, comparability and information reliability, particularly when similar activities are performed across different business units. However, standardisation does not necessarily imply complete uniformity. Common structures may provide consistency while still allowing processes to accommodate differences arising from specific operational requirements (Dumas et al., 2018). The value of standardisation therefore lies not simply in making activities identical, but in reducing unnecessary variation without disregarding differences that remain relevant to process performance.

Process improvement also requires organisations to question the design of existing processes before introducing technological solutions. Automating an inefficient process may

reproduce rather than eliminate its underlying limitations. Effective redesign therefore involves reconsidering how activities are structured and how information moves between them, identifying opportunities to simplify activities, reduce unnecessary handovers and eliminate non-value-added work. Improvements can consequently affect several dimensions of process performance, including execution time, cost, quality, and flexibility (Reijers & Limam Mansar, 2005). Process redesign should therefore be assessed according to the organisational problems it addresses and the improvements it generates rather than according to the sophistication of the solution implemented.

Taken together, BPM and process redesign emphasise that improving organisational processes requires more than modifying individual tasks. It involves understanding how activities interact, identifying unnecessary complexity and determining where greater consistency can improve process performance (Dumas et al., 2018; Reijers & Limam Mansar, 2005). This perspective is particularly relevant when technological solutions are introduced, since automation can reinforce process improvements but may also reproduce existing inefficiencies when applied without prior process analysis. The increasing use of digital technologies in organisational processes therefore extends the discussion from process design to the role of digitalisation and automation, which constitutes the focus of the following subsection.

3.1.2 Process Digitalisation and Automation

Digital technologies have changed how organisations design and execute business processes by enabling activities and information flows to be increasingly supported by digital systems. Digitalisation should therefore be distinguished from the simple conversion of analogue information into digital formats. While digitisation concerns this conversion, digitalisation refers to the use of digital technologies to improve business processes and organisational activities, whereas digital transformation involves broader changes to organisational structures, business models and value creation (Verhoef et al., 2021). For process improvement, the relevance of digitalisation lies particularly in its capacity to change how existing activities are performed and coordinated.

Within Business Process Management, automation represents a practical application of digital technologies to the execution and coordination of organisational processes. Information systems can automate routine activities and support workflows that would otherwise require manual intervention, potentially reducing execution time and improving

process consistency (Dumas et al., 2018). Automation should not, however, be treated as an objective. Its contribution depends on the characteristics of the underlying process and on whether technology addresses existing inefficiencies rather than reproducing them in a digital environment.

This distinction reinforces the importance of redesign preceding automation. Digital solutions can support process improvement by reducing repetitive activities, facilitating information exchange between process participants and improving the coordination of activities throughout a process (Dumas et al., 2018). Digitalisation is therefore most appropriately understood as an enabler of process improvement whose value depends on its integration with appropriately designed organisational processes rather than on technological adoption alone (Dumas et al., 2018; Verhoef et al., 2021).

The implications of digitalisation consequently extend beyond process efficiency. Because organisational processes also determine how data are captured, transferred and transformed, changes to those processes can influence the information available for subsequent organisational use (Dumas et al., 2018). Reducing manual intervention and restructuring information flows may improve the conditions under which information is produced, but technological automation does not by itself guarantee that the resulting information will be accurate, relevant or useful to its users. Assessing process improvement therefore also requires considering the quality of the information generated and its capacity to support managerial decision-making, which constitutes the focus of the following subsection.

3.1.3 Information Quality and Decision Support

The contribution of organisational processes depends not only on how efficiently activities are performed but also on the quality of the information they generate. Information used for planning, monitoring and decision-making must therefore satisfy requirements that extend beyond technical accuracy. Information quality encompasses characteristics such as accuracy, relevance, completeness, timeliness, consistency and accessibility, which collectively influence whether information is appropriate for its intended organisational use (Lee et al., 2002).

This perspective places the user of information at the centre of quality assessment. The AIMQ framework developed by Lee et al. (2002) distinguishes between intrinsic, contextual, representational and accessibility dimensions of information quality, reflecting the idea that

technically correct data may still be of limited value if they are incomplete, outdated, difficult to interpret or inappropriate for the task being performed. Information quality should therefore be evaluated in relation to its intended use rather than exclusively according to the technical characteristics of the data.

Information quality is also closely connected to the processes through which information is generated and communicated. Organisational processes involve the continuous capture, transformation and transfer of information between activities and participants, meaning that weaknesses in process design can affect the completeness and consistency of the resulting information (Dumas et al., 2018). Process improvement consequently has an informational as well as an operational dimension: redesigning how activities and information flows are structured can influence the quality of the information subsequently available for organisational use.

This relationship becomes particularly relevant when information is used to support managerial decisions. Information that is relevant, sufficiently timely and representative of organisational activities provides a stronger basis for planning and performance evaluation, whereas incomplete or inconsistent information may limit the usefulness of these processes (Lee et al., 2002). The contribution of process improvement and digitalisation should therefore not be assessed exclusively through reductions in manual work or execution time, but also through the quality and usefulness of the information that the redesigned processes make available.

Information quality thus provides the link between the process-oriented perspective developed in this section and the management control mechanisms examined next. Once organisational processes generate and communicate information, that information must be transformed into measures and planning mechanisms through which performance can be monitored and evaluated. The following section therefore examines performance measurement, Key Performance Indicators, budgeting and forecasting, focusing on how organisational information is structured and used to support performance management and managerial decision-making.

3.2 Performance Management and Organisational Planning

3.2.1 Performance Measurement Systems and Key Performance Indicators

The availability of reliable organisational information does not, by itself, ensure effective performance management. Information must be structured in ways that enable organisations to establish expectations, monitor results and evaluate whether activities contribute to organisational objectives. Performance measurement systems fulfil this role by connecting objectives and strategies with performance measures, targets and feedback mechanisms. Their function therefore extends beyond the reporting of financial results, forming part of a broader management process through which performance is evaluated, and information is used to support managerial action (Otley, 1999).

From this perspective, performance measurement should be understood as an integrated process rather than as the operation of individual measures in isolation. Organisational objectives and strategies must relate to performance targets, evaluation and feedback mechanisms, while appropriate information flows allow results to be reviewed and communicated throughout the management process. Performance measurement acquires managerial relevance not simply through the production of measures, but through their integration into processes that enable results to be compared with expectations and provide information for subsequent action (Otley, 1999; Ferreira & Otley, 2009). This systemic perspective also highlights the role of feedback in maintaining the connection between organisational objectives and operational activities as performance evolves.

The contribution of performance measurement also depends on how the resulting information is used by managers. Performance measures can influence managerial cognition by increasing managers' understanding of organisational conditions, clarifying responsibilities and providing information relevant to decision-making (Hall, 2016). Their usefulness therefore extends beyond the numerical representation of performance: measures can contribute to the way managers understand organisational activities and identify issues requiring attention. Performance measurement should consequently be evaluated not only according to the information it produces, but also according to its capacity to support managerial understanding and decision-making (Hall, 2016).

Within performance measurement systems, Key Performance Indicators (KPIs) provide selected measures through which relevant aspects of organisational performance can be monitored. Their purpose is not to capture every measurable organisational activity, but

to focus attention on information that is particularly relevant to organisational objectives and performance. Accordingly, the usefulness of KPIs depends on the relationship between what is measured and the organisational priorities that the measures are intended to represent. Performance measurement should therefore begin with the information required to understand organisational objectives rather than with the data that are most readily available (Marr, 2012; Parmenter, 2015).

Selectivity is therefore an important characteristic of performance measurement. Increasing the number of measures does not necessarily improve performance information, since extensive measurement can make it more difficult to distinguish strategically relevant information from routine operational data. A more focused set of indicators can instead direct managerial attention towards the aspects of performance most relevant to organisational objectives (Marr, 2012; Parmenter, 2015). The design of performance measurement systems thus involves choices about what deserves managerial attention rather than simply expanding what can technically be measured.

Performance information may also differ in the aspects of organisational activity it represents. Financial measures provide important information about economic outcomes, but a broader understanding of performance may require complementary information concerning the activities and conditions associated with those outcomes (Otley, 1999). The usefulness of performance measurement therefore depends not only on identifying results but also on providing information that helps managers understand the organisational circumstances underlying them. Combining different forms of performance information can support a more comprehensive assessment of organisational performance, provided that the measures selected remain relevant to the objectives and activities being evaluated.

The value of performance indicators also depends on the information from which they are constructed. Measures based on unreliable information, poorly aligned with organisational objectives or unavailable at an appropriate frequency may provide limited support for managerial action (Marr, 2012; Parmenter, 2015). This reinforces the information-quality perspective developed in the previous section: the availability of data is insufficient if the resulting measures do not provide information that is relevant and appropriate for their organisational purpose. Process design, information quality and performance measurement are therefore closely connected, since weaknesses in the

information generated by organisational processes can affect the usefulness of the measures subsequently used to evaluate performance.

Performance measurement systems and KPIs consequently provide a structured basis for evaluating organisational performance and directing managerial attention towards relevant results. However, measurement alone does not establish the performance organisations expect to achieve, nor does it provide a mechanism for reconsidering those expectations as new information becomes available. Performance management also requires planning and review mechanisms through which targets are established, actual outcomes are compared with expectations, and future projections can be reassessed. These mechanisms provide the basis for the discussion of budgeting, forecasting and performance review in the following subsection.

3.2.2 Planning, Forecasting and Performance Review

Performance measurement provides information about organisational performance, but management control also requires mechanisms through which expectations are established and subsequently reviewed. Budgeting contributes to this process by translating organisational objectives into financial and operational expectations and providing reference points against which actual performance can be assessed (Otley, 1999; Merchant & Van der Stede, 2017). Forecasting complements this process by allowing future expectations to be reconsidered as new information becomes available (Hope & Fraser, 2003; Player, 2013). Together with performance review, these mechanisms connect planning with monitoring by enabling organisations to compare expected and actual outcomes and reconsider future expectations throughout the planning process.

Budgets perform several interconnected functions within this process. They translate organisational objectives into shorter-term financial and operational targets, support resource allocation and coordination, and establish standards against which actual performance can subsequently be evaluated (Merchant & Van der Stede, 2017). Their contribution therefore extends beyond financial planning. By establishing expectations across organisational units and responsibilities, budgeting can also facilitate communication and coordination between organisational actors involved in implementing organisational objectives (Otley, 1999; Merchant & Van der Stede, 2017).

Budgeting is closely connected to performance measurement. Whereas performance measures provide information about organisational results, budgets establish expectations that allow those results to be evaluated relative to planned performance. Comparing actual

outcomes with budgeted expectations can reveal deviations requiring managerial attention and provide a basis for assessing whether activities are developing as anticipated (Otley, 1999; Merchant & Van der Stede, 2017). Budgets and performance measures can therefore operate as complementary elements of the management process, connecting the establishment of expectations with the subsequent evaluation of performance.

The usefulness of budgets may nevertheless become constrained when assumptions established during the planning process no longer adequately represent the conditions in which organisations subsequently operate. Fixed annual targets can lose relevance as operational or environmental conditions change, particularly when budgets simultaneously serve planning, resource allocation and performance evaluation purposes. Combining these functions may create tensions between producing realistic planning information and achieving predetermined performance targets, potentially encouraging behaviours such as budgetary slack or excessive attention to target achievement (Hope & Fraser, 2003).

These criticisms highlight the importance of distinguishing between the purposes served by budgeting and forecasting. While budgets establish targets and resource commitments for a defined planning period, forecasts provide revised expectations of future performance as new information becomes available. Separating forecasts from fixed performance commitments can reduce pressure to make revised projections conform to previously established targets and allow changing organisational conditions to be reflected more realistically (Hope & Fraser, 2003). Forecasting can thus incorporate new information into the planning process while maintaining a distinction between the original plan and subsequent assessments of expected performance.

The capacity to revise expectations is particularly relevant when organisational conditions change during the planning period. More adaptive approaches to planning involve periodically reassessing expectations as new information about operational performance and relevant business conditions becomes available (Player, 2013). Their contribution lies not simply in increasing the frequency of forecasts, but in allowing assumptions and expected outcomes to be reconsidered throughout the planning process. Planning can thereby remain responsive to developments that were not fully reflected in the assumptions underlying earlier expectations.

Budgeting and forecasting acquire further managerial relevance when expected outcomes are compared with actual performance. Variance analysis provides a mechanism for identifying differences between planned and realised results and investigating the factors underlying those differences. Its purpose extends beyond calculating numerical deviations: understanding their causes can help identify variations requiring managerial attention and inform subsequent corrective action (Merchant & Van der Stede, 2017). Performance review consequently connects measurement with action by directing attention towards the reasons why results differ from expectations.

The interpretation of these deviations also creates a feedback mechanism within performance management. Information about actual performance and identified variances can be used to reconsider previous assumptions, evaluate decisions and inform subsequent planning processes. Feedback allows performance management to operate as a continuing cycle in which plans establish expectations, results are monitored against those expectations, deviations are examined and the resulting information informs future decisions (Otley, 1999; Ferreira & Otley, 2009). Performance review is therefore not limited to retrospective evaluation but can contribute to organisational learning by informing how subsequent expectations and actions are formulated.

Understanding deviations nevertheless requires more than identifying numerical differences between actual and expected performance. Managers must interpret results in relation to the organisational circumstances in which they arise and determine which information warrants attention. Performance measures can contribute to managerial understanding and decision-making by shaping how managers interpret organisational conditions and allocate attention (Hall, 2016). Within performance review, quantitative information therefore provides a basis for analysis, while managerial interpretation is required to understand the significance of observed results and their implications for subsequent action.

Budgeting, forecasting, variance analysis and performance review can thus be understood as interconnected mechanisms within a broader performance management process. Budgets establish expectations, forecasts reconsider future outcomes as new information becomes available, and comparisons with actual performance provide feedback on realised results and the assumptions underlying them. Management control consequently involves not only establishing targets and measuring deviations but also interpreting

performance information and reconsidering expectations as organisational conditions evolve (Otley, 1999; Ferreira & Otley, 2009; Merchant & Van der Stede, 2017).

3.3 Management Control in Multinational Corporations

3.3.1 The Complexity of Management Control in Multinational Corporations

The management of organisational performance becomes more complex when activities are distributed across geographically dispersed units. Multinational corporations operate through subsidiaries and business units exposed to different institutional, regulatory and competitive environments, while remaining part of a broader structure requiring coordination and strategic alignment. Management control in this context must therefore address not only the performance of individual units but also the coordination of activities and information across the multinational network (Sageder & Feldbauer-Durstmüller, 2019).

Organisational dispersion also increases the number of relationships that management control must accommodate. Headquarters and subsidiaries may differ in their responsibilities, access to information and knowledge of local operating conditions, while organisational interdependencies require activities performed in different units to remain sufficiently coordinated. Management control consequently involves multiple and interconnected mechanisms, including planning and budgeting processes, performance measurement, reporting practices and organisational procedures, which collectively contribute to coordinating dispersed activities and communicating organisational expectations (Sageder & Feldbauer-Durstmüller, 2019). Rather than operating independently, these mechanisms provide different means through which performance and activities can be coordinated across the multinational structure.

A particularly important requirement in this context concerns the coordination of geographically dispersed organisational units. Multinational corporations use different management control mechanisms to align subsidiaries with corporate objectives, including planning, reporting and performance-related controls. These mechanisms support headquarters in coordinating subsidiary activities and addressing the information asymmetries that may arise between different parts of the multinational organisation. Their design and use are nevertheless influenced by the relationship between headquarters and subsidiaries and by the organisational and external conditions in which subsidiaries operate (Sageder & Feldbauer-Durstmüller, 2019).

One organisational response to these coordination requirements is the centralisation of support activities through Shared Service Centres (SSCs). Rather than maintaining equivalent support functions independently across multiple organisational units, SSCs consolidate activities such as finance, accounting, human resources and information technology within specialised service structures serving different parts of the organisation. This model can facilitate process standardisation, reduce duplication and support greater consistency in the provision of administrative services across geographically dispersed operations (Ferencikova & Grachová, 2024). Shared services can therefore be understood not only as an efficiency-oriented organisational arrangement, but also as a structure through which common processes and support activities are coordinated across multiple entities.

The existence of common control mechanisms and centralised structures does not eliminate the contextual differences that characterise multinational organisations. More broadly, contingency-based perspectives suggest that the design of management control systems should reflect the organisational and environmental conditions in which they operate (Pérez Sigüenza et al., 2022). In multinational corporations specifically, relevant contextual factors include organisational characteristics such as strategy and subsidiary autonomy, as well as external conditions including environmental uncertainty, market requirements, culture and legal frameworks. These conditions can affect the suitability of particular control mechanisms across subsidiary environments, reinforcing the importance of adapting management control to the context in which it is applied (Sageder & Feldbauer-Durstmüller, 2019).

The management of geographically dispersed organisational units therefore creates simultaneous requirements for organisational coordination and sensitivity to contextual differences (Sageder & Feldbauer-Durstmüller, 2019). Common control mechanisms and shared organisational structures can facilitate coordination across the multinational network, while contextual heterogeneity means that the units to which these mechanisms are applied may face different organisational and environmental conditions (Ferencikova & Grachová, 2024; Sageder & Feldbauer-Durstmüller, 2019). The resulting challenge concerns how multinational corporations can obtain the benefits associated with organisational integration without disregarding the specific circumstances of individual units (Sageder & Feldbauer-Durstmüller, 2019). This tension provides the basis for examining the balance between global integration and local responsiveness in the following subsection.

3.3.2 Balancing Global Integration and Local Responsiveness

Reconciling organisational integration with local responsiveness requires multinational corporations to determine which elements of management control should remain common across subsidiaries and which should be adapted to their specific circumstance. Common control mechanisms can promote coordination and alignment with corporate objectives, while differences in economic, legal, cultural and market conditions may require adaptation at subsidiary level (Sageder & Feldbauer-Durstmüller, 2019). The challenge therefore concerns not whether multinational organisations should pursue integration or responsiveness, but how these requirements can coexist within the management control system.

Global integration can be supported through common control mechanisms that provide shared reference points across organisational units. Multinational corporations use performance measurement systems, budgeting, reporting and standardised procedures to coordinate foreign subsidiaries, while financial performance measures are particularly suitable for comparison across countries (Sageder & Feldbauer-Durstmüller, 2019). Reporting also enables headquarters to obtain information about subsidiary activities, with integrated systems being used to increase consistency in reporting across the multinational organisation (Sageder & Feldbauer-Durstmüller, 2019). Standardisation can therefore contribute to multinational control by facilitating coordination and enabling organisational information to be evaluated within common structures.

Centralisation represents another mechanism through which multinational corporations can coordinate geographically dispersed activities. Centralised control allows headquarters to monitor operational activities and can be reinforced by management information systems that support information flows and the coordination of activities across locations (Sageder & Feldbauer-Durstmüller, 2019). Shared Service Centres represent a related organisational response through which MNCs concentrate support activities that provide services to parent companies and other entities within the corporate group (Ferencikova & Grachová, 2024). These arrangements illustrate how organisational activities can be brought within common structures to support the management of operations extending across multiple organisational units.

The benefits of common control mechanisms do not, however, imply that greater standardisation is always preferable. Multinational subsidiaries operate under different

market, cultural, legal and political conditions, and the suitability of controls may consequently vary across locations (Sageder & Feldbauer-Durstmüller, 2019). Evidence reviewed in the multinational management control literature indicates that subsidiaries may supplement global performance measurement systems with measures reflecting country-specific requirements, while local managers can retain decision rights within defined boundaries to respond to local market conditions. Similarly, although standardised procedures can support coordination and efficiency, their effectiveness may be constrained when they reduce the flexibility required by local operations (Sageder & Feldbauer-Durstmüller, 2019). Global consistency and local responsiveness should therefore not be treated as mutually exclusive alternatives.

The need for such adaptation is consistent with a broader contingency perspective on management control, according to which control and organisational structures should reflect the resources, capabilities and circumstances in which organisations operate (Pérez Sigüenza et al., 2022). In multinational corporations, this principle is reflected in the coexistence of corporate control requirements with different degrees of subsidiary autonomy and adaptation to local conditions (Sageder & Feldbauer-Durstmüller, 2019).

Effective multinational management control consequently depends less on choosing between complete centralisation and complete local autonomy than on determining where consistency is required and where adaptation is necessary. Common performance measures, reporting mechanisms and organisational procedures can facilitate coordination across geographically dispersed units, while local adaptation can preserve the capacity to respond to circumstances that cannot be adequately accommodated through uniform controls (Sageder & Feldbauer-Durstmüller, 2019). The resulting coexistence of integration and responsiveness illustrates the broader challenge of designing management control as a combination of complementary mechanisms rather than as a set of isolated practices. This broader understanding of Management Control Systems provides the basis for the contemporary perspectives examined in the following section.

3.4 Contemporary Perspectives on Management Control Systems

The previous sections examined organisational processes, performance management and the coordination of activities within multinational organisations. Although these mechanisms address different organisational requirements, they do not operate independently from the broader systems through which organisations establish objectives,

monitor performance and influence organisational activities. Management Control Systems (MCSs) provide a framework for considering how different control mechanisms interact and contribute to organisational objectives. This broader perspective is particularly relevant when processes, performance measures, planning mechanisms and organisational arrangements coexist and jointly contribute to management control.

Early conceptualisations provided an important foundation for understanding the purpose of management control. Anthony (1965) defined management control around the processes through which managers seek to ensure that organisational resources are obtained and used effectively and efficiently in achieving organisational objectives. Subsequent frameworks broadened the analysis of control by examining the different mechanisms involved in managing organisational performance. Otley (1999), for example, conceptualises performance management through the relationships between organisational objectives, strategies and plans, performance targets, reward mechanisms and information feedback. Management control can therefore be examined not only through individual accounting or measurement practices, but through the connections between organisational objectives, performance expectations and the information used to evaluate their achievement.

This interconnected perspective is particularly evident in the concept of Management Control Systems as a package. Malmi and Brown (2008) argue that individual control mechanisms should not be considered independently from the wider collection of controls within which they operate, since organisations typically employ multiple controls simultaneously. Their framework distinguishes between planning, cybernetic, reward and compensation, administrative and cultural controls, which together provide a broad representation of the mechanisms through which organisations seek to direct behaviour. The relevance of the package perspective lies less in the individual categories themselves than in recognising that the functioning of one control mechanism may depend on its relationship with others. Analysing controls in isolation may therefore provide an incomplete understanding of how management control operates within an organisation (Malmi & Brown, 2008).

The effectiveness of management control also depends on how control mechanisms are used. Simons (1995) distinguishes between diagnostic and interactive uses of control systems. Diagnostic control involves monitoring organisational outcomes against established expectations and identifying significant deviations, whereas interactive use involves greater

managerial involvement with control information and its use in organisational dialogue around strategic uncertainties. This distinction demonstrates that similar control information can perform different organisational roles depending on how managers engage with it. Control systems may therefore support both the monitoring of expected performance and managerial discussion when emerging information requires attention or reconsideration.

The configuration and use of management control mechanisms must also be considered in relation to organisational context. Contingency-based perspectives reject the assumption that a single control configuration is universally appropriate, emphasising instead the relationship between management control and the circumstances in which it operates (Otley, 1999). This contextual perspective is consistent with the multinational setting examined in the previous section, where common organisational requirements coexist with differences across organisational units. The effectiveness of management control consequently depends not only on the existence of particular mechanisms, but also on whether their design and use are appropriate to the organisational conditions they are intended to address.

Taken together, these perspectives support an understanding of management control in which planning, performance measurement, organisational arrangements and other control mechanisms are considered as interconnected rather than isolated practices (Otley, 1999; Malmi & Brown, 2008; Simons, 1995). This perspective brings together the theoretical arguments developed throughout the literature review: organisational processes influence how information is generated, performance management mechanisms structure that information for planning and evaluation, and organisational context affects how common control practices can be coordinated and applied. Management control therefore provides the broader framework through which these mechanisms and their interactions can be examined. This integrated perspective establishes the theoretical basis for the critical reflection on the internship activities developed in the following chapter.

4. Critical Reflection on the Activities Developed in Light of the Literature

4.1 Management Control Begins Before the Report

Management control became visible during the internship mainly through reports, budgets, forecasts and performance indicators. Yet several of the projects developed suggested that the effectiveness of these mechanisms was determined considerably earlier, by the processes through which the information they relied upon was generated. Apparently technical problems in reporting, payroll and project monitoring could not be addressed effectively by changing the final output alone; improvement required examining how information was collected, transformed and transferred before reaching the systems or reports in which it would ultimately be used. The internship consequently challenged the initial perception of management control as an activity beginning with the analysis of organisational results. In practice, some of the conditions for effective control were already being established upstream, through the processes responsible for producing management-relevant information.

This observation is consistent with the process perspective developed in Business Process Management. Process improvement involves analysing and reconsidering how activities are structured and interact (Dumas et al., 2018), while business process redesign provides mechanisms for evaluating alternative process configurations according to their effects on dimensions such as time, cost, quality and flexibility (Reijers & Limam Mansar, 2005). The internship extended this reasoning by showing that automation was most effective when the fundamental process and its information requirements had first been examined and, where necessary, redesigned. When processes generate information subsequently used for reporting, planning or organisational monitoring, weaknesses in their design can also affect the information available for those purposes. Process improvement may affect not only how efficiently an activity is performed, but also the informational conditions under which management control operates.

The IS vs Budget project illustrated this distinction. Although transferring the report to Power BI was initially considered, analysis of the existing workflow indicated that its main limitations concerned repetitive preparation activities, interconnected workbooks and

specific reporting requirements rather than the reporting technology itself. Retaining Excel and automating selected activities through VBA provided a solution more closely aligned with the existing process and the timeframe of the project. The experience suggested that technological sophistication was less important than the fit between the intervention, the process and the organisational problem being addressed.

The employee onboarding and Project Tracker projects reinforced this conclusion at different stages of information generation. In the onboarding process, part of the manual work performed by Payroll originated upstream because the information initially collected was insufficient for subsequent requirements and required additional communication and restructuring. Redesigning how information was captured at its source was necessary before its subsequent transformation could be automated. Similarly, automating the Project Tracker without first restructuring the Activities worksheet would have reproduced limitations in the information used for project monitoring. These experiences are consistent with the user-oriented perspective of Lee et al. (2002), according to which information quality depends on its appropriateness for its intended use. They also demonstrate why process redesign mattered beyond efficiency: changes to the underlying processes affected where information was captured, how it was structured and its suitability for subsequent organisational use.

This relationship requires an important conceptual distinction. The onboarding process, for example, was not itself a management control mechanism, and not every process generating organisational information should be classified as part of a Management Control System. Established management control frameworks examine mechanisms through which organisations establish objectives, structure performance expectations, use feedback and influence organisational behaviour (Otley, 1999; Malmi & Brown, 2008), while Otley (1999) also recognises the importance of understanding operational activities in the design and use of control systems. The internship reinforces this broader perspective while highlighting an upstream dependency: management information can only be as useful as the processes that enable relevant data to be captured, transformed and communicated. Process design can thus create, or constrain, the informational conditions under which subsequent management control mechanisms operate.

The projects ultimately changed the way management control itself was understood. What initially appeared to be a collection of reporting and automation initiatives revealed that the informational foundations of control were already being shaped before a report was

produced or a performance measure analysed. Understanding the process generating the information, clarifying its intended use and determining where technology could meaningfully support that process became prerequisites for several of the interventions undertaken. The internship therefore suggests that effective management control cannot be understood exclusively through its visible outputs. Attention must also be given to the processes that make those outputs possible. The subsequent question is when the information generated through these processes becomes sufficiently meaningful to support managerial judgement and decision-making, which is examined in the following section.

4.2 From Performance Measurement to Managerial Judgement

Performance measurement initially appeared to represent one of the clearest manifestations of management control during the internship. Reports, budgets and forecasts provided structured information through which actual and expected performance could be compared and deviations identified. The literature similarly positions performance information within broader processes connecting organisational objectives, evaluation and feedback (Otley, 1999; Ferreira & Otley, 2009). However, participation in the MCE and Forecast processes revealed an important distinction between producing technically correct information and producing information that managers considered sufficiently meaningful for decision-making. Financial information could reconcile mathematically and remain internally consistent while still being questioned because the underlying result did not correspond with managers' understanding of the business. The practical challenge was consequently not limited to producing accurate numbers but extended to determining whether those numbers made sense within their operational context.

This distinction became particularly visible during the MCE. Preparing revised estimates required actual performance and future expectations to be incorporated into the reporting process, but numerical consistency alone was insufficient for validation. Deviations had to be investigated, assumptions provided by the Business Units had to be understood, and projected values could require reconsideration when their implications appeared inconsistent with expected business developments. The process therefore gave variance analysis a different meaning from the one initially associated with financial reporting. A deviation was not simply a difference to be calculated and reported; it was a signal requiring interpretation. Performance information acquired managerial relevance through the

questions it generated about why performance differed from expectations and whether those differences should alter the view of future performance.

The information-quality literature helps explain part of this experience. Lee et al. (2002) explicitly conceptualise information quality in relation to its use, incorporating contextual dimensions alongside intrinsic, representational and accessibility characteristics. The internship therefore does not challenge the idea that information must be appropriate for its intended purpose. Rather, it demonstrates how demanding this principle can become in management control practice. Accounting accuracy and computational consistency represented necessary conditions, but managers also assessed whether financial information was plausible in light of their knowledge of operational circumstances. Contextual validation was consequently not an alternative to technical information quality, but an additional process through which technically reliable information acquired managerial credibility.

The Forecast provided further evidence of the importance of contextual interpretation. Forecasting literature emphasises the value of revising expectations as new information becomes available rather than relying exclusively on assumptions established during the original planning process (Hope & Fraser, 2003; Player, 2013). The internship supported this reasoning but also showed that incorporating more recent information did not eliminate the need for judgement. Business Units operating within the same organisational group differed in their activities, performance drivers and expected developments, meaning that a common forecasting structure could not substitute for understanding the assumptions underlying each projection. The quality of the Forecast consequently depended not only on updating financial expectations, but also on translating operational expectations into financial terms and assessing whether the resulting projections remained plausible for the specific business concerned.

This experience is particularly relevant when confronted with research on the managerial use of performance information. Hall (2016) highlights the role of performance information in developing managerial understanding rather than treating performance measures simply as mechanisms for representing results. The internship strongly supports this perspective, while suggesting a specific way in which such understanding was produced in practice. Reports and forecasts did not provide definitive answers from which decisions followed automatically. Instead, they created occasions for questioning results, challenging assumptions and combining financial information with knowledge of operational conditions.

Performance information therefore did not replace managerial judgement; it provided a basis on which that judgement could be exercised. Its contribution to decision-making depended on the interaction between the information produced and the contextual knowledge brought to its interpretation.

The experience ultimately changed the meaning attributed to validation within management control. At the beginning of the internship, validation was associated primarily with checking formulas, reconciliations and numerical consistency. Through the MCE and Forecast processes, it became apparent that this represented only one level of validation. A second involved asking whether technically correct information provided a credible representation of expected business developments. This distinction does not diminish the importance of reliable financial information; managerial judgement cannot compensate for inaccurate data. It instead suggests that technical reliability and contextual interpretation perform complementary roles. Information becomes useful for management not simply when it is correct, but when its meaning can be understood in relation to the organisational reality it is intended to represent. In this sense, the transition from information to managerial action is neither automatic nor purely quantitative, creating a further question regarding how common management practices can accommodate different organisational realities across the multinational context.

4.3 Finding the Right Level of Standardisation

Standardisation was a recurring feature of the activities developed during the internship. Common structures were introduced in information collection, project monitoring and financial planning, while the NSC itself represented a centralised organisational structure supporting activities across different Eurofins entities. The multinational management control literature provides a clear rationale for such arrangements: common reporting mechanisms, procedures and performance structures can facilitate coordination and comparability across geographically dispersed organisational units (Sageder & Feldbauer-Durstmüller, 2019). However, the internship suggested that the value of standardisation depended less on achieving uniformity itself than on whether uniformity addressed a specific coordination or information requirement.

Several projects demonstrated situations in which standardisation clearly created value. In the employee onboarding process, establishing a common structure for collecting the information required by subsequent users reduced inconsistencies between different

stages of the process. Similarly, restructuring the Project Tracker around a common organisation of activities, responsibilities and dates provided users with a shared basis for monitoring project development. In both cases, standardisation addressed an identifiable problem: different organisational actors needed information to be structured consistently so that it could move effectively through the process. These experiences support the literature on the coordination benefits of common organisational practices, while suggesting that the relevant benefit resulted from improved interaction between users and activities rather than from uniformity as an independent objective.

The limits of this reasoning became particularly visible during the proposed standardisation of two Excel workbooks used by different Portuguese entities. Because the workbooks supported similar processes, adopting a single structure initially appeared consistent with the efficiency and consistency associated with standardisation. Discussion with their users nevertheless revealed substantial differences in information requirements and operational use. A completely uniform solution would consequently have incorporated worksheets and information that were unnecessary for some users, increasing rather than reducing complexity. This episode qualifies the assumption that similarity between processes necessarily provides sufficient justification for standardising their supporting tools. The relevant question was not whether the processes were sufficiently similar to permit standardisation, but whether the elements being standardised served a common organisational purpose.

The Forecast exposed the same tension within a single management control process. A common structure was necessary to organise the exercise and ensure that forecasts could be consolidated and evaluated within the broader organisational framework. However, the assumptions required to produce those forecasts could not be standardised to the same extent. Business Units differed in their activities, operational drivers and expected developments, meaning that applying identical assumptions could reduce rather than improve the reliability of the resulting projections. This experience is consistent with multinational management control research showing that common control mechanisms may coexist with adaptation to subsidiary-specific circumstances (Sageder & Feldbauer-Durstmüller, 2019). Yet the practical experience suggests that the distinction between standardisation and adaptation may be more granular than a choice concerning an entire

process: different components of the same process may require different degrees of uniformity.

This distinction changes the managerial question raised by standardisation. Rather than asking how extensively a process should be standardised, it may be more useful to determine what within the process requires standardisation and for what purpose. Reporting structures, data definitions or submission requirements may require consistency where comparability and coordination depend on common practices, while assumptions and operational inputs may need to remain sensitive to the circumstances of individual Business Units. This interpretation is consistent with the broader contingency principle that control arrangements should reflect the circumstances in which they operate (Pérez Sigüenza et al., 2022), while the multinational context illustrates how such adaptation can coexist with corporate control requirements (Sageder & Feldbauer-Durstmüller, 2019). Standardisation and flexibility consequently need not be treated as alternative designs applied uniformly to an entire process; they can coexist within different elements of the same control mechanism.

The role of the NSC can be understood within this perspective. Its contribution was not limited to centralising support activities but included providing common structures through which information and practices could be coordinated across organisational units. Shared Service Centres are used within multinational organisations to concentrate support activities serving different entities within a corporate group (Ferencikova & Grachová, 2024). The internship nevertheless showed that centralisation did not eliminate the need for knowledge of the entities being supported. The Forecast and other reporting activities repeatedly required information provided by Business Units to be interpreted in relation to their particular operational circumstances. Centralisation and local knowledge were thus complementary rather than opposing requirements: common structures facilitated coordination, while contextual knowledge preserved the relevance of the information processed through those structures.

The internship ultimately changed the way standardisation was understood within management control. Its value could not be assessed according to the degree of uniformity achieved, but according to the organisational problem that uniformity was intended to solve. Standardisation created value where common structures improved comparability, information flows or coordination, but became less useful when differences in information needs or operational circumstances were themselves relevant to the activity being controlled.

Effective management control therefore does not require maximising standardisation. It requires identifying which elements benefit from consistency and which require contextual differentiation, so that common organisational structures support rather than constrain coordination. This distinction provides an important link to the broader interpretation of management control developed in the following section.

4.4 Connecting Processes, Information and Managerial Action

Although the activities developed during the internship addressed different organisational problems, their analysis reveals a common underlying relationship. Improvements to processes affected how information was generated and structured; performance management mechanisms transformed that information into reports, comparisons and future expectations; managerial judgement was required to interpret its significance; and coordination determined how common organisational requirements could be reconciled with different operational realities. These relationships suggest that the contribution of management control cannot be understood through any one mechanism independently. What matters is how processes, information, interpretation and organisational action connect with one another.

The relationships identified throughout the critical reflection are summarised in Figure 2. The framework represents management control as an interconnected process in which the conditions established through process design influence information generation and, subsequently, the performance information available for managerial use. That information becomes managerially relevant through interpretation and judgement, which provide the basis for coordination and decision-making. Importantly, the framework is not intended to represent a linear sequence. Decisions and managerial interpretations can reveal new information requirements, challenge previous assumptions or expose limitations in existing processes, generating feedback towards earlier stages. The MCE provided a clear example: deviations between actual and expected performance prompted investigation, operational knowledge informed their interpretation, and revised expectations subsequently re-entered the reporting process.

Figure 2 - An integrated interpretation of management control emerging from the internship.

1. Process Design	Defines activities, responsibilities, controls and procedures that shape how work is performed.
↓	
2. Information Generation	Captures, validates and structures data through process execution and system registrations.
↓	
3. Performance Information	Transforms data into reports, budgets and forecasts to monitor results and support planning.
↓	
4. Managerial Judgement	Interprets information in context, challenges assumptions and draws conclusions.
↓	
5. Coordination & Decision-Making	Communicates insights, decides on actions and implements decisions through organisational processes.

↶ Feedback to earlier stages: new information requirements, revised assumptions and process adjustments ↷

Source: Author's own elaboration.

Such interdependence is consistent with the broader view of management control as a combination of mechanisms connecting objectives, expectations, performance information and organisational behaviour rather than as a set of isolated practices (Otley, 1999; Malmi & Brown, 2008). The organisational role of control information similarly depends on how managers engage with it rather than solely on its production (Simons, 1995). The internship does not contradict these perspectives but makes particularly visible the connections surrounding formal control mechanisms. Reports, forecasts and performance measures depended on upstream processes that shaped the information available to them, while their usefulness downstream depended on contextual interpretation and coordination. The boundaries of effective management control thus extend beyond the visible moment at

which performance is measured or reported, without implying that every process contributing information should itself be classified as a management control mechanism.

Considered together, the activities developed during the internship show that effective management control depends on the interaction between several organisational elements. Process improvement can strengthen the way information is generated and structured, while performance measurement and planning mechanisms provide a basis for monitoring results and anticipating future developments. However, the usefulness of this information ultimately depends on managerial judgement and on the organisational context in which it is interpreted and used. Similarly, standardisation can facilitate coordination and comparability, but its value depends on preserving sufficient flexibility to accommodate relevant differences between organisational units. Management control can thus be understood not simply through individual reports, forecasts or procedures, but through the connections between process design, information, managerial judgement and organisational coordination. The internship experience demonstrated that these connections are particularly important in transforming organisational information into meaningful support for managerial decision-making.

5. Conclusion

This report critically examined the contribution of the activities developed during the curricular internship at Eurofins Lab Environment Testing Portugal to management control and managerial decision-making within a multinational organisational context. Through direct involvement in projects concerning process redesign, standardisation, automation, performance reporting and forecasting, the internship provided an opportunity to understand management control beyond its most visible outputs. What initially appeared primarily as a set of initiatives aimed at improving existing processes progressively revealed broader connections between the way organisational activities are designed, the information they generate and the mechanisms through which that information is interpreted and used.

The objectives established for the internship were largely achieved through the projects developed. Existing processes were analysed and redesigned, opportunities for automation and standardisation were identified, reporting structures were improved, and mechanisms were developed to facilitate the collection, validation and monitoring of organisational information. The redesign of the IS vs Budget process combined automation with changes to the structure of the information available for performance analysis; the employee onboarding project reduced unnecessary manual intervention by reconsidering how information was collected and transformed; and the Project Tracker established a more structured basis for monitoring continuous improvement initiatives. Participation in the MCE and Forecast processes extended the experience towards the preparation, validation and interpretation of information directly associated with performance monitoring and organisational planning. Taken together, these activities demonstrated that apparently different projects could contribute to management control through their effects on processes, information and the conditions supporting managerial action.

An equally important outcome concerned the situations in which the solution initially considered was not necessarily the most appropriate one. The decision not to adopt Power BI as the immediate solution for the IS vs Budget process, the difficulties encountered during the Forecast and the discussion surrounding the proposed standardisation of spreadsheets used by different entities demonstrated that process improvement should not be evaluated according to the technological sophistication or degree of uniformity achieved. The suitability of an intervention depended instead on the problem being addressed, the requirements of its users and the organisational context in which the process operated. This

progressively shifted the approach to process improvement from identifying how an existing activity could be automated or standardised towards first understanding what the process was intended to achieve, what information it needed to produce and where greater consistency or flexibility would create value.

The internship also demonstrated that improving the processes through which information is produced does not automatically make that information useful for management. The MCE and Forecast processes were particularly important in revealing the distinction between technical reliability and managerial relevance. Financial information could be computationally correct while still requiring investigation when the resulting values appeared inconsistent with operational expectations. Reports, forecasts and performance measures consequently provided a basis for managerial analysis rather than definitive answers from which decisions followed automatically. Their contribution depended on the capacity to interpret financial information in relation to operational circumstances, question underlying assumptions and determine which deviations or developments required managerial attention. This reinforced the importance of managerial judgement in transforming performance information into meaningful support for action.

The multinational organisational context added a further dimension to this understanding. Common reporting structures, procedures and information requirements facilitated coordination and comparability across organisational units, but the internship also demonstrated the limitations of pursuing uniformity independently of its organisational purpose. Different Business Units could operate within common planning or reporting structures while requiring assumptions and operational inputs adapted to their particular circumstances. Standardisation and flexibility therefore emerged not as opposing approaches, but as requirements that could coexist within the same organisational process. The relevant challenge was to identify where consistency created value through coordination and comparability and where differentiation was necessary to preserve the relevance of the information produced.

Beyond these organisational conclusions, the internship contributed substantially to professional development. Limited familiarity with both the organisation and its management control processes initially required greater emphasis on understanding existing procedures and producing the outputs requested. As knowledge of the organisation developed, the approach became progressively more analytical: assumptions were

questioned, unexpected results were investigated, alternative solutions were considered and communication with different organisational actors became increasingly important. The Forecast was particularly relevant in this respect because its complexity required interaction with controllers, Business Unit Managers and other functions, while simultaneously demanding adaptation to different operational realities and changing project requirements. By the end of the internship, approaching a management control problem increasingly required understanding where information originated, how it was transformed, who required it and, most importantly, what organisational purpose it was expected to serve.

These conclusions must nevertheless be interpreted within the boundaries of the internship experience. Its duration prevented the long-term evaluation of several implemented solutions, meaning that their sustained effects on process efficiency, information quality and organisational use could not be systematically assessed. The experience was also developed within a specific organisational setting and does not provide a basis for generalising the practices observed within Eurofins to management control functions in multinational organisations more broadly. Furthermore, the position occupied during the internship provided greater exposure to the preparation, validation and communication of management information than to the subsequent strategic decisions made using that information. A longer period of observation could therefore provide additional insight into how the implemented process improvements evolve over time and how changes in the generation and quality of management information ultimately influence organisational decisions.

Within these boundaries, the central conclusion emerging from the internship is that the contribution of management control depends on the connections between process design, information, managerial judgement and organisational coordination. Process improvement can strengthen the conditions under which information is generated; performance measurement and planning mechanisms can structure that information for monitoring and anticipation; managerial judgement is required to interpret its significance; and organisational coordination determines how information and action can be aligned across different actors and units. None of these elements is sufficient independently. Their interaction determines whether organisational information can move beyond its technical production and become meaningful support for managerial decision-making.

In this sense, the title Rethinking Management Control: From Process Improvement to Managerial Decision-Making in a Multinational Organisation reflects the progression of the internship itself. The experience began largely with the improvement of processes but progressively demonstrated why those processes matter for management control. Reports, budgets, forecasts, performance indicators and automated workflows are important mechanisms, but their value depends on the quality of the processes and information supporting them, the judgement applied to their interpretation and their capacity to respond to organisational requirements. Rethinking management control in light of the internship therefore meant moving beyond the individual mechanisms through which performance is monitored and recognising the connections that allow those mechanisms to contribute to informed managerial action.

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Annexes

Annex I – Redesigned Income Statement versus Budget Reporting Process

This annex provides an anonymised representation of the redesigned Income Statement versus Budget (IS vs Budget) reporting process. The representations preserve the logic of the solution developed during the curricular internship while using fictional financial information and generic account labels.

Figure AI.1

Automated preparation of the subsequent monthly reporting period



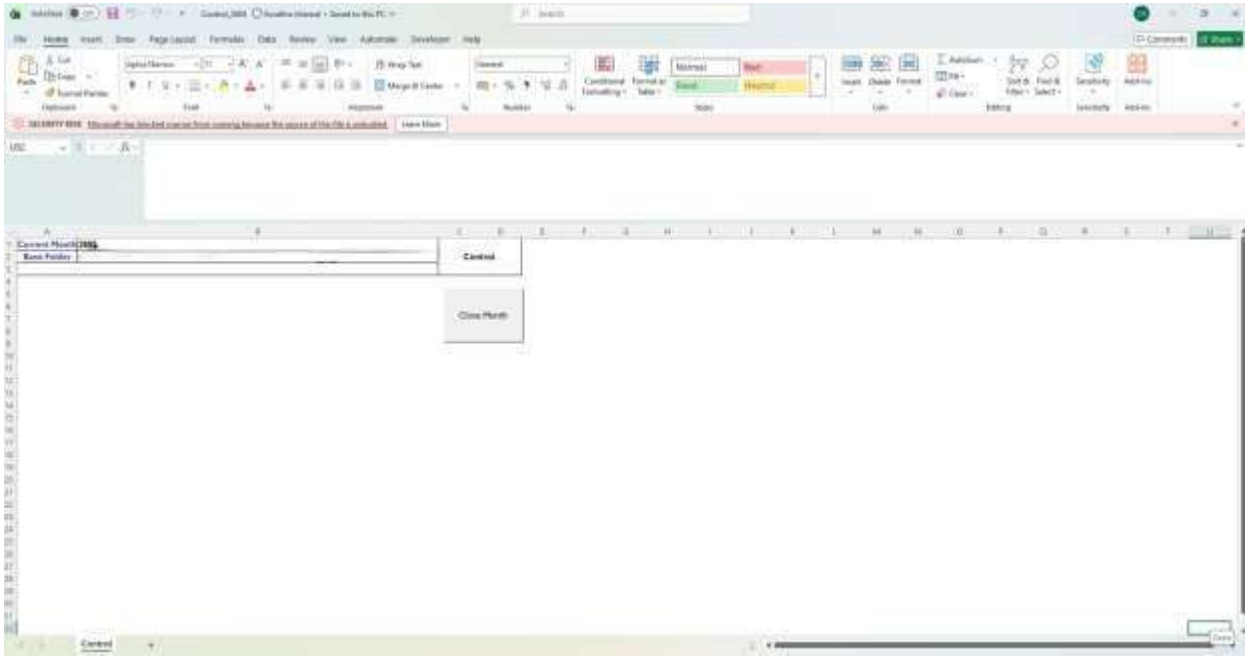
Subsequent reporting period prepared

New reporting structure is ready for the next monthly cycle.

Source: Author's elaboration based on the reporting process redesigned during the curricular internship.

Figure AI.2

Control interface developed for the automated monthly reporting process



Source: Internal Eurofins documentation.

Figure AI.3

Illustrative anonymized representation of the redesigned IS vs Budget analytical structure

Monthly performance view

Account / KPI	Jan Actual	Jan Budget	Feb Actual	Feb Budget	Mar Actual	Mar Budget
Net Sales	410	400	445	425	485	475
Personnel Costs	165	160	178	170	192	190

Direct Costs	122	120	132	128	141	142
EBITA	58	55	64	60	71	68

Quarterly comparison introduced during the redesign

Account / KPI	Previous Year Actual Q1	Current Year Actual Q1	Current Year Budget Q1	Current Year MCE Q1
Net Sales	1,250	1,340	1,300	1,360
Personnel Costs	510	535	525	540
Direct Costs	380	395	390	400
EBITA	175	190	185	195

Note: All account labels and financial values shown are illustrative and fictional. The figure is intended to reproduce the analytical logic described in Section 2.2.1 rather than confidential organisational information.

Source: Author's elaboration based on the IS vs Budget report redesigned during the curricular internship.

Annex II - Employee Onboarding Data Collection and Transformation Process

This annex provides an anonymised representation of the employee onboarding process redesigned during the curricular internship. The representations preserve the logic and information structure of the solution while excluding original employee data and confidential organisational information. The tables are presented vertically and selectively to ensure readability.

Figure AII.1

Redesigned employee onboarding data flow

New Employee

Provides the required personal and administrative information.

↓

Microsoft Forms

Collects employee information through a structured questionnaire with conditional logic.

↓

Microsoft Power Automate

Automatically transfers each submitted response to the Excel raw data table.

↓

Raw Data Table – Excel

Stores the employee responses in the format in which they were collected.

↓

Automated Data Transformation – Excel

Reorganises and converts the collected information into the structure required for ERP import.

↓

ERP Import Table

Presents the employee information according to the required field sequence and coding structure.

↓

Primavera ERP

Receives the formatted employee information for payroll registration and processing.

Source: Author's elaboration based on the process developed during the curricular internship.

Table AII.1

Illustrative structure of the raw employee data table

Information category	**Field in raw data table**	**Illustrative fictional value**
Identification	Nome Completo	Employee A
Identification	Primeiro e último nome	Employee A
Address	Morada	Example Street, 10
Address	Localidade	Example City
Address	Código-postal	0000-000
Personal information	Nacionalidade	Portuguese
Personal information	Data de Nascimento	01/01/2000
Contact information	Email	employee.a@example.com
Contact information	Nº de Telemóvel	900 000 000
Identification	Nº de Cartão de Cidadão	XXXXXXXX
Tax and Social Security	Nº de Contribuinte	XXXXXXXXX
Tax and Social Security	Nº de Identificação de Segurança Social	XXXXXXXXXXX
Tax information	Estado Civil	Illustrative category
Tax information	Titulares de Rendimento	Illustrative response
Tax information	Ano Início IRS Jovem	2026
Dependants	Nº de Dependentes Não Deficientes	0

Information category	Field in raw data table	Illustrative fictional value
Bank information	IBAN	PT50 XXXX XXXX XXXX XXXX XXXX X
Bank information	SWIFT	XXXXXXXX
Education	Habilitações Literárias	Illustrative qualification
Emergency contact	Primeiro e último nome de contacto de emergência	Contact A

Note: The original raw data table contains more than forty fields. For readability, this table presents a representative selection of fields. All example values are fictional.

Source: Author's elaboration based on the raw data structure developed during the curricular internship.

Table AII.2

Illustrative transformation of employee data for ERP import

Raw Forms field	ERP import field	Illustrative transformation	Transformation type
Nome Completo	Nome*	Employee name transferred to the ERP employee record	Direct transfer
Morada	Morada	Address transferred to the corresponding ERP field	Direct transfer
Localidade	Localidade	Locality transferred to the corresponding ERP field	Coding
Código-postal	Código Postal 1 / Código Postal 2	Postal code reorganised according to the ERP field structure	Structural transformation

Raw Forms field	ERP import field	Illustrative transformation	Transformation type
Nacionalidade	Nacionalidade	Nationality aligned with the ERP-required field	Coding
Data de Nascimento	Data Nascimento	Date aligned with the ERP-required field and format	Formatting
Género	Género	Employee response aligned with the ERP field	Direct transfer / coding where required
Email	Email	Email transferred to the corresponding ERP field	Direct transfer
Nº de Telemóvel	Telemóvel	Mobile number transferred to the corresponding ERP field	Direct transfer
Nº de Cartão de Cidadão	Número do BI	Identification number aligned with the ERP identification field	Direct transfer
Data de Validade do Documento de Identificação	Data Validade Documento Identificação	Date transferred to the ERP-required field	Direct transfer
Nº de Contribuinte	Número de Contribuinte	Tax identification number transferred to the corresponding ERP field	Direct transfer
Estado Civil	Estado Civil*	Response converted/aligned with the structure accepted by the ERP	Coding

Raw Forms field	ERP import field	Illustrative transformation	Transformation type
Titulares de Rendimento	Titulares de Rendimentos	Tax information aligned with the ERP-required field	Coding
Percentagem de Incapacidade	Percentagem de Incapacidade	Value transferred to the corresponding ERP field	Direct transfer
Ano Início IRS Jovem	Ano Início IRS Jovem	Year transferred to the corresponding ERP field	Direct transfer
Nº de Dependentes Não Deficientes	Nº Dependentes Não Deficientes	Number of dependants transferred to the corresponding ERP field	Direct transfer
Nº de Dependentes Deficientes	Nº Dependentes Deficientes	Number of dependants transferred to the corresponding ERP field	Direct transfer
IBAN	IBAN (FormasPagamento)	Bank account information transferred to the ERP payment structure	Structural allocation
SWIFT	SWIFT (FormasPagamento)	Bank identifier transferred to the ERP payment structure	Structural allocation

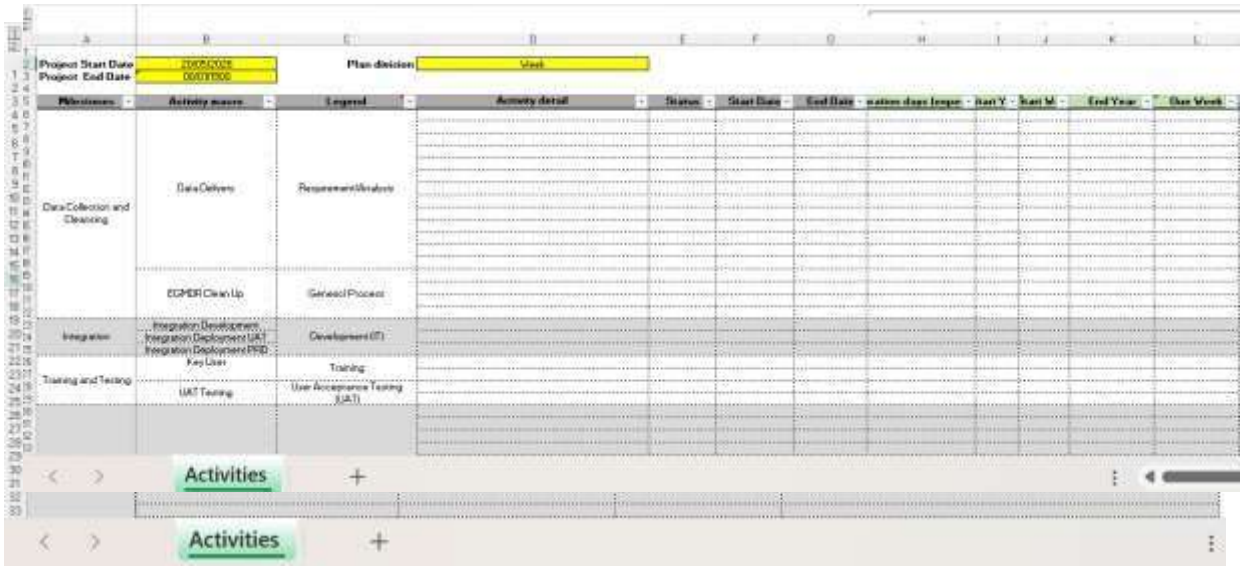
Note: This table illustrates representative mappings between the employee information collected through Microsoft Forms and the fields required by the ERP import structure. It does not reproduce the complete import template. Where coding or formatting was required, the description is intentionally generalised to avoid disclosing internal implementation details.

Source: Author's elaboration based on the employee data collection and ERP import structures developed during the curricular internship.

Annex III – Redesigned Project Monitoring Activities Sheet

Figure AIII.1

Redesigned Activities worksheet of the project monitoring system



Source: Internal Eurofins documentation.