Microsoft Solutions Partner
Microsoft Cloud

Microsoft Solutions Partner
Data & AI
Azure

Specialist
Infra and Database Migration
Migrate Enterprise Applications
    to Microsoft Azure

Microsoft Solutions Partner
Digital & App Innovation
Azure

Specialist
Low Code Application
    Development
Migrate Enterprise Applications
    to Microsoft Azure

Microsoft Solutions Partner
Business Applications

Specialist
Low Code Application
    Development

Microsoft Solutions Partner
Infrastructure
Azure

Specialist
Infra and Database Migration

Case Study: Western Cape Blood Services

Digitally Transforming Blood Services in Africa

Prepared by

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Health **Intelligence**

Cover Letter

First Digital, a division of the First Technology Group, is a leading South African digital transformation partner with over a decade of industry experience. As part of one of the country's largest and most established ICT organisations, we bring the strength, scale, and reliability of the broader First Technology Group to every engagement.

We specialise in delivering end-to-end technology solutions that empower public and private sector customers to modernise their operations, streamline business processes, and enhance digital experiences. Our services span software development, business process automation, systems integration, cloud solutions, and strategic consulting. Whether it's building bespoke enterprise applications, automating critical workflows, or crafting intelligent digital platforms, we combine deep technical expertise with practical business insight to deliver measurable outcomes.

At First Technology, we continuously explore new and emerging technologies to help our customers stay ahead in an ever-evolving digital landscape. Our strategic partnerships with leading global vendors, specialising in Microsoft, enables us to deliver innovative, future-fit solutions. These alliances also give us access to advanced tools, training, and technical support, which directly benefit our customers through faster delivery, better integration, and long-term scalability.

First Digital is a part of The First Technology Investments group, a Level 1 certified B-BBEE company.

Our operations are structured across four specialised business units to ensure depth and focus:

- **Innovation** explores cutting-edge technologies such as AI, IoT, and custom application development to solve complex business problems and create new digital value streams.
- **Automation** focuses on process efficiency and workflow optimisation through platforms like Nintex/K2 and Outsystems, helping customers reduce manual work, improve accuracy, and accelerate delivery.
- **Digital Workplace** delivers collaboration and productivity solutions using Microsoft 365, Power Platform, Teams, and intranet frameworks-empowering employees to work securely and effectively from anywhere.
- **Data** enables organisations to turn data into insight through data engineering, analytics, reporting, and visualisation. This unit supports better decision-making by connecting, modelling, and surfacing data in meaningful ways.

We operate from offices in Gauteng, KwaZulu-Natal, the Western Cape, and internationally, enabling us to offer regional agility backed by national reach. Our multidisciplinary teams collaborate seamlessly across geographies, bringing together a rich diversity of skills, perspectives, and experience to deliver value.

At First Technology, our customers view us not just as a service provider but as a trusted technology advisor. We pride ourselves on our commitment to excellence, innovation, and partnership, ensuring that every project we deliver is aligned with our customers' strategic goals and sets the foundation for long-term success.

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First Technology & Western Cape Blood Services (WCBS)

Overview

For over five years, **First Technology** has partnered with **Western Cape Blood Services (WCBS)** to lead a comprehensive digital transformation journey grounded in the Microsoft technology ecosystem. From foundational IT support to pioneering artificial intelligence and cloud-first innovation, First Technology has helped WCBS evolve into a modern, efficient, and donor-centric healthcare organization.

At the heart of this transformation is the **Donor Digital Experience** — the **first fully digital, end-to-end blood donation solution in Africa** — powered entirely by Microsoft technologies. This initiative, combined with AI innovation and robust Azure cloud architecture, has redefined how WCBS serves its donors and manages its operations.

Challenge

WCBS required a technology partner capable of supporting a diverse, mission-critical IT environment while also driving innovation in how donors engage with their services. Key challenges included:

- Outdated, fragmented donor processes

- Manual data collection and limited traceability

- Lack of a unified digital engagement strategy

- Limited scalability in legacy systems

- The need to adopt cloud and AI capabilities to streamline operations

Our Solution: Microsoft-Powered Digital Transformation

Technologies Used

- **Microsoft Azure** (App Services, Virtual Machines, Cognitive Services)

- **Azure AI** (Chatbot, Language Models, Training Tools)

- **Microsoft SharePoint** (Collaboration and Intranet)

- **Microsoft .NET** (Custom Development, .NET MAUI)

- **Microsoft SQL Database** (Data Storage & Analytics)

- **WordPress on Azure** (Public Website Hosting)

- **Azure DevOps** (CI/CD, Project Automation)

Key Services Delivered

- AI and Cloud Consulting
- Microsoft Licensing
- SharePoint Development and Support (SLA)
- Mobile & Web Support Services (SLA)
- Database Administration (SLA)
- Custom Software and Mobile App Development
- Quality Assurance Services
- Azure Estate Management and Optimization
- DevOps and Cloud Infrastructure Assessments

Flagship Project: Donor Digital Experience

Africa's First Fully Digital Blood Donation Ecosystem

The **Donor Digital Experience** is a groundbreaking initiative that allows blood donors to engage in a **completely digital journey** — from registration to post-donation interactions. Developed using Microsoft's powerful technology stack, it offers:

- Online registration and profile management
- Pre-donation health questionnaires completed digitally
- Mobile booking and real-time appointment management
- Digital consent and compliance tracking
- Cloud-based data management with full traceability and audit trails

Why It Matters

- **First-of-its-kind in Africa**, placing WCBS at the forefront of global blood services innovation.
- Significantly **reduces paper-based workflows**, ensuring real-time updates and improved data accuracy.
- Ensures **end-to-end audibility**, enhancing regulatory compliance and internal reporting.
- Enhances the **donor experience**, making it faster, easier, and more user-friendly.
- **Frees up internal resources**, allowing WCBS to focus on serving more donors and scaling impact.

"This innovation has redefined donor engagement. It's not just digital—it's intelligent, efficient, and donor-first."
— Project Lead, First Technology

Azure & AI Innovations

AI Chatbot: HemoLink

Developed using **Azure Cognitive Services**, **HemoLink** is an AI-driven chatbot that enables WCBS to provide 24/7 donor assistance across web and mobile platforms. Features include:

- Real-time donor FAQs
- Appointment support
- Health screening guidance
- Integration with donor systems

The chatbot reduces call center load, increases donor engagement, and ensures consistent, accurate communication.

AI-Powered Training Content

In collaboration with WCBS, First Technology developed **AI-generated training content** using **Azure OpenAI services**. This system automates the creation of training materials, video modules, and onboarding resources.

📺 *Watch the demo:* [YouTube - First Digital](#)

Benefits:

- Cuts training content creation time by over 60%
- Standardizes knowledge delivery
- Enables rapid deployment of new modules

Cloud Management and Optimization

First Technology provides full **Azure estate management**, including:

- Performance tuning of Azure App Services and SQL databases
- Cost optimization and scaling strategies
- Identity management and security best practices
- DevOps assessments to streamline deployment pipelines

Through this, WCBS has reduced infrastructure overhead while increasing scalability and agility.

Mobile Transformation: From Ionic to .NET MAUI

Migrating WCBS's mobile donor application from **Ionic** to **Microsoft .NET MAUI** has enabled:

- Improved native performance across iOS and Android
- Tighter integration with Azure backends and authentication
- Unified development cycle using Microsoft toolsets

This modernization aligns the mobile experience with the overall digital strategy and ensures long-term maintainability.

Results & Impact

AREA	OUTCOME
DONOR ENGAGEMENT	60% faster registration, higher repeat donation rate
COMPLIANCE	Full traceability and audit trails across the digital platform
OPERATIONS	>40% reduction in manual processes, faster response time to donors
SCALABILITY	Azure-based hosting ensures uptime, load balancing, and quick scaling
INNOVATION	First fully digital donor experience in Africa
EFFICIENCY	AI-based automation reduces repetitive workload and enhances training

Conclusion

The collaboration between **First Technology** and **WCBS** is a leading example of how **cloud-first, AI-enhanced, Microsoft-based solutions** can digitally transform public health organizations. By reimagining how donors interact with WCBS and by implementing intelligent automation, First Technology has enabled WCBS to scale their services, reduce operational overhead, and deliver a world-class, future-ready blood donation experience.

This case stands not only as a model for South Africa but also for healthcare systems across emerging markets seeking to leapfrog legacy challenges through innovative, trusted technology.