POLITECNICO DI TORINO

Master of Science in Engineering and Management

Master Thesis

Application of Lean Principles in a Hybrid Public-Private Model: Visit Piemonte Case Study

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1. Introduction

This thesis investigates the effectiveness of ARXivar, evaluating its overall impact through a detailed case study. To achieve this, a two-pronged approach is employed. Firstly, the intrinsic effectiveness of ARXivar is assessed. Secondly, its impact on Visit Piemonte's internal processes is analyzed. The first chapter proposes various business process optimization theories, exploring their growing relevance in the corporate world. Building upon this foundation, the second chapter proposes a potential solution for implementing these theories using a software called ARXivar. The case study of Visit Piemonte serves as a real-world example, showcasing how companies can enhance their internal processes through ARXivar. By examining each process and comparing its pre and post-implementation state, the study offers valuable insights into the software's effectiveness. In the end, a competitive analysis has been done to evaluate the real savings that the process optimization can generate for the company's operational costs. The study not only confirms ARXivar effectiveness but also reveals potential cost savings through competitive analysis, demonstrating its positive impact on Visit Piemonte's operational efficiency.

2. Optimizing Operations: A Comprehensive Look at Lean, Six Sigma, and BPM

2.1 Lean Management

The concept of Lean incorporates important works of Ohno starting in 1978 and Deming in 1986. Lean production evolved from the Toyota Production System over a period of several decades and is considered to improve firm performance through the elimination of waste. Lean production is a prominent manufacturing philosophy that is based on customer-focused process improvements. The key idea is to increase value to customers while reducing the number of resources consumed and cycle times via waste elimination. Lean is a philosophy of manufacturing that incorporates a collection of principles, tools, and techniques into the business processes to optimize time, human resources, assets, and productivity while improving the quality level of products and services to their customers. Applying lean manufacturing philosophy is one of the most important concepts that help enterprises gain a competitive advantage in the world market. Lean manufacturing is a multi-dimensional management practice including just-in-time, quality systems, work teams, cellular manufacturing, supplier management, etc. in an integrated system. According to Bhasin and Burcher, only 10 percent or less of the companies succeeded in implementing lean manufacturing practices. Even though the number of lean tools, techniques, and technologies available to improve operational performance is growing rapidly, however, a few companies that put effort into using them failed to produce significant results.

2.2 Global Trends

Lean management is a relatively new concept, but it is gaining traction rapidly around the world. It was theorized in the late 1990s and early 2000s, based on Toyota's principles of lean manufacturing. The Journal of Industrial Engineering and Management studied the evolution of lean methodology through a comprehensive literature review. It emerged that lean methodology research articles have, dramatically increased over time, notably since 2010. Lean evolution comprises three distinctive phases, and during each step, the number of publications has increased by more than thrice. The number of publications climbed

from 35 in 1994–2000 to 320 in 2011–2017, demonstrating wider adoption of lean as an improvement strategy in both research and business.

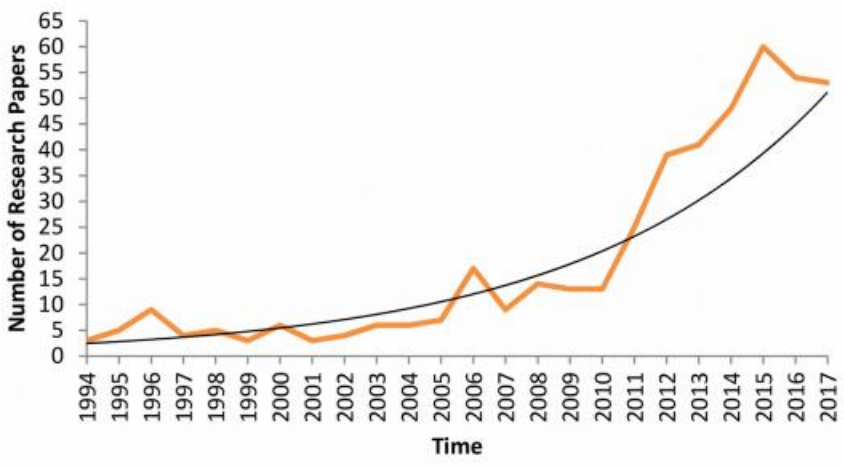


Figure 1: Number of Research Papers over the years 1994-2017

The global recession, which forced businesses to diminish costs, and the acceptance of lean as an operating model to maintain competitiveness are two causes that are essential for this increased interest. In addition, the new interest of the companies in sustainability has found in lean management a way to save on waste. The literature on lean management also indicates that lean management has progressed from the stage of prescription, where researchers prescribe the lean tools and techniques, to a stage of deeper understanding, where researchers identify the needed requirements and success factors. The focus of lean management extends lean manufacturing principles to other aspects of management, like human resources management aspects. This means that the manager who applies the lean management principles has to consider providing the employees with a positive atmosphere in the workplace, setting both long-term and short-term objectives for the employees, and constructing multiple communication channels among employees. Still, according to Sinha & Matharu we can divide the huge increase in research papers in each phase into segments that call for a three-time lens analysis of the evaluated articles. It might be useful in deriving some significant conclusions on the subject's maturity, trends, and topics.

- Before 2001: During this time, lean management ideas began to take shape. The first paper on the subject was published in 1994, four years after the landmark MIT study that gave rise to the best-selling book "The Machine That Changed the World." Lean was mainly adopted during this time by industrialized nations, with only one case study from China. The majority of research (35) concentrated on the manufacturing industry, and at the time, Lean was mostly connected to manufacturing. The fact that case studies accounted for about 57% of the studies shows how well this approach works for preliminary research and theory development.
- Between 2001 and 2010, there were 92 research papers published, with a large percentage (43.4%) appearing after 2008. This change may have resulted from the realization of Lean's ability to save costs, especially in the aftermath of the 2007 global recession. While case studies continued to be prominent, the use of survey research methodologies increased. A few research looked into the service sector. Furthermore, scholars started talking about Lean as a more general management concept that had uses outside of the production system.
- After 2010: There has been a significant increase in interest in lean management, as evidenced by the sharp rise of articles from 92 to 320. Economic difficulties increased international rivalry, and growing production costs are to blame for this comeback and the need for businesses to consider new operational approaches. Lean concepts, such as reducing lead times, cutting costs, and avoiding waste, spurred firms to adopt green and sustainable solutions, recognizing Lean's usefulness in a wider array of scenarios.

2.2 Developing a Conceptual Model for Lean Service

The manufacturing sector, where a tangible product is produced, is where lean approaches are most frequently used. Although the lean principles are being implemented in service environments, many of the manufacturing-specific approaches are not readily transferable. Thus, before being applied to service processes, lean principles and practices need to be reevaluated. The major goal of this section is to

provide a model for lean service that can be applied to service-related activities. Five steps make up this model's structure (Fig. 1):

• Lean Service Principles Definition

• Customer Participation in Service

• Evaluation of Service Waste

• Application: Evaluation of Lean Service Techniques

• Validation of the Lean Service Model: Results Monitoring and Continuous Improvement

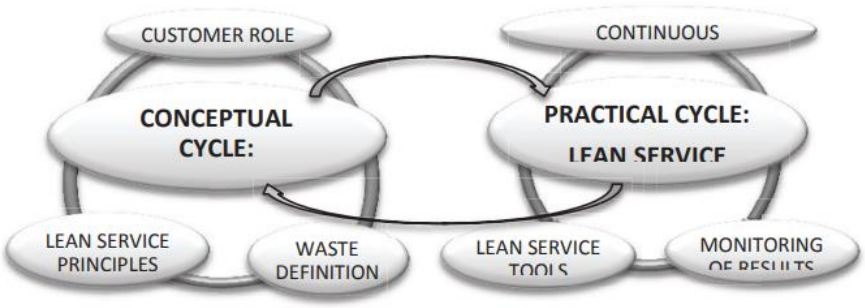


Figure 2: Conceptual Cycle and Practical Cycle Interaction

The conceptual cycle and the practical cycle are the other two cycles that make up the model. The conceptual cycle, which takes into account the fundamental qualities of service and the customer's role as a co-creator in the service process, ensures an adequate performance of the transition from lean manufacturing to lean service. By lean thinking, the practical cycle makes sure that the conceptual cycle is translated into practical objectives.

Lean Service is built on five guiding concepts that apply to both the manufacturing and service industries, making them universally applicable:

1. Specify what creates value: In a service environment, value is defined as the need that the service can fulfill for the end customer and must be defined by the customers themselves.
2. Identify the value stream: In the service sector, value is primarily created by customer needs, so the value stream consists of the sequence of activities that enable their satisfaction.
3. Optimize flow: It focuses on optimizing the continuous movement through the sequence of service activities that generate value as perceived by the customer.
4. Implement Pull: In a service environment, pull means distributing customer demand along the entire value stream, delivering only what is demanded by the customer.
5. Strive for perfection: In service management, striving for perfection means focusing on the customer's perspective and delivering exactly what the customer wants, exactly when they want it.

Lean Service emphasizes the active role of the customer, integrating them into the service creation process. Customers actively participate in the production of the service, transforming their role within the value network and becoming partners in creating the value stream.

Service Quality is defined as the alignment between customer expectations and their perceptions of the provided service. Quality is an experiential concept, and the idea of co-creation should be linked to service operation management, integrating the customer as an input that is transformed by the service process into an output with a certain degree of satisfaction.

Identifying waste in the service sector can be complex because service operations are often intangible. Nevertheless, various types of waste can occur in services, including overproduction, delays, unnecessary transport or movement, over-quality or duplication, lack of standardization, failure demand, underutilized resources, and management resistance to change.

Additionally, the text provides a table comparing types of waste in services with their counterparts in manufacturing, along with examples and possible root causes for each type of waste.

Lean Service aims to eliminate these wastes to improve efficiency and customer satisfaction in the service industry.

2.3 Lean 4.0': How can digital technologies support lean practices?

The availability of low-cost sensors, increases in computing power, and high-speed internet connectivity are some of the enablers of massive advances in technologies for operations and supply chain management. Companies have always used new technologies to advance their process. The shipping container is probably the most successful example of a technical revolution that not only significantly improved supply chain processes but also shaped global trade flows in the long term. On the other hand, there are also technologies like Radio Frequency Identification (RFID) that have triggered high expectations for process improvement in retailing operations but have so far only been able to partially fulfill them. Ultimately, new technologies can provide benefits in two fundamentally different ways, i.e. either by increasing efficiency or by increasing revenues – many technologies aim to achieve both. As we are interested in the technology benefits that aim at waste reduction, we carefully screened for relevant technologies in this context. Since new technology developments are currently observed every day, we focused our literature analysis on practitioner articles as well as white papers and reports issued by large technology firms. with a higher associated level of lean implementation benefit the most in embracing Industry 4.0 and in grasping its potential. Other researchers refer instead to Industry 4.0 as a completion of lean, which was declared as limited by some studies. Market requirements are nowadays more complex and customers' demand for highly personalized products may hinder Lean from being effective. Lean could not only be able to keep up with the pace of personalization using the same tools used since the second half of the 20th century with no technological advancements supporting those tools. In this sense, Industry 4.0 represents the mean Lean can exploit to face new trends in the manufacturing world, preserving its process robustness. The strong interest in the topic from academia is evident,

however, due to the infancy of the Industry 4.0 topic, it is still difficult to assess the effect of Lean 4.0. To the best of the authors' knowledge, available scientific studies are mostly focused on theoretical research, and hence conclusive proof for Lean 4.0 potentials is still outstanding. This research is an attempt to study the mechanisms explaining how digital technologies can enhance Lean, and to assess the impact of 'Lean 4.0' on operational performance. The scope is limited to industrial operations management, including manufacturing, logistics, and supply chain operations since it is the traditional application space for lean.

Technology	**Description**	**Examples**
IoT solutions	Sensors, cameras, and smart devices that process and share gathered data using internet connectivity.	Process control sensors, environmental monitoring, cameras, and smart replenishment solutions.
Virtual and augmented reality	Interactive experiences where real-world objects are represented either entirely "virtual" or "augmented" by computer-generated perceptual information.	Smart glass, holo-lens, virtual twins.
Advances analytics	Data science tools for improved decision-making, such as gaining deeper insights, making predictions, or generating recommendations.	Predictive Analytics, Machine Learning, Deep Learning, Support Vector Machines.
Autonomous vehicles	Solutions allowing semi- and fully autonomous transportation, ranging from long-distance to short-distance deliveries.	Platooning trucks, autonomous trucks, drones, self-driving delivery vehicles.
Robotics	Physical robotic systems are used across all supply chain processes within enclosed environments.	Robotic mobile fulfillment systems, picking robots, industrial robots, cobots.
Digital manufacturing	An integrated, computer-based manufacturing system comprising simulation, 3D visualization, analytics, and collaboration tools to create products and manufacturing processes.	Digital printing, 3D printing, CNC milling, Stereolithography.

Table 1

2.4 Six Sigma Approach: Another way to improve quality

Statistically, Six Sigma refers to a process in which the range between the mean of a process quality measurement and the nearest specification limit is at least six times the standard deviation of the process (fig.3).

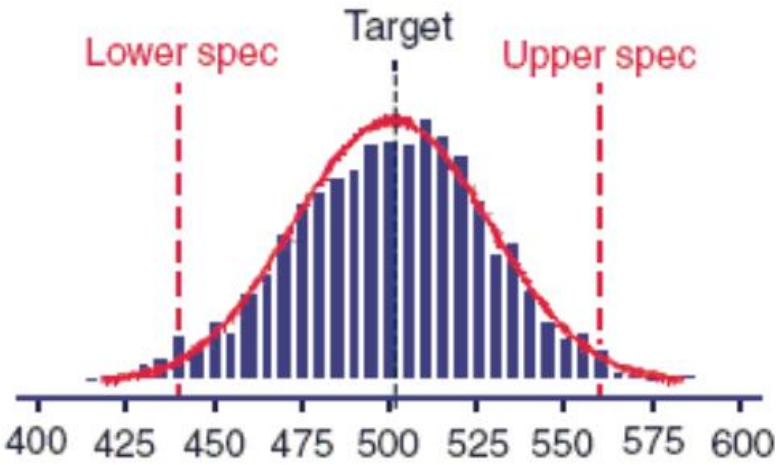


Figure 3: Six Sigma Example

Six Sigma sets itself apart from other quality programs with its distinctive top-down approach and a rigorous methodology that requires thorough analysis, data-driven decision-making, and the implementation of a control plan for continuous process quality control. Originating at Motorola in the 1980s, Six Sigma has been embraced by major corporations such as GE, Honeywell, Sony, Caterpillar, and Johnson Controls, yielding significant benefits. Implementing Six Sigma is a sustained commitment that hinges on wholehearted support from upper management. It fundamentally transforms the organizational mindset by instilling a culture of fact-based decision-making across all levels. Consequently, Six Sigma Methodology was completed by some authors analyzing Motorola case study and proposed as a new opportunity for all the companies that want to improve their quality. Table 2 shows how Six Sigma Approach principles can be applied with specific tools:

Strategies and Principles	**Tools and Techniques**
Project management	Statistical process control
Data-based decision making	Process capability analysis
Knowledge discovery	Measurement system analysis
Process control planning	Design of experiments
Data collection tools and techniques	Robust design
Variability reduction	Quality function deployment
Belt system	Failure mode and effects analysis
DMAIC process	Regression analysis
Change management tools	Analysis of means and variances Hypothesis testing Root cause analysis Process mapping

Table 2

2.5 Business Process Management

Business Process Management (BPM) is a systematic approach to optimizing the business processes of an organization, with the ultimate goal of enhancing overall efficiency and performance. It encompasses the design, execution, monitoring, and improvement of business processes to attain organizational goals and objectives. BPM employs a set of customized tools or technologies, in addition to a comprehensive management philosophy that emphasizes continuous process improvement and alignment with organizational strategies. This involves understanding how different activities and tasks within an organization are interconnected and how they contribute to the overall objectives. BPM aims to eliminate bottlenecks, redundancies, and inefficiencies in processes, leading to improved productivity and better resource utilization. One key aspect of BPM is the

modeling of business processes. This involves creating visual representations or diagrams that illustrate the sequence of activities, decision points, and interactions within a process. Business process models serve as a blueprint for understanding, communicating, and analyzing how work is done in an organization. They provide a common language that enables stakeholders to collaborate and make informed decisions about process improvements.

According to Dumas (2013), the lifecycle of BPM typically involves these stages:

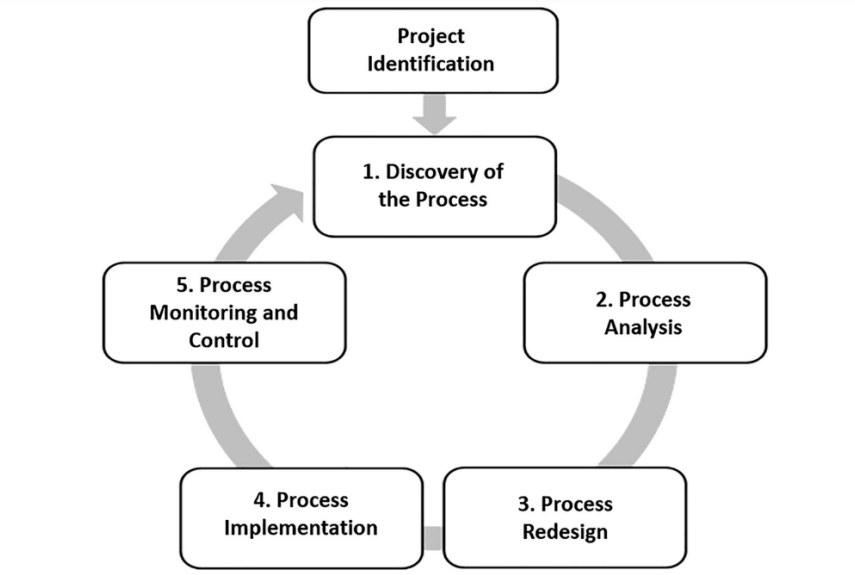


Figure 4: BPM Life Cycle

- Process Identification: This step is marked by the identification of the process to be improved;
- Process analysis: A process-oriented strategy is developed at this step. Such a development will provide a framework and direction for the continuous management of the processes and its macro-objective must be aligned with those of the company. For this alignment to take place, it is necessary to know the organization's targets;
- Process redesign: This phase is marked by the validation of the information before the effective action. It is the context in which the goals and objectives are measured and their variables, as external factors, are identified. In addition, this step is

marked by the process design and its materialization. At this moment, questions like “what, when, where, who, and how” will be answered. It is worth mentioning that these first three phases may vary according to the company’s maturity in BPM practice;

- Process implementation: This step is directly tied to the process design, and allows small changes to the original process;
- Process monitoring and control: This step provides information about process performance through metrics and helps to think about refinement actions. Delgado also complements that the monitoring execution enables the understanding and control of the actual occurrences of the organization’s business processes, and helps to improve awareness and self-consciousness of the organization.

2.6 Can BPM Co-exist with Lean Management and Six Sigma?

Many articles assess that Lean, Six Sigma, and BPM are competing disciplines, it seems to be one or the other: Six Sigma along with Lean or BPM. Daniel Morris's theory takes a different position: He believes that BPM, Lean, and Six Sigma, have weaknesses that the others fill and that together, they provide a changing environment that delivers the full promise of each. Lean and Six Sigma focus on improving parts of an overall process. While this helps focus effort, it puts the scope of improvements in a specific vertical causing the improvement to be narrowly focused. This creates problems if isolated improvements sub-optimize the activity downstream in the process, causing problems in the flow of goods and services across the enterprise. BPM doesn’t provide a mathematical approach like Six-Sigma, but if applied strategically, at the enterprise level, BPM provides the framework for change in its process and workflow models. This is especially effective when application touchpoints, legacy application functionality, data use, and metrics are included with the normal work activities. Such models allow information from one project and operation to link to those of the next project and build to form a complete picture of the process. In addition, BPM provides proof of needed participation and inclusion by showing who is involved in any process or workflow, what that involvement produces, and how the product(s) are used. This helps break down the barriers between groups and promotes

inclusion and cooperation for the common good. It also clearly shows the limitations in improvement if the groups involved in executing the end-to-end process are not engaged.

Considering that adaptability and fast-changing are becoming one of the central capabilities for most companies, If a complete BPM tool suite has been used as the foundation for this changing environment, business managers working with data analysts will now be able to generate the applications that manage their workflows and the overall processes, track work, and monitor performance. Implementing BPM allows any change project or any manager to look up comprehensive information, redesign the operation knowing the upstream and downstream impact, simulate changes, compare costs and improvement, and then decide on the best action. If a complete BPM tool suite has been used as the foundation for this changing environment, business managers working with data analysts will now be able to generate the applications that manage their workflows and overall processes, track work, and monitor performance. To establish a solid foundation, the BPM environment furnishes models and information about the business, rules, performance, applications, and data flow. This enables effective application and sets the context for Lean utilization, allowing for an immediate evaluation of proposed changes through simulation. Similarly, this environment serves as the framework for Six Sigma application, providing a comprehensive overview of measured activities, a method for gauging flow and performance at various process points, and reference points for statistical measurements within the Six Sigma framework.

3. ARXivar

Arxivar is a digital platform where various types of documents can be uploaded (such as Excel files, Word documents, and emails) and managed within customized workflows created based on customer requests. This is aimed at optimizing processes and promoting the digital transformation of companies.

Initially, there was only a Windows client environment, a downloadable application from the browser, within which all the operations we will see below could be carried out. Three years ago, the web version of the application was introduced, named Arxivar Next, which allows performing all tasks online. This transition marked a turning point by facilitating and improving project implementation, as it eliminated the need to access a company server and instead allowed implementation through the web. The only requirement is to know the access credentials for the Arxivar environment.

Figure 5: Arxivar main functions

3.1 ARXivar Main Tools

1. **Document Archiving:** Within the software, profiles are created and associated with all documents related to the company. These profiles aim to facilitate the search for customer information, enabling the visualization of all files related to a particular customer.

2. **Substitute Conservation:** This is a regulated digital procedure under Italian law. It ensures the long-term legal validity of an electronic document. Under certain conditions, electronic documents are equated with paper documents. This feature allows companies to save costs on printing and storage.

Figure 6: Electronic Storage

3. **Business Process Modeling (BPM):** Arxivar includes a designer tool used to create workflows. These are digital representations of all activities carried out in the company. Within these workflows, variables can be emphasized, or specific tasks can be performed. The tasks are designed to send notifications to end-users, specifying the operations they need to perform to advance the process. This capability enables tracking of actions performed and their executors.

Arxivar stands out for its versatility and user-friendly interface. Its key features include:

1. Document Storage: Users can input various document profiles by completing necessary data fields using a tool called a mask.

2. Search Functionality: After storing documents, you can easily search through them using views and filter the results.

3. Security: It is possible to set different information access levels ensures the right parameters of confidentiality and integrity on documents. For each document class it is possible, in a simple and intuitive way, to establish the rights (for example: modification, sharing, cancellation, etc.) for each user / group of users:

    - Access to the platform is guaranteed by logon providers such as Active directory or OAuth 2.0.
    - It is possible to have segregated information on the same platform that is accessible only to certain groups of users.
    - The status of the document also determines its visibility or accessibility.

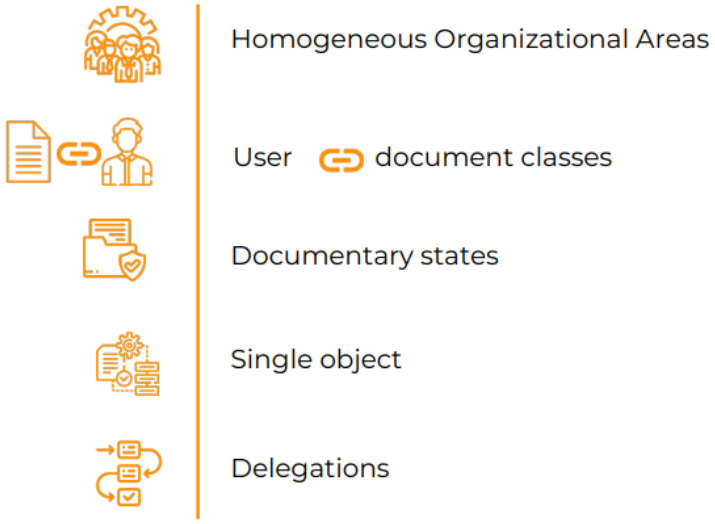


Figure 7: Arxivar security levels

4. Folders Organization**:** Documents are organized within folders, which can be either static or dynamic, and can be generated directly from workflows.

5. Protocol Management: Arxivar handles the protocolization of documents. When activated, it automatically assigns a code through a series of computerized

procedures for efficient document management. This code serves to uniquely identify each document within the protocol.

6. Revisions: Unlike other file systems, Arxivar has the capability to store the history of revisions made to a document. When a document within an existing profile is modified, the previously entered information is not deleted but is retained in memory. This allows users to view all the files profiled over time; by default, the system always displays the latest uploaded version. If desired, users have the option to restore an old revision and set it as the main document.

7. Logs: These are files containing numerous lines explaining the outcomes of completed processes, reporting any errors, and including the name of the user who performed the action.

8. Sharing**:** Documents archived into Arxivar are accessible to all users with the appropriate authorization, and they are unique; no specific copies are created for each user.

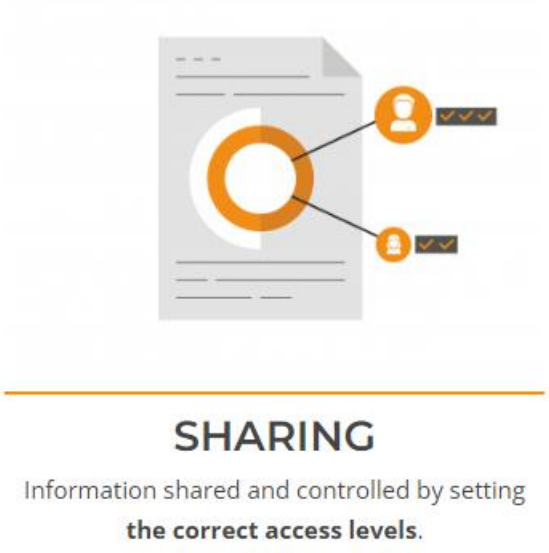


Figure 8: Sharing information with ARXivar

9. Integrations: ARXivar is the Information & Process Management platform with the highest number of native integrations in Italy. ARXivar can be easily complemented to ERP and management systems because it enhances and extends their scope of

action, easily and without upsetting operating habits. Some integration examples are:

- Microsoft Dynamics 365 Business Central
- BMS
- AUTOCAD
- SAP
- Mago.Net

Figure 9: ARXivar Integrations

10. Digital Signature and Certified Email: Arxivar enables the signing of contracts or various types of documents using a digital signature. Additionally, it allows the legally valid sending of emails through Certified Electronic Mail. Electronic signature solutions allow documents to be signed quickly wherever you are, with a positive impact on operational efficiency. The solutions can be integrated into processes for full digital management of procedures and full control of each approval step.

Figure 10: Electronic Signature Solution

11. Data Analysis: Thanks to the monitoring and reporting tools, it is possible to have a detailed analysis of the performance of processes and individual activities, improving operational efficiency. In addition ARXivar can be integrated with more powerful Business Intelligence tools like Board or PowerBI, in order to read and analyze data archived into ARXivar.

Figure 11: Analysis of Data saved into ARXivar

3.2 ARXivar Workflows

The word Workflow means “workstream” and is used to identify the digital model of a process through its rationalization and division into different activities (tasks), to optimize performance and make efficient use of resources. Tasks may be automatic when they do not require decision-making intervention: it is possible to create a certain number of conditions (activation rules) that will automatically initiate a specific workflow, notifying the user or group involved that they have been assigned a new task to perform. Once the task has been completed, if the process so requires, the workflow will send a new task to the next user to take charge of the next step in the workflow.

A workflow process is made of different elements:

- **Start and End:** Two fixed elements for every workflow, defining the beginning and end of the process.

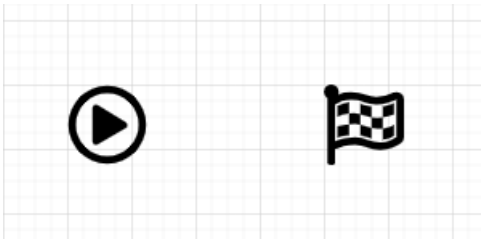


Figure 12: Start and End of a Worklow

- **Links:** Most operations take place within links. For example, file conversion to PDF, populating a variable (either with a default value or through an SQL query), modifying the document status, email sending, etc.

Figure 13: Example of a Link

- **Conditions:** These are connected by links and represent the steps of the process. They allow the workflow to be directed on a way or in another.

Figure 14: Condition

- **Tasks:** It is the interactive tool of a workflow process. A task is a notification sent to the users that have performeda some operations in order to let the process continue. It includes a text field where the executor is informed of the steps to take and which variables or operation have to be completed.

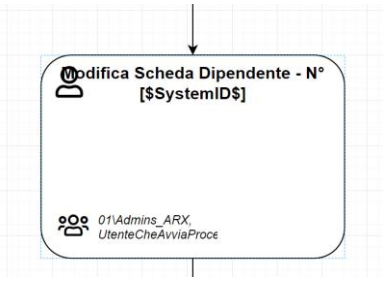


Figure 15: Example of a Task

- **Pauses:** Adjustable in length, pauses are crucial for interrupting the flow if needed.
- **Stops:** Stops are used to interrupt a branch of the workflows.

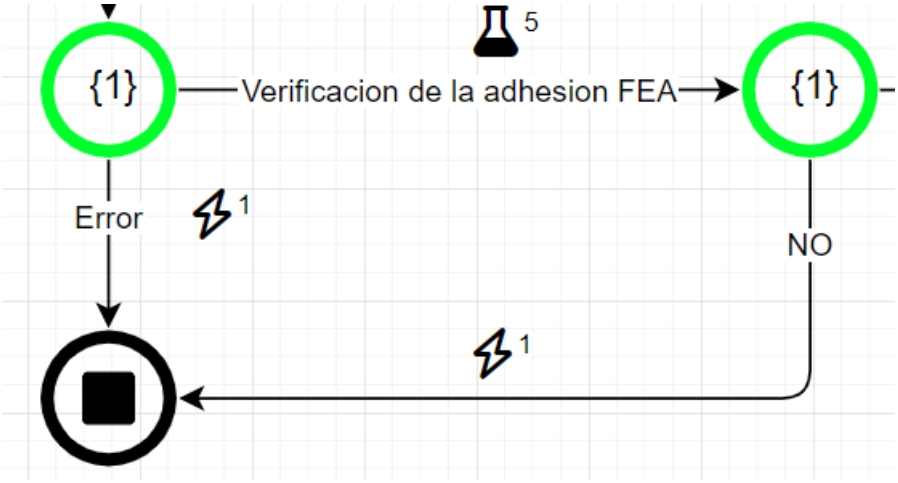


Figure 16: Example of a Stop

- **Events**: An event activates a branch of the workflow not directly connected to the main one. It can be activated more than once, for example, to do a repetitive operation, like sending an email.

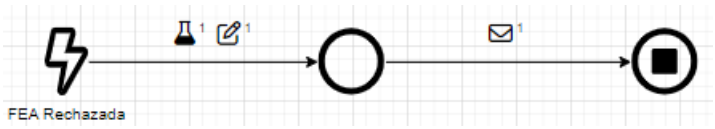


Figure 17: Example of an Event

3.3 ARXivar Application Examples

Thanks to its versatility Arxivar is widely adopted in Italy, with more than 4000 companies leveraging its capabilities across various sectors. The main ones are:

- Retail;
- Automotive;
- Manufacturing;
- Health;
- Logistics;
- Food And Beverages.

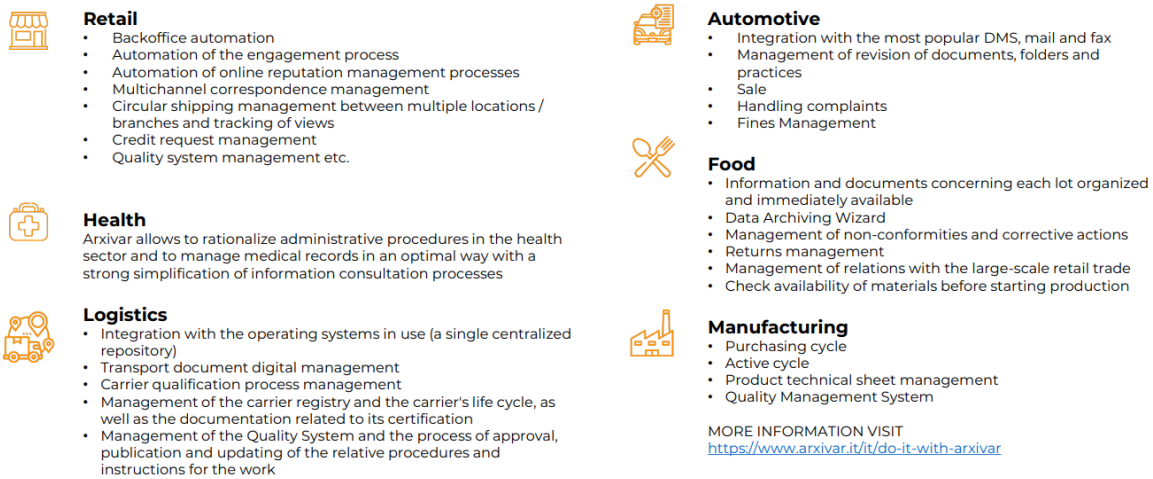


Figure 18: Arxivar main application sectors

4. Case Study: Visit Piemonte

Figure 19: Visit Piemonte Website Homepage

4.1 Visit Piemonte: General Overview

Visit Piemonte, formerly known as DMO, operates as an in-house company. under the Piedmont Region, focusing on the promotion of tourism, sport and agri-food. Established in 2007, Visit Piemonte's primary goal is to showcase the strengths of the Piedmont Region both in Italy and internationally, promoting various initiatives and events. The in-house company is a type of corporate form that operates as the operational arm of a public entity. When the public entity needs to initiate a project, instead of conducting a public procurement, it entrusts the project to these companies of which it is a shareholder (and controlling entity). The in-house company differs from a publicly participating company, as it primarily provides services almost exclusively for the public entity (more than 80% of the activities performed by the in-house company must be in favor of the controlling public entity). In addition, this company is a non-profit organization, meaning that any proceeds generated from an event are reinvested. It relies on public funding from entities such as the Piedmont Region, the European Union, and other smaller organizations.

Visit Piemonte principal tasks are:

- Manages the Tourism Observatory, supplying information on the evolution of demand and markets. It also offers consultancy to both public and private entities for the formulation of marketing strategies in the tourism and agri-food sectors.
- Executes communication campaigns targeting the general public, covering aspects of the overall tourism offering and highlighting Piedmontese agri-food products.

- Ensures the commercial promotion of Piedmonts tourism and agri-food products by fostering connections between local tourism operators and their national and international counterparts.
- Conducts public relations and information operations, particularly directed towards national and international media.
- Organizes courses and specialized training activities for technical operators, focusing on topics related to tourism and gastronomic marketing.
- Provides technical consulting services to businesses for the development of agreements and commercial partnerships.

Visit Piemonte commits itself to identifying the needs of its guests and attempting to fulfill them in order to make their stay as enjoyable as possible. This approach to tourism prioritizes the needs of the visitor without sacrificing sustainability.

Visit Piemonte organization is split into two primary lines: the institutional line and the project line, both backed by the administrative and control office. In terms of the project line, its main objective is the advancement of diverse initiatives that are designed by the organization, suggested to its members, and financed by them. Conversely, the institutional line handles all activities that happen on a regular basis over an extended period of time. Included in this category are the operations of the Tourism Observatory, which first offers criteria for choosing which initiatives to pursue (by industry analyses) and then manages the oversight of the actions that are carried out.

4.2 Visit Piemonte – Needs and Implemented Solutions

The primary need that led Visit Piemonte to review its organizational processes is to provide its shareholders, Regione Piemonte and Union Camere, with the most detailed reporting possible regarding the activities and resources expended on a project. This reporting activity is not only aimed at describing the use of resources but is also crucial in the case of oversight by regulatory bodies, a scrutiny to which this company is subject. Regione Piemonte estimates every year a budget to pursue some targets in tourism. Visit Piemonte is in charge of ensure the right commercial promotion to reach the established

goals carrying on different *projects*, where each of them is made of many sub-activities reports daily. In order to justify to shareholders how the budget has been spent, every cost is associated with the related project. Costs can be divided into two main categories:

- Internal Costs: Are the cost related to the human activity of the employes. It's calculated through the number of hours worked on the project, multiplied by the specific hourly cost of the employee.
- External Costs: Every cost related to a project that is not internal. I.e., the organization of an event, a business trip, etc..

Every day the employees have to report the activity done on a timesheet, directly associated with a project, used to calculate the Internal Costs. External Cost instead are mainly reported on the list of Orders done for each project.

Before the automation, this process was made through calculation on Excel sheets and required more than a month of work just to aggregate all the data. Considering that this report must be submitted twice a year, the automation let the administrative office save more than two months of work per year. In order to make this process lean, an integration between four systems has been introduced:

- ARXivar: is the digital storage of all the data. Every employee inserts data on ARXivar archiving documents such as the daily timesheet. All the digital data are saved in a database accessible from external systems.
- Board: is a tool used to read, aggregate, and analyze big quantities of data. In this case, Board reads the data from ARXivar database and automatically prepares the reports Visit Piemonte needs. All the reports can be easily seen from a customized dashboard, real-time updated with the data from the database.
- Attendance tracking system: the time clock system is integrated with ARXivar to be aligned whether a certain employee has to work in the office or not, because, for example, he/she is working from home, doing a business trip, or on vacation.
- Google Calendar: All the activities are automatically published on Google Calendar through Rest API calls. All the employees have access to the company calendar in order to simplify communication between offices.

More specifically, different working areas were created:

1. Activity Management Area: Through the digitization of the existing Timesheet, users can upload work reports, specifying the project, the type of activity performed, and providing all the information needed for subsequent semi-annual reporting. This reporting is automatically generated, thanks to integration with Board, according to the specific control model set by the Regione Piemonte.

2. Travel Management & Expense Notes: Concurrently with the completion of work reports, travel and expense notes are also entered so that the incurred costs flow into the reporting system.

3. Authorization Processes Area: The previous paper forms have been digitized, and workflows have been created for staff requests (vacations, permits, Law 104 for relatives' assistance, maternity). These functionalities are integrated with the attendance tracking system to authorize requests, track attendance/absences, and manage the collection of supporting documentation (e.g., medical/study permits) using automatic filing.

4. Centralized Management of Company Activities (closures/layoffs) and Communications: Features have been implemented to distribute documentation/announcements and certify acknowledgment of documents such as internal announcements.

5. HR Portal: Each employee can access their reserved area to download the Payrolls and the Ticket report (Monthly detail and summary reports for closed months) generated from previously uploaded work reports and expense notes.

6. Protocol Management: The registration of incoming and outgoing documents is done using ARXivar, which generates and manages, through a reservation mechanism, the protocol number for correspondence.

7. Creation of a working environment for data aggregation: Data is brought in real-time to this platform, from which it is possible to derive reports (Corporate Performance Management) at various levels of detail.

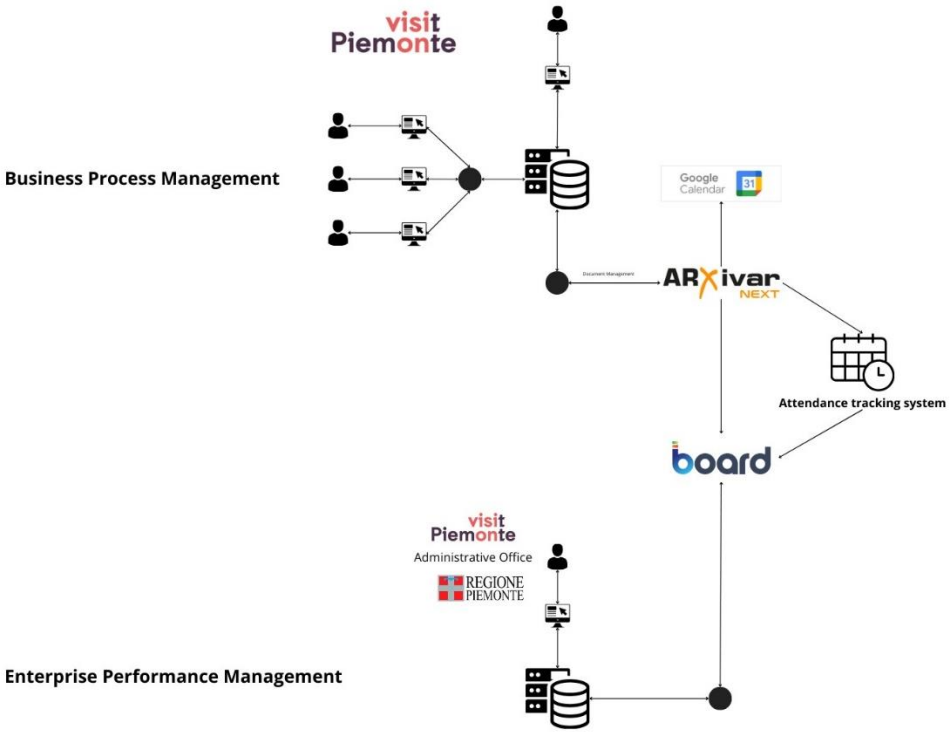


Figure 20: Outline of Visit Piemonte's integrations

5. Case Study: Analysis of Visit Piemonte Arxivar Website

Arxivar features both a client interface and a web interface. In recent years, there has been a shift towards phasing out the client interface to offer users a comprehensive web experience. Although the two interfaces are entirely symmetrical, as they draw from the same database, newer functionalities have primarily been implemented for the web portal.

The web interface allows for complete customization of the layout, enabling different groups of users to see distinct menu options. Typically, user groups consist of employees from specific offices who perform similar tasks. This customization proves invaluable in

simplifying the user experience, as each office can customize ARXivar to its unique needs, showing only the essential functions.

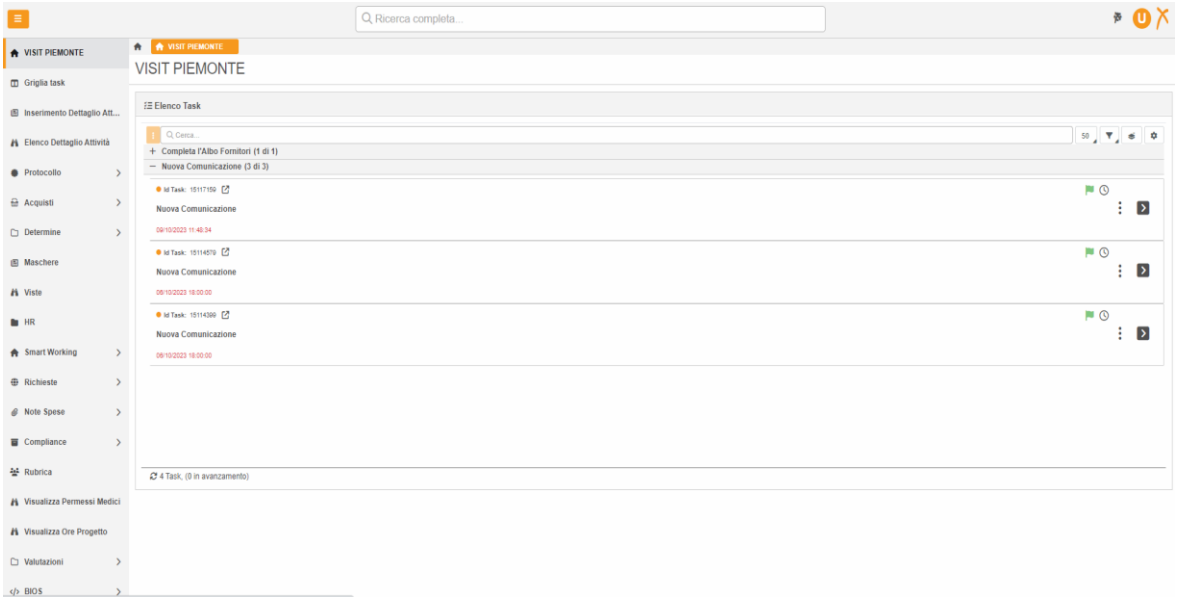


Figure 21: Administrative Office Layout

The implementation process is overseen by a designated Administrator user or users who have maximum control over the system. These administrators are the sole individuals with access to the System Management area, where important settings such as user configurations, document classes, and security protocols are established. This exclusive access ensures a centralized and secure management of the system.

Visit Piemonte are set three different layouts:

- President: Visit Piemonte president uses Arxivar just for a few basic operations, to simplify his/her user experience was created this simpler layout.
- Employees: This layout contains just the basic functions necessary for all standard users.
- Administrative office: The administrative office layout is an extension of the standard user layout.
- Administrators: Layout for administrators allows them full access all over the system.

The main ARXivar tools used by Visit Piemonte are the following:

- Models are designed to guide the user in completing a document: starting from a template provided in programming, associated with a form, specific information is requested from the user. Arxivar then automatically inserts these details into the template. The template can have various formats, from Word to Excel.
- Masks, on the other hand, are used for document archiving: they prompt the user to fill in specific fields that will constitute the document's profile. As mentioned earlier, Arxivar can maintain both the original document and create a profile containing the user-entered field values, uniquely identifying a document.
- Searches based on the fields in this profile can be conducted to display specific documents, and this is done through views: views are guided paths that allow the visualization of already archived documents.
- Tasks are the direct connection between a Workflow process and the users. Inside tasks users interact with workflow processes, for example, inserting data, archiving documents and so much more. Each task in a workflow is sent to a specific user or a group of users.

5.1 Timesheets Management Workflows

Returning to Visit Piemonte's primary objective of streamlining report preparation for diverse projects by distinguishing between external and internal costs, a detailed examination of the specific environment is now underway. In this context, the division of costs isn't merely a matter of choice but is intricately tied to the company's overarching goal of delivering precise and comprehensive reports to its shareholders. To achieve this, a process has been set in motion to ensure the accurate allocation of work hours for each resource to their respective activities. This step is crucial for payroll calculations, as it is essential to determine their contribution to specific projects.

The company is strategically divided into operational areas, and a deliberate decision has been made to assign the cost of a resource not to an organizational area but to a specific activity. This strategic choice is driven by the reality that the same resource engages in cross-functional activities impacting various areas.

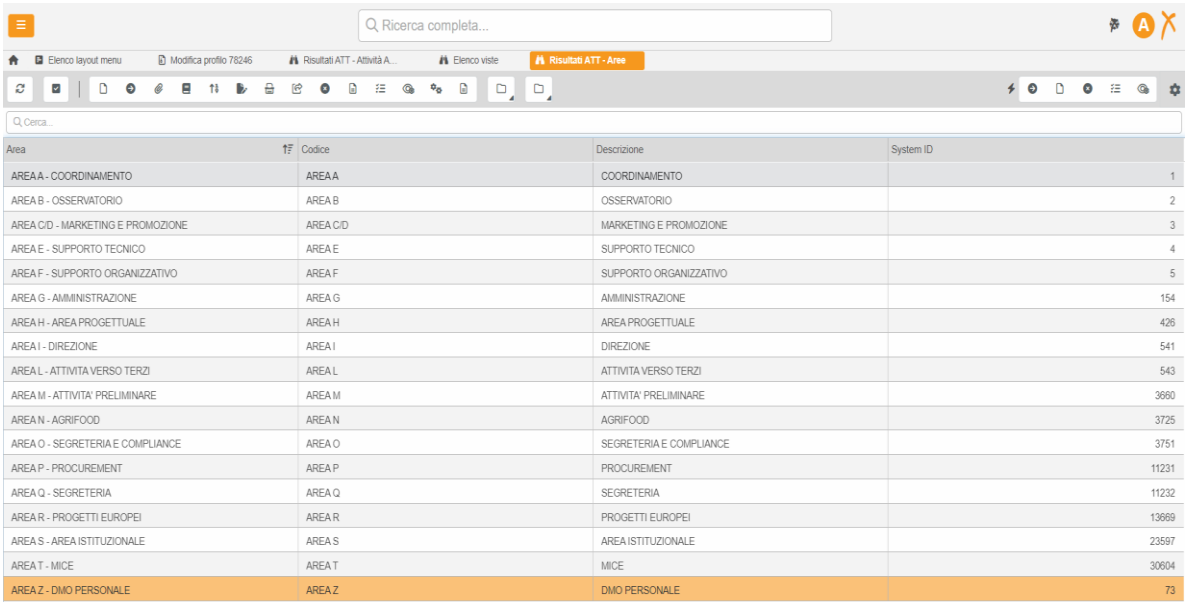
This organizational structure mirrors the characteristic flexibility of project-based firms, where resources aren't confined to fixed and standard roles but are dynamically managed and deployed across various activities, even spanning different organizational areas.

Integrating an activity into Arxivar serves the dual purpose of associating it with a specific organizational area and pre-determining the resources linked to it. This approach is designed to restrict resource access to only their designated activities, thereby minimizing the likelihood of errors.

Activities can be in three different working states:

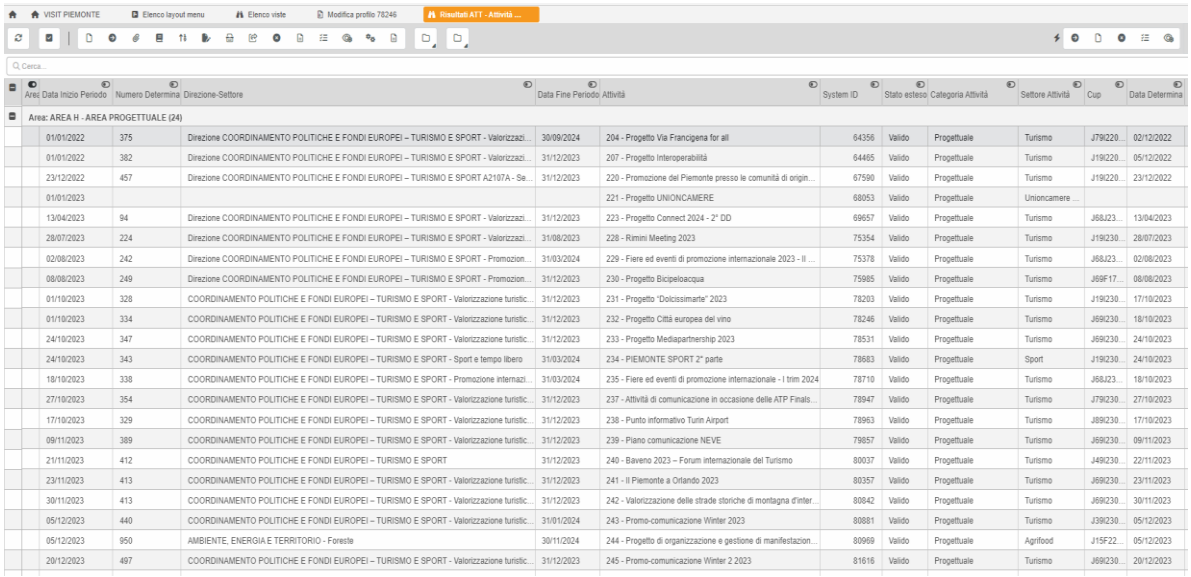
- Open: This state allows visibility to all the users.
- Pre-closure: Only the administrative office can see and modify activities in this state.
- Closed: Activities in this state cannot be modified anymore.

Below are shown images to clarify the Operational Areas and the activities performed:



Area	Codice	Descrizione	System ID
AREA A - COORDINAMENTO	AREA A	COORDINAMENTO	1
AREA B - OSSERVATORIO	AREA B	OSSERVATORIO	2
AREA C/D - MARKETING E PROMOZIONE	AREA C/D	MARKETING E PROMOZIONE	3
AREA E - SUPPORTO TECNICO	AREA E	SUPPORTO TECNICO	4
AREA F - SUPPORTO ORGANIZZATIVO	AREA F	SUPPORTO ORGANIZZATIVO	5
AREA G - AMMINISTRAZIONE	AREA G	AMMINISTRAZIONE	154
AREA H - AREA PROGETTUALE	AREA H	AREA PROGETTUALE	426
AREA I - DIREZIONE	AREA I	DIREZIONE	541
AREA L - ATTIVITA VERSO TERZI	AREA L	ATTIVITA VERSO TERZI	543
AREA M - ATTIVITA' PRELIMINARE	AREA M	ATTIVITA' PRELIMINARE	3660
AREA N - AGRIFOOD	AREA N	AGRIFOOD	3725
AREA O - SEGRETERIA E COMPLIANCE	AREA O	SEGRETERIA E COMPLIANCE	3751
AREA P - PROCUREMENT	AREA P	PROCUREMENT	11231
AREA Q - SEGRETERIA	AREA Q	SEGRETERIA	11232
AREA R - PROGETTI EUROPEI	AREA R	PROGETTI EUROPEI	13669
AREA S - AREA ISTITUZIONALE	AREA S	AREA ISTITUZIONALE	23597
AREA T - MICE	AREA T	MICE	30604
AREA Z - DMO PERSONALE	AREA Z	DMO PERSONALE	73

Figure 22: Visit Piemonte Operational Areas



Area	Data Inizio Periodo	Numero Determina	Direzione-Settore	Data Fine Periodo	Attività	System ID	Stato esteso	Categoria Attività	Settore Attività	Cup	Data Determina
Area: AREA H - AREA PROGETTUALE (24)											
	01/01/2022	375	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazi...	30/09/2024	204 - Progetto Via Francigena for all	64356	Valido	Progettuale	Turismo	J79I220...	02/12/2022
	01/01/2022	382	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazi...	31/12/2023	207 - Progetto Interoperabilità	64465	Valido	Progettuale	Turismo	J19I220...	05/12/2022
	23/12/2022	457	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT A2107A - Se...	31/12/2023	220 - Promozione del Piemonte presso le comunità di origin...	67590	Valido	Progettuale	Turismo	J19I220...	23/12/2022
	01/01/2023				221 - Progetto UNIONCAMERE	68053	Valido	Progettuale	Unioncamere ...		
	13/04/2023	94	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazi...	31/12/2023	223 - Progetto Connect 2024 - 2° DD	69657	Valido	Progettuale	Turismo	J68J23...	13/04/2023
	28/07/2023	224	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazi...	31/08/2023	228 - Rimini Meeting 2023	75354	Valido	Progettuale	Turismo	J19I230...	28/07/2023
	02/08/2023	242	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Promozion...	31/03/2024	229 - Fiere ed eventi di promozione internazionale 2023 - II ...	75378	Valido	Progettuale	Turismo	J68J23...	02/08/2023
	08/08/2023	249	Direzione COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Promozion...	31/12/2023	230 - Progetto Bicipeloacqua	75985	Valido	Progettuale	Turismo	J69F17...	08/08/2023
	01/10/2023	328	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	231 - Progetto "Dolcissimarte" 2023	78203	Valido	Progettuale	Turismo	J19I230...	17/10/2023
	01/10/2023	334	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	232 - Progetto Città europea del vino	78246	Valido	Progettuale	Turismo	J69I230...	18/10/2023
	24/10/2023	347	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	233 - Progetto Mediapartnership 2023	78531	Valido	Progettuale	Turismo	J69I230...	24/10/2023
	24/10/2023	343	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Sport e tempo libero	31/03/2024	234 - PIEMONTE SPORT 2° parte	78683	Valido	Progettuale	Sport	J19I230...	24/10/2023
	18/10/2023	338	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Promozione internazi...	31/03/2024	235 - Fiere ed eventi di promozione internazionale - I trim 2024	78710	Valido	Progettuale	Turismo	J68J23...	18/10/2023
	27/10/2023	354	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	237 - Attività di comunicazione in occasione delle ATP Finals...	78947	Valido	Progettuale	Turismo	J79I230...	27/10/2023
	17/10/2023	329	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	238 - Punto informativo Turin Airport	78963	Valido	Progettuale	Turismo	J89I230...	17/10/2023
	09/11/2023	389	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	239 - Piano comunicazione NEVE	79857	Valido	Progettuale	Turismo	J69I230...	09/11/2023
	21/11/2023	412	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT	31/12/2023	240 - Baveno 2023 – Forum internazionale del Turismo	80037	Valido	Progettuale	Turismo	J49I230...	22/11/2023
	23/11/2023	413	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	241 - Il Piemonte a Orlando 2023	80357	Valido	Progettuale	Turismo	J69I230...	23/11/2023
	30/11/2023	413	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	242 - Valorizzazione delle strade storiche di montagna d'inter...	80842	Valido	Progettuale	Turismo	J69I230...	30/11/2023
	05/12/2023	440	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/01/2024	243 - Promo-comunicazione Winter 2023	80881	Valido	Progettuale	Turismo	J39I230...	05/12/2023
	05/12/2023	950	AMBIENTE, ENERGIA E TERRITORIO - Foreste	30/11/2024	244 - Progetto di organizzazione e gestione di manifestazion...	80969	Valido	Progettuale	Agrifood	J15F22...	05/12/2023
	20/12/2023	497	COORDINAMENTO POLITICHE E FONDI EUROPEI – TURISMO E SPORT - Valorizzazione turistic...	31/12/2023	245 - Promo-comunicazione Winter 2 2023	81616	Valido	Progettuale	Turismo	J69I230...	20/12/2023

Figure 23: Open Activities of Area H – Projects

Area	Data Inizio Periodo	Numero Determina	Direzione-Settore	Data Fine Periodo	Attività	System ID	Stato esteso	Categoria Attività	Settore Attività	Cup
Area: AREA S - AREA ISTITUZIONALE (22)										
	01/01/2018				015 - ISTITUZIONALE PITEM N.2 - OUTDOOR DATA	39	Valido	Istituzionale	Progetti Europei	
	01/01/2018				017 - ISTITUZIONALE PITEM N.3 - OUTDOOR OFF	40	Valido	Istituzionale	Progetti Europei	
	01/01/2018				033 - DIGITAL PR E UFFICIO STAMPA	57	Valido	Istituzionale	Turismo	
	01/01/2018				042 - SUPPORTO ATTIVITA' DI COMUNICAZIONE	144	Valido	Istituzionale	Turismo	
	01/01/2018				061 - SUPPORTO DI ATTIVITA' ISTITUZIONALE	609	Valido	Istituzionale	Turismo	
	01/01/2018				063 - ISTITUZIONALE INTERREG I-CH: TRENINO VERDE	611	Valido	Istituzionale	Progetti Europei	
	01/01/2018				065 - ISTITUZIONALE PITEM N.1 - PCC	613	Valido	Istituzionale	Progetti Europei	
	01/01/2020				153 - MARKETING / COMUNICAZIONE WEB / MATERIALE...	30203	Valido	Istituzionale	Turismo	
	01/01/2023	186	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...	31/12/2023	198 - CAMPAGNE DI COMUNICAZIONE ISTITUZIONALI	65512	Valido	Istituzionale	Turismo	J69I230...
	01/01/2023	187	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...		101 - OSSERVATORIO TURISTICO REGIONALE	65516	Valido	Istituzionale	Turismo	J69I230...
	01/01/2023	190	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...	31/12/2023	145 - ATTIVITA MICE (COSTI ESTERNI)	65520	Valido	Istituzionale	Turismo	J69I230...
	01/01/2023				148 - ATTIVITA' MICE (PERSONALE)	65521	Valido	Istituzionale	Turismo	
	01/01/2023	190	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...	31/12/2023	115 - MATERIALE PROMOZIONALE	65524	Valido	Istituzionale	Turismo	J69I230...
	01/01/2023	190	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...	31/12/2023	211 - MARKETING TURISTICO	65931	Valido	Istituzionale	Turismo	J69I230...
	01/01/2023	186	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...	31/12/2023	212 - VISITPIEMONTE.COM - SOCIAL MEDIA SYSTEM	65933	Valido	Istituzionale	Turismo	J69I230...
	01/01/2023	153	Direzione COORDINAMENTO POLITICHE E FONDI EUROPE...	31/12/2023	217 - PIEMONTE SPORT COMMISSION	65941	Valido	Progettuale	Sport	J14J23...
	01/01/2023	463	Direzione AGRICOLTURA E CIBO - Valorizzazione del sistema...	31/12/2023	218 - MARKETING AGROALIMENTARE	65942	Valido	Istituzionale	Agrifood	J19I230...

Figure 24: Open Activities of Area S

Area	Data Inizio Periodo	Numero Determina	Direzione-Settore	Data Fine Periodo	Attività	System ID	Stato esteso	Categoria Attività	Settore Attività	Cup
Area: AREA I - DIREZIONE (7)										
	01/01/2018				001 - COORDINAMENTO STRUTTURA E SUPERVISIONE ...	6	Valido	Istituzionale		
	01/01/2018				002 - RELAZIONI CON I SOCI / COMITATO TECNICO	7	Valido	Istituzionale		
	01/01/2018				003 - RELAZIONI CON ISTITUZIONI INTERNAZIONALI - N...	8	Valido	Istituzionale		
	01/01/2018				004 - STRATEGIA ORGANIZZATIVA E PROGETTUALE	9	Valido	Istituzionale		
	01/01/2018				005 - PARTECIPAZIONE TAVOLI COORDINAMENTO PER ...	10	Valido	Istituzionale		
	01/01/2018				006 - ANALISI E VERIFICA CRITICITA' BUROCRATICHE/S...	11	Valido	Istituzionale		
	01/01/2018				007 - PARTECIPAZIONE E INTERVENTI DI PROMOZIONE ...	12	Valido	Istituzionale		
Area: AREA O - SEGRETERIA E COMPLIANCE (10)										
	01/01/2018				032 - RLS SICUREZZA E MANUTENZIONE LUOGO DI LAV...	56	Valido	Funzionamento		
	01/01/2018				030 - SVILUPPO GESTIONALE	3752	Valido	Funzionamento		
	01/01/2018				079 - DELEGATO DATORE LAVORO SICUREZZA	5129	Valido	Funzionamento		
	01/01/2018				080 - SEGRETERIA	6526	Valido	Funzionamento		
	01/01/2018				081 - PROCUREMENT	7133	Valido	Funzionamento		
	01/01/2018				082 - DPO	7134	Valido	Funzionamento		
	01/01/2018				084 - RCPT	7147	Valido	Funzionamento		
	01/01/2019				054_COMPLIANCE	14200	Valido	Funzionamento		
	01/01/2020				103 - FORMAZIONE INTERNA	21619	Valido	Istituzionale	Turismo	

Figure 25: Area I and Area O Activities

A further analysis is needed concerning area Z. This area is relative to all the requests of employees and contains activities that are not relative to a specific project, such as holiday, sickness or, compensative recovery. The activities of this area are not referred to a certain project, but the administrative office still has to calculate them in the semiannual reports send to the Regione Piemonte.

Area: AREA Z - DMO PERSONALE (12)						
01/01/2018				901 - FERIE	74	Valido
01/01/2018				903 - MALATTIA	76	Valido
01/01/2018				904 - MATERNITA	77	Valido
01/01/2018				902 - PERMESSO	741	Valido
01/01/2018				905 - LEGGE 104	1772	Valido
01/01/2018				907 - D.LGS. 151	5070	Valido
01/01/2018				908 - RECUPERO	5308	Valido
01/01/2019				909 - PERMESSO STUDIO	10196	Valido
01/01/2019				910 - PERMESSO MEDICO	10906	Valido
01/01/2019				911 - DONAZIONE (AVIS)	16395	Valido
01/01/2019				912 - CHIUSURA AZIENDALE	17566	Valido
01/01/2020				913 - CASSA INTEGRAZIONE	23272	Valido

Figure 26: Area Z Activities

Workflow 1: Timesheet Management

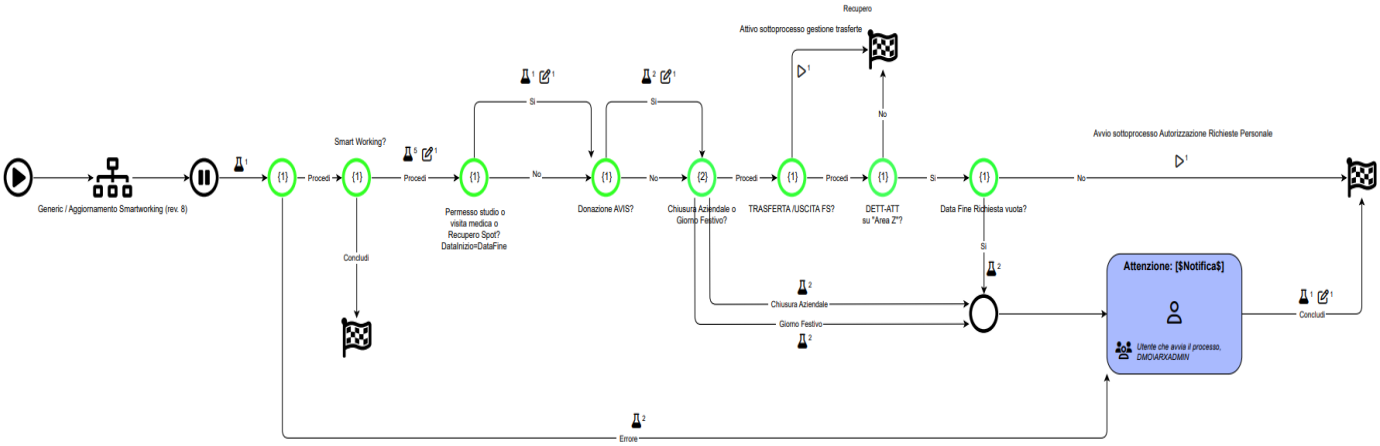


Figure 27: Timesheet Management Process

This workflow is designed to streamline user activities. When a user submits a new timesheet through a mask, the process categorizes it into various types. Its primary purpose is to sort the timesheet: activate a sub workflow process, open a task, or simply check that the timesheet is formally complete. The main branches that the process can take are:

- Activation of the subprocess ‘Requests Authorization’ for the timesheet belonging to area Z;
- Activation of the subprocess ‘Business Trip Management’;
- Signaling an error if the timesheet is formally incorrect;
- Stop the process for all the other types of timesheets.

The initial stage of the process involves verifying whether the employee has requested remote work for the specified day on the timesheet. If this is the case, the corresponding activity will be recorded as "done from home," and the Attendance Tracking System will be notified. This verification is conducted through the subprocess named 'Check Remote Working'.

The next step is checking if the user has made any error filling the mask, like doing a timesheet on a vacation day. In that case, the user is notified with a task.

Subsequently, the process checks if the timesheet is a request for a business trip, and in that case activates the process 'Business Trip Management'.

In the end, for activities falling under area Z, the workflow initiates an authorization process led by the area supervisor. This authorization step is non-negotiable, providing a crucial means to track who requested what and, notably, when they received approval.

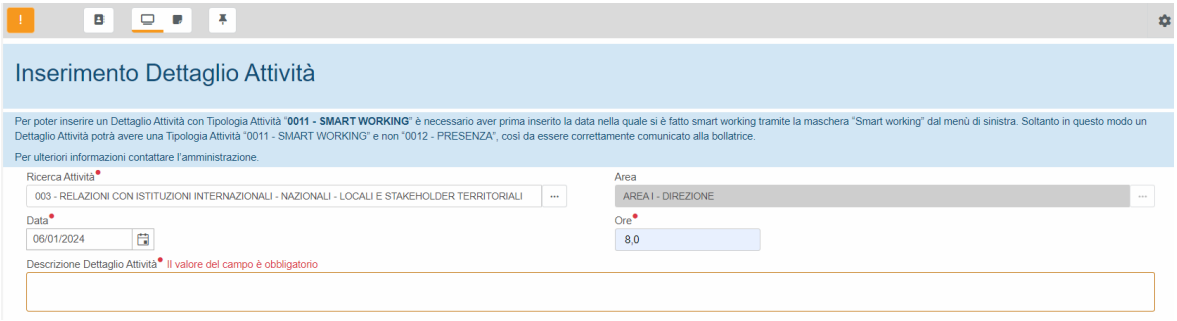


Figure 28: Timesheet Mask

Workflow 2: Requests Authorization

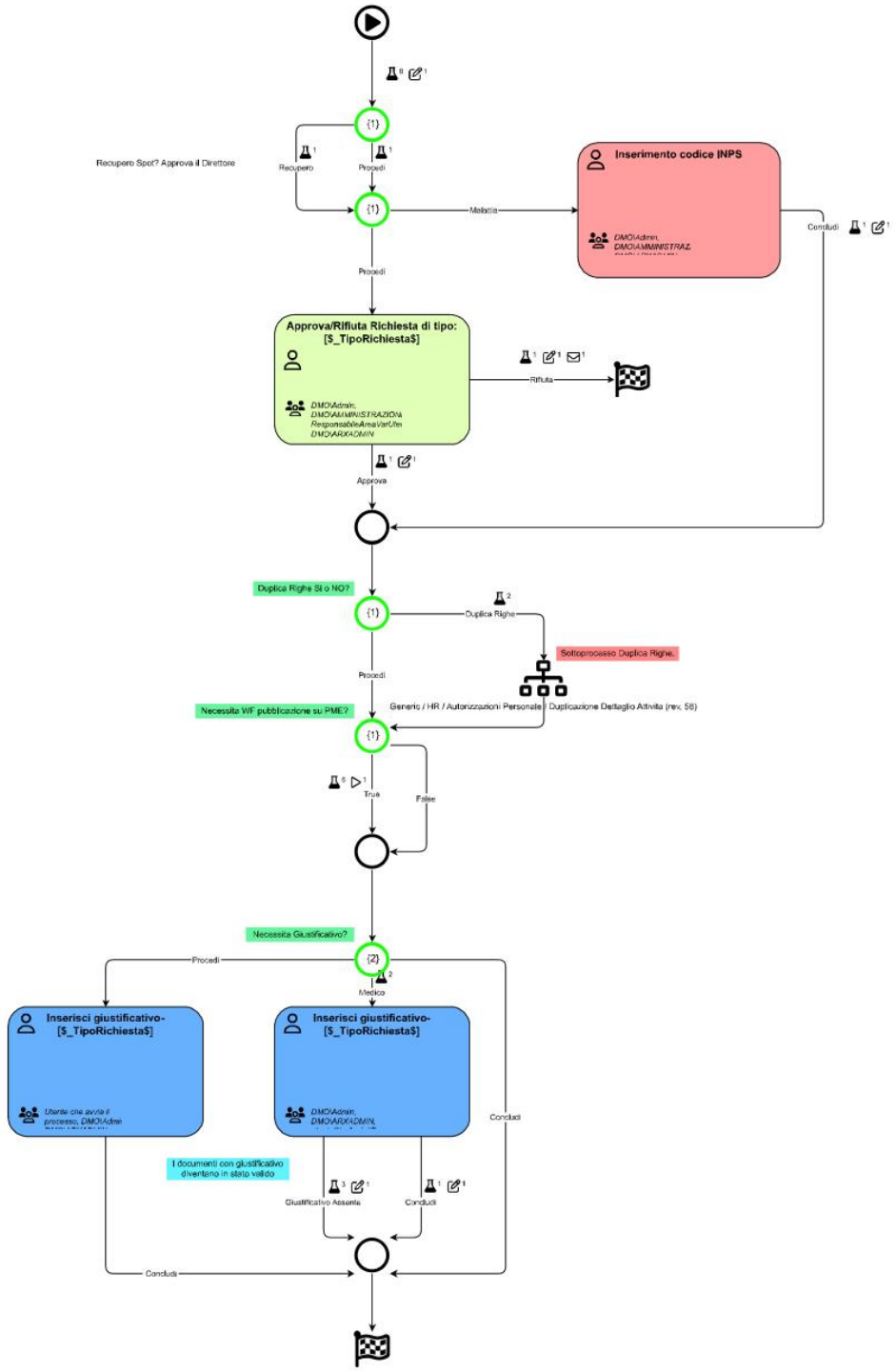


Figure 29: Requests Authorization Process

The approval process differs for each type of request, but thanks to the use of variables and conditional nodes during the development, the process appears very simple from an external point view. The pursue of simplicity was a central point during the design of the processes because identified users can access the drawn and check the status of the process, means where the approval is stuck.

The primary conditional node aims to distinguish between all authorization processes and illness: the latter needs to be reported but is not authorized (only the employee's INPS code is requested). The other potential procedures include business trips, smart working, maternity, medical visits, study leave, or “Law 104” leave. Once the type of procedure is identified, the authorization phase begins. This task is sent to the area supervisor, who has the option to either approve or reject (leading to the 'Timesheet Duplication’ subprocess). In the event of rejection, the user will be notified via email. Additionally, for study leave, maternity, or medical visits, the user will be prompted to submit the relevant supporting documents.

Another facet overseen by this process is the recovery procedure: Visit Piemonte ensures that its employees adhere to a fixed annual hour quota (8 working hours per day for 220 working days in a year). If, during a specific month, employees surpass the stipulated 20 working days (for instance, due to business trips, where Saturdays and Sundays are also counted if within the period), they have the option to request recovery time in the subsequent month. Recoveries resulting from business trips are automatically handled by the 'Business Trips Management' process. However, individual spot recovery requests are subject to authorization through this process.

This workflow is automatically started by the father process ‘Timesheet Management’ for all the categories that need to be approved.

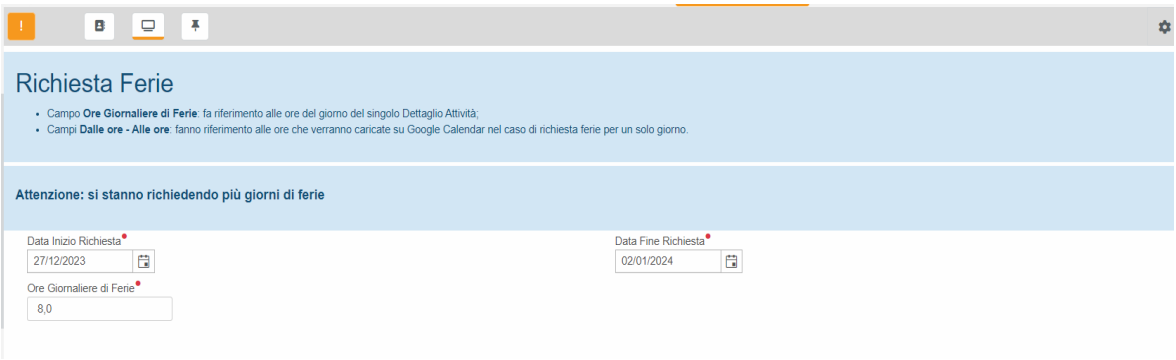


Figure 30: Holiday Request Mask

Workflow 3: Timesheet Duplication

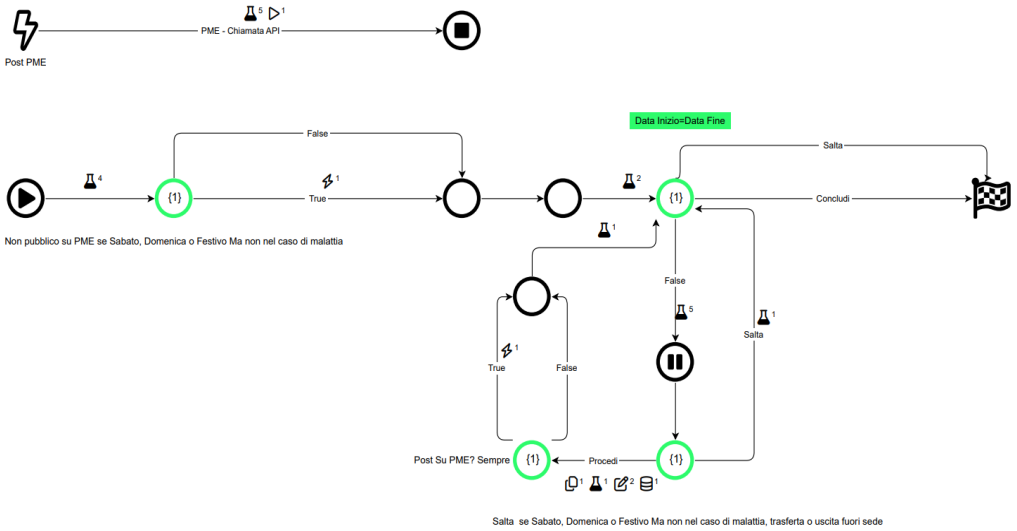


Figure 31: Timesheet Duplication Process

This workflow stems from the need to duplicate rows when a request span multiple days. Instead of initiating a separate request for each day, this approach updates the rows for the selected range, subject to the employee's supervisor's approval. This process does not require any human interaction,

The process is designed not to consider Saturdays, Sundays or any national holidays. When making a vacation request, only working days are considered, eliminating the need to include Saturdays and Sundays.

The request in this process involves submitting a document. The request is then approved by the employee's area supervisor, and ultimately, a notification is sent to the central administration. This final step is crucial for further streamlining processes: the administration needs to record the employee's attendance, and this automation optimizes the entire procedure.

Workflow 4: Business Trip

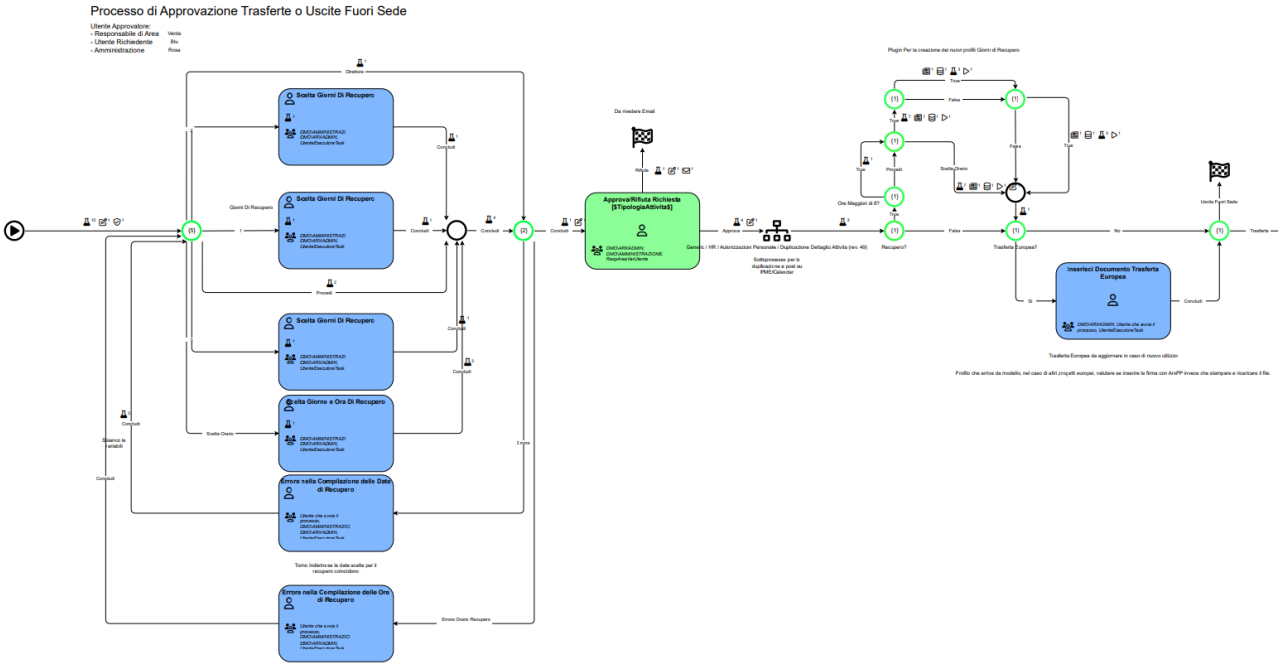


Figure 32: Business Trip Management Part 1

The Business Trips Management is arguably the most intricate internal process at Visit Piemonte. It involves a distinct authorization procedure encompassing recoveries and travel expense management. Business trips can fall into two primary categories:

- Within the city of Turin.
- Outside the city of Turin.

The approval steps for both categories are the same. However, for trips within the city of Turin, employees are not eligible for expense reimbursement, and the process concludes

that point (see Figure 32). The process is triggered automatically when a new request is archived through the designated mask.

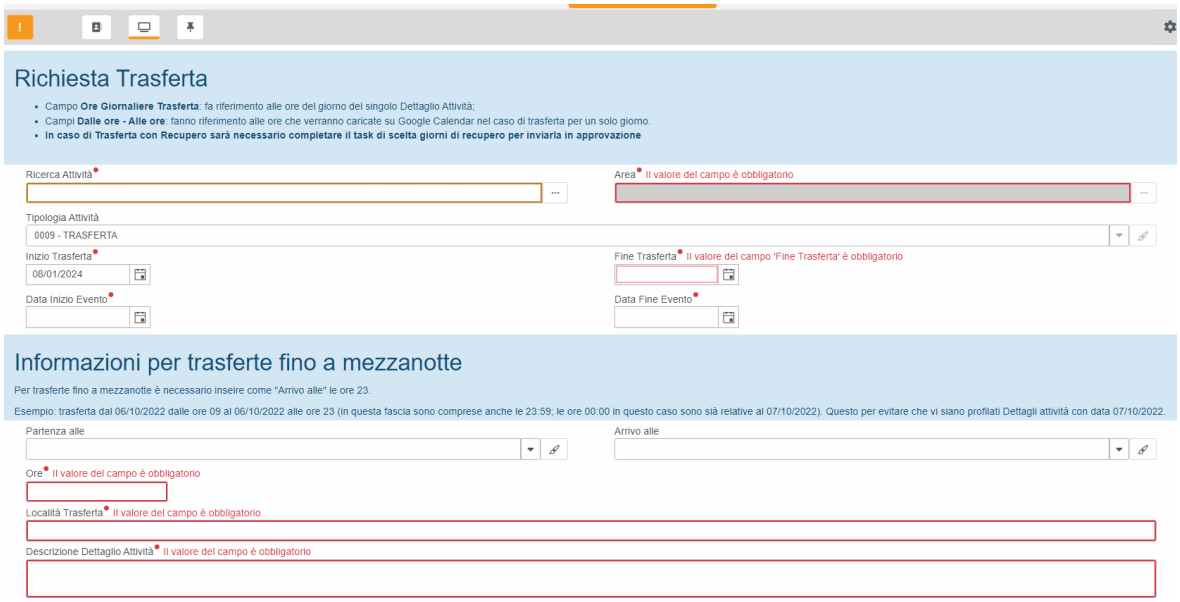


Figure 33: Business Trip Request Mask

The first stage of the process involves checking if the business trip request falls on dates eligible for recovery, such as a Saturday, Sunday, or any national holiday. If recovery days are applicable, the user is then prompted through a task to select the corresponding recovery days. Afterwards, the request proceeds to the employee's supervisor for approval, providing the option to either approve or reject the request. The process automatically

creates the timesheet for the recovery days, then, stops in case of trips within the metropolitan area of Turin, or goes on to part 2.

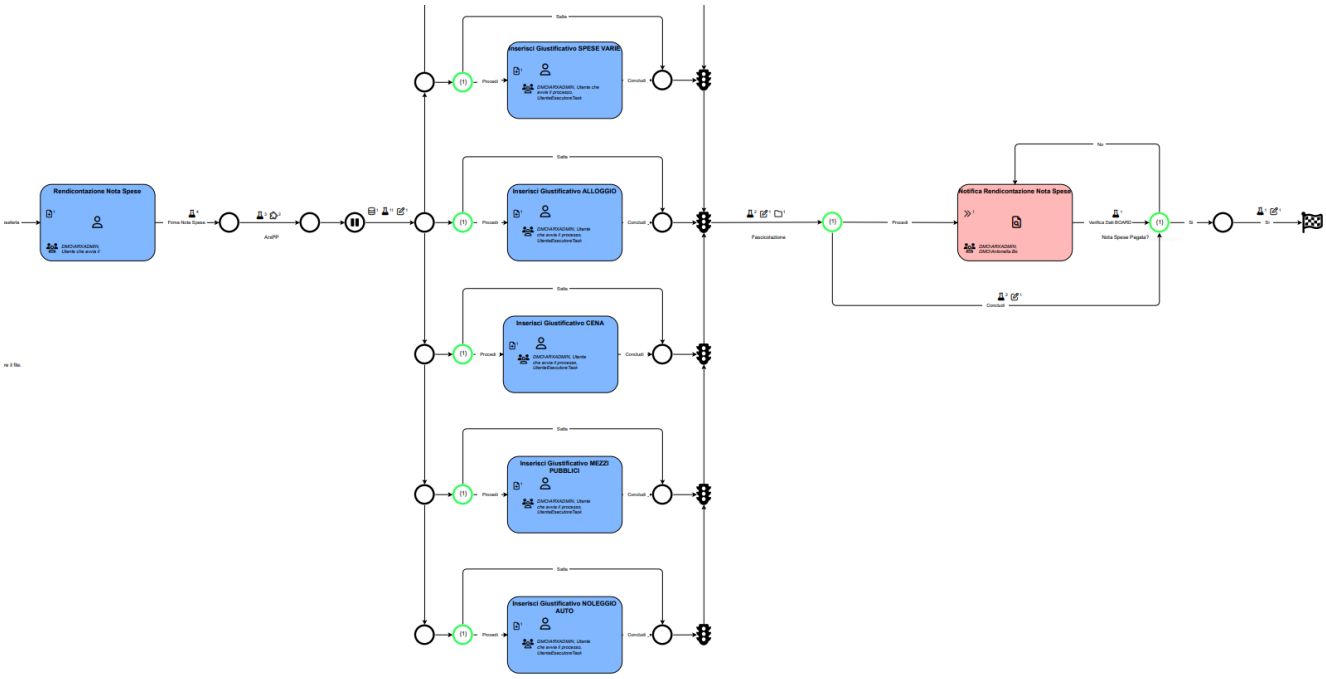


Figure 34: Business Trip Management Part 2

The second part of the process is relative to expense management. Trip expenses are a crucial part of the accounting reports that Visit Piemonte has to submit to its shareholders, which is the reason why the approval process for trips hass been separated from the other types of requests.

Business trips also serve as a criteria for file organization: for each resource, one method of filing involves grouping the undertaken business trips and associating them with the expense reimbursement document. The following template is filled out by the user from a mandatory operation inside a task, to generate an expense report. The user is required to provide information on various expense categories, specifying whether they were personally covered or combined into a single category if covered by the agency. These

categories include lunch, dinner, accommodation, taxi, public transportation, highway tolls, parking, and other expenses.

Workflow 5: Remote Working Management

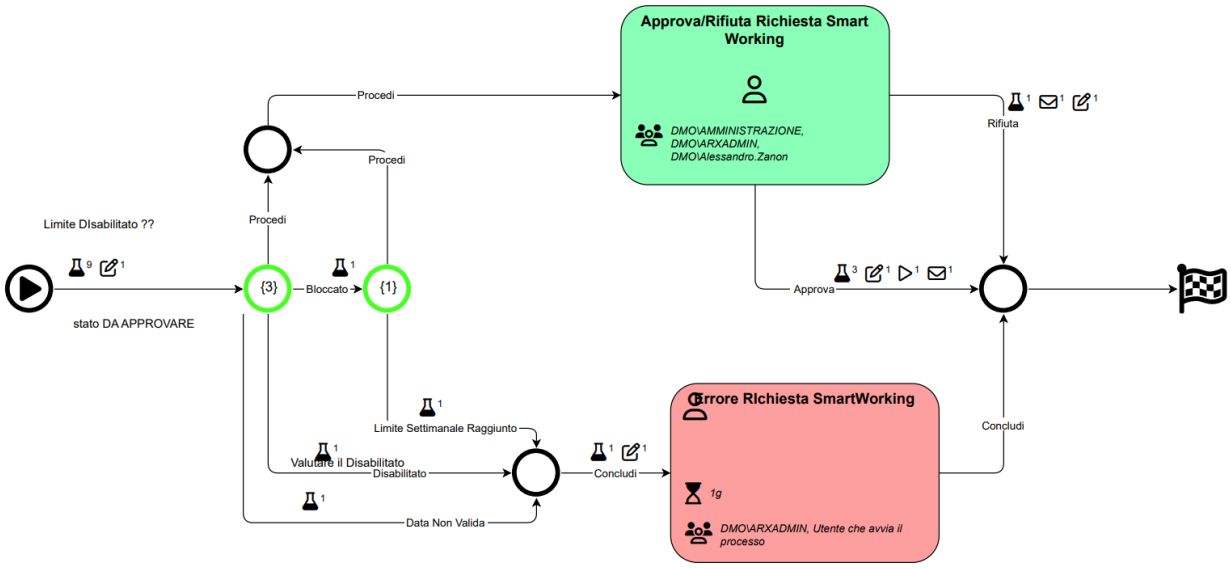


Figure 35: Remote Working Request Process

The option for remote work was introduced at Visit Piemonte following the Covid-19 pandemic. Although employees no longer work entirely remotely since the end of the pandemic, they still have the opportunity to work from home for a specified number of weekly hours as outlined in their contracts. However, any such request requires approval from the Director.

To ensure adherence to the agreed-upon weekly hours for remote work, an automated workflow verifies whether the user exceeds the allowed limit. In cases where the limit is exceeded, a task is generated, leading to an automatic rejection of the request. Alternatively, the Director has the authority to either approve or reject the request. The user is then notified of the Director's decision via email. In the event of approval, the remote working schedule is updated and published on Google Calendar.

5.2 Purchasing Management Workflows

Efficiently managing a project's financial landscape is a top priority for Visit Piemonte, with a key focus on meticulous purchase reporting. This involves carefully segregating external costs from internal personnel expenses, ensuring a clear distinction within internal expenditure.

Driven by a commitment to meet regulatory requirements, Visit Piemonte strategically places procurement at the forefront. This strategic approach particularly emphasizes maintaining a comprehensive supplier registry and ensuring seamless post-purchase services. The framework is tailored to address specific operational needs.

Supplier Certification stands out as a crucial aspect, transcending a simple list. Visit Piemonte's Suppliers Registry encompasses vital documents like model 231 and financial flow traceability. This process not only certifies suppliers but also establishes their position within the broader procurement structure.

In tandem, post-sales management becomes crucial for the well-established purchase process. This includes specifying authorization details, managing instances of non-compliance payment refusals, and utilizing Arxivar's log system for systematic tracking of user authorizations.

Navigating the complex procurement landscape, the company employs three distinct methods. The direct assignment to a supplier involves direct communication, emphasizing familiarity and trust. The tender method includes outreach to three potential suppliers for quotes, with the most cost-effective option chosen post-evaluation. Finally, the public tender method involves a complex public bidding phase, where eligible companies participate based on the company's specific business needs.

Visit Piemonte formalizes its commitment to acquiring goods or services through a document known as "Determina." Following this expression of intent, a purchase order is generated from the "Determina" and transmitted to the designated supplier.

Workflow 6: Management of Purchasing Order Templates

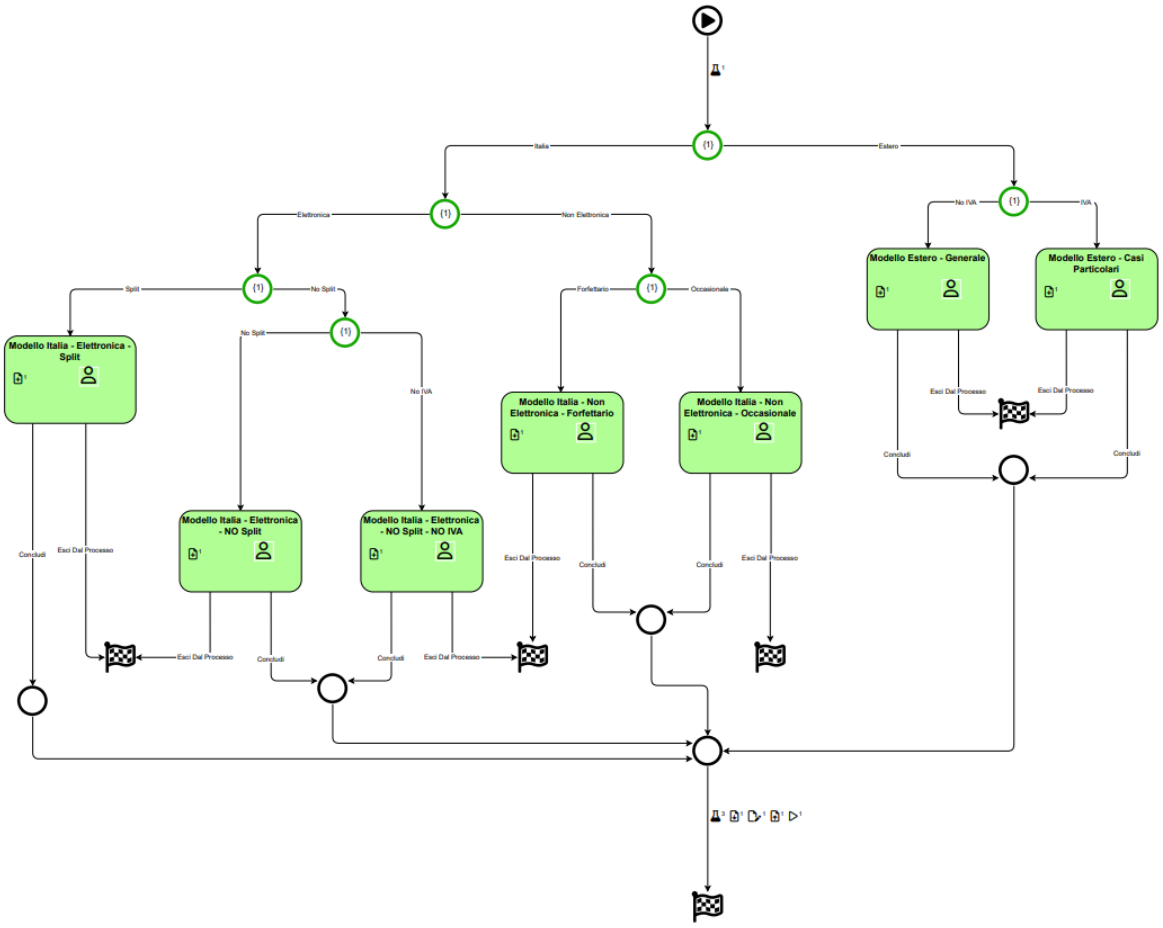


Figure 36: Purchasing Order Template Process

The objective of this workflow is to determine, based on the supplier, the most suitable order template to use. This process involves a step-by-step discrimination of suppliers to identify the category to which they belong.

Initially, the workflow inquires whether the supplier is located in Italy or abroad. If the supplier is Italian, the subsequent level involves distinguishing between electronic and non-electronic invoicing. In the case of electronic invoicing, the workflow further assesses whether the split payment applies, leading to the creation of different order templates. For completeness, in instances of non-electronic invoicing, a differentiation is made between flat-rate and occasional suppliers. In the scenario where the supplier is foreign, the only consideration is whether or not VAT applies. The workflow systematically navigates

through these criteria to ensure the appropriate selection of the order template based on the characteristics of each supplier.

In Italy, split payment is a mechanism implemented by tax authorities to address VAT fraud and improve tax compliance. The split payment system involves the separation of the payment for goods or services and the corresponding value-added tax (VAT) amounts. This system aims to prevent VAT evasion and improve tax collection. It is often applied in transactions involving high-risk sectors where there is a greater likelihood of tax evasion. The split payment mechanism enhances transparency and allows tax authorities to monitor and control the flow of VAT more effectively.

As mentioned earlier, the supplier registry at Visit Piemonte serves a purpose beyond being a mere registry: it also encompasses other documents certifying the supplier. These documents are requested from the supplier at the time of the purchase order. As illustrated in Figure 35, some of these documents are provided by Visit Piemonte as attachments to the purchase order and must be countersigned by the supplier. On the other hand, other documents must be directly sent by the supplier as attachments with the first invoice.

For the analyzed company, the certification models must be present for the invoice payment to occur. The decision to include such a clause stems from the significance that Visit Piemonte places on data transparency.

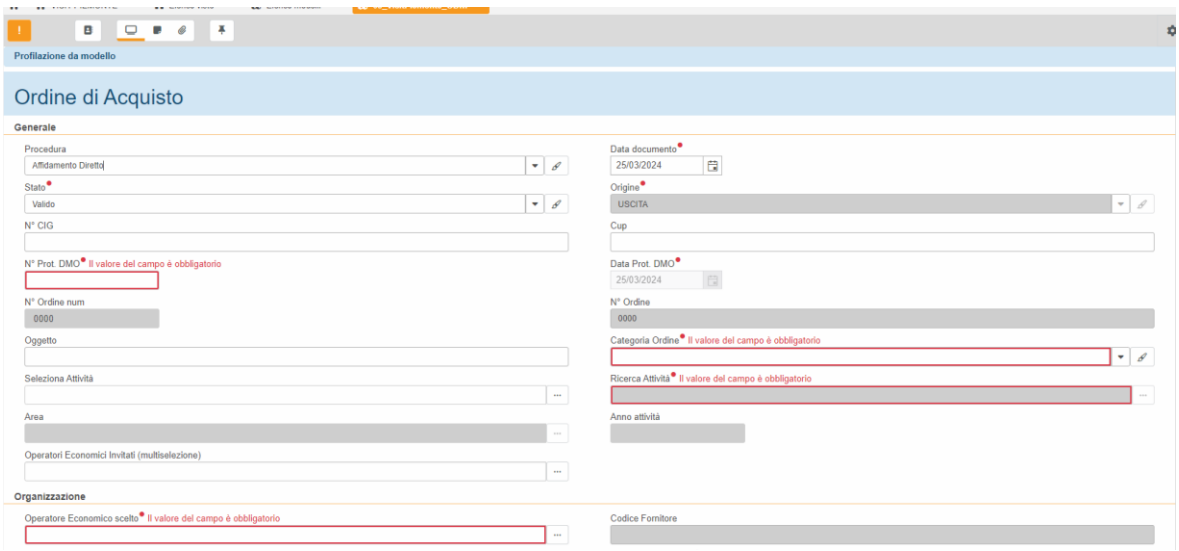


Figure 37: Purchase Order Mask

visit Piemonte
REGIONAL MARKETING AND PROMOTION

Spett.le
VBCREATIVE SRL
via Savio 2
15033 - Casale Monferrato AL
ITALY

Torino, 22/03/2024
Prot. n°: 221
Ordine di Acquisto n°: 0087
CUP: J18H24000060002
CIG: B0EF2C54E0
Area di competenza: AREA H - AREA PROGETTUALE
Progetto: 253 - Progetto Stralcio Piano di attività 2024

Oggetto: grafica stand Città europea del Vino / VINITALY 2024

Visit Piemonte scrl conferma l'affidamento dell'incarico alla società **VBCREATIVE SRL** per un importo complessivo pari a **€ 450,00 + IVA**, come indicato nella vostra offerta.

Si evidenzia che la fattura emessa dovrà riportare l'annotazione **"scissione dei pagamenti"** ex art. 17 ter DPR 633/72, con conseguente versamento diretto dell'IVA da parte nostra all'Erario.

I dati relativi alla nostra società per la fatturazione sono i seguenti:

Visit Piemonte scrl - Via A. Bertola, 34 - 10122 Torino - P.IVA 09693360019

Figure 38: Microsoft Word Document automatically filled with the metadata inserted on ARXivar

Workflow 7: Order Payment Approval

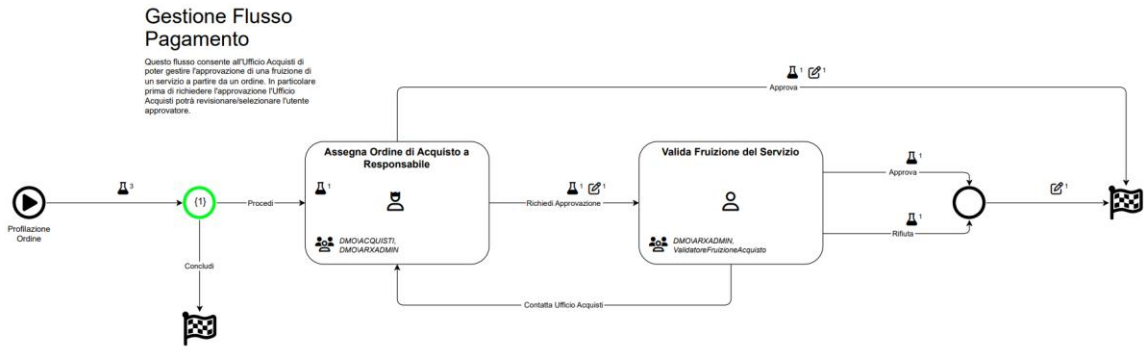


Figure 39: Order Payment Approval

The subsequent process is not concerned with the steps leading up to an order but focuses instead on all aspects related to post-sales. This is a response to the regulatory requirements imposed on Visit Piemonte, specifically the necessity to meticulously track who approves what and when. It's important to mention, for comprehensive understanding, that the actual order process was omitted as it didn't address any immediate needs of the company. Although the order process exists within the company, it hasn't been implemented on Arxivar. The analyzed workflow aims at approving the order (and subsequent payment) after the order has been issued. The section under scrutiny is described by the image that follows.

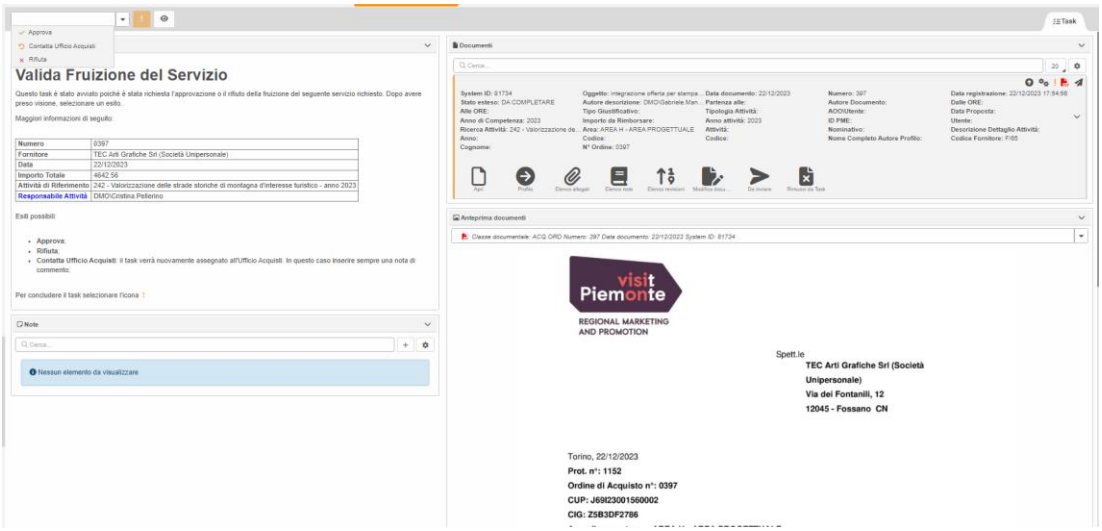


Figure 40: Payment Approval Task

Workflow 8: Detemine

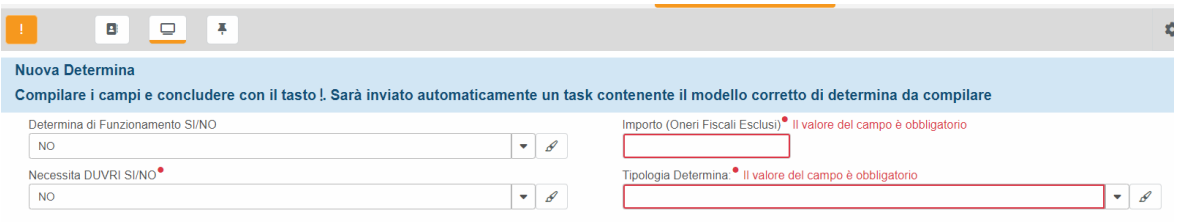


Figure 41: Mask to request a Determina

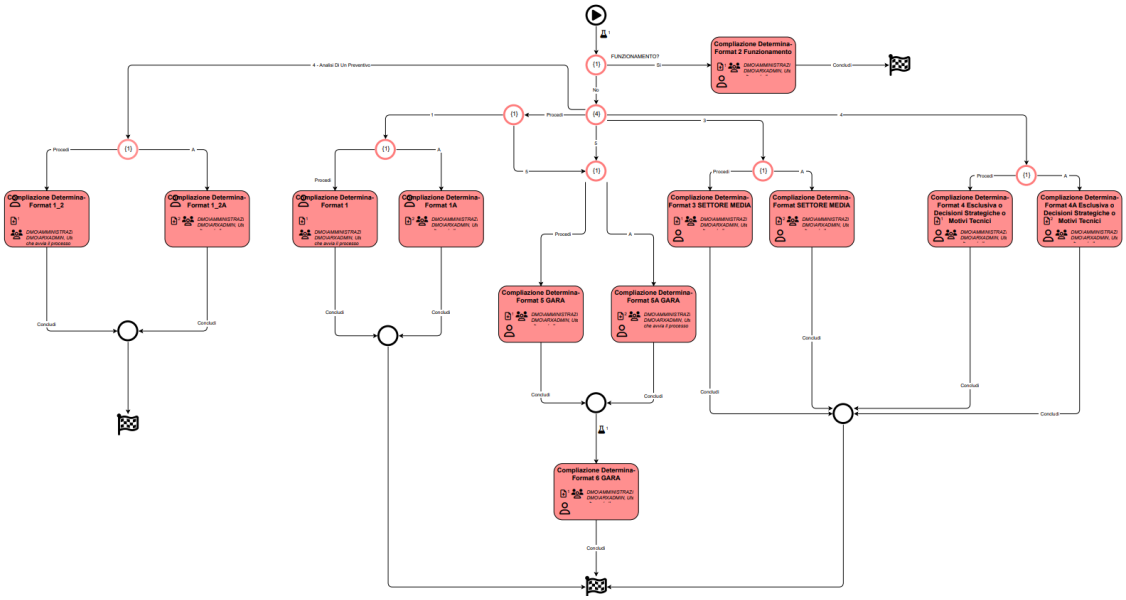


Figure 42: 'Determine' Process

Determina is a resolution document that Visit Piemonte has to write in order to justify the orders and must be done before the order is emitted. The aim of the process is to pick up the right document template, it starts when a user archives a profile called 'Determina request', which contains all the necessary information that can drive the use of one template or another.

A "Determina" that is considered functional is characterized by having its own template, distinct from others in use. This distinction arises from the unique requirements and considerations associated with functional determinations. Another crucial factor influencing the template selection is the need for a Unique Document of Interference Risks Evaluation (DUVRI), an additional document utilized to evaluate health risks for employees.

In cases where DUVRI is deemed necessary, the task mandates the inclusion of both documents.

The third variable influencing the template choice is the Amount excluding VAT. For contracts exceeding €140,000, Visit Piemonte is obligated to initiate a tender process to assess and select the most favorable offeror. This strategic approach ensures a comprehensive evaluation to secure the best value and quality for higher-value contracts.

Lastly, the category of the contract plays a pivotal role in determining the appropriate template. The typologies of templates include:

- Format 1: This is the standard case template, utilized when analyzing multiple suppliers for a contract that doesn't require a formal tender process.
- Format 2: A special template exclusively designed for functional "Determina," reflecting the unique considerations associated with this category.
- Format 3: This template is specific to contracts related to marketing and media, recognizing the distinct nature of these contractual arrangements.
- Format 4: Reserved for contracts requiring special technical implementations, often handled by specific suppliers possessing the necessary expertise.
- Format 5: This template is utilized when a tender needs to be issued, representing the first part of a comprehensive document containing essential information about the suppliers involved.
- Format 6: Serving as the second part of the tender document, this template justifies the selection of one offeror over another, providing a detailed rationale for the decision-making process.

At the end of the process, the document is digitally signed by the Director.

5.2 HR Documents

Before Covid-19 pandemic, payroll slips, and all HR reports were printed and personally delivered to each employee. The imposed social distancing measures made this traditional approach no longer feasible. This problem was used as an opportunity to digitalize the process and automatically deliver these documents to resources using ARXivar. Payrolls are redacted by an accountant office external from Visit Piemonte, HR Reports instead, are created by Board. The Integration between ARXivar and Board has been possible thanks to the use of monitored folders where Board inserts the reports once a month, and ARXivar upload them into the system.

The document types are:

- Payroll slips: If previously the payslip was delivered directly to the worker, in this case, it is no longer possible. Instead, a system has been implemented where the payslip is delivered directly to the user, preserving all privacy regulations. The user can then view the payslip directly from their home. The following workflows enable Arxivar to import payslips from Spool Rec and export them to Board. Payrolls are inserted into ARXivar as a unique PDF document by the administrative office, then ARXivar automatically split the document into single payrolls, reads the name of the addressee and send a task containing the payroll to the relative user. All PDF documents are encrypted, which means that they can just be opened with a secret code owned by the user.
- Income Tax Statement (Certificazione Unica): like the payslips it is not directly redacted by the administrative office. It is sent directly to the user so that they can view the report through a task. The viewing of this document, managed in compliance with privacy regulations, allows the user to review it, while also enabling the administration to track who and when the report was viewed. This helps in controlling the issuance of tickets, as the document automatically changes its status to log when it has been viewed.
- Activity Reports: This document is the result of the integration between ARXivar and Board. Board reads data from the Timesheets saved in ARXivar database, then

prepares the reports for selected users, and put them in a shared folder located on the server. Arxivar archives it and send to the user an email containing the report.

- Meal Voucher Reports: The meal voucher report follows a very similar path as the one of activity reports. Both are sent once a month to user, the main difference is that Meal Voucher reports are sent to all users, and not just to users involved in particular activities.

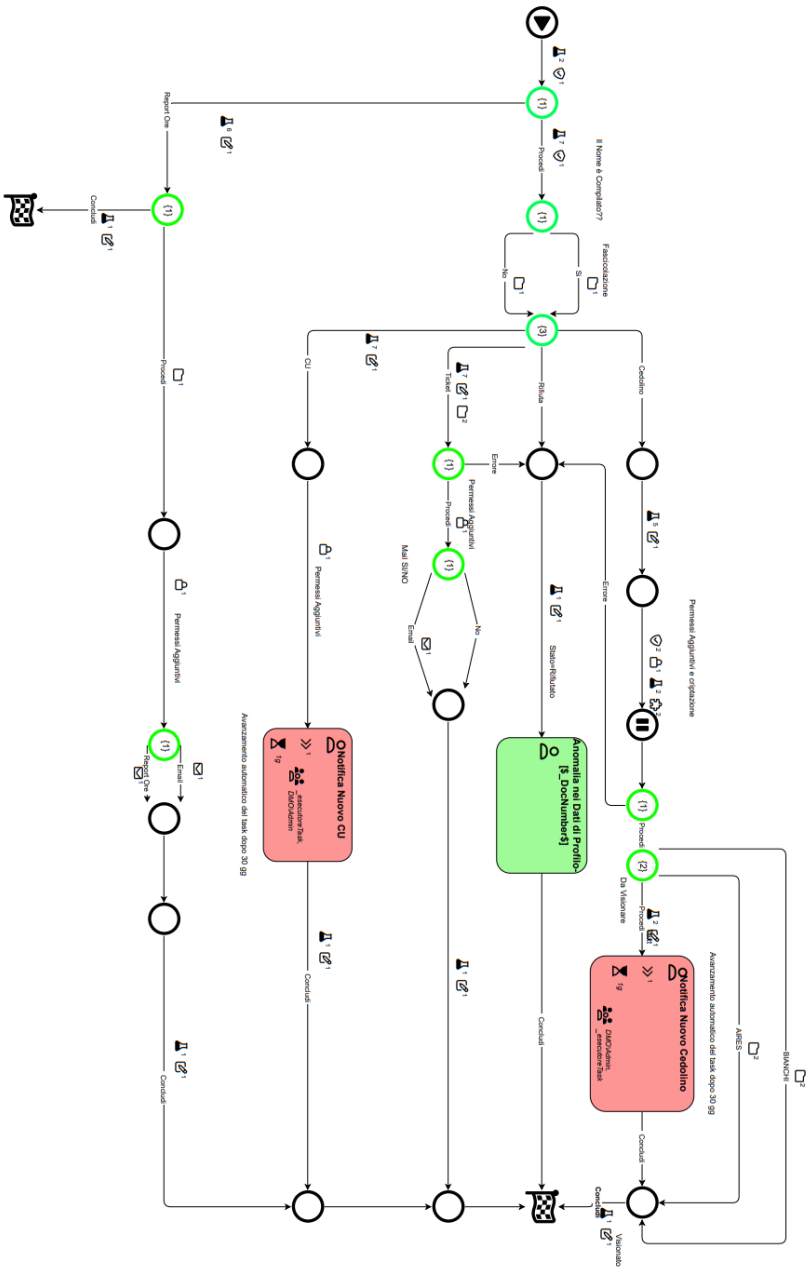


Figure 43: HR Workflow Process

The outlined process involves setting variables in the initial link to discriminate the document type and determine the addressee authorized to access it. Depending on the document type, the workflow takes a specific path. For sensitive documents like payrolls, the process starts by checking for anomalies. If anomalies are detected, a task is created for the administration; otherwise, the ticket status transitions to ‘Imported’.

The subsequent step involves managing permissions to define who can view the document. Access is granted to the administration as a precautionary measure and to the user. Additionally, the document is transformed into a crypted PDF, requiring a password for access. Following this, the document status automatically changes to 'To Be Viewed,' and a task is sent to the user for review. The user must confirm viewing, concluding the task and changing the document status to 'Viewed.' Digital viewing of documents not only addresses the COVID-19 emergency needs but also results in significant paper and time savings. Automated report writing eliminates the need for a dedicated resource, and subsequent import to Arxivar is done automatically, streamlining administrative tasks.

For other document types, the steps are similar, excluding encryption. Payrolls and Income Tax Statements are sent via a task, requiring read confirmation due to legal obligations. Documents not mandating this information are typically sent through automated emails.

All these documents are stored together in a dedicated ARXivar folder, allowing users to access their documents easily. Organizing documents into folders is a rule to enhance document management efficiency and facilitate easy retrieval.

Figure 44: Password required to open a Payroll

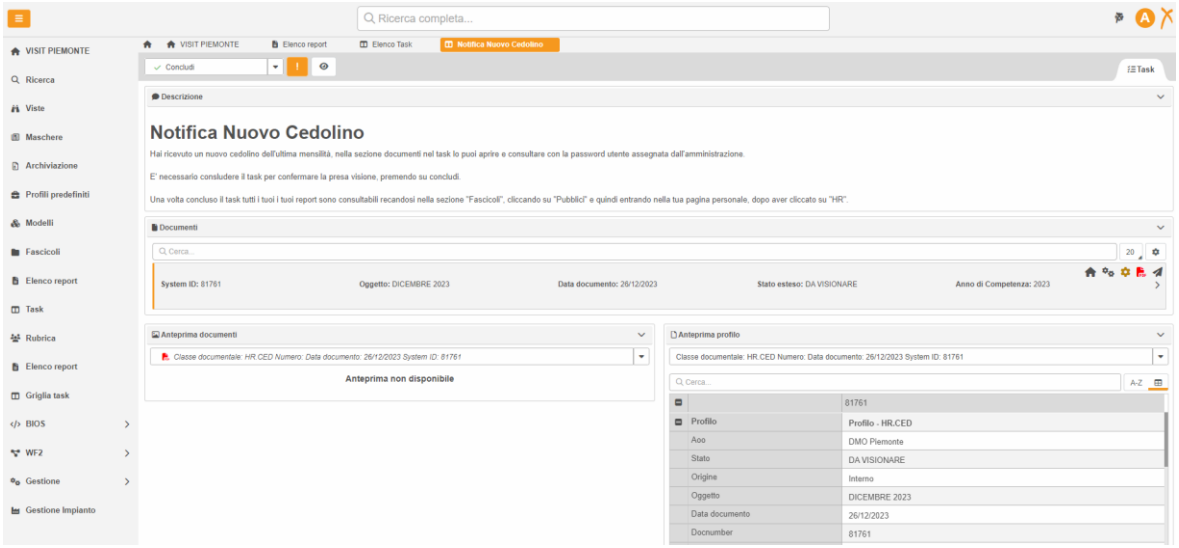


Figure 45: New Payroll Communication

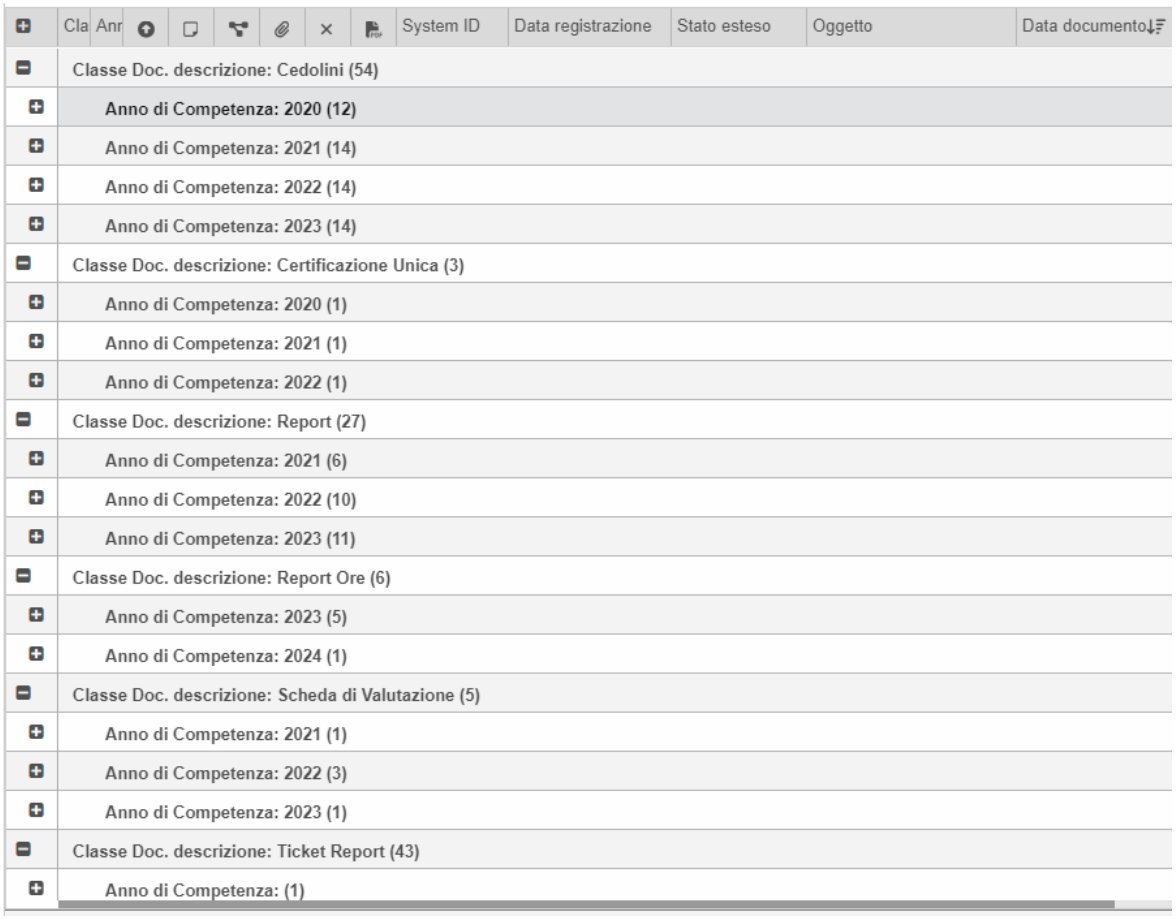


Figure 46: HR Folder

5.3 Internal Communications

Top-down communications involve the flow of information from higher levels of management to lower levels in an organization, conveying directives, policies, and strategic goals. These communications are vital for maintaining organizational alignment, ensuring that employees understand the company's vision, goals, and expectations. They provide clarity on policies, foster a sense of direction, and enable effective implementation of strategies. Top-down communications enhance organizational cohesion, employee engagement, and overall efficiency by establishing a clear line of authority, setting expectations, and keeping the workforce well-informed about key decisions and developments within the company. In Visit Piemonte internal communications are managed through ARXivar. When the administrative office needs to send a new

communication to all the employees, they archive it through a mask, which will start a process that send the document to all the employees.

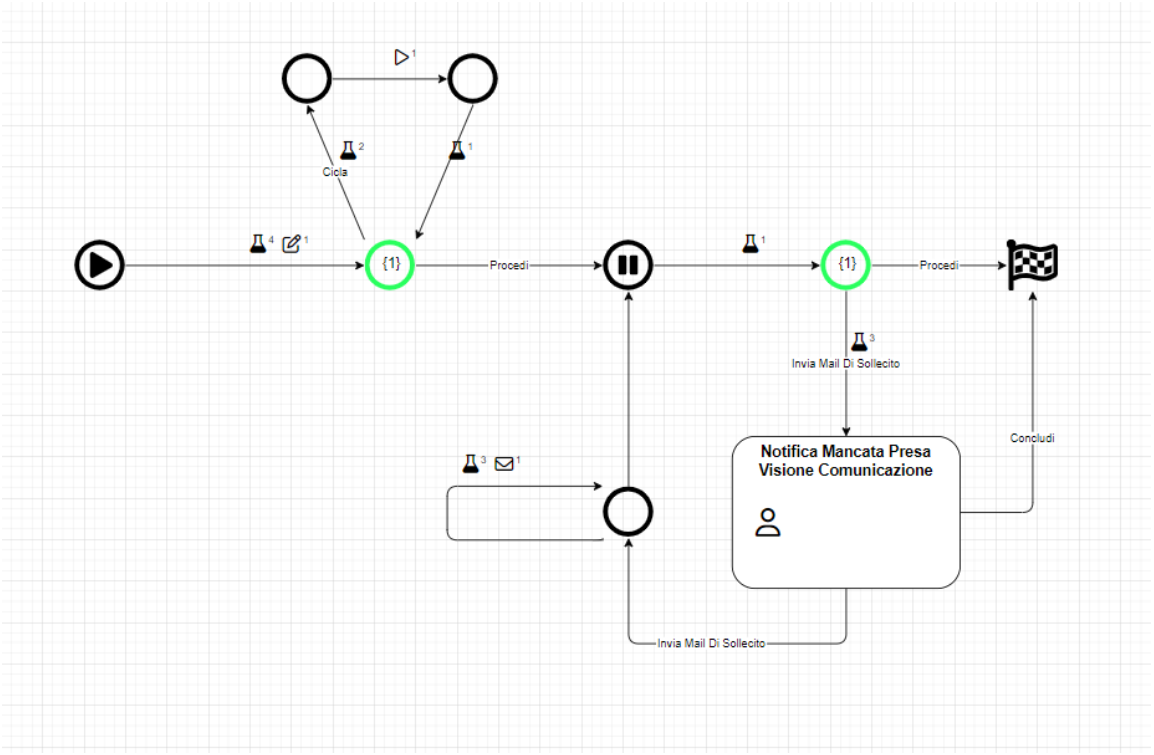


Figure 47: Master Communication Process

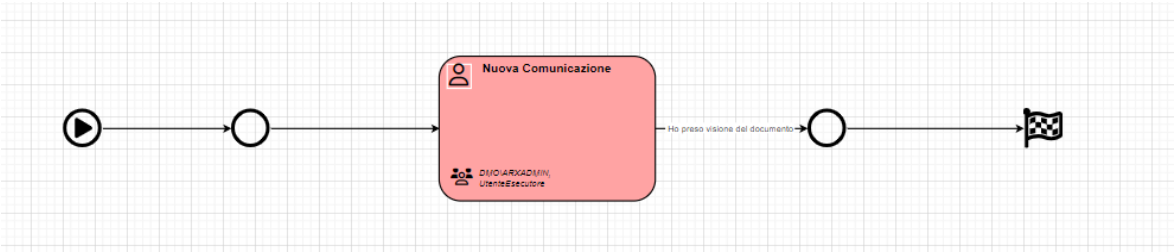


Figure 48: Communication Subprocess

The described process consists of two interconnected workflows: a master process and subprocesses. In the master process, an uploaded list containing ARXivar usernames triggers a cycle, initiating a subprocess for each list element. After starting all subprocesses, the master process enters a ten-day waiting period. Simultaneously, subprocesses send tasks to users, requiring them to confirm document reading. Users can access the task directly from a link sent to their email account, which will redirect them to into ARXivar. Following the initial communication phase, the system allows for a strategic follow-up.

After the waiting period, the master process identifies users who haven't confirmed and sends a task to the Administrative Office with a list. The Administrative Office, equipped with this data, can proactively choose between sending targeted email reminders or closing the process for non-responsive users. This tailored approach ensures efficient communication, engagement tracking, and a responsive workflow that adapts to user behavior, enhancing overall effectiveness and accountability in the process.

5.4 And More to Come…

Invoice Management

At the moment, Visit Piemonte has commissioned more projects for the year 2024. The main one is the implementation of the Invoice management. In Italy, law imposes that invoices must be electronically sent in the format of .XML documents to 'Agenzia delle Entrate' (Tax Agency), the public entity responsible for managing and enforcing tax laws and consequently kept stored for no less than 10 years. At the moment sales and purchase invoices are manually managed by Antonella, who is the responsible of the Administrative Office, and by the external accounting office. The project is to automatize the process, of sending and receiving invoice thanks to the integration of the Accounting Management System (ARCA) and ARXivar. In addition, Board which, as mentioned, is responsible for analyzing enterprise performance, will read and account ARXivar data into the different held activities. In order to do so, ARXivar will use two built-in services: IXFE, hence the one responsible for sending invoice to the Tax Agency, and IXCE which is made to keep the document conserved for ten years.

A resume of the complete process is:

1. Invoice Import from the fiscal tool ARCA: ARCA will generate sales invoices in XML format and export them to a shared folder accessible by ARXivar. ARCA will not be responsible for sending these invoices to the Tax Agency, instead, ARXivar will handle it through the IXFE service.
2. Purchase Invoice Import: The IXFE service of ARXivar will be responsible for importing all purchase invoices from the fiscal drawer to ARXivar.

3. Sending Sales Invoices to the Tax Agency: The IXFE service of ARXivar will handle sending all sales invoices to the Tax Agency.
4. Purchase and Sales Invoices will be sent for Electronic Storage: The IXCE service of ARXivar will handle sending all intermediate Purchase and Sales Invoices and automatically preserving them.
5. For each invoice added to ARXivar:
    a. Conversion of the .XML file (difficult to read) to a PDF, which is easier to understand for users.
    b. A task containing the invoice will be sent to the administrative office to execute the following operations:
        i. Invoice Reconciliation - orders through a task to the user group "Administration." There will be an option not to perform the association.
        ii. Categorization of Invoices into ‘Region’, ‘Operations’, ‘European Projects’.
6. Sending data to BOARD: BOARD will read the Invoice-Order association data directly from the ARXivar database.
7. Export PDF Invoices: ARXivar will take care of exporting all Sales and Purchase invoices to a shared folder (accessible from ARCA), according to a predetermine tree of folders.
8. ARCA Import Invoices: ARCA will access the shared folder and import the PDF invoices according to the set structure.
9. ARCA sends protocol to ARXivar: through a supporting SQL table populated by ARCA with reference to protocol and invoice number, ARXivar will acquire the protocol from ARCA and automatically write the information on the profile of the Invoice.

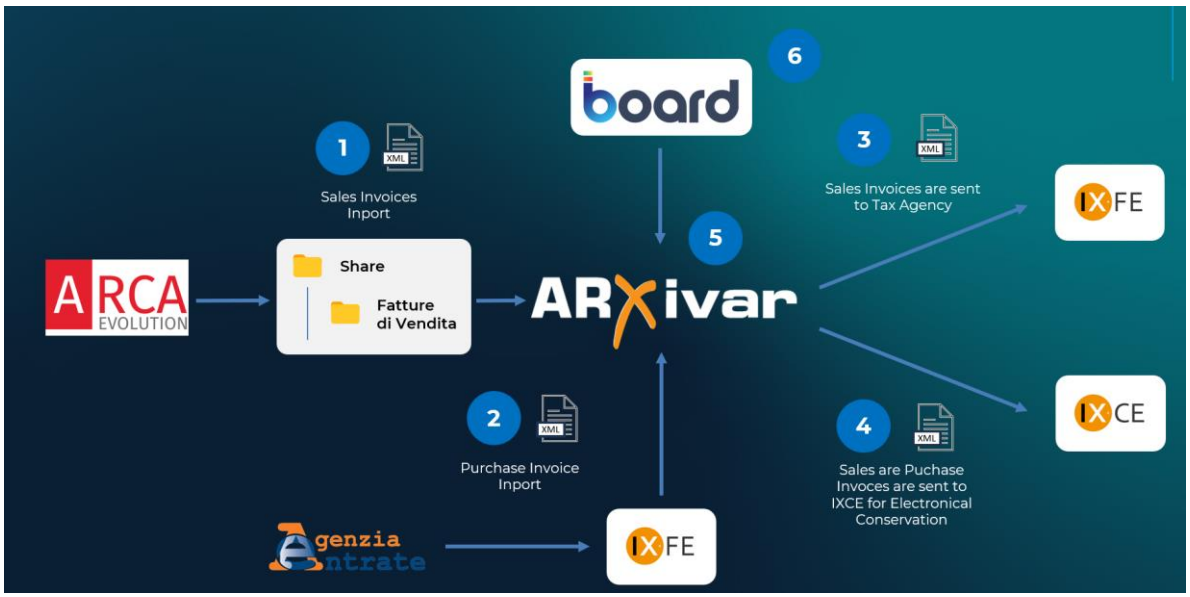


Figure 49: Invoice Management pt.1

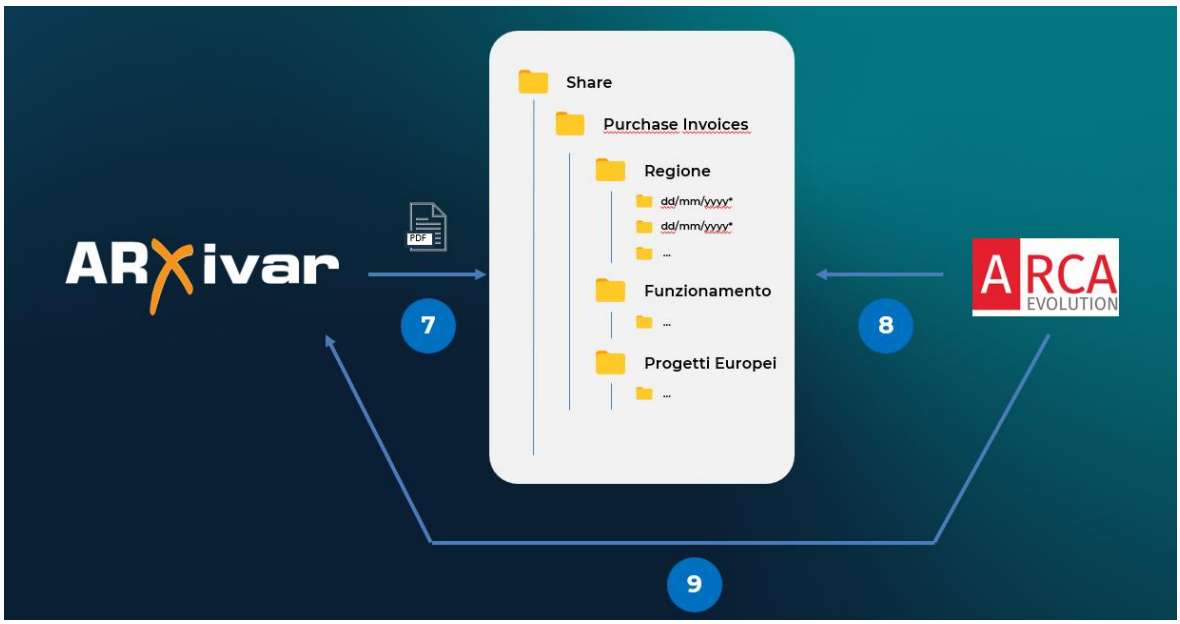


Figure 50: Invoice Management pt.2

Suppliers Management

Suppliers' management is a crucial aspect that needs to be improved in Visit Piemonte. Considering that Visit Piemonte is financially supported by the public entity Regione Piemonte, all the money spent to support their activities must be spent with certified suppliers, which need to have some specific quality standards. At the moment a new supplier needs to submit a form on Visit Piemonte website, which automatically trigger an

approval process on ARXivar. If the supplier fulfills the prerequisites, it is inserted into the ARXivar list that groups all the approved suppliers. After they have been manually registered on two other software used for suppliers' management. We can notice that the efficiency of this process is very low, because the same operation must be repeated three times. The project for the year 2024 is to make this process leaner, hence avoiding the repetition of the same operation by the administrative office users. In order to do that, from January 2024, suppliers registration form has been moved to a new website, directly connected with a new vertical software used just for suppliers' management called Net4Market. Thanks to the use of integration within systems, suppliers' information will be automatically shared Between Net4Market, the Customer Relation Management system (CRM - VTiger) and ARXivar through Rest Api calls, and subsequently from ARXivar to VTiger. Rest API is an new way of information sharing that allows different software applications to communicate with each other over the web. They allow integration between systems of a completely different nature, still using severe security protocols. This integration will permit the administrative office to save time from a low value activity, implying that the same resource, within the same timeframe, can dedicate themselves to a greater number of activities, but it also changes the quality of the work performed.

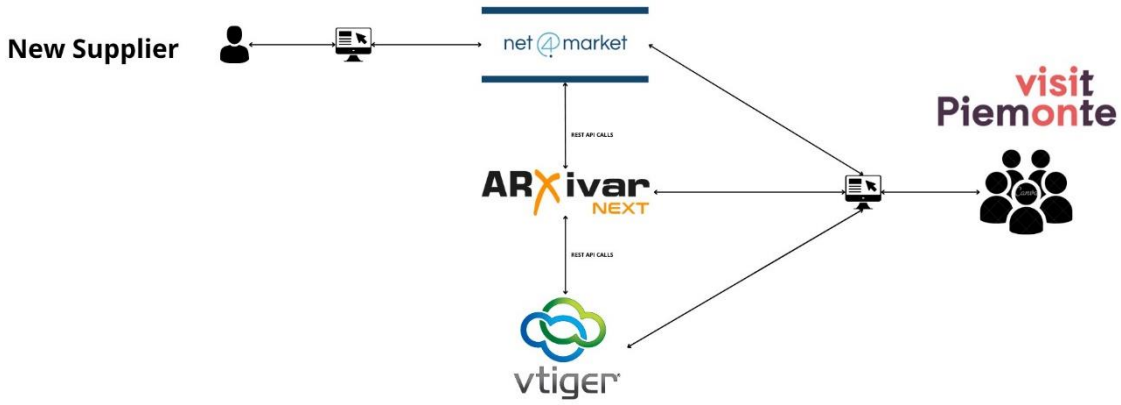


Figure 51: Suppliers Management

6 Competitive Analysis Over the Use of ARXivar

It is now necessary to analyze what are the real advantages that the introduction of ARXivar has brought to Visit Piemonte. Arxivar is a tool increasingly utilized by businesses, offering versatile applications from document archiving and process automation to enhancing communication among company roles and various other aspects. Consequently, assessing its efficiency through simple KPIs isn't feasible for a company, especially when compared with competitors using different technologies or tools.
However, this doesn't diminish the utility of Arxivar for its users. On the other side, users have experienced substantial changes in cost reduction and overall business efficiency. The key benefits include:

1. Reduction of Paper Document Circulation: Arxivar, as a document archiving software, enables companies to almost entirely remove paper, cutting costs associated with paper and printer consumables while avoiding issues related to lost printed sheets.
2. Organizational Enhancement: The software facilitates better organization of business activities. This is achieved through the ability to send notification tasks to users and dedicated emails.

The project at Visit Piemonte aimed to achieve these benefits, enhancing the quality of the company's work by replacing a management system based solely on large and unwieldy Excel files for courses and compliance. From the outset, the company showed a positive inclination towards change, welcoming the software. After overcoming the initial hurdle of adopting new technology, users found Arxivar relatively easy to use and provided positive feedback. Looking ahead, there are expectations to continue collaboration, implementing additional processes to further improve the company's quality, such as a system to manage and monitor the production and bottling side of the business.

Specifically on Visit Piemonte, ARXivar was introduced originally to manage, as told, just few processes. In this way users were slowed introduced into a new way of working, guiding them into the famous digital transformation step by step, not revolutionizing their way of working. This was the base for them to also truly understand the potential of the change,

and from this point new Visit Piemonte internal problems were solved through the redrawing of digitalization.

From the economic point of view, the analysis is more difficult to do. We should compare the situation before and after the introduction of ARXivar. The following economic analysis must be considered as an estimation made considering the average data relative to the sectors involved, which try to recreate the closest scenario of reality.

Before ARXivar Introduction:

As we saw before, ARXivar was introduced to create structured data, easily readable, containing all the information about the Activities carried on by the employees. The aim was to simplify the accountability that the company has to show to his main shareholder Regione Piemonte twice per year. All the papers were redacted by the administrative office where the accounting manager, used to spend four months, two for every report, per year just on calculating the daily activities expenses. Considering that the average salary for a professional figure like the Accounting Manager with more than 20 years of experience is 55'000 €/Year. In addition, all the employees had to record daily a timesheet on an Excel file, task that now is digitalized and requires less that one minute of employees' time and reduces to zero the probability of mistakes. It is anyway considered negligible the time spent by the employees to archive the timesheets.
The Total Cost before ARXivar introduction is calculated as follows:

Total Cost = Annual time worked x AVG annual salary = 4[months]/12[months] x 55'000€/Y ≈ 18'333€/Year

The cost of ARXivar license is based on the number of profiles archived yearly.
We consider:

- 1.2 timesheets per day per employee (people can use more than timesheet per day).
- The total number of Visit Piemonte employees is equal to thirty.
- An average of 255 Working Days per Year (Excluding all Saturdays and Sundays).
- A 10% margin will be added to the total number of profiles.

Number of Profiles = 1.10 x (Number of Timesheets per day) x (Number of Employees x AVG Working Days/Year) = 1.10 x (1.2 x (30 x 255)) ≈ 10'000 Profiles per Year

The cost for this type of license can vary depending on many factors, because usually offers are shaped on the customer's needs, but we can estimate it using this formula:

License Cost per Year = Number of profiles x Annual Cost per profile =

=10'000 x 0.35 = 3500 €/Year

To this we must add the cost that Visit Piemonte had to pay for the implementation of ARXivar environment. Bios Management was the supplier elected for the implementation, and also if we cannot publish the real data about the offer, we can still propose an estimation for academic proposals. We can assume the following values:

- Daily cost for consulting considering an average mixed price for senior and junior figures in Italy can be assumed as: 700 € per day.
- Number of days required for the analysis, implementation, testing, training can be assumed as follows:
- Four days are required for the general analysis.
- Two days are required for the installation and implementation of the backend, considering server and software configuration.
- Six days are required for the implementation of ARXivar, including the drawing of the workflows.
- Two days are required for testing and bug fixing.
- One day is necessary to do the on-site training with final users.
- We then assume two days per year of consulting, necessary to maintain the digital system.

The total cost necessary for the implementation of the digital timesheets system hence is:

Consulting Cost = Number of consulting days x Cost/day = (16+2X) x 700

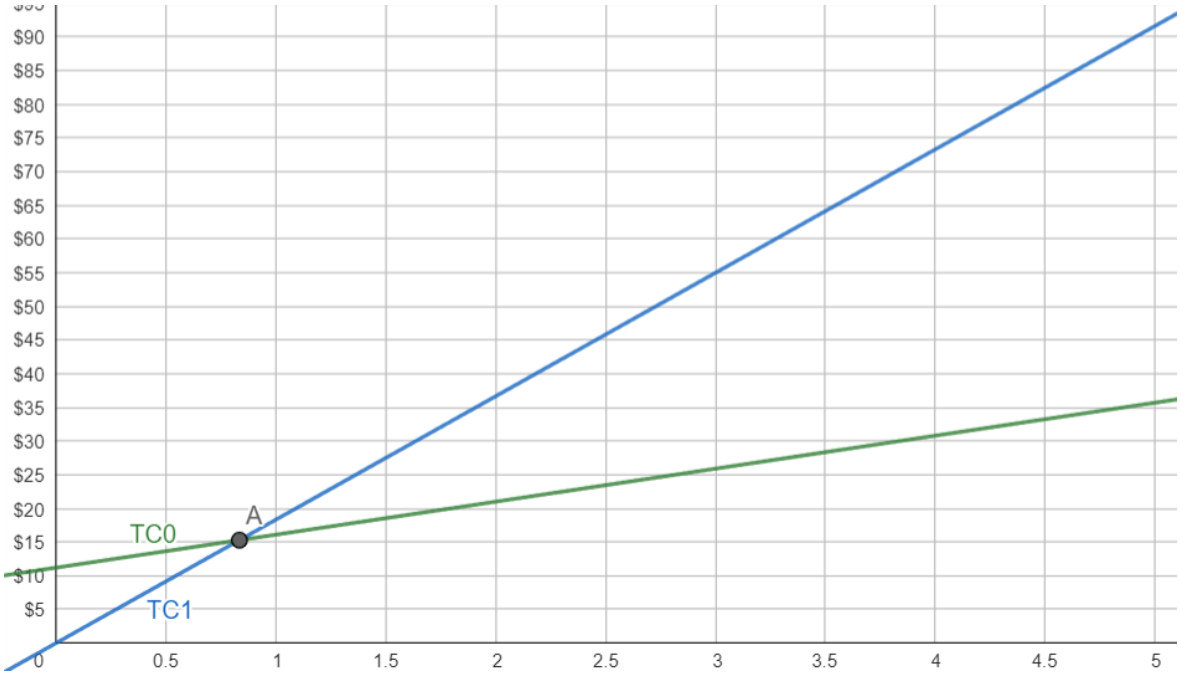
=11’200 + 1400X

Where X= is the number of Years

The total cost over the use ARXivar can be hence calculated as the result of the sum of the License Cost and the Consulting Cost:

Total Cost = 3500X+ 11’200 + 1400Y = 4900X + 11’200

Plotting the two functions of the Total Cost we obtain:



Where TC0 is the total cost function before the introduction of ARXivar and TC1 is the total cost function after ARXivar Introduction.

When X is understood to signify the number of years, the observation from the functions' intersection at approximately $X = 0.83$ leads to a clear conclusion. After 0.83 years, the investment in ARXivar for automating processes proves to be more economical than the cost of employing a staff member to perform these processes manually. After a period of five years, the company will have saved €55,950 just on this specific activity. This significant reduction in costs implies that, in the years to follow, the expenses the company faces for maintaining the same activity will be markedly lower, highlighting the enduring financial benefits of the initial investment.

General Overview

Focusing exclusively on the cost aspect, initiating a workflow with ARXivar sets a cost-efficient foundation for integrating more workflow processes as time progresses. This cost-efficiency is largely due to ARXivar's licensing model, which is contingent on the number of profiles stored in the system rather than the quantity of processes deployed. It's crucial to recognize the relationship between the increase in processes and the accumulation of profiles. Nonetheless, even with this correlation, the cost structure is more favorable towards expanding workflow processes. This is because the incremental costs are associated with the profile volume, not the number of processes, thereby making it financially feasible to broaden operations within the ARXivar framework over time. Moreover, ARXivar proves to be particularly advantageous for large organizations with a high number of users, given that the licensing fees are not affected by user count but are instead based on the profile number.

Conclusion

Selecting Visit Piemonte as a case study has provided insights into why a business, which operates under a unique legal framework blending public and private sector elements, is motivated to engage in technological innovation that encompasses its entire managerial operations. In this scenario, Arxivar served as the catalyst for transformation. However, the achievement of the best outcomes was made possible through the collective effort and collaboration of all parties involved. The main role was played by the employees, whose cooperation was essential in realizing these results. When ARXivar was first introduced, there was a little bit of reluctancy on the change by the use of the new software, but step by step, they got used to it and ARXivar has become the pivot of all internal processes carried on by Visit Piemonte. This case study aims to demonstrate the possible application in every area of a company, supporting the digital transition of companies in an easy and effective way.

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