



**PARTNERSHIP INFORMATION  
MANAGEMENT SYSTEM**

FINAL REPORT



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The Partnership Information Management System (PIMS) project is an initiative of the President's Emergency Plan for AIDS Relief (PEPFAR) funded by the United States Agency for International Development (USAID) under contract number AID-674-C-13-00001 and implemented by John Snow, Inc (JSI).

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Cover photo: Holly Powers / USAID Southern Africa

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## LIST OF ACRONYMS

<b>APR</b>	<b>Annual Progress Report</b>
<b>DATIM</b>	<b>Data for Accountability Transparency and Impact</b>
<b>DHIS</b>	<b>District Health Information System</b>
<b>ESI</b>	<b>Enhanced Strategic Information</b>
<b>GIS</b>	<b>Geographic Information Systems</b>
<b>IP</b>	<b>Implementing Partner</b>
<b>KZN</b>	<b>KwaZulu-Natal</b>
<b>MER</b>	<b>Monitoring, Evaluation, and Research</b>
<b>OGAC</b>	<b>Office of the Global AIDS Coordinator</b>
<b>PEPFAR</b>	<b>President's Emergency Plan for AIDS Relief</b>
<b>PEPFAR/SA</b>	<b>President's Emergency Plan for AIDS Relief South Africa</b>
<b>PIMS</b>	<b>Partnership Information Management System</b>
<b>SAG</b>	<b>South African Government</b>
<b>SASI</b>	<b>South Africa Strategic Information</b>
<b>SAPR</b>	<b>Semi-Annual Progress Report</b>
<b>USG</b>	<b>United States Government</b>

# LETTER FROM THE CHIEF OF PARTY

I am a project manager who is passionate about finding appropriate business processes for data collection and use in public health. My studies in information systems began in Zimbabwe, my home country, and continued when I moved to South Africa to help develop free open-source software. I came to JSI to work on the USAID-funded Enhancing Strategic Information (ESI) project, for which we built government capacity in health information systems management and a new reporting system for the PEPFAR program in South Africa. I then led ESI's successor activity, the Partnership Information Management System (PIMS) project. The goal of PIMS was to consolidate the standards-based approach to build and support a collaborative data reporting platform for the PEPFAR program, which would give the local U.S. Government team ownership and full control of its system.

Over the last five years, South Africa's health sector has opened to support from development partners. The new environment has led to a Partnership Framework between the U.S. and SA governments to reduce the effects of HIV and TB in communities. PIMS helped the two governments understand PEPFAR's contribution and provided a platform for their implementers and program managers to share data and collaborate.

South Africa, a young democracy, is overwhelmed by public health crises including high rates of HIV and TB, maternal and child mortality, non-communicable diseases, and violence and injury. A number of initiatives to mitigate these public health problems have been introduced, and JSI, like other PEPFAR partners, has supported these projects and initiatives. It has been a privilege for JSI to provide an essential part

of the solution by introducing a new standards-based way of working that make PIMS' contributions last beyond the life of the project.

USAID gave JSI a platform to reduce the effort required to compile PEPFAR information from various implementing partners, generate strategic information to inform planning and policy decisions, and yield results that were unexpected in a landscape where PEPFAR's focus shifted from providing direct services to targeted technical assistance.

After PIMS was introduced and training was completed, PEPFAR program managers and implementing partners were asked, through an extensive annual client satisfaction survey, to comment on the system. Responses included "We are very pleased with the PIMS team. Programme results are easily uploaded. Communication of the workflow is excellent and the quality of...the support team is top notch. Keep up the excellent work." "Excellent responsiveness! The helpdesk has consistently been very patient and willing to take it a step further in resolving our issues in a timely manner. Customer support was very great and very helpful." "If any programme manager actually gives it a chance, and works through it, they will be blown away at what the capabilities are!"

The PIMS project team thanks USAID and the American people for the continued financial support of and sustained interest and engagement in the project. We are also grateful to the Government of South Africa, our strategic partners, fellow PEPFAR implementers, JSI, and, most importantly, the users of the information that this initiative generated.

-Manyobvo Machipanda





## INTRODUCTION

Global health and HIV programs having become increasingly data-driven over the past decade, with data being routinely used to ensure services are reaching those who need them most. With the volume of available data becoming near-overwhelming, ensuring data quality and transforming data into formats usable by decision makers are necessary to ensure data is used to improve the design and targeting of health programs to reach those in greatest need.

In this data-centered landscape, donors and implementers have been investing in various data management and analytics tools. Open data initiatives and transitions to electronic information systems are making government data more accessible than ever. The Partnership Information Management System (PIMS) 2.0 and its predecessors have provided the information architecture to streamline reporting and information use for the President's Emergency Plan for AIDS Relief (PEPFAR) activities in South Africa for nearly a decade.

## WHERE PIMS STARTED

PEPFAR began supporting the HIV response in South Africa in 2004, and has contributed nearly \$4.4 billion<sup>1</sup> to fight the epidemic since that time. PEPFAR/South Africa (PEPFAR/SA) is among the largest PEPFAR programs globally. In 2014 alone, PEPFAR/SA supported antiretroviral therapy for more than 2.8 million people and counseling and testing for 7.9 million.

PEPFAR is currently undergoing a transition from an emergency response to a stabilization phase, marked by increased investments to strengthen the HIV response system.

South Africa was one of the first countries to develop a centralized, electronic reporting system for PEPFAR partner data. This custom system—PIMS—collects and provides information on activities, results, partners, sub-partners, and staff supported through PEPFAR funding in each sub-district throughout the country. Data collection in South Africa prior to PIMS was done through a number of various Microsoft Excel templates developed by PEPFAR and its implementing partners. There was little or no control over what reporting tools PEPFAR implementing partners were using. The process was cumbersome and took a considerable amount of time to consolidate reports for USG and the South African Government. Coordination of efforts and planning of PEPFAR activities in South Africa was difficult due to lack of reliable information.

PIMS is linked to an internal geographic information systems (GIS) website that uses PIMS data to create geographic representations of PEPFAR program results. PIMS is intended to catalyze the movement toward PEPFAR sharing data with the South African data collection systems such as the District Health Information System (DHIS) and facilitate alignment of indicators and reporting needs between the government of South Africa and the U.S. government.

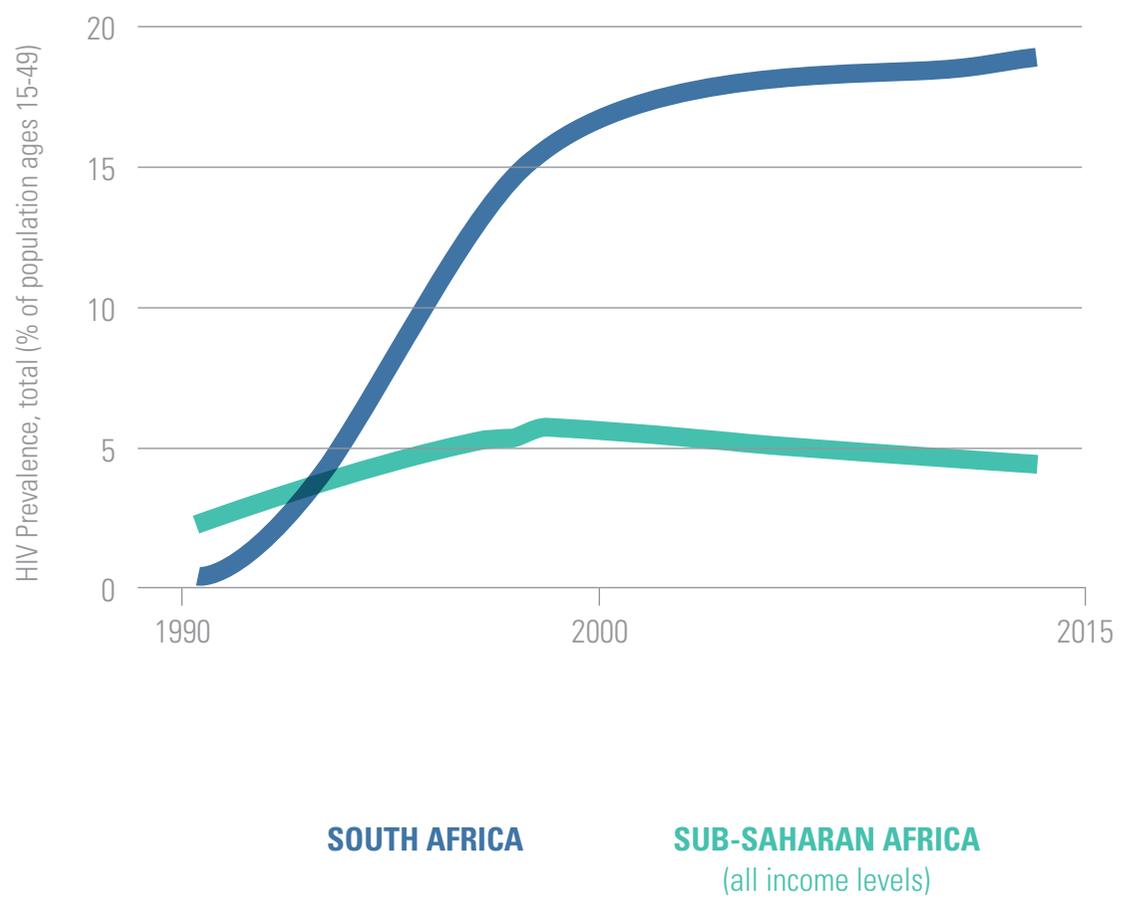
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<sup>1</sup>Total budget figure calculated based on annual PEPFAR South Africa budget reported on <http://www.pepfar.gov/countries/southafrica/>, accessed 5 January 2016.



Partnership Information Management System  
Cultural Day Celebration with JSI staff members.

**SOUTH AFRICA IS ONE OF THE COUNTRIES HIT HARDEST BY HIV,  
NEARLY ONE IN FIVE SOUTH AFRICANS WERE HIV+ DURING THE HEIGHT OF THE EPIDEMIC**



A health manager uses PIMS  
in his daily work.



# EVOLUTION OF PIMS

## 2004

PEPFAR in South Africa has had an information system in place since 2004, originally called the PEPFAR Data Warehouse, to routinely track and report on implementation of PEPFAR funded programs on a quarterly basis. The data warehouse was web-based and only accessible to PEPFAR partners and United States government (USG) staff. It was developed through the USAID-funded Enhanced Strategic Information (ESI) project, which was managed by JSI.

## 2010

In 2010, PEPFAR/SA commissioned an inventory of their program to catalogue the geographic location of their funded partners and sites they were supporting, the level of human and financial resources being used for implementation, and categorized by filters including agency affiliation, funded program area, type and ownership of sites. This web-based system was called the PEPFAR Inventory, and was accessible to anyone with Internet access.

## 2011

With the signing of the PEPFAR Partnership Framework between the USG and South African Government (SAG), PEPFAR decided that the integration of these two systems was necessary in order to have strategic information available to monitor the implementation of this new framework, while meeting the routine reporting requirements of the Office of the Global AIDS Coordinator (OGAC). The new system, dubbed the Partnership Information Management System (PIMS), began development in 2011.

## 2011-14

PIMS was created and implemented to fulfill newly established user requirements for strategic information required by the USG to manage the PEPFAR program. PIMS assists with monitoring and evaluation of PEPFAR programs, as well as the implementation of the Partnership Framework agreement between USG and SAG. PIMS is necessary for the PEPFAR program to report the program results to the Office of the Global AIDS Coordinator (OGAC) twice per year – the semi-annual progress report (SAPR) and the annual progress report (APR).

## 2015 AND BEYOND

PIMS will be used to collect and report on results for DREAMS, a new PEPFAR initiative for young women and girls in South Africa and nine other countries. DREAMS is currently being piloted in five districts in two provinces, Gauteng and KwaZulu-Natal (KZN). DREAMS indicators are customized for the South African context and have been agreed on by the South African government and donors. Some of these indicators granularity and

context go beyond what is required by DATIM and this has led to the need to building a new indicator crosswalk and data exchange between the two systems. Data being collected in PIMS will be transmitted into DATIM, supporting a seamless transition to the new reporting system, which is benefiting from the change management, training, and improved computer literacy of the partners supported by the PIMS project.

# PROJECT LIFE CYCLE



## DATA WAREHOUSE

Data collection at partner level; Minimal data security; Data capture for based report; Data review per location; Ad-hoc based report



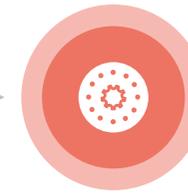
## PIMS I

Improved look and feel; Improved data security; Program area based reporting; Bulk data review; Expenditure analysis pilot; Enhanced data capture forms



## PIMS II

Enhanced navigation, look and feel; Standardized reporting output; Dynamic reporting; glandular data security; Implementing Mechanism based; Automated APR process; Enhanced PEPFAR Inventory Management; Internal communication module; EA process; Enhanced data reporting forms;



## PEPFAR INFO SYSTEM

PIMS II evolves into a generic system to take care of PEPFAR SA needs, eg DREAMS Initiative



# PIMS TECHNOLOGY INNOVATIONS

Throughout the life of the system, the PIMS team focused on how to make the system simple for users. PIMS had a wide range of users who played many different roles within PEPFAR-funded activities in South Africa. The system was developed to be robust enough to manage and match users and resources in a very secure way. Users were grouped by role, and each role made important contributions to the workflow processes of data collection, data cleaning, and report generation. A special category of administrators was also created to manage the system's meta-data (e.g., geo-locations, partner data, programs). Table 1 shows the demography of PIMS roles and number of users to date:

Over the life of the project, innovations that improved the user experience and helped to streamline the annual reporting process included:

- **Global gold standard for process management:** PIMS received ISO certification (ISO 9001:2008) to ensure standardization of the system and its alignment with global best practices. ISO certification is an internationally recognized achievement that signals certain quality standards have been met (e.g., strong customer focus, management effectiveness, process approach, continuous quality improvement).
- **Data exchange:** PIMS was customized to allow data exchange between systems, including exchange with other global PEPFAR systems including PROMISE (expenditure analysis data), FACTS Info (annual reporting system for OGAC), and implementing partner systems. This reduced data entry redundancies and streamlined reporting and analysis processes.

ROLE	TOTAL USERS	DESCRIPTION
Data Viewer	85	Allowed only to view published results, meta-data, and generate reports
Data Capturer	414	Implementing partner (IP) data capturers
Data Verifier	312	IP M&E managers responsible for submitting results to the donor
Partner Admin	83	Manages meta-data, users, and resources available for IPs
PEPFAR Provincial Liaison (PPL)	8	Responsible for a specific province, major requirement is to produce aggregated provincial reports on program activities
USG Activity Manager (AM)	101	Reviews data submitted by IPs
Agency Admin	5	Manages and maintains the agency meta-data, users, and allocates resources
Super User	5	Access to all system resources
PIMS Support	20	PIMS internal support and development team
USG SI Team	19	Strategic Information Technical Working Group; reviews and publishes results
Expenditure Analysis Verifier	67	Verifies IP expenditure analysis data and submits for AMs to review

- **Indicator crosswalk:** The PIMS team developed and routinely updated the indicator crosswalk between the South Africa Strategic Information (SASI) Manual and OGAC indicators. The crosswalk enabled partners to report against the required national indicators and simultaneously transform that data into PEPFAR reporting- ready information. While the calculations were often complex, the crosswalk ensured the system focused on meeting partners where they were, with their current reporting requirements, rather than creating a wholly duplicate system.

In the ten years PIMS was in development and use, data management and visualization technology evolved rapidly and PEPFAR went through numerous overhauls to their reporting structure and requirements. As a result, PIMS was overhauled to improve user experience and align to new PEPFAR data needs.

PIMS 2.0 included a number of strategic updates, including:

- New user management structure (clarified roles and enhanced security for the system)
- Download features for allowing partners to generate reports for their records
- Reporting forms that mirrored the PEPFAR Annual Performance Report forms, simplifying the semi-annual and annual reporting processes
- A more dynamic system that allowed users to add new indicators or change the structure of indicators without too much difficulty (this simplified making edits to the crosswalk and accommodating new reporting structures and indicators for PEPFAR)

Having PIMS in place also simplified the process for PEPFAR when introducing new online systems (e.g., DATIM), as partners were already accustomed to reporting into electronic systems.



Partnership Information Management System Chief of Party  
Manyobvo Machipanda accepts the ISO certificate on behalf of the PIMS team.

## STRENGTHENING DATA USE WITH PIMS

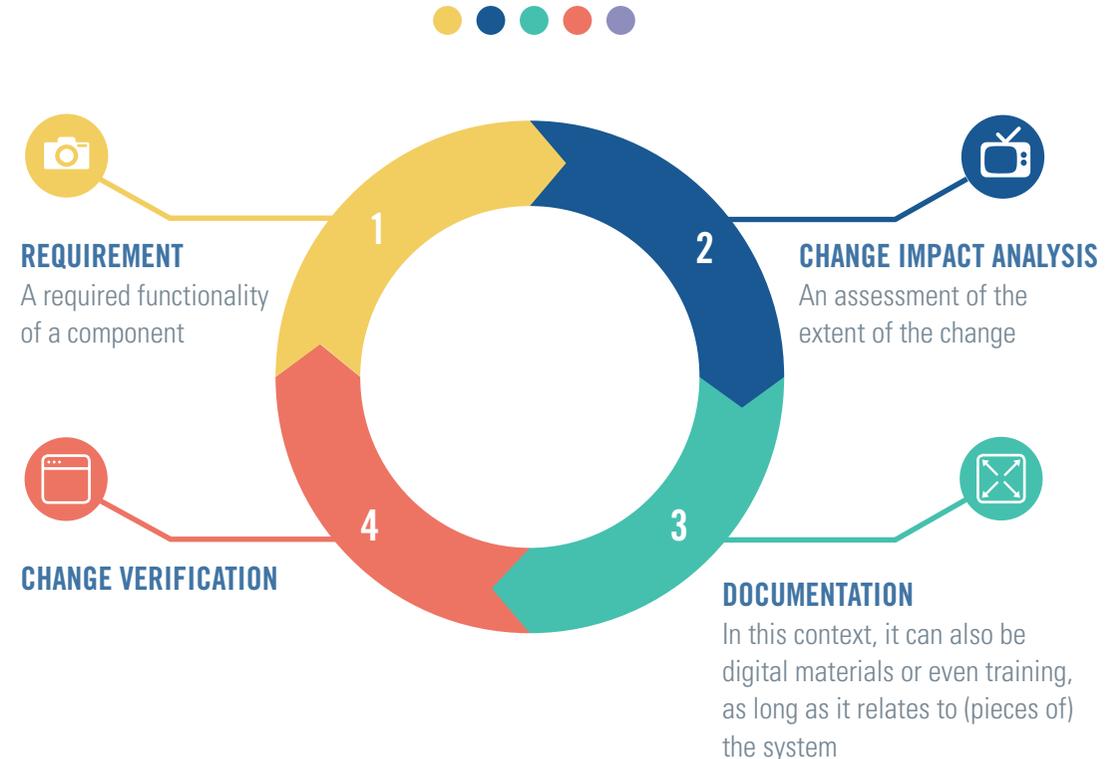
Change management has been a critical component of the PIMS workflow, working with both implementing partners and the USG strategic information team. The system was initially developed for reporting purposes, and evolved to include various data visualization and tools to support partners who wanted to access their data in usable formats.

Adoption of the latest iteration of PIMS grew markedly from 2012 (launch) through 2015, with the total number of users more than doubling. With more specific, well-defined roles, the system provided users with the functionality they needed and ensured a stringent verification and approval system for submitting data.

By 2014, 221 implementing partners were reporting their annual progress report data into PIMS. Innovations in the reporting format, like the indicator crosswalk, reduced or eliminated duplicate data analysis and data entry by allowing partners to report their SASI data in PIMS and allowing the system to calculate the equivalent monitoring, evaluation, and research (MER) indicators.

By the final year of the project, PIMS 2.0 had evolved to include custom reporting forms that aligned with the new PEPFAR MER indicators, enabled more rapid responses within the epidemic with site specific information, and empowered local implementing partners by providing custom download options that allowed the partners to download their reporting data in formats for their own use.

## CHANGE MANAGEMENT

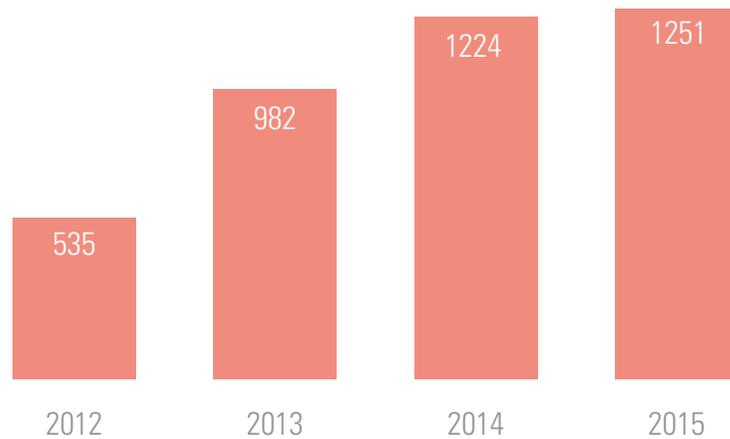


Use of the system by implementing partners was supported by in-person trainings and a responsive help desk, with staff trained to respond to user queries and ensure they had the ability to report accurate, timely information aligned to evolving PEPFAR reporting requirements.

Routine communications with users was key to supporting the PIMS user community. In a user satisfaction survey conducted in 2015, the majority of respondents (80%) agreed that email blasts sent out from the PIMS team were useful and more than three quarters of respondents (77%) agreed that the PIMS email support was useful.

As an early innovation in PEPFAR information systems, PIMS was critical to ensuring the USG strategic information team and implementing partners had the necessary information to use data-driven approaches for improving their programs.

**THE NUMBER OF PIMS 2.0 USERS MORE THAN DOUBLED FROM LAUNCH TO PROJECT CLOSE OUT**



Partnership Information Management System Quality Assurance Programmer  
Podile Mafoko provides support call to a PIMS user.

# LESSONS LEARNED

## CHALLENGES

With a number of stakeholders involved, sometimes system requirements were unclear, in part due to the changing structure of PEPFAR as a global program.

When changes needed to be made to the system, timelines for careful development and testing of new features were very tight. While the excitement from users to see changes implemented quickly was a testament to the value of the system, program staff and developers often had a different level of understanding of just how much time would be required to create and test the new features in the system.

As with any information system with a wide user base, different users want the system to do different things. Partners wished PIMS would be more functional as a daily monitoring system (counter to its design as an aggregate reporting system) while activity managers wanted to see even more in-depth reporting and analysis than the system was designed to provide.

Limited technical strengths of the partners and people using the system. For example, some users were not familiar with Excel, or did not have sufficient computer literacy to work easily with the system.

## SOLUTIONS

Using an iterative process, the PIMS team went through a routine process of gathering new requirements for the system, and instituted change control meetings for clear documentation of necessary changes.

The PIMS team worked with the USG strategic information team to prioritize the key features that need to be updated or changed, particularly when working to develop new features for an upcoming reporting period, and worked late nights to ensure these priority changes were addressed.

The team prioritized user groups and stayed true to the core function of PIMS as an aggregate reporting system. In-person trainings hosted for partners helped to clarify the role PIMS should play and demonstrated the value of the aggregate data for local (partner) decision making and use.

To ensure users had the basic knowledge necessary to work with PIMS, the team developed and hosted hands-on technical trainings about the system, which incorporated computer literacy training.



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