

HARNESSING INNOVATION

The Group aspires to lead the industry with technology, digital and innovation as key enablers to our strategic essentials and differentiators

WHAT WE DID IN 2022

SUCCESSSES

- Delivered an annualised R650 million (US\$40 million) allocated cost optimisation benefit leveraging the continuous improvement process
- Three-fold increase in capacity for the now distinct focus areas of innovation, digital transformation, and technology, positioning the Group for significant progress over the medium- to long-term
- Innovation ecosystem enhanced through partnerships with academia, research programmes, service providers and through our iXS initiative
- Progress with ICT's utilisation of artificial intelligence (Alice) which automated over 50 existing governance controls during 2022. We expect to expand on its capability and to automate our control environment
- ISO 27001 certification awarded on 14 April 2023

CHALLENGES

- Evolving innovation and technology demands, coupled with rapidly evolving technology, dramatically increases the scope of research and application
- Global shortage of chips has effected rollout of technology, in some cases causing delays of 6-9 months
- Worldwide threat of cyber attacks on companies, where attackers are becoming more sophisticated. The proliferation of technology and the rise of remote work have also expanded the attack surface and increased the difficulty of defending against cyber-attacks



ALIGNMENT WITH SDGs



INNOVATION, DIGITAL TRANSFORMATION, TECHNOLOGY DEVELOPMENT AND ADOPTION

The 2022 year proved to be a pivotal year for innovation, with several changes to the portfolio as a result of being included as one of our values and identified as a key enabler to our strategy (■ See *Our three-dimensional strategy*, page 32) for more information). Digital transformation, and technology development and adoption, previously subsets of innovation, were elevated to distinct portfolios aligned with, but independent of innovation.

New senior leadership was appointed to take charge of the three portfolios within the Group Technical and Innovation function with the following objectives

- Innovation: establish an innovation culture and capability that helps embed innovation as a value
- Digital transformation: embed digital as an enabler to our strategic objectives
- Technology development and adoption: drive industry leading technology development and adoption in support of our strategic objectives

Progress is already evident in the development and strategic repositioning of the three portfolios.

In 2022, we spent R125 million (US\$7.6million) on strategic innovation, digital transformation and technology adoption initiatives, of which R72.6 million (US\$4.4 million) was distributed via the BioniCCube capital allocation mechanism. (R55 million (US\$3.7 million) in 2021).

See www.sibanyestillwater.com/business/innovation-technology

INNOVATION

Objective: establish an innovation culture and capability that helps embed innovation as a value

Our value definition for innovation is 'We intentionally find new ways to do things better.' This statement is supported by five behaviours

- We will all understand the need to innovate
- We will invite everyone to innovate
- We will encourage innovation
- We will develop innovators
- We will recognise innovation



HARNESSING INNOVATION continued

To this end (in 2022) we developed a programme of objectives and activities to establish an innovation culture and capability. The initial phase of the programme, which will commence in Q1 2023, consists of five strategic drivers to achieve our medium-term objectives

- Purpose driven innovation – define a clear and common innovation purpose that helps guide innovation efforts and creates meaning for our organisation
- Shared understanding – engage meaningfully on our innovation purpose and key messages to ensure understanding of our innovation objectives
- Innovation structure and process – reimagine organisational structures to enable collaboration and implement appropriate processes which encourage innovation
- Innovation capability with accountability – build capable leaders that drive meaningful innovation and establish appropriate measurements that encourage the right innovation behaviours
- Innovation mechanisms – enhance existing, and implement new, innovation initiatives; create safe spaces for experimentation

Strategic innovation initiatives***DigiMine, Simulacrum and MMP***

We continue to support DigiMine, a digital mining laboratory at the University of the Witwatersrand (Wits), Johannesburg, run in partnership between Sibanye-Stillwater and the Wits Mining Institute (WMI). Its primary objective is to research digital technologies that will enable the mine of the future. 2022 marked the eighth year of the partnership, over which time Wits has received R68.5 million in funding from the Group, with a further R5.5 million committed for 2023.

Under a similar partnership model to DigiMine, we help fund the University of Johannesburg's (UJ) Simulacrum, a state-of-the-art training facility (with virtual reality capabilities) that gives undergraduate students practical experience. To date we have contributed R38.5 million to this partnership, with a further R5.5 million committed for 2023.

Sibanye-Stillwater is an active participant in the Mandela Mining Precinct (MMP) which is a public-private-partnership involving government and several other mining companies facilitated by the Minerals Council of South Africa and the Department of Science and Industry.

In 2022, the MMP funded centre of excellence programmes for Wits and UJ. Wits was allocated the centre of excellence programmes for Real Time Information Management Systems and the Successful Adoption of Technology Centred Around People initiatives (RTIMS and SATCAP respectively). UJ was allocated the centre of excellence programme for the Longevity of Current Mining initiative. We are proud to be part of these initiatives, creating shared value through research and development.

iXS initiative (innovate, accelerate and scale)

The iXS initiative is a Sibanye-Stillwater-led investment programme that supports innovators and entrepreneurs. It has three primary objectives: develop non-core expertise to solve mining-related challenges through entrepreneurial and innovative solutions; progress technology development to proof of concept level through seed funding; support startup businesses (focusing on mining-related technology) to become commercially viable and globally applicable.

iXS comprises two key components

- An incubation and development centre focused on entrepreneurial management and innovation skills; including internship programmes (for innovators and entrepreneurs)
- An investment programme to help startups scale up their operations; capital investment of up to US\$1 million for early stage opportunities and US\$5 million for later stage opportunities

In its first year (November 2021 to November 2022), iXS achieved: the establishment of a full cohort of entrepreneurs and innovators; a pipeline of 19 early stage investment opportunities; investment in two early stage ventures.

Besides benefitting budding entrepreneurs, iXS is helping to establish an ecosystem of partners to solve industry challenges. The initiative also helps bridge the gap between concept and implementation for certain research from adjacent programmes. iXS is managed in partnership with an external service provider, but is wholly funded by Sibanye-Stillwater.

Continuous improvement

The SA region initiated an allocated cost intervention in 2021. This involves a portfolio of 83 initiatives, with a 36-month target, with the potential for annualised cost reduction of R1.34 billion, to be achieved through leveraging the Group's continuous improvement process.

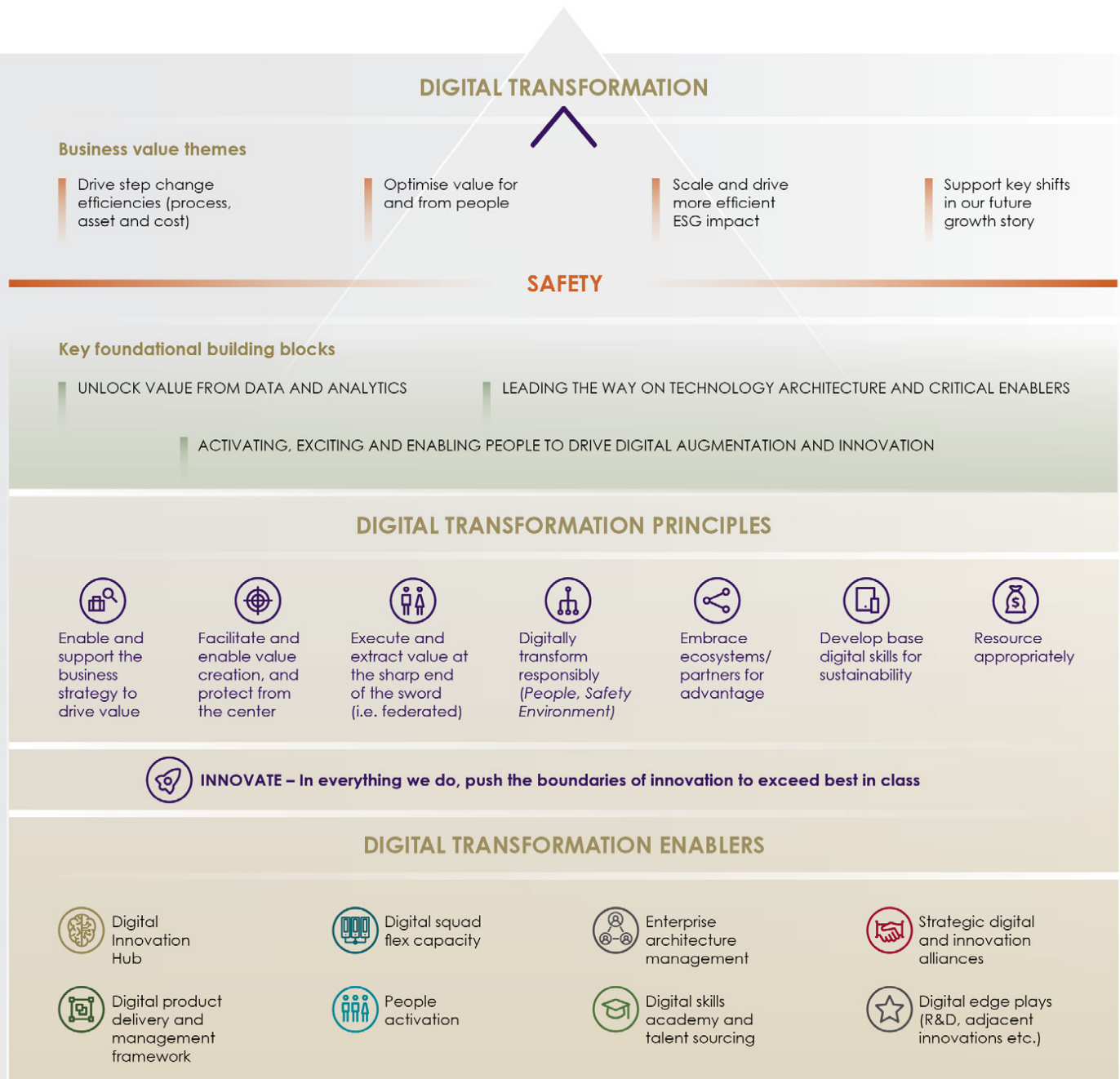
Cost-reduction for the initial 12 months was approximately R650 million (US\$40 million) at annualised run-rate, despite unforeseen challenges, including the three-month strike at our gold operations. The SA region will continue to drive the initiative, with the aim of achieving annualised total cost reduction of R1.34 billion for the remaining 24 months.

DIGITAL TRANSFORMATION**Objective: Embed digital as a key enabler to our strategic objectives**

We developed an international partnership model for digital transformation. The model supports the adoption of novel and competitive digital solutions that meet two imperatives: the ability to execute with agility, while maintaining a flexible organisational structure, and the ability to deploy internationally across our organisation. In 2023 the underlying model for our digital capability will be executed under the Digital transformation banner .

The Digital transformation team developed the following infographic to show how the Group will achieve its digital transformation objectives.

HARNESSING INNOVATION continued



In 2023, we will start implementing the above enablers and foundational building blocks, while pursuing various digital transformation initiatives.

Strategic digital initiatives

Enhanced metallurgical process management and automation

The Group continues to evolve and apply manufacturing execution systems (MESs) and advanced process control (APC) to improve the digital maturity of our metallurgical operations.

MESs are software systems that document and control manufacturing processes. Similarly, APC increases the levels of autonomy in our processing and metallurgical environments, improving responses to process variability and optimising process stability.

We continue to make progress in the areas of MES and APC across the Group. In 2023 we aim to have MES implemented across the full metallurgical environment at our SA PGM operations.

The US region is currently in the process of determining the appropriateness of MES and APC implementation. Similarly, we initiated a maturity assessment for Sandouville, concluding the preliminary assessment in November 2022 with recommendations for enhancement in 2023.

HARNESSING INNOVATION continued

Operational technology (OT) architecture

For digital transformation to be successful it needs a robust technology architecture. During H2 2022 we mapped out the OT landscape, and formulated a set of key architecture principles and disciplines.

Work continues into 2023 to include the business technology landscape and establish an architecture management capability.

TECHNOLOGY DEVELOPMENT AND ADOPTION

Objective: drive industry leading technology development and adoption in support of our strategic objectives

In 2022, we researched the key technological trends which should be adopted over a 10-year period. A multidisciplinary team formulated six primary technology themes and 11 organisational themes.

Primary technology themes include platform technology, additive manufacturing, and electrification; organisational themes include utility and resource independence; zero-waste; and enabling beyond the business boundary.

We will prioritise a number of smaller initiatives within each theme for execution in the short-term. In addition, the current portfolio of initiatives will be re-prioritised and positioned within our broader technology and organisational themes.

Strategic technology initiatives

Integrated mining enterprise (IME)

We are continuing to develop towards becoming a digitally integrated mining enterprise. By this we mean that operational planning and execution, combined with interrelated technical and non-technical aspects of mining, are digitally integrated.

To this end, we conducted pilot projects at Saffy and Thembelani shafts (SA PGM) in 2022. This work involves not only changing systems and technology, but also changing the culture of work-practices. The pilots focused on enabling line management with digital tools, accessible through the IME platform, allowing them to determine whether their assets are operating at the correct capability.

Ultimately, the IME presents a digital system capable of reducing dependency on human reporting and making visible, key dependencies for our key assets. This will enable proactive task management and adequate resource scheduling, resulting in safe and predictable production, and sustainable performance.

The Saffy and Thembelani pilots will be monitored into 2023, after which our business plan makes provision to scale the solution for other shafts, which have already been prioritised. The 36-month rollout begins in H2 2023.

Battery-electric and semiautonomous vehicles

The Group has assembled a diverse fleet of BEVs (battery-electric vehicles) for trial purposes. The adoption of BEVs in mining is an ongoing global trend, one in which – given the technical complexity and diversity of our operations – we can be considered industry leading.

There are five ongoing BEV trials within the Group. The trials cover a range of applications in utility, load and haul, and personnel carriers. A key priority is to establish a broad body of knowledge to support the decarbonisation of our operations.

Besides electrification, we are also exploring remote and autonomous vehicle operation. We have completed initial tests of an industry-leading low-profile battery-electric remote and semi-autonomous load-haul-dumper (LHD), known as BEVerly. The remote and autonomous nature will provide a more safe, conducive, and inclusive operating environment.



Remotely operated battery-electric LHD at the Bathopele operation at SA PGM

Trackless mobile machinery (TMM) level-9 proximity detection/collision avoidance

The Group has made significant, industry-leading progress with respect to the implementation of collision avoidance technology on its TMM. Our approach is to implement TMM safety measures beyond the regulatory requirements, for both SA and US regions.

In 2022, for the SA region, we completed the implementation of level-9 collision avoidance on all underground TMMs (excluding projects), regardless of their risk profile. Considering the scale of our fleet by number, the initiative was both complex and ambitious, and we are proud to be at the forefront of this global objective.

The US region is on track to have all equipment at level-7 (detection) in 2023; planning for level-9 implementation in Q2 2024 is well advanced. The operational team continues to develop ancillary technology to enable the application of level-9 collision avoidance on its fleet of machinery.

FUTURE FOCUS

Beyond a continued effort to identify and deliver strategic initiatives that unlock tangible value across our Continuous Innovation portfolio, focus in the medium- to long-term is to further develop and embed the respective strategies into our organisational DNA, and includes the following

- The establishment of an embedded innovation culture and capability
- The implementation of digital enablers and foundational capabilities that drive sustainable digital transformation
- The development and adoption of industry-leading technology in support of our strategic objectives

HARNESSING INNOVATION continued

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

ICT STRATEGY

STRATEGIC PLAN				
Purpose				
Delivering secure, reliable and agile ICT services to Sibanye-Stillwater				
Key objectives				
Customer engagement	Business unit delivery	Innovation/hyper automation	Project delivery	Governance/security
Ensure on-time/always-on ICT services and be the supplier of choice	In support of the Group strategy and delivery, the effective deployment of ICT applications	To learn and continuously innovate	On-time, within cost and highly governed project delivery	Management of a secure and resilient enterprise infrastructure
Initiatives				
<ul style="list-style-type: none"> Expand the Service Efficiency Centre (SEC) Introduce chat bots to our global call centre Central monitoring of ICT systems and applications Adopt 24/7 operating model and implement the follow the sun strategy Establish an agile ICT training function 	<ul style="list-style-type: none"> Continuous optimisation Reduce application footprint Reduce cost baseline Optimise licence structures Optimise support structures globally Ensure scalability Establish global support operating model ERP One consolidation for SA operations JDE upgrade for the US operations 	<ul style="list-style-type: none"> Adopt fit-for-purpose hybrid cloud strategy Expand datacentre footprint at Teraco Enable enterprise mobility Continuously drive automation – hyper automation Establish support structure for robotic process automation (RPA) Introduce 5G LTE services Introduce Starlink satellite networks 	<ul style="list-style-type: none"> Compliance to project management framework Project governance in all initiatives All business ICT initiatives channelled through ICT project management office (PMO) Introduce programme management framework Digitize the ICT PMO function 	<ul style="list-style-type: none"> Ensure ICT policies support strategy Streamline ICT controls and align to business processes Ensure high level of security architecture and control Ensure high level of governance and compliance to regulatory requirements ISO 27001 certification Manage efficient data governance
Key performance indicators				
<ul style="list-style-type: none"> Customer experience Increase productivity Process efficiencies Time/effort 	<ul style="list-style-type: none"> Governance, risk and compliance Financial management Strategic delivery 	<ul style="list-style-type: none"> % Increased efficiencies % increased quality Customer engagement 	<ul style="list-style-type: none"> Delivery in scope/time Financial management Governance and compliance 	<ul style="list-style-type: none"> SOX/Internal audit reports Management of security control framework

Update on ICT strategic projects for 2022

In 2022, we continued to upgrade and consolidate our digital infrastructure. We are committed to a hybrid cloud model, whereby we deliver ICT services by seamlessly combining public cloud capabilities, such as Microsoft, with private cloud services and on-premises infrastructure.

Our operating model is dedicated to ensuring on-time/always-on ICT services (globally), and being the supplier of choice for our users.

Data centre and footprint consolidation

The centralisation of our footprint remains a strategic priority. ICT continues with its build of a hybrid cloud-based platform. This entails establishing a global data centre facility in each one of the major regions of our operations. We have consolidated the SA operations' data centres at Teraco, and work continues to do the same for the US operations at Billings Data Centre (in Montana). Our hybrid cloud strategy and consolidation of data centres supports our ESG initiatives and our commitments in driving footprint reduction.

Office 365

Office 365 is a key enabler to support our work-from-anywhere architecture. By 2022 we had migrated around 10,289 users, and we plan to migrate the last users during 2023 and complete the rollout.

ISO 27001 certification

In 2022 we addressed the gaps identified by PwC and implemented ISO 27001 (information security) for our SA operations and Group systems. We contracted a third-party for ISO 27001 certification, which was accomplished in the last quarter of 2022. The formal ISO 27001 certification was obtained on 14 April 2023. This certification provides us assurance around information security and the management of privacy risks.

Alice

Alice, is a platform we introduced to fully automate the current ICT control environment, giving robotic process automation (RPA) capabilities to the ICT team. This is especially useful for complying with SOX and other governance needs.

The first phase (the introduction) of the Alice rollout was completed in 2022, in sync with and supportive of, our implementation of ISO 27001. There are at least 750 controls in the ICT environment and

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automating these controls remains a priority and Alice has proved very useful thus far in doing so.

ERP One program

The team completed the technical upgrade of JDE 9.2, thus signalling completion of the first phase of the US ERP One program. Meanwhile, the Marikana operation was integrated onto the ERP One SAP platform for the SA region.

Service delivery

In 2022 our Service delivery teams managed 149,000 calls (130,000 in 2021) with a 99.03% SLA score (99.7% for 2021). The ICT service delivery team continues to render a cost-effective quality service to users across all operations. The focus remains on availability, first time call resolution and professional conduct. We continue to assist with individualised training needs (both in group sessions and virtual face-to-face on Microsoft Teams).

We are implementing an IT service management (ITSM) tool that covers our global footprint. This will be fully implemented for the US, SA and Europe regions. Given that our current Cherwell system is reaching end-of-life (EOL), we will institute a new system by June 2023.

SOHO project

During COVID-19 lockdowns we adopted the policy of small office, home office (SOHO), whereby around 1,500 employees could work from home. Our Office 365 rollout continues to support SOHO. Given our strategy to be on the cutting-edge of change, the ICT team will continue to support the Group in facilitating SOHO. We are introducing enhanced and secure technologies that enable SOHO as a future way of working for the Group.

WeAreOne and Ulwazi mobile app

WeAreOne is Sibanye-Stillwater's digital employee engagement app. Since its launch in 2021, the platform has grown from strength to strength. Currently 48,000 employees (52%) are registered on the platform, with (46%) accessing WeAreOne via the mobile site; 45% use it through unstructured supplementary service data (USSD), which enables users without smartphones to access information using their feature phones to receive small bite-sized pieces of information similar to SMS.

In 2022, we sent over 23 million SMS messages to keep employees aware of key updates and events across the organisation with a 63% increase in active users from 2021. WeR1 also surpassed 1.2 million unique interactions.

The focus for the platform in 2022 was to deliver initiatives that generated awareness and cultivated active users. The platform played a critical role supporting the SA gold wage negotiations with over 650,000 content views.

The upcoming year will see a focus on continued active user growth and unique interactions as we provide more functional and uplifting content and develop our digital HR offering.

Ulwazi is Sibanye-Stillwater's community engagement app that has been deployed across all SA communities within Sibanye-Stillwater's operations. Initially, the platform was developed to deliver Public participation process (PPP) requirements to ensure all stakeholders could access information and provide feedback and commentary as needed.

The platform has subsequently taken on a broader community focus, bringing awareness to key topics such as community and environmental awareness (Marikana 10-year anniversary, tailings and cholera), job opportunities and vendor requirements. Members can access information at no cost via the web or USSD.

2023 will see a focus on growing the user base, while providing current and relevant content through targeted campaigns.

■ See *Empowering our workforce*, page 149, *Engaging with our stakeholders*, page 74.

Project HoneyComb (SharePoint upgrade)

We deployed data loss prevention toolsets on the new SharePoint architecture in 2022, to detect and manage the flow of classified information. The aim is to migrate SharePoint 2019 sites to SharePoint Online. Thus far, various sites have been migrated and sites are being standardised, with governance configured accordingly. Business engagements and refresher training is ongoing. The migration will support better governance.

Microsoft Digital PMO platform

A key focus, in the interests of improving our project management capability, was the roll out the Microsoft Digital PMO platform during 2022, to ICT and to the wider business. The platform was enhanced to cater for various project types. It is also proving useful for working with project leads in completing the US Modernisation program.

AT4SS for automating our control environment

The automation technology for Sibanye-Stillwater (AT4SS) training project continues in various forms, including drop-in and lunch-break sessions, as well as taking on interns (three to date). In 2022, the US ICT team was incorporated into our AT4SS training, as well as other training initiatives.

Restructure of US ICT team

A key focus of 2022 was the restructuring of the US ICT team to align with the Group structure and to ensure standardisation of work and execution practices. We instituted Project Mentos in Q3 2022 to mitigate against risks associated with the US infrastructure and to introduce best practices for the US region, including resource management and staff development.

Sandouville integration

We finalised the integration of Sandouville into Sibanye-Stillwater ICT. We completed the SAP system carve out, thus separating Sandouville ICT from their previous owner.

Windows 11 upgrade

The upgrade to Windows 11 is in readiness for Windows 10 coming to an end (in terms of being able to support it) in 2025. Windows 11 readiness testing has been initiated on all desktops and laptops for all operations.

Wireless network capabilities and backup

In the SA region, vandalism results in disruption of part of our ICT infrastructure. One of the solutions is to install a wireless network. To this end, a tender was put out and we are vetting the applicants. Site assessments for the work have been completed.

We are focused on providing a dedicated wireless backup network capability to our SA and US regions. Networking capability to support our growing organisation is a strategic imperative. All new digital programs and solutions provide more data than ever. Our network architecture must meet the high, and growing, demands of our business; new and enhanced solutions that can do so will be constantly evaluated. The team will start introducing the Starlink networking satellites at both the SA and US regions.

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Critical telephonic infrastructure

Critical telephonic infrastructure replacement (to replace outdated equipment) was carried out as planned in 2022. Marikana and Driefontein received new telephone infrastructure.

Digital risk and protection tool protection

ICT implemented world class digital risk protection tools for combatting online scammers, be they social media impersonators, counterfeiters, trademark infringers, or online phishers.

Ongoing training and development

Training and development (and employee growth) is a priority. Exposure to, and training in, new software and systems (supporting employees in their certification) is critical to support our growing company. In 2022, close to 60% of ICT staff completed level one of our Digital Transformation training development programme.

We also trained non-ICT staff in the Microsoft Enterprise project management platform. We continued with SharePoint business engagements and refresher training on a needs basis.

Supporting IME (Integrated mining enterprise)

ICT, in support of Group technology and innovation's efforts around IME (■ See *Harnessing innovation*, page 172) is implementing MineRP's digital enterprise software. MineRP is a world leader in technical software for mines.

Cost management

The implementation of our global support model (as a function of scaling and rationalisation) has helped reduce ICT costs. Our aspiration is to be the lowest cost service provider in the mining sector. For 2022, our overall ICT operational costs came in at R551 million (US\$33 million) for South Africa, US\$6.1 million (R100 million) for the US PGM operations, and €1.3 million (R22 million) for the Sandouville refinery.

Risks

We face an emerging risk of the physical safety of employees who perform maintenance on ICT infrastructure. The ICT team is working with Protection services to establish protocols and procedures for high-risk areas and high-risk times of the day. According to the risk register, ICT faces no high/catastrophic risks (i.e. coded red, with score 20-25). All our risks have either been coded green (low and negligible) or are on the low end of yellow (moderate and significant). The only exception here is the aforementioned risk of damage to ICT infrastructure due to theft or due to power surge/outage (coded yellow and given a residual risk rating score of 15). The high score here is primarily for vandalism (as opposed to outages).

As mentioned earlier, implementing wireless infrastructure will help mitigate this risk, as will engaging Protection services to use smarter technologies to detect and prevent vandalism on core network infrastructure.

■ See *Corporate governance*, page 30; *Managing our risks and opportunities within the external environment*, page 37.

System failures

There were no major failures that had a negative impact on business for either the SA, US or EU region in 2022. We also conducted our annual disaster recovery for our systems in SA and the US.

FUTURE FOCUS – ICT

- Automation and digital opportunities prioritised; each business unit within ICT to prioritise the acceleration of digital and innovative platforms
- Enterprise mobility in all areas of our business to be accelerated; expand on use of Wyzetalk platform (WeR1)
- Community and social projects in the SA region to be supported with free and secure Wi-Fi for employees and free Wi-Fi for surrounding schools and communities
- Our newly created Information management business unit will execute on critical projects, including the modernisation of our SharePoint platform as a priority
- The rollout and implementation of Office 365 is an element of our strategic focus and needs to be accelerated; the usability and adoption of Office 365 will be accelerated
- Continuous enhancement of our Group SOHO strategy
- Reporting and Consolidation and our SAP S4 Roadmap will be executed with the aim to create one consolidated system for Sibanye-Stillwater to do financial budgeting, forecasting, reporting and the Group financial consolidations
- The Keliber integration project, to fully integrate our Keliber operations into the Group ICT operating model; the aim is to align ICT standards, principles and frameworks to that of the Group by executing a full ICT integration

