CENTRO DI RICERCA Impresapiens





2nd Workshop of the project "101101784 — 2022-IT-FRED2" Fraud Repression through EDucation2

«MAPPING KNOWLEDGE IN THE FIGHT AGAINST FRAUD»

Venice, 19-20 February 2024

Performance measurement related to EU projects

Francesca **landolo**, PhD, Tenure-track Lecturer in Management, Department of Management, Sapienza University of Rome

francesca.iandolo@uniroma1.it

Introduction (1/2)

EU-Funded Projects: Significance

- Context: They represent a critical mechanism through which EU *invests* in innovation, regional development, environmental sustainability, and social inclusion across its member states and associated countries. These projects address key societal challenges, promote economic growth, and ensure cohesion among EU regions.
- **Impact**: By targeting strategic areas (R&D, climate change, digital transformation, social equity), EU funds **catalyse advancements** that contribute significantly to the EU's broader goals of sustainable development and a competitive economy.

Importance of Evaluating These Projects

- Accountability: Evaluation ensures that taxpayer money is spent efficiently and effectively, providing accountability for public spending.
- Performance Measurement: It measures the performance of projects against their intended goals, assessing whether they deliver the expected outcomes and impacts.
- Policy Alignment: Through evaluation, the EU can align project outcomes with its policy objectives, ensuring that
 funded initiatives contribute to overarching EU strategies and priorities.

Introduction (2/2)

Overview of KPIs

- **Definition**: **Key Performance Indicators (KPIs) are quantifiable measures** used to evaluate the success of a project in achieving its objectives by providing a clear framework for monitoring progress, measuring outcomes, and assessing the impact of interventions.
- Role in Evaluation: KPIs are essential for the evaluation process as they offer objective criteria for measuring project
 performance. By setting <u>Specific, Measurable, Achievable, Relevant, and Time-bound (SMART)</u> KPIs, project
 managers and stakeholders can track progress, identify areas for improvement, and make informed decisions to steer
 projects towards their goals.
- Adaptability: The use of KPIs in evaluation is adaptable to various project scopes and sectors. This **flexibility** allows for tailored evaluation approaches that accurately reflect the unique objectives and challenges of each project.

Why KPIs are Used in Evaluation

- Strategic Focus: KPIs help maintain a strategic focus on key outcomes and impacts, ensuring that projects remain aligned with their goals throughout their lifecycle.
- Evidence-Based Decision-Making: By providing quantifiable data, KPIs facilitate evidence-based decision-making, enabling project managers to adjust strategies and resource allocation effectively.
- Continuous Improvement: Regular monitoring and evaluation through KPIs encourage continuous improvement, fostering a culture of learning and adaptation within organizations and projects.



Objectives of KPIs in EU Projects (1/2)

Enhancing Transparency and Accountability

- Transparency: KPIs serve as a tool to enhance transparency in EU-funded projects by providing clear, measurable outcomes that can be communicated to stakeholders, including the public, funding bodies, and project partners.
- Accountability: They ensure accountability for the use of funds by demonstrating how resources are allocated and what they
 achieve, making it easier to identify and address inefficiencies.

Supporting Strategic Decision-Making

- **Guiding Decisions**: KPIs provide **data-driven insights** that support strategic decision-making throughout the project lifecycle, from planning and implementation to closure.
- Resource Allocation: By evaluating project performance against KPIs, project managers can make informed decisions on resource allocation, prioritizing activities that contribute most effectively to the project's objectives.

Facilitating Continuous Improvement

- **Benchmarking**: KPIs allow for **benchmarking** against best practices, industry **standards**, or **previous** projects, helping to identify areas for improvement.
- Feedback Loop: Establishing a feedback loop based on KPI performance enables continuous refinement of strategies and processes, promoting a culture of excellence and innovation.



Objectives of KPIs in EU Projects (2/2)

Measuring Impact and Success

- Outcome Measurement: KPIs are crucial for measuring the direct outcomes and long-term impact of projects, assessing whether they achieve their intended social, economic, environmental, or technological benefits.
- Success Criteria: They provide a basis for defining success criteria, enabling project teams and stakeholders to understand
 whether the project has met its goals.

Driving Stakeholder Engagement and Communication

- Engagement: Effective communication of KPIs helps engage stakeholders by demonstrating progress and outcomes, fostering
 a sense of ownership and commitment.
- Transparency in Communication: Clear, quantifiable indicators facilitate transparent communication with all stakeholders, including beneficiaries, partners, and the general public, about what the project aims to achieve and its current status.

Aligning with EU Policy Objectives

- Policy Alignment: KPIs ensure that projects are aligned with broader EU policy objectives, such as promoting sustainable development, innovation, social inclusion, and economic growth.
- Contribution to EU Strategies: Through the measurement of specific KPIs, projects can demonstrate their contribution to the strategic priorities of the European Union, facilitating coherence across various initiatives and funding programs.



Categories of KPIs_(1/2)

When evaluating EU-funded projects, **Key Performance Indicators (KPIs)** are organized into distinct categories, each reflecting a different aspect of project performance. Understanding these categories helps in designing a comprehensive evaluation framework that covers all critical dimensions of project success.

Project Implementation and Management

- Focus: Measures the efficiency and effectiveness of project management practices, including adherence to timelines, budget management, and stakeholder engagement.
- Examples: Milestone completion rates, budget variance, and stakeholder satisfaction surveys.
- **Purpose:** Ensures that **projects are executed as planned**, resources are optimally utilized, and stakeholders are actively involved and satisfied.

Efficiency and Effectiveness

- Focus: Evaluate how well the project utilizes its resources to achieve its objectives and the effectiveness of its strategies and activities.
- Examples: Cost per unit of output, ratio of actual outputs to planned outputs.
- Purpose: Aims to identify areas where project performance can be optimized, ensuring that objectives are met in the most resource-efficient manner.

Outputs and Deliverables

- Focus: Tracks the tangible and intangible products generated by the project, assessing their quality and relevance.
- Examples: Number of deliverables produced, compliance with quality standards, relevance of outputs to target groups.
- **Purpose:** Ensures that the **project produces the expected outputs**, which are essential for achieving the desired outcomes and impacts.



Categories of KPIs_(2/2)

Outcomes and Impact

- Focus: Measures the immediate and long-term effects of the project on its target groups and the broader environment.
- Examples: Changes in behaviour, practice, or policy; improvements in environmental conditions; economic benefits to target communities.
- Purpose: Assesses the real-world difference the project makes, contributing to the achievement of broader EU policy objectives and societal goals.

Dissemination and Exploitation

- Focus: Evaluates the efforts made to share project results and ensure they are used by stakeholders, including the public, industry, and policymakers.
- Examples: Reach and impact of dissemination activities, number of citations or adoptions of project findings, integration of results into policy or practice.
- Purpose: Aims to maximize the project's visibility, accessibility, and usability of its results, enhancing its overall impact and sustainability.

Sustainability and Legacy

- Focus: Assesses the durability of the project's benefits beyond its lifetime and the mechanisms put in place to ensure long-term impact.
- Examples: Continuation of project activities, maintenance of project outcomes, long-term funding arrangements.
- Purpose: Ensures that the project's benefits continue to be realized in the future, contributing to lasting positive change.



Detailed Overview of KPIs – Project Implementation and Management (1/2)

Completion of Project Milestones on Time

- **Significance:** Timely completion of milestones is a clear indicator of project progress and efficiency. It reflects the project team's ability to plan, execute, and adjust workflows as necessary.
- Measurement: Percentage of milestones completed by their due dates.
- Importance: Ensures project stays on schedule, which is crucial for meeting objectives within the designated timeframe and budget.

Budget Adherence

- **Significance:** Adherence to the budget signifies sound financial management, indicating the project's economic efficiency.
- Measurement: Comparison of actual spending against the planned budget over specific periods.
- Importance: Critical for maintaining financial integrity and ensuring that the project does not exceed its financial resources, potentially jeopardizing its completion.

Stakeholder Satisfaction

- Significance: Stakeholder satisfaction is an overarching measure of the project's success in meeting or exceeding the expectations of all parties involved, including beneficiaries, partners, and funders.
- Measurement: Surveys and feedback forms collected at various project stages.
- **Importance:** High satisfaction levels among stakeholders are indicative of effective communication, collaboration, and project impact, fostering continued support and engagement.



Detailed Overview of KPIs – *Project Implementation and Management* (2/2)

Risk Management Effectiveness

- Significance: Effective risk management minimizes the potential negative impacts of unforeseen events on the project.
- **Measurement:** Number of identified risks that were successfully mitigated or avoided versus those that were not.
- Importance: Demonstrates the project team's ability to anticipate, prepare for, and respond to risks, ensuring project resilience and stability.

Quality of Project Deliverables

- **Significance:** The quality of deliverables reflects the project's adherence to technical, functional, and aesthetic standards, ensuring that outputs meet stakeholders' needs and expectations.
- Measurement: Evaluation against predefined quality criteria and stakeholder feedback.
- Importance: Essential for achieving project objectives and ensuring that outputs have the desired impact on target groups and beneficiaries.

Communication and Reporting Efficiency

- **Significance:** Effective communication and timely reporting are vital for transparency, stakeholder engagement, and project governance.
- Measurement: Timeliness and quality of project updates, reports, and responses to stakeholder inquiries.
- Importance: Facilitates informed decision-making, ensures alignment with project goals, and maintains stakeholder trust and support.



Detailed Overview of KPIs – *Efficiency and Effectiveness* (1/2)

Cost-effectiveness

- Overview: Cost-effectiveness evaluates how economically resources are used to achieve project objectives. It's about doing more with less and ensuring that the project delivers value for the money spent.
- **Measurement:** This can be calculated by comparing the project outcomes (benefits or outputs) to the costs incurred. A higher ratio indicates greater cost-effectiveness.
- Example: If a project aimed at improving energy efficiency in a building results in a 20% reduction in energy costs with minimal investment, the cost-effectiveness KPI would reflect the savings achieved versus the expenditure.

Ratio of Administrative to Operational Expenses

- Overview: This KPI measures the proportion of the project budget spent on administrative tasks (like management, accounting, reporting) versus operational activities (actual project work, such as development, implementation, production).
- **Measurement:** It is calculated by dividing administrative costs by operational costs. The goal is to minimize the ratio, ensuring that more resources are allocated directly to activities that contribute to project outcomes.
- Example: In a software development project, if €20.000 is spent on administrative tasks and €80.000 on development work, the ratio would be 0.25 (20.000/80.000), indicating that 25% of the budget is spent on administrative expenses.



Detailed Overview of KPIs – *Efficiency and Effectiveness* (2/2)

Strategies for Improving Efficiency and Effectiveness

- Streamline Processes: Identify and eliminate redundant processes to reduce administrative costs and improve operational efficiency.
- Adopt Technology: Implement project management and collaboration tools to automate administrative tasks and enhance team productivity.
- Regular Review and Adjustment: Continuously monitor these KPIs and adjust strategies to ensure the
 project remains cost-effective and resources are optimally allocated.

Importance:

Focusing on these KPIs helps project managers not only deliver projects within budget and timelines but also ensures that the project's outcomes are achieved most efficiently. It's crucial for maximizing the impact of the project while maintaining or reducing costs.



Detailed Overview of KPIs – *Outputs and Deliverables*

Number of Deliverables

- Definition: Counts the specific outputs produced by the project, such as reports, tools, prototypes, and training sessions.
- **Significance**: Directly reflects the productivity and output capacity of the project team, indicating how effectively project plans are being executed.
- Measurement: Total count of all specified deliverables outlined in the project's scope.
- **Impact on evaluation**: A higher number of deliverables, assuming quality standards are met, typically signifies successful project execution and progress toward achieving project goals.

Quality of Deliverables

- **Definition**: Assesses the extent to which the project's outputs meet predefined quality standards and stakeholder expectations.
- Significance: Ensures that deliverables are not only produced but are functional, effective, and capable of fulfilling the project's objectives.
- Measurement: Quality reviews, stakeholder feedback, compliance with industry standards, and performance metrics specific to each deliverable.
- Impact on Evaluation: High-quality deliverables enhance stakeholder satisfaction, contribute to the project's success, and often
 lead to better project outcomes and impact.



Detailed Overview of KPIs – Outcomes and Impact (1/2)

Achievement of Objectives

- Definition: Evaluates how well the project meets its initially stated objectives within the set timeframe and resources.
- Significance: A core indicator of project success, directly reflecting its effectiveness in addressing the identified needs or challenges.
- Measurement: Comparison of project objectives against achieved results, using specific, quantifiable targets for each goal.
- **Impact on evaluation**: Successful achievement of objectives is a clear sign of a project's effectiveness and its strategic alignment with broader goals.

Sustainability of Results

- **Definition**: Measures the longevity and continued relevance of the project's outcomes after the completion of the project.
- Significance: Critical for projects aimed at long-term benefits, ensuring that positive changes are durable and self-sustaining.
- Measurement: Follow-up assessments, long-term impact studies, and evidence of ongoing benefits or improvements.
- Impact on Evaluation: Projects that achieve sustainable results demonstrate higher value and effectiveness, contributing to lasting positive change.



Detailed Overview of KPIs – *Outcomes and Impact* (2/2)

Contribution to EU Policy

- **Definition:** Assesses the extent to which project outcomes support, advance, or align with EU policies and priorities.
- **Significance:** Highlights the project's role in furthering EU strategic objectives, such as innovation, social inclusion, environmental sustainability, or regional development.
- **Measurement**: Analysis of project outcomes in relation to specific EU policy objectives, including qualitative and quantitative contributions.
- **Impact on evaluation**: Projects that significantly contribute to EU policy not only fulfill their specific objectives but also play a part in broader EU initiatives, enhancing their strategic importance.



Detailed Overview of KPIs – *Dissemination and Exploitation* (1/2)

Reach of Dissemination Activities

- **Definition:** The extent to which project findings, results, and outputs are shared with and accessed by the target audience and the wider community.
- Significance: Ensures that the knowledge and innovations generated by the project are widely communicated and accessible, maximizing their impact.
- Measurement: Metrics such as audience size, engagement rates, dissemination channels used, and geographic or demographic reach.
- Impact on evaluation: Effective dissemination activities increase project visibility, impact, and the potential for uptake and application of results by various stakeholders.

Use of Results by External Stakeholders

- **Definition:** The extent to which the project's outputs, findings, or methodologies are adopted, utilized, or referenced by parties outside the project consortium.
- Significance: Indicates the practical applicability and relevance of the project's results beyond its immediate context.
- Measurement: Case studies, user testimonials, policy adoptions, citations in academic or industry publications, and integration into practices or further research.
- Impact on Evaluation: The adoption and utilization of project results by external stakeholders are strong indicators of the project's success, relevance, and contribution to its field or sector



Detailed Overview of KPIs – *Sustainability and Legacy*

Continuation of Project Activities

- **Significance**: Assesses whether the project's initiatives or services are maintained beyond the project's lifespan.
- Measurement: Ongoing activities, initiatives, or services that continue after project funding ends.
- **Importance**: Indicator of the project's success in embedding lasting solutions or practices within target communities or sectors.

Maintenance of Project Outcomes

- Significance: Measures the durability of the project's benefits and whether they continue to deliver value over time.
- Measurement: Longitudinal assessments of outcome indicators relevant to the project's objectives.
- **Importance:** Ensures that the positive changes initiated by the project persist, contributing to long-term societal, environmental, or economic benefits.



Measuring and Reporting KPIs (1/2)

Measuring KPIs

- **Process:** Begins with defining clear, quantifiable objectives that KPIs aim to measure. This involves setting baseline values, establishing targets, and regularly collecting data to assess progress.
- Quantitative vs. Qualitative: KPIs can be quantitative (numerical data) or qualitative (non-numerical insights). Quantitative KPIs are straightforward to measure, while qualitative KPIs may require surveys or interviews to gather stakeholders' perceptions and experiences.
- Frequency of Measurement: The frequency depends on the project's lifecycle and the specific KPI. Some KPIs are measured in real-time or weekly, while others may be assessed monthly, quarterly, or annually.

Tracking KPIs

- Tools and Software: Numerous project management and analytics tools are available for tracking KPIs. These include Project Management Software Tools (Asana, Trello, and ClickUp); Business Intelligence Tools (Tableau, Power BI, and Google Analytics) that provide advanced data analysis and visualization capabilities, allowing for detailed tracking of performance against KPIs; Custom Dashboards for complex projects (developed using spreadsheet software like Microsoft Excel or Google Sheets, or through programming in environments like R or Python, tailored to specific project needs).
- Real-time Monitoring: Some tools enable real-time monitoring of KPIs, offering the advantage of immediate insights into project performance and the ability to act quickly on emerging issues.



Measuring and Reporting KPIs (2/2)

Reporting KPIs

- Regular Reporting: Establishing a regular reporting schedule ensures that stakeholders are kept informed about the project's progress. Reports can be weekly, monthly, or quarterly, depending on the project's duration and the stakeholders' needs.
- **Formats**: Reports can vary in format, from written documents and presentations to interactive dashboards. The choice depends on the audience's preferences and the complexity of the information being conveyed.
- Actionable Insights: Effective reports go beyond presenting data; they analyze trends, compare performance against targets, and offer actionable insights and recommendations for improvement.

Tools or Software for Reporting

- Integrated Project Management Tools: Many project management platforms come with built-in reporting features that automatically generate insights from tracked KPIs.
- **Dedicated Reporting Tools:** Tools that specialize in creating comprehensive, customizable reports from various data sources.
- Collaboration and Presentation Tools: Software like Microsoft PowerPoint, Google Slides, or Prezi can be used to create engaging presentations for reporting KPIs to stakeholders.



Challenges in KPI Evaluation

Challenges in Selecting KPIs

- Relevance: Ensuring KPIs are aligned with project objectives and stakeholder expectations can be difficult. Irrelevant KPIs may lead to misguided efforts and resources.
- Overcomplexity: Selecting too many KPIs or overly complex indicators can overwhelm teams and dilute focus
 from critical success factors.

Overcoming Selection Challenges

- **Strategic Alignment:** Align KPIs closely with project objectives, ensuring they directly measure outcomes that matter to stakeholders.
- Simplicity and Focus: Limit the number of KPIs to those that are most critical. Adopt the principle of "less is more" to maintain focus on key performance areas.

Challenges in Measuring KPIs

- **Data Availability and Quality:** Accessing reliable and timely data for measuring KPIs can be a significant hurdle, especially for qualitative indicators.
- Consistency: Maintaining consistent methodologies for data collection and analysis across the project lifecycle and different projects can be challenging.



Examples of KPIs (1/2)

Timeliness KPIs:

- 1. Cycle Time: Measures the time required to complete a specific task or activity.
- 2. On-Time Completion Percentage: Indicates whether tasks or assignments are completed by their deadlines.
- 3. Planned Hours vs. Time Spent: Compares the estimated time for project completion against the actual hours spent, highlighting discrepancies that may impact resource allocation or project timelines

Budget KPIs:

- 1. Cost Performance Index (CPI): A ratio that measures the cost efficiency of a project's budget, calculated by dividing the earned value (EV) by the actual cost (AC). If CPI is less than 1, the project is over budget.
- 2. Budget Variance (CV): Shows how much the actual budget deviates from the projected budget, helping in identifying whether the project is over or under its expected financial plan.

Quality KPIs:

- 1. Customer Satisfaction/Loyalty: Assessed through surveys to determine if clients or customers would return or recommend the project outcomes to others.
- 2. Number of Errors: Counts how often tasks need to be redone, affecting both budget and schedule.

Effectiveness KPIs:

- 1. Billable Utilization: Evaluates the performance of team members by determining the percentage of billable hours out of the total hours spent on project work.
- 2. Average Cost Per Hour: Calculates the average expense per hour for executing the project, including employee salaries, benefits and other related costs.



Examples of KPIs (2/2)

Risk Management KPIs:

- 1. Risk Mitigation Efficiency: Measures the effectiveness of risk mitigation actions by comparing the number of identified risks against those successfully mitigated.
- 2. Risk Exposure: Quantifies the project's exposure to risks, taking into account the probability and impact of identified risks.

Stakeholder Engagement KPIs:

- 1. Stakeholder Engagement Level: Assesses the degree of stakeholder involvement and satisfaction through surveys or feedback mechanisms, indicating how well the project meets or exceeds stakeholder expectations.
- 2. Communication Effectiveness: Evaluate the success of communication strategies in ensuring all stakeholders are informed and engaged, typically measured by the frequency and quality of updates, meetings, and feedback loops.

Sustainability KPIs:

- 1. Environmental Impact Score: For projects with environmental considerations, this KPI measures the project's impact on the environment, including aspects like carbon footprint reduction, waste management efficiency, and sustainable resource use.
- 2. Social Impact Assessment: Evaluate the project's contribution to social goals, such as community development, job creation, and enhancing quality of life for affected populations.

Innovation and Improvement KPIs:

- 1. Innovation Rate: Tracks the number of new ideas, processes, or products generated through the project, highlighting the project's contribution to advancing knowledge or industry standards.
- 2. Improvement in Process Efficiency: Measures the enhancements in process efficiency as a result of the project, which could include reduced time cycles, cost savings, or improved output quality.



Examples of KPIs (2/2)

Risk Management KPIs:

- 1. Risk Mitigation Efficiency: Measures the effectiveness of risk mitigation actions by comparing the number of identified risks against those successfully mitigated.
- 2. Risk Exposure: Quantifies the project's exposure to risks, taking into account the probability and impact of identified risks.

Stakeholder Engagement KPIs:

- 1. Stakeholder Engagement Level: Assesses the degree of stakeholder involvement and satisfaction through surveys or feedback mechanisms, indicating how well the project meets or exceeds stakeholder expectations.
- 2. Communication Effectiveness: Evaluate the success of communication strategies in ensuring all stakeholders are informed and engaged, typically measured by the frequency and quality of updates, meetings, and feedback loops.

Sustainability KPIs:

- 1. Environmental Impact Score: For projects with environmental considerations, this KPI measures the project's impact on the environment, including aspects like carbon footprint reduction, waste management efficiency, and sustainable resource use.
- 2. Social Impact Assessment: Evaluate the project's contribution to social goals, such as community development, job creation, and enhancing quality of life for affected populations.

Innovation and Improvement KPIs:

- 1. Innovation Rate: Tracks the number of new ideas, processes, or products generated through the project, highlighting the project's contribution to advancing knowledge or industry standards.
- 2. Improvement in Process Efficiency: Measures the enhancements in process efficiency as a result of the project, which could include reduced time cycles, cost savings, or improved output quality.



CENTRO DI RICERCA Impresapiens





2nd Workshop of the project "101101784 — 2022-IT-FRED2" Fraud Repression through EDucation2

«MAPPING KNOWLEDGE IN THE FIGHT AGAINST FRAUD»

Venice, 19-20 February 2024

Performance measurement related to EU projects

Francesca **landolo**, PhD, Tenure-track Lecturer in Management, Department of Management, Sapienza University of Rome

francesca.iandolo@uniroma1.it