Transforming project management through the Project Management & Tracking System (PMTS) in Makueni County

County:	Makueni		
Sector/s:	Transport, Infrastructure, Public works, Energy & ICT	Sub-sector/Theme:	ICT
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Target Audience:	County Government, Project Management Teams, citizens, development partners, NGOs		
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Introduction:

In March 2024, the County Government of Makueni launched the Projects Monitoring and Tracking System (PMTS), a digital platform that is transforming the planning, execution and oversight of County projects. PMTS operates as a centralized, web-based solution, providing stakeholders with real-time access to project data, streamlining collaboration, and strengthening accountability across departments. The system's public dashboard allows citizens to track project details —including budgets, status, timelines and expenditures — while its internal dashboards enable County leaders and technical officers to make timely, data-driven decisions that optimize resource allocation and service delivery.

PMTS is fully integrated with email and SMS services, facilitating seamless communication and automated notifications for stakeholders and project teams. In its next phase, the system will be

enhanced to incorporate GIS capabilities, providing spatial project mapping and advanced analytics. Together, these advances will ensure PMTS continues to evolve as a high-impact tool for efficient, transparent and sustainable governance.
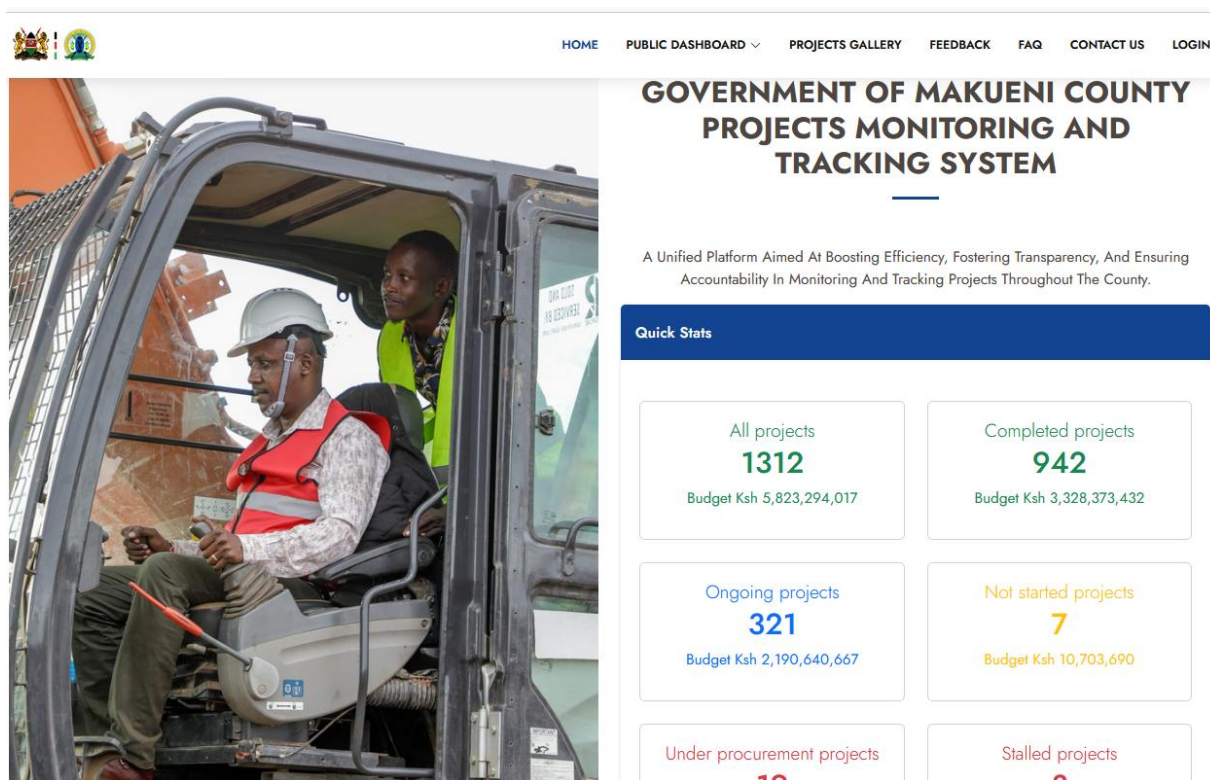

Figure 1 The Public Dashboard offering real-time project updates and a feedback tool, promoting transparency and citizen engagement

Before the introduction of the PMTS, the County faced major challenges with fragmented and manual project monitoring. This led to delays, cost overruns, and limited transparency. Over 300 officers managing projects struggled with bottlenecks due to the absence of a centralized system, resulting in delayed reporting, disjointed data, and inefficient resource allocation.

Citizens and County officials lacked access to real-time information, making it difficult to track project progress, hold contractors accountable, or engage meaningfully in the development process. For the County Executive and development partners, the lack of accurate, timely data undermined decision-making, oversight, and accountability, ultimately weakening service delivery,

stalling critical projects, and eroding public trust.

Implementation of the practice (solution path):

The implementation and deployment of PMTS was a collaborative effort between the departments of ICT, Education & Internship (ICT Directorate) and the department of Finance (Monitoring & Evaluation directorate). The in-house ICT Systems Development team built and deployed the system, while M&E Officers played a key role in updating projects statuses and using the system for tracking. This was executed through a structured, phased approach to ensure smooth integration with County projects workflows:

1. **Conceptualization & planning:**

The need for a centralized project monitoring tool emerged from internal reviews and performance reporting forums held by the ICT and M&E teams. These teams observed recurring challenges in project monitoring, such as fragmented data sources, delayed feedback loops, manual reporting processes, and weak interdepartmental coordination. As such, the County did not hire a consultant to carry out a needs assessment. Instead, the system was conceptualized organically through internal observations and diagnostic reviews.

Key findings that informed the system design included:

- ➢ Fragmented project data
- ➢ Lack of real-time monitoring
- ➢ Delayed reporting and feedback loops
- ➢ Limited public access to information
- ➢ Weak interdepartmental coordination
- ➢ Manual workflows and redundancy

The system's requirements were defined internally by the ICT and M&E teams using a problem-driven approach. Informal consultations with staff across departments were conducted to understand actual user needs. The teams also benchmarked with national best practices and reviewed existing tools, mainly paper-based and Excel-based templates, to identify inefficiencies that could be addressed through automation.

Why was this approach adopted:

- Relying on in-house expertise, it helped the County minimize costs while building internal capacity.
- Developing the system internally ensured it was tailored to the real needs and working environments of County staff.
- Having an in-house development team made future updates, support, and scaling more manageable.

The system was envisioned as a centralized, web-based platform that would offer real-time project tracking, automated workflows, data analytics, SMS/email integration, and GIS functionality in future iterations.

2. **System Development**

The development of PMTS was also undertaken by the County's ICT and M&E teams, without external vendors. The team required several components to make this possible:

- A skilled internal software development team
- Secure cloud hosting infrastructure
- Input from relevant stakeholders to ensure system relevance
- Reliable project data for system testing and migration

One key decision was to include a public-facing dashboard. This was a deliberate choice aimed at promoting transparency, empowering citizens with access to information, and strengthening public trust in County service delivery.

Key system requirements included:

- A centralized database to store all project data
- User-friendly dashboards for both internal staff and the public
- Real-time data synchronization
- SMS and email integration for alerts and feedback
- Role-based access controls for system security
- Scalable architecture to support future integrations, such as GIS

The system features two main dashboards:

- ➢ **Internal dashboard**: Allows M&E officers to input, update, and monitor project progress; manage citizen feedback; and generate reports.

- ➢ **Public dashboard**: Offers real-time visibility into project information, including project titles, locations, budgets, implementation status, timelines, and expenditure. It also includes a feedback tool that allows citizens to raise concerns or submit comments, establishing a two-way channel for accountability and engagement.

3. **Data cleaning & migration**:

Before launching the system, the M&E team reviewed and validated data from FY 2023/24 to ensure accuracy, consistency, and completeness. Only verified and relevant data was migrated into the system. The data validation process was resource-intensive, as records were initially scattered across departments, inconsistently reported, and in many cases incomplete.

4. **Capacity building**:

Key County staff were trained in system use, including data entry, report generation, and management of citizen feedback. Simultaneously, the public was sensitized through; community engagement forums, radio broadcasts, social media campaigns and demonstrations during public participation forums. This dual approach helped ensure both internal adoption and public awareness of the system.

5. **Pilot testing & optimization**:

The system was piloted across departments and user feedback informed further refinements. It was then officially launched by H.E. Governor Mutula Kilonzo Jr. in March 2024. Expenditures for the system are limited to essential shared services which include cloud hosting, SSL certificates, bulk SMS that is acquired through a Software-as-a-Service (SaaS) model and email hosting services.

Sustainability

PMTS is fully embedded within the County's M&E structure with ICT directorate providing ongoing technical support. Sustainability is ensured through:

- ➢ **Institutionalization:** The system operates under formal policies and Standard operating Procedures (SOPs), ensuring accountability and continuity.

- ➢ **Continuous optimization:** Citizens' feedback and system performance indicators inform

improvements.

- ➤ **Long-term impact:** Dedicated budget allocations support maintenance, upgrades, and training. Legislative backing and patenting safeguard intellectual property and facilitate potential collaboration with other government bodies.

Results of the Practice:

The system has significantly improved how projects are monitored and managed, resulting in enhanced transparency, accountability and citizen engagement. Key outcomes include:

- ➤ **Real-time monitoring:** Over 1,564 projects from FY 2023/24 and 2024/25 have been digitized, enabling staff and citizens to track implementation progress in real-time.

- ➤ **Enhanced transparency & participation:** The public dashboard provides open access to project information, encouraging citizen feedback and building trust.

- ➤ **Automation & accuracy:** Automated reporting has reduced manual errors and delays, improving oversight and efficiency.

- ➤ **Improved service delivery:** Since July 2023, PMTS has supported the timely implementation of 1,114 projects, 747 completed and 338 currently ongoing.

- ➤ **Data-driven decision-making:** Real-time data supports better planning resource allocation, and accountability across departments.

- ➤ **Strengthened public trust:** Visibility into project status, budgets and procurement has increased citizen confidence in County governance.

- ➤ **Preserved institutional memory:** PMTS serves as a central digital repository maintaining historical project data and insights to inform future development planning.

Lessons learnt:

- ➤ Mapping out partners and their contributions helps identify overlaps, gaps and opportunities, enabling better alignment and operational efficiency.

- ➤ Collaboration with County Government fosters better coordination, knowledge sharing and strategic planning.

- ➤ Understanding the scope of work for each stakeholder supports more targeted resource allocation and effective support.

> ➤ Regular and transparent communication among teams is essential for successful collaboration and efficient resource allocation.

Recommendations/*Conclusion:*

The implementation of the PMTS has clearly demonstrated its value in enhancing project visibility, strengthening interdepartmental coordination and fostering accountability across Makueni County.

Beyond Makueni, PMTS presents a scalable and adaptable solution that other counties and government institutions can adopt to improve their project monitoring and tracking systems. It stands as a best practice in public sector project management, offering a strong foundation for replicating and scaling effective, data-driven service delivery across Kenya.

Further reading:

https://pmts.makueni.go.ke

https://cioafrica.co/makueni-county-launches-projects-monitoring
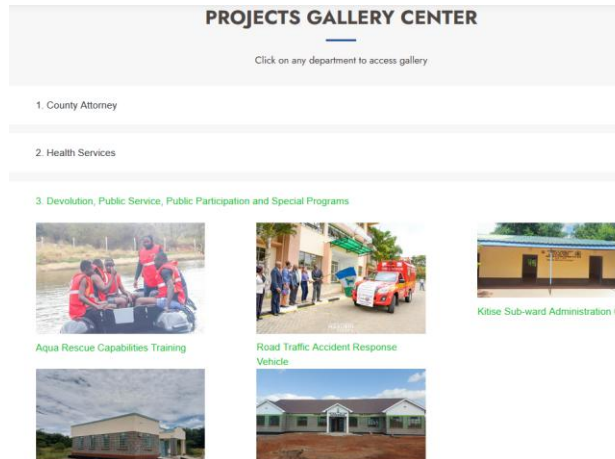
Photo Gallery

A photo during PMTS launch

Figure 2The Projects Gallery Centre showcasing County projects, organized by department for easy access and tracking.
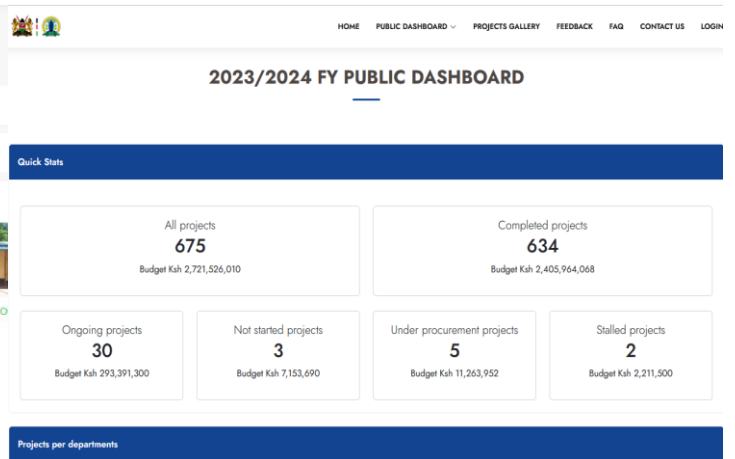
Figure 3The public dashboard displaying project status for each project's status in each Financial Year