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## **2019 ANNUAL RESULTS AGENDA**



ESG - safe & responsible mining

Chris Griffith



**Operations** 

Chris Griffith



**Financials** 

Craig Miller



**PGM** market

Chris Griffith



**Next phase of value delivery** 

Chris Griffith

## RECORD PERFORMANCE

Safety performance

**Fatalities** 

zero

at managed operations

Leading ESG<sup>(1)</sup> performance

Rank by Sustainalytics(2)

**1** St

of 55 peers in precious metals sector

**Robust PGM fundamentals** 

**USD** basket price up

27%

rand basket price up 38% per platinum ounce sold

Increasing returns

ROCE<sup>(3)</sup> increased to

**58**%

**Strong balance sheet** 

**Net cash position** 

R17.3bn

after paying R4.9 billion in dividends

**Industry leading returns** 

**Total 2019 dividend** 

R14.2bn

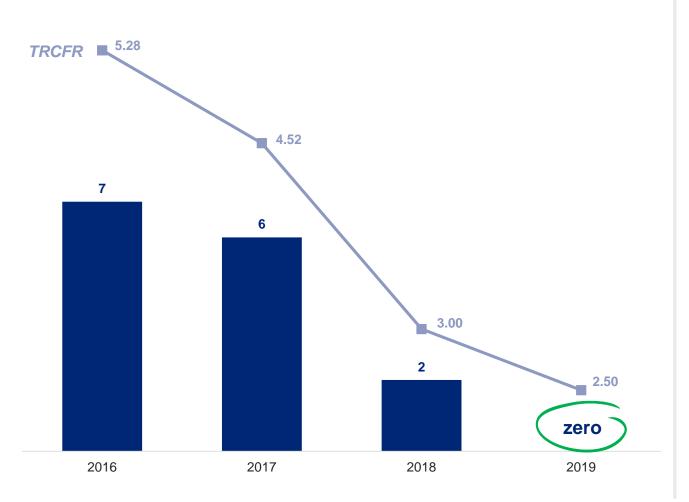
R52.60 per share for 2019





## **ELIMINATION OF FATALITIES REMAINS THE FOCUS**

#### Fatalities & total recordable case injury frequency rate (TRCFR)<sup>(4)</sup>



#### **Fatalities**

## zero

at managed operations

#### **Improving safety indicators**

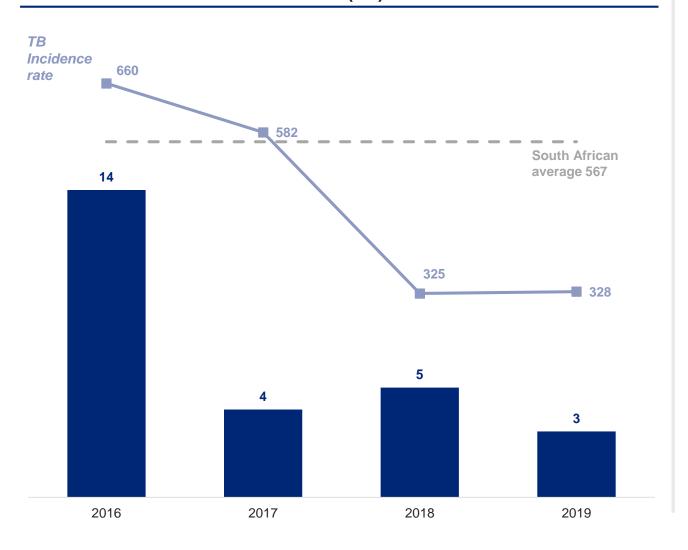
2.50

TRCFR<sup>(4)</sup> down 53% since 2016

- · Focus on the elimination of fatalities
- Robust operational risk management process in place
- · Reporting & learning from incidents
- Focus on reducing all injuries at operations, including joint ventures

## IMPROVING THE HEALTH OF EMPLOYEES

#### Number of deaths from tuberculosis (TB) & TB incidence rates<sup>(5)</sup>



#### **UNAIDS Target**(6) surpassed

97:91:90

against target of 90:90:90

#### TB incidence rate<sup>(5)</sup> reduction

**50%** 

Since 2016 to 328, below the South African average of 567

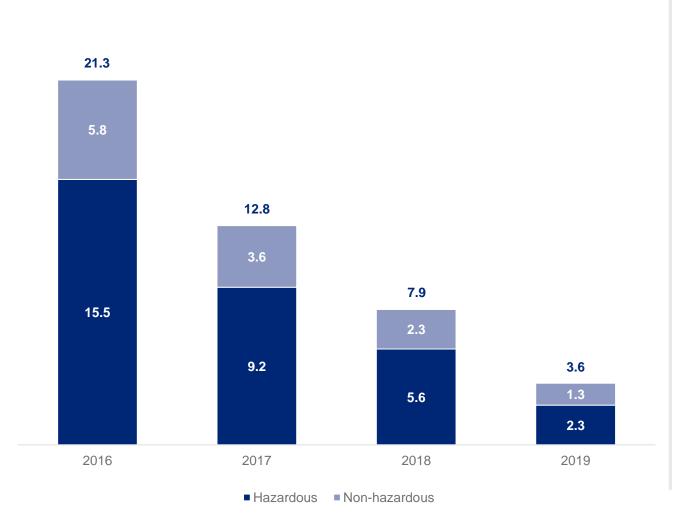
#### TB related deaths reduce to

3

down from 14 in 2016 and 63 in 2013

## **WASTE & WATER REDUCTION**

#### Reduction in total waste to landfill (tonnes)



#### Waste to landfill reduced

83%

since 2016

#### **Environmental incidents**<sup>(7)</sup>

zero

at all operations since 2013

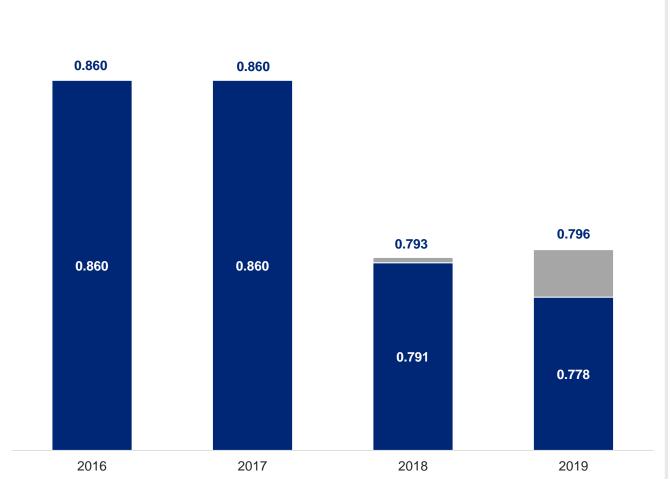
## Potable water intensity<sup>(8)</sup> reduction

9%

since 2016

## **ENERGY USE & EMISSION REDUCTION CONTINUES**

#### **Energy intensity reduction (Gigajoules / tonnes milled)**



#### **Energy intensity down**

10%

down 7% including new operations since 2016<sup>(9)</sup>

GHG<sup>(10)</sup> emissions down

**7**%

down 4% including new operations since 2016<sup>(9)</sup>

Trial of hydrogen powered

# Fuel cell truck

at Mogalakwena in H2 2020

## **SOCIAL IMPACT – INVESTING IN COMMUNITIES**

#### Infrastructure benefits

Mapela community project enabled

70,000

community members access to fresh daily water

Land donated<sup>(12)</sup>

270 hectares

to Rustenburg community

#### **Community benefits**

Procurement from zone of influence

**R3.8**bn

including R2.4 billion of services procured from door-step communities

### Social labour plans resulted in

1,200

jobs created in local communities

#### **Community spend**

Social labour plan & CSI<sup>(11)</sup> spend

**R392**m

in 2019

Dividends paid to communities

**R227**m

through Amandelbult chrome plant and Alchemy community share schemes

## **GLOBAL ESG RECOGNITION**











We make it easier to invest in companies that invest in the future.

JS≣

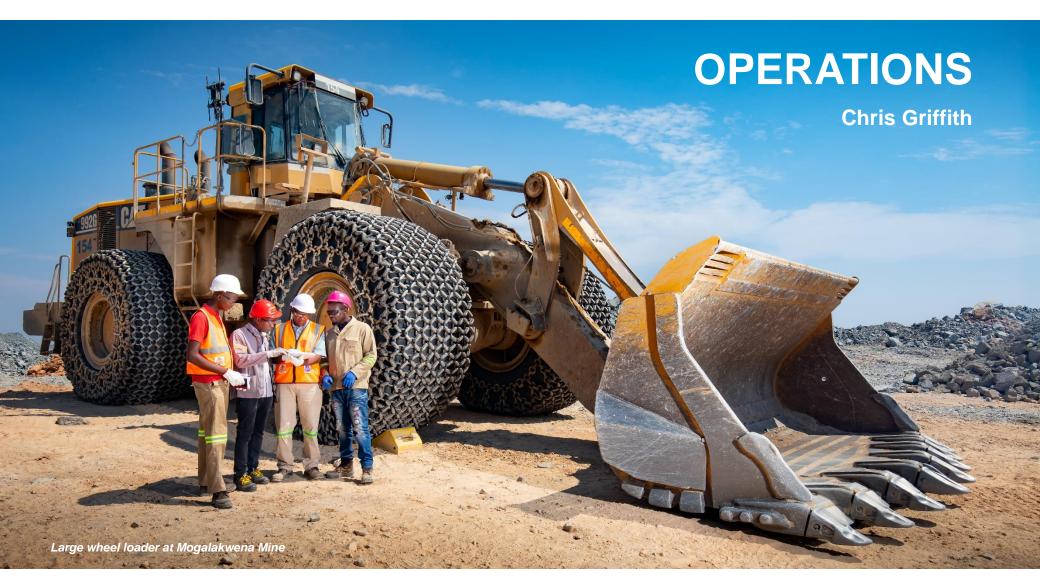
THE FTSE/JSE RESPONSIBLE INVESTMENT INDEX SERIES



One of 325 global companies included in the index







## STEADY OPERATIONAL PERFORMANCE

**Operational performance** 

**Record production** 

2019 production

**PGM** production increased

1%

Mogalakwena & Unki up

4% & 5%

Impacted by:

- Eskom power outages
- Unprotected strike at Mototolo
- · Cracked mill at Mogalakwena
- · Rebuild of rope shovel

Refined production<sup>(13)</sup>

2019 refined production

Lower all-in sustaining cost (14)

**PGM** production increased

11%

including tolling up 8%

Impacted by:

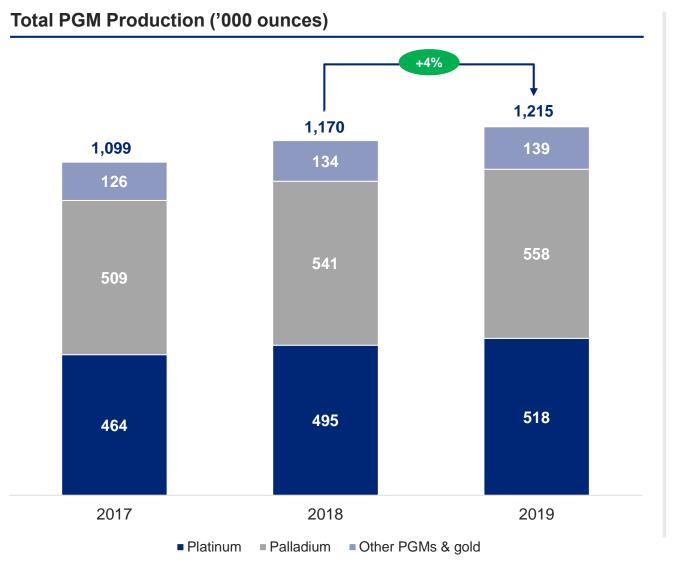
- Power supply disruptions & associated power outage at Rustenburg Processing
- 89,000 PGM ounces build in WIP to be refined in 2020

AISC per platinum ounce sold

\$293

versus realised platinum price of \$861

## **MOGALAKWENA – ANOTHER RECORD PERFORMANCE**



#### **PGM** production increase

4%

record production

EBITDA<sup>(15)</sup> margin

**56%** 

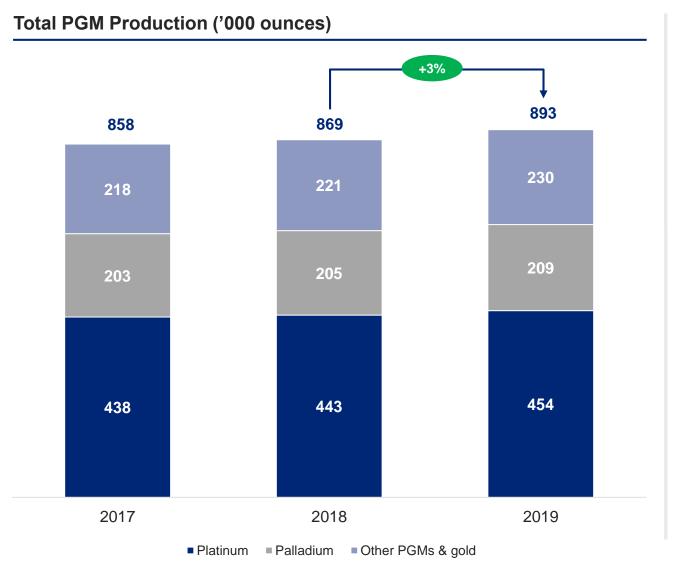
and ROCE(3) of 55%

Economic free cash flow<sup>(16)</sup>

**R9.9**bn

at AISC<sup>(14)</sup> of \$(429) per platinum ounce sold

## **AMANDELBULT – STRONGER H2 PERFORMANCE**



#### **PGM** production increase

3%

12% increase in H2 over H1

### EBITDA<sup>(15)</sup> margin

30%

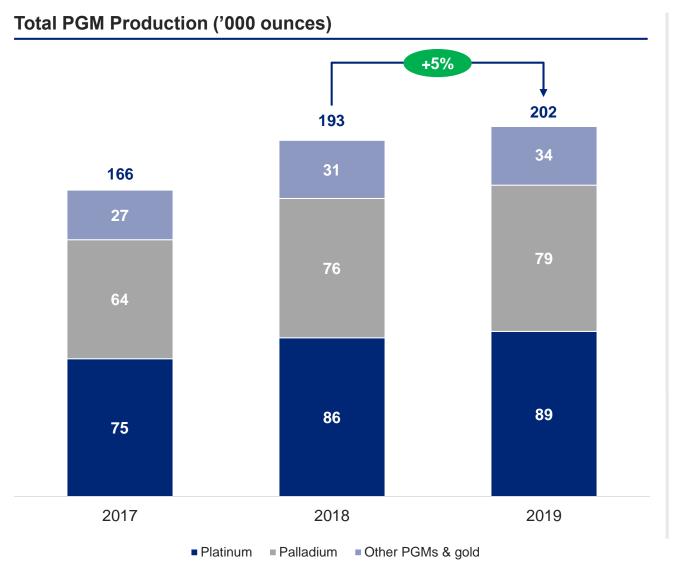
and ROCE(3) of 49%

#### Economic free cash flow<sup>(16)</sup>

R3.3bn

at AISC<sup>(14)</sup> of \$390 per platinum ounce sold

## **UNKI – RECORD PRODUCTION**



## **Total PGM production increase**

5%

record production

EBITDA<sup>(15)</sup> margin

35%

and ROCE(3) of 24%

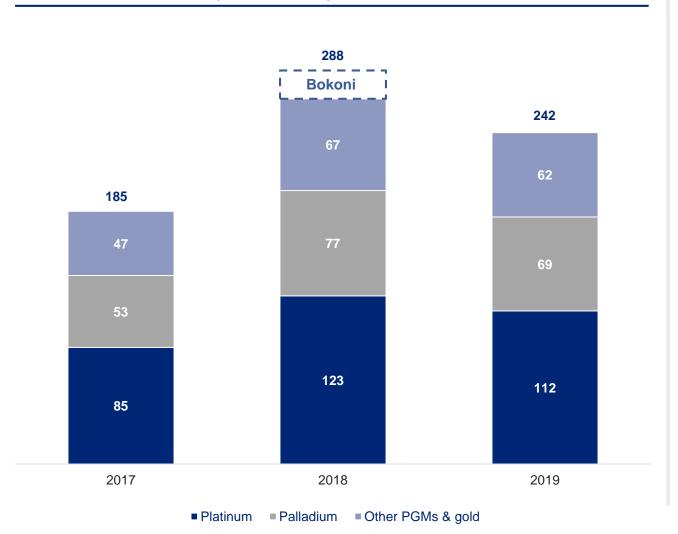
Economic free cash flow<sup>(16)</sup>

**R1.1**bn

at AISC<sup>(14)</sup> of \$88 per platinum ounce sold

## **MOTOTOLO – SHORT TERM PRODUCTION IMPACTS**

#### **Total PGM Production ('000 ounces)**



### **Total PGM production decrease**

9%

ex.benefit of Bokoni material in 2018. 26% increase in H2 over H1

EBITDA<sup>(15)</sup> margin

43%

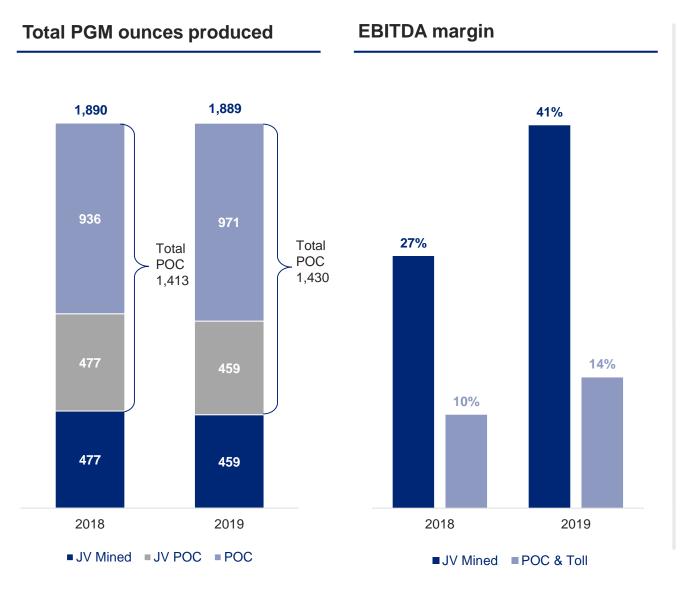
and ROCE(3) of 54%

Economic free cash flow<sup>(16)</sup>

**R1.4**bn

at AISC<sup>(14)</sup> of \$73 per platinum ounce sold

## **JOINT VENTURES & POC PRODUCE STABLE MARGINS**



JV production decrease

4%

**Total POC production increase** 

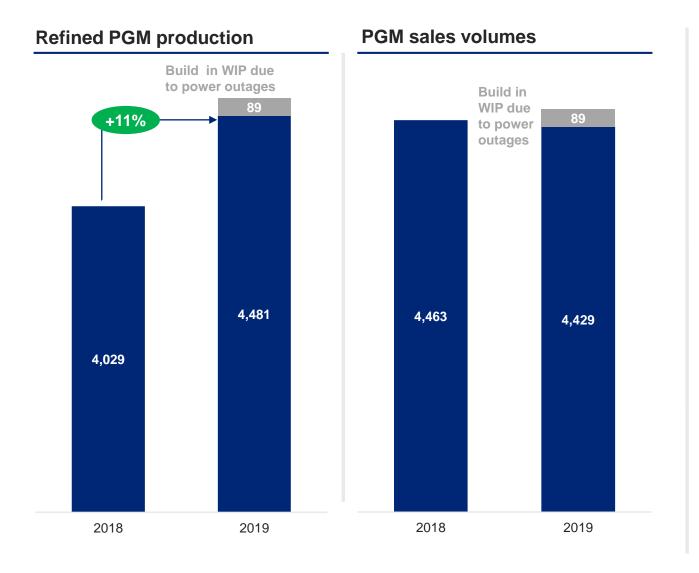
1%

**Economic free cash flow**<sup>(16)</sup>

**R1.1**bn

from POC and toll. POC AISC of \$806 per platinum ounce sold

## STRONG REFINED PRODUCTION DESPITE HEADWINDS



### Refined production<sup>(13)</sup> increase

11%

including tolling up 8%

#### Sales volumes down

1%

due to lower sales of minor metals +7% Pt sales, +13% Pd sales

#### Impact of power outages

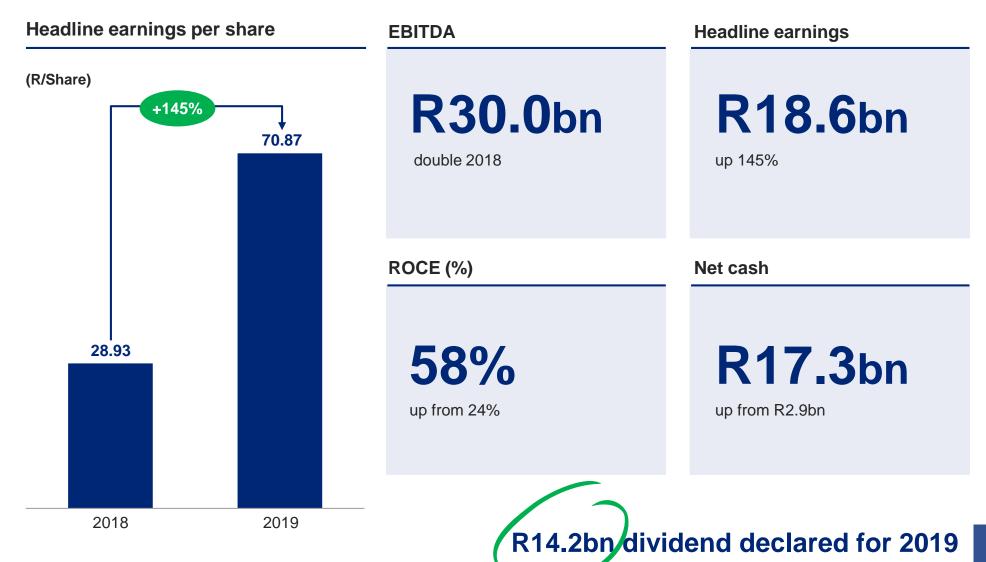
89,000

PGM ounces WIP<sup>(17)</sup> to be refined in 2020



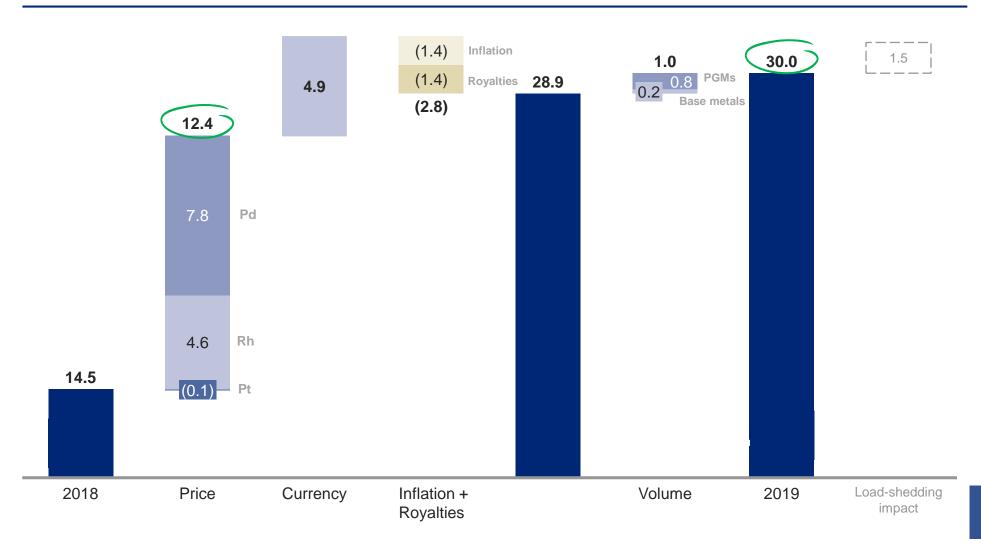


## RECORD FINANCIAL PERFORMANCE

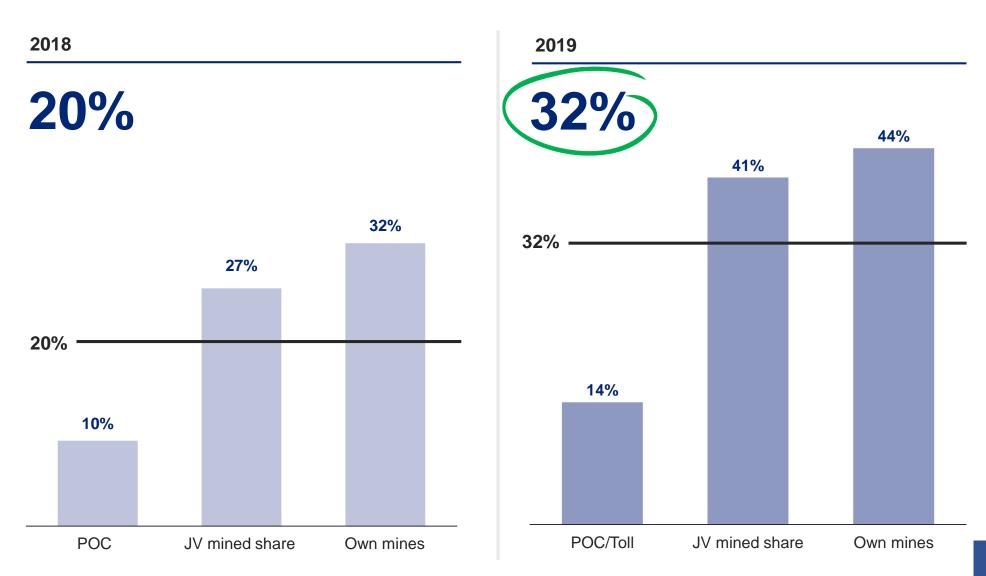


## EBITDA DOUBLED - BEST EVER PERFORMANCE

#### **EBITDA (R billion) 2019 vs. 2018**

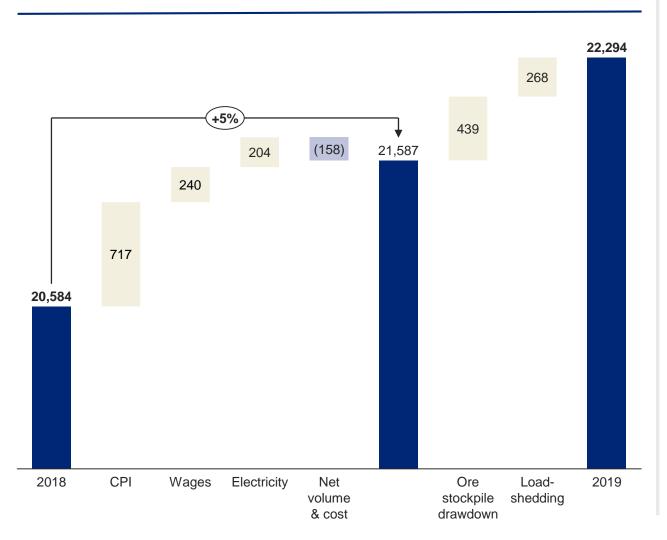


## **STRONG EBITDA MARGINS**



## UNIT COST IMPACTED BY OPERATIONAL HEADWINDS

#### R/Pt oz produced



R/PGM ounce

R10,189/PGM oz

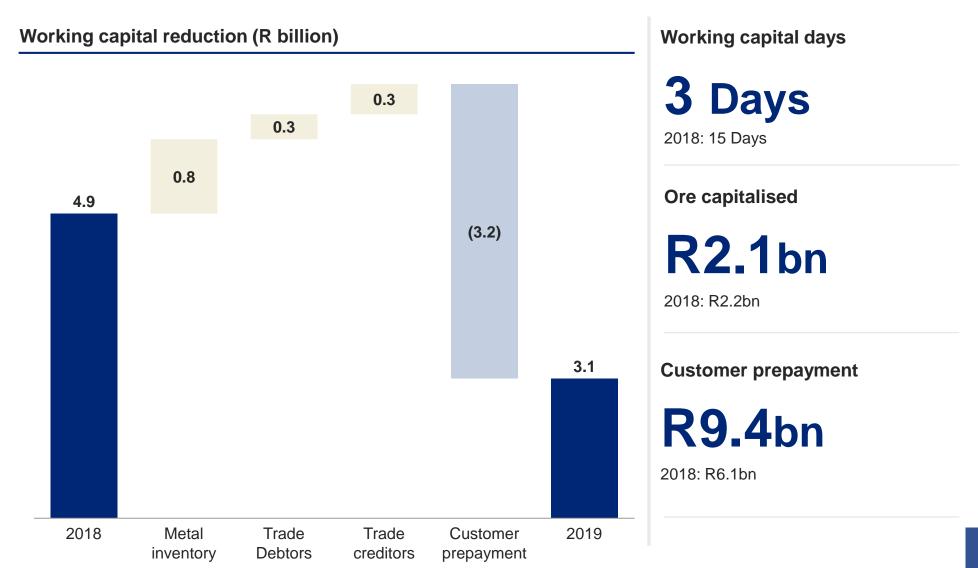
2018: R9,412/PGM oz

All-in sustaining unit cost

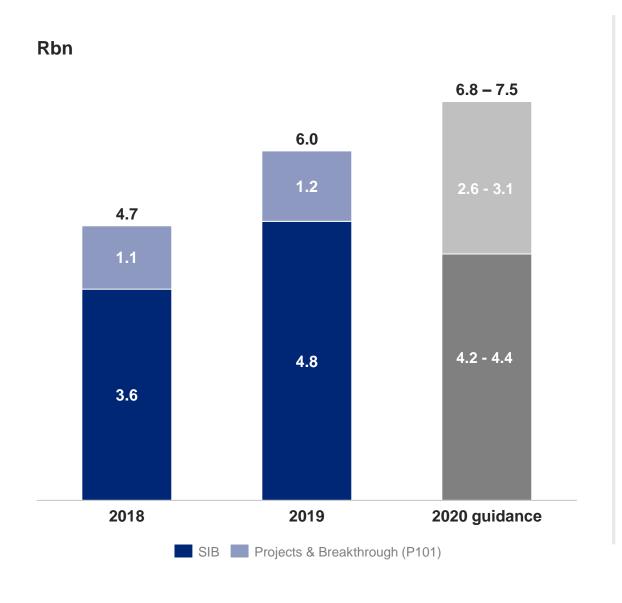
**\$293** / Per sold Pt oz

against a platinum achieved price of \$861/oz

## **WORKING CAPITAL REDUCED TO RECORD LOW**



## CONTINUED CAPITAL INVESTMENT IN VALUE ACCRETIVE PROJECTS



SIB capital expenditure

**R4.8**bn

Investment in SO<sub>2</sub> abatement & Mogalakwena HME

Project and breakthrough (P101) capital

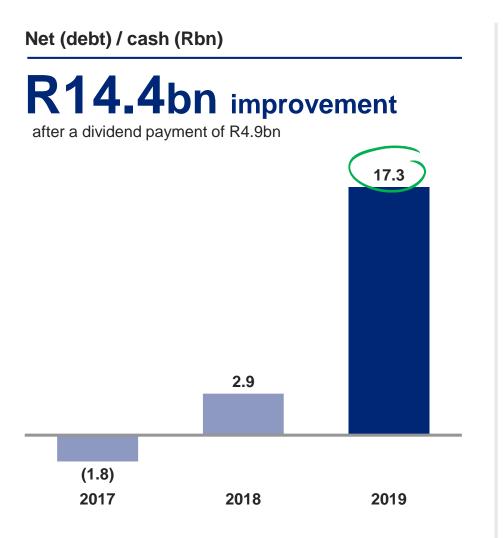
**R1.2**bn

on low capex, fast payback projects

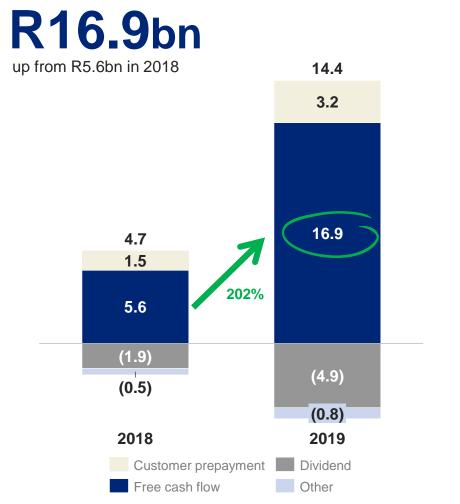
**Capitalised waste stripping** 

**R2.1**bn

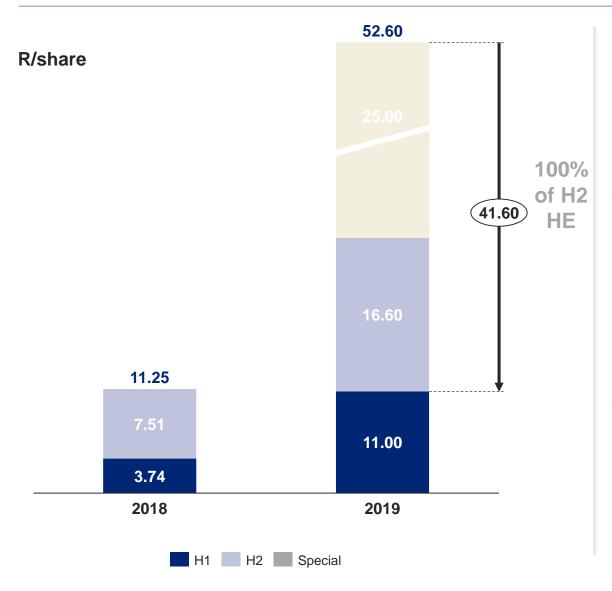
## STRONG CASH GENERATION



### Stronger free cash flow from operations<sup>(18)</sup> (Rbn)



## **DIVIDEND 100% OF H2 2019 EARNINGS**



H2 2019 dividend

R11.2bn

R14.2 billion returned for 2019

**Dividend payout %** 

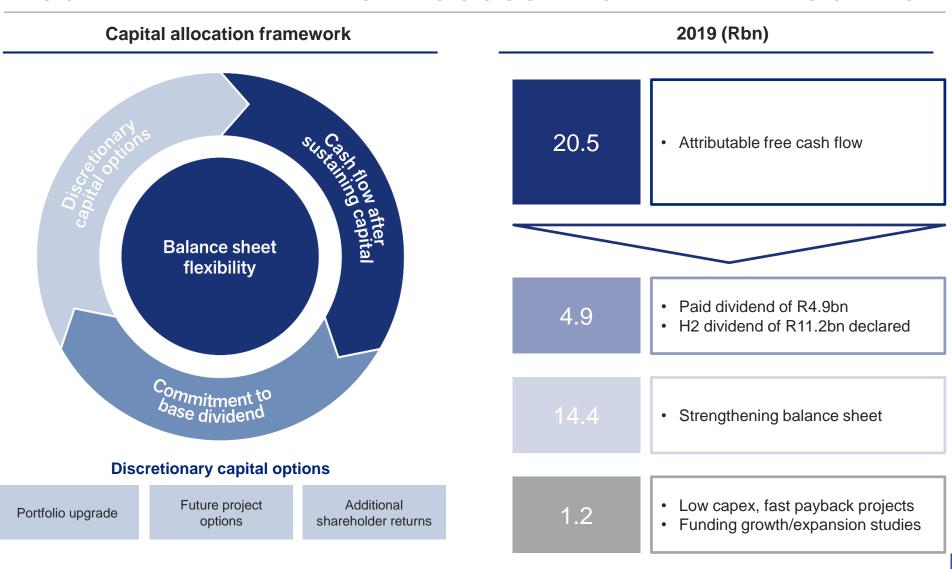
- 40% of HE earnings
- Special dividend of R25.00 /share
- 76% of 2019 earnings

H2 dividend per share

R41.60<sub>/share</sub>

4% dividend yield

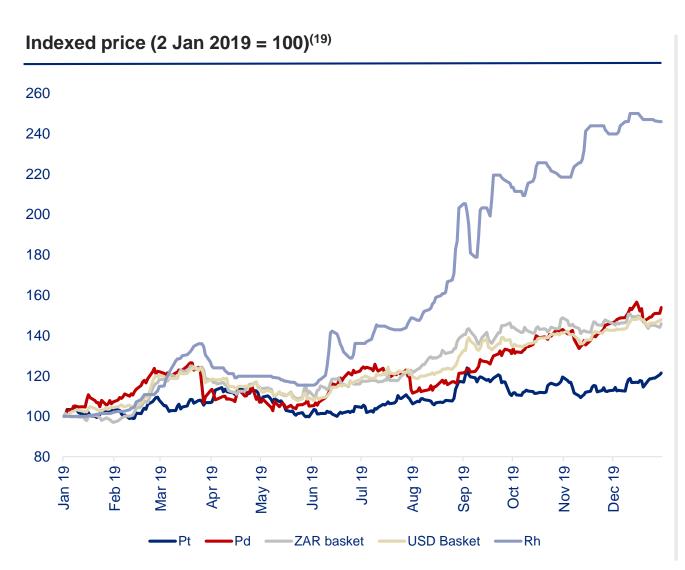
## DISCIPLINED AND VALUE FOCUSSED CAPITAL ALLOCATION







## STRONGER BASKET PRICE, SUPPORTED BY PALLADIUM AND RHODIUM



USD palladium & rhodium price increases

48% & 73%

achieved prices year-on-year

**USD** basket price increase

27%

achieved prices year-on-year

Rand basket price increase

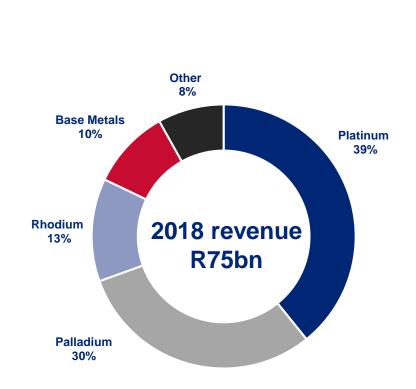
38%

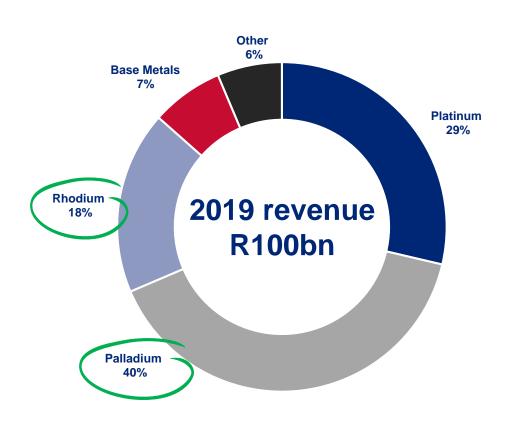
achieved prices year-on-year

## BENEFIT OF DIVERSIFICATION OF METAL BASKET

Revenue per metal % - 2018

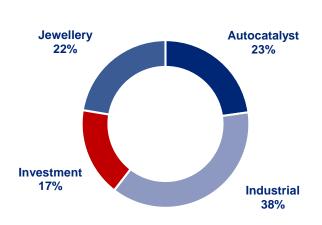
Revenue per metal % - 2019





## **OVERALL OUTLOOK FOR 3E DEMAND POSITIVE**

#### Platinum (net demand)<sup>(19)</sup>

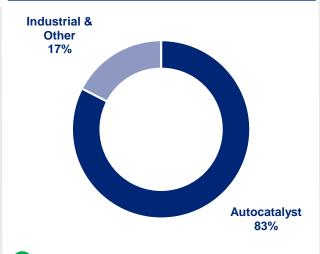


- Exceptionally strong investment demand and firm industrial demand
- Jewellery demand steadying
- Decline in light duty diesel sales slowing

**Medium-term outlook** 

improving

#### Palladium (net demand)(19)

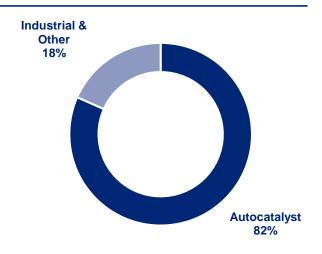


- Automotive consumption very strong
- Average loadings on automotive catalysts set to climb
- Industrial demand softer

**Medium-term outlook** 

positive

#### Rhodium (net demand)(19)



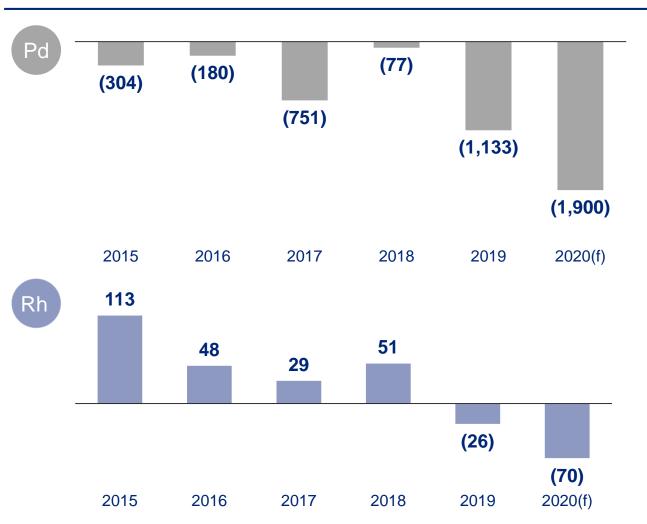
- Automotive consumption very strong
- Average loadings on automotive catalysts set to rise
- Industrial demand softer

**Medium-term outlook** 

positive

## PALLADIUM AND RHODIUM IN FUNDAMENTAL DEFICIT





Palladium outlook

## growing deficit

Demand growth from the automotive sector outstrips supply growth

Rhodium outlook move to

## sustained deficit

Platinum outlook supported by

# scope for substitution





## **NEXT PHASE OF VALUE DELIVERY...**

1. Operational Efficiency - Achieving benchmark & beyond (P101), modernisation & digitalisation

**2. Breakthrough -** Step change in production through FutureSmart Mining™ technology deployment

3. Projects - Fast payback, high-margin replacement ounces & growth option studies advancing

4. Market Development - Developing new applications for PGMs & growing demand

## **OPERATIONAL EFFICIENCY – BENCHMARK & BEYOND (P101)**

### **Double benching at Mogalakwena**

- From 2020 pit slope design based on double benching
- · Moving from 30m to 60m stack height
- Digitalisation enhances slope stability control
- Significant reduction in incremental strip ratio
- · Reduces waste tonnes mined



### Rope shovel efficiency improvement

- Digitalisation improves control systems
- Improved utilisation through double side loading
- Better truck positioning reduces shovel hang time
- Rope shovel bucket fill-factor increased
- Fill trucks with fewer loads efficiency gains from increased truck utilisation



### **Modernisation at Amandelbult**

- Tumela 15E mechanisation
- Dishaba ramp-up
- · Modernisation and digitalisation
- · Cycle mining
- PGM recovery improvements
- Asset reliability and maintenance enhancements



## BREAKTHROUGH - FUTURESMART MINING™ TECHNOLOGY

### Bulk-ore sorter - trial underway

 Sensors determine ore content prior to processing allowing waste material to be removed

#### **Benefits**

- · Immediate grade testing
- Unlocks production capacity by rejecting waste early
- Allows for lower cut off grades
- Reduces mining cost & complexity



### Coarse particle rejection – Q1 2021

- Trial plant to be built at Mogalakwena North Concentrator
- Rejection of coarse gangue ahead of the primary flotation section

#### Benefits:

- Unlocks downstream capacity for increased throughput
- Reduced energy consumption
- Reduced water consumption
- Reduced operating cost



### XLP at Tumela 15E – in progress

 Extra-low profile mechanised equipment

### **Benefits**

- Safety remote controlled equipment away from mine face
- Lower panel heights result in less dilution of ore with waste
- Faster extraction & improved labour efficiencies
- Higher level of skilled employees



## HIGH RETURN, HIGH MARGIN, FAST PAYBACK PROJECTS

### **Base Metal Refinery - copper debottlenecking**



Copper plates at the Rustenburg Base Metal Refinery (RBMR)

### **Amandelbult modernisation**



Winder upgrades increase hoisting capacity from 160ktpm to 230ktpm

### Disciplined capital allocation framework drives project selection

Projects:	Commission:					
Modikwa chrome recovery plant	Approved	R0.2bn	+288ktpa	Q1 2021	~2 year payback	>50%IRR
RBMR copper debottlenecking	Approved	R0.7bn		Q2 2021	~2 year payback	>35%IRR
Unki debottlenecking	Approved	R0.7bn	+31ktpm	Q3 2021	~3 year payback	>35%IRR
Amandelbult modernisation	Approved	R1.3bn		Q1 2022	~3 year payback	>60%IRR
Tumela 15E	Approved	R1.1bn	+70ktpm	Q3 2022	~5 year payback	>20%IRR

## PROJECT STUDIES ON VALUE ACCRETIVE GROWTH OPTIONS

### Mogalakwena expansion

- Feasibility project study on track to complete in 2021, assessing:
  - Construction of third concentrator with breakthrough technology
  - Upgrading and debottlenecking existing concentrators
  - Concurrently studying underground mining options
- Ramp up to fill third concentrator 18 to 24 months
- Full production expected in 2024
- Estimated ounces ~500,000 PGMs

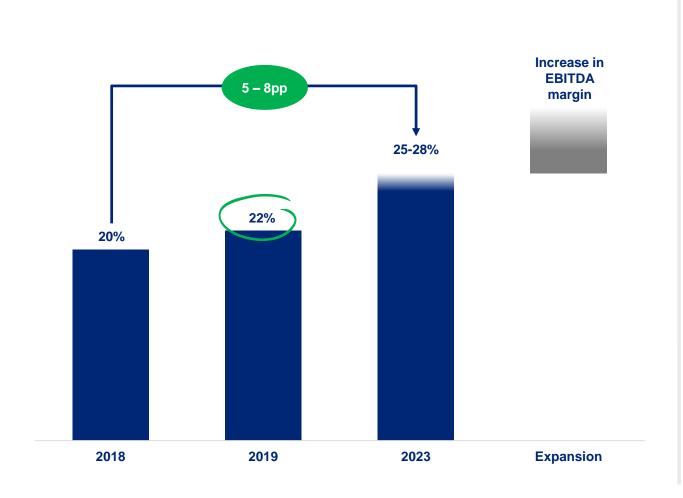
### Der Brochen / Mototolo replacement and growth

- Replacement of Mototolo in feasibility maintain current production
- Requires establishment of Der Brochen South Shaft to replace Lebowa shaft
- Shaft infrastructure designed such to allow future expansion
- Expansion of Der Brochen / Mototolo project in pre-feasibility B
  - Breakthrough technology to increase throughput and improve grade into the concentrator
  - Potential to increase production by c.33%

Project studies for value-accretive growth under	way	
Project studies:		Status
Der Brochen / Mototolo - replacement	Feasibility	Replacement of Mototolo
Mogalakwena expansion	Pre-feasibility B	Significant expansion potential - studies under way
Der Brochen / Mototolo – replacement & expansion	Pre-feasibility B	Expansion potential - studies under way

### **EBITDA MARGIN EXPANSION**

### Driving an uplift in EBITDA<sup>(15)</sup> margin



### Margin uplift before expansion

5 – 8pp

at 2018 prices and FX rates

### Margin uplift driven by

- Operational efficiency to beat best in class (P101)
- Breakthrough opportunities utilising FutureSmart Mining™ technology
- Fast payback, value enhancing project delivery

### **Expansions could add further**

## margin growth

## MARKET DEVELOPMENT – GROWING DEMAND FOR PGMS

### **Jewellery**

2019 spend on jewellery development

\$25m



AAP owned and funded, PGI, launched new "Men Of Platinum" brand in India



Exclusive Platinum bridal line launched with De Beers in the US



PGI showroom opened in China to accelerate adoption of new generation platinum jewellery designs

### Investment

2019 spend on investment development

\$5m







- Contribute to investment development through industry body – World Platinum Investment council
- WPIC trained over 3,000 managers of Bank of China and Agricultural Bank of China to promote platinum investment products

### Industrial

2019 spend on industrial development

\$6m



- Launched Lion Battery Technologies to develop next generation PGM batteries
- Two additional partners in AP Ventures fund - Mirai Creation Fund, backed by Toyota, and Plastic Omnium
- >\$230 million total funding invested into AP Ventures from all partners

## **UNPRECEDENTED MOMENTUM FOR HYDROGEN & FUEL CELLS**

**AP Ventures investments** 

Portfolio companies in hydrogen economy value chain

6



**FCEV** targets set

30 countries commit to deploy

10 million

vehicles in 10 years

Cost of H<sub>2</sub> fuel reducing

Cost since 2010 reduced by

60%

Industry alliances growing

**Hydrogen Council members** 

81

up from 13 in 2013

FCEV availability increasing

Models currently available

45

up from 1 in 2013

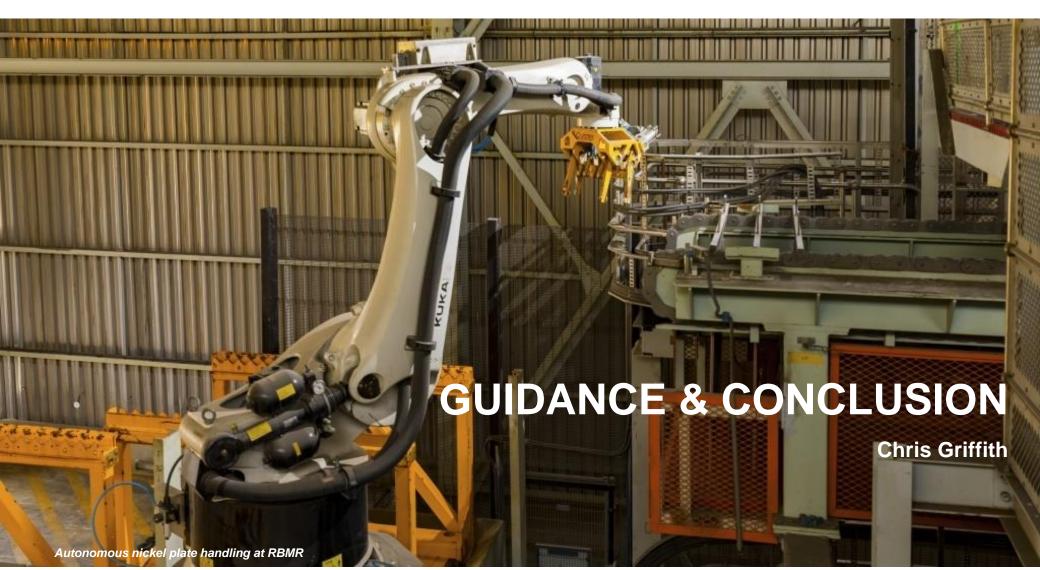
Increase in H<sub>2</sub> refueling stations

**Global stations increased** 

>50%

Since 2015, and some funded by AAP





## **2020 GUIDANCE**

### **Production M&C (million ounces)**

PGMs 4.2 - 4.6

Pt: 2.0 – 2.2

Pd: ~1.4

Other: 0.8 - 1.0

**Excluding toll production** 

### **Capital expenditure**

R6.8 - 7.5 bn

Refined production (million ounces) Sales volumes (million ounces)

**PGMs** 4.2 – 4.7

Pt: 2.0 – 2.2

Pd: 1.4 – 1.5

Other: 0.8 - 1.0

**Excluding toll production** 

### Capitalised waste stripping

R2.4 - 2.6bn

**PGMs** 4.2 – 4.7

Pt: 2.0 – 2.2

Pd: 1.4 – 1.5

Other: 0.8 - 1.0

**Excluding toll production** 

Unit cost per PGM ounce

R10,600 -R11,000

Unit cost per platinum ounce produced between R22,800 – R24,000

### TO CONCLUDE...

- ✓ Zero fatalities and best ever safety performance
- ✓ Focus on ESG performance is receiving global recognition
- Record production from Mogalakwena and Unki
- **✓** Robust fundamentals for PGMs to continue
- **✓** Net cash position of R17.3 billion
- ✓ Increased returns total 2019 dividend of R14.2 billion
- ✓ Focusing on the next phase of value delivery

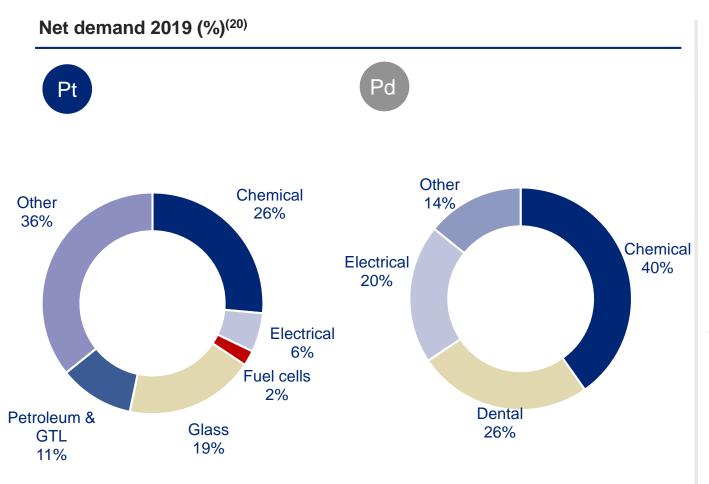








## INDUSTRIAL DEMAND NORMALISING SHORT-TERM



### Platinum outlook

## neutral

following three years of significant capacity expansion in China

Palladium outlook

## slight negative

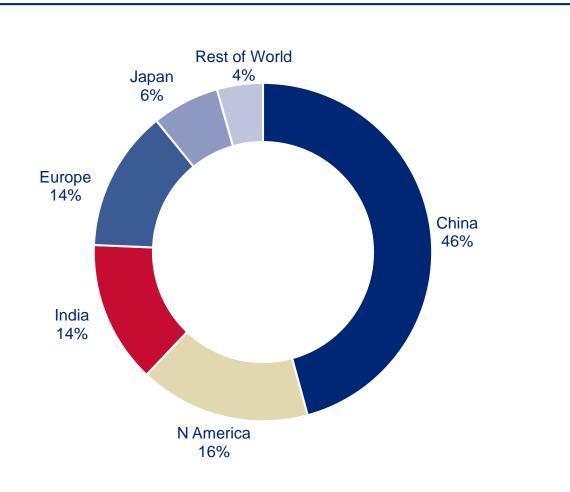
**Rhodium outlook** 

## slight negative

as a rapidly increasing price drives thrifting efforts

## **JEWELLERY: 2019 MIXED, OUTLOOK MORE POSITIVE**

Net platinum demand 2019 (%)(21)



China remains challenging

# short term negative

but there are signs of new initiatives and product development from manufacturers

Europe, Japan, North America

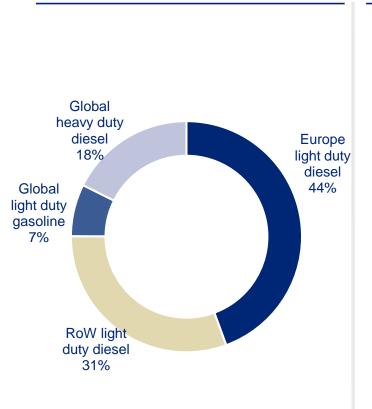
## steady

**Growth from India** 

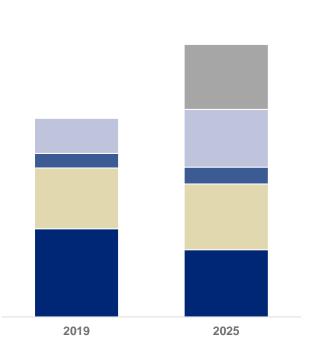
## positive

### PLATINUM DEMAND FROM AUTOMOTIVE SECTOR RESILIENT





### Forecast platinum auto demand<sup>(23)</sup>



- Gasoline Pt:Pd Substitution at 10%
- Global heavy duty diesel
- Global light duty gasoline
- RoW light duty diesel
- Europe light duty diesel

### Auto platinum demand increase

0.6%

CAGR over 2019-2025, excluding impact of substitution

Heavy duty diesel outlook

## steady growth

as to tighter emissions regulation compensate for a short term fall in unit sales

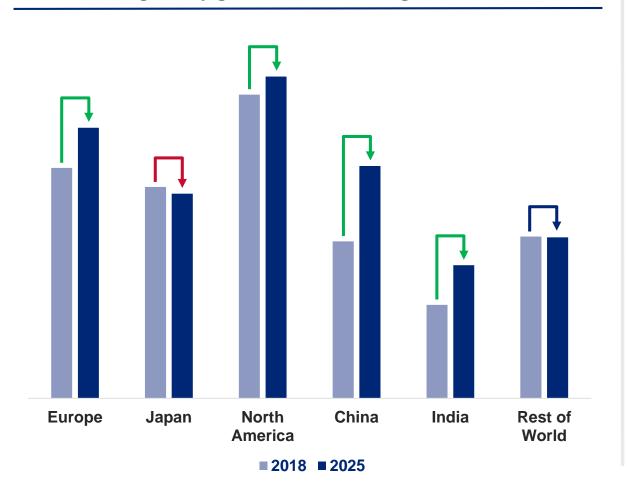
Increase in palladium and rhodium prices could lead to

## substitution

of platinum into gasoline autocatalysts

### **AUTOMOTIVE PGM DEMAND TO CONTINUE TO GROW**

### Forecast 3E light duty gasoline PGM loadings<sup>(20)</sup>



### Average global loadings increase



between 2018 and 2025

**3E Automotive PGM demand** forecast to

## increase

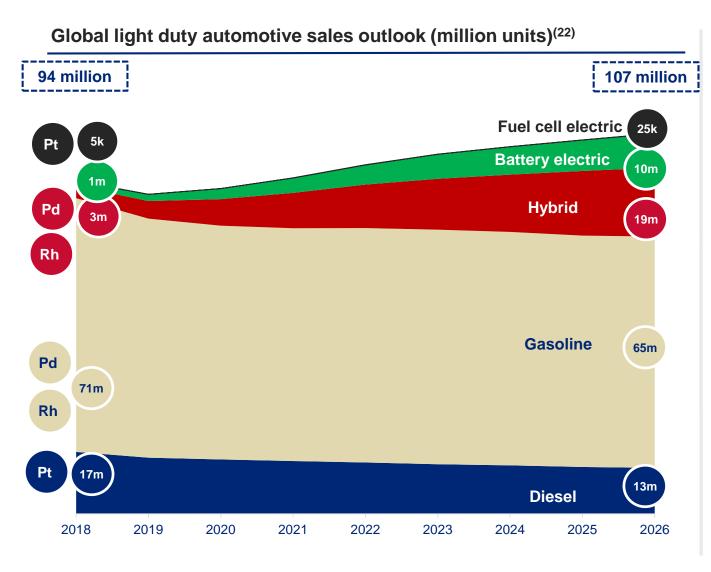
despite falling vehicle sales

Total light duty 3E outlook

## strong positive

tighter emissions legislations result in significant increases in PGM loadings

## **AUTOMOTIVE PGM DEMAND TO CONTINUE TO GROW**



Diesel car sales decline

2.9%

CAGR over 2019-2026

Gasoline/hybrid sales increase

2.3%

CAGR over 2019-2026

**Total light duty 3E outlook** 

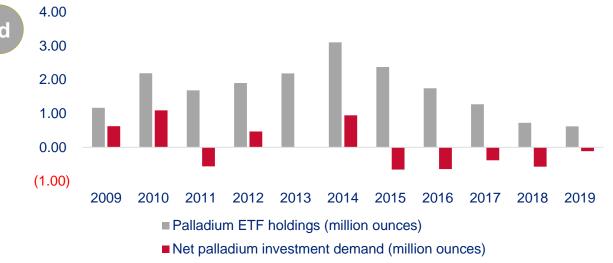
# strong positive

as internal combustion engine remains the dominant drive train technology

# ATTRACTIVE PLATINUM PRICE DRIVES EXCEPTIONALLY STRONG INVESTMENT DEMAND

### ETF holding and investment demand (million ounces)(24)





**Total platinum investment** 

+1.1 Moz

in 2019

**Total palladium disinvestment** 

-116koz

down from -574 koz in 2018

Palladium ETF holdings at just

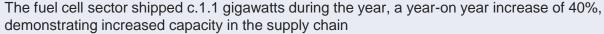
**620**koz

due to significant redemption of ETFs

# HYDROGEN AND FUEL CELL ADOPTION GATHERED ADDITIONAL MOMENTUM IN 2019

Fuel cell shipments exceed 1 GW as supply chain strengthens







Michelin and Faurecia joined forces to produce and market hydrogen fuel cell systems for mobility and other applications.

Corporate M&A and investments in the H2 sector accelerated



faurecia

Cummins joined the hydrogen race acquiring Hydrogenics (amongst other FC investments) in a \$290m deal



In Korea, Doosan Fuel Cells floated on the stock market giving it access to external funds for further business development



Nikola joined forces with IVECO with the aim of expanding into Europe. The company also secured \$1.7 million in funding from the US Department of Energy

OEMs deliver more FCEVs while heavy FC duty applications find traction







- In September the 10,000<sup>th</sup> Mirai left Toyota's production line. The new updated Mirai has also begun to appear at motor shows and is due for launch during 2020
- Hyundai Nexo shipments exceeded those of the Mirai in 2019
- BMW presented its iHydrogen NEXT concept car at the 2019 Frankfurt Motor Show
- The 1<sup>st</sup> of 1600 Hyundai FC trucks to be deployed in partnership with Swiss retailers has hit the road

Countries increasingly acknowledge the potential of fuel cells





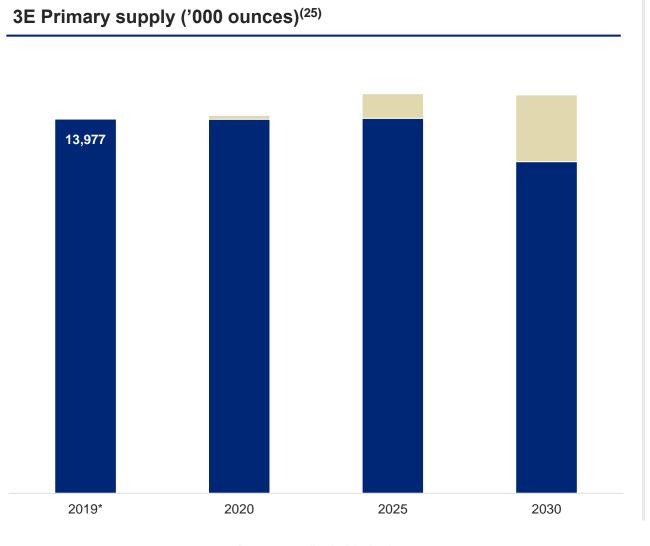


- Today, 18 countries, accounting for 70 per cent of global GDP, have detailed strategies for deploying hydrogen energy solutions
- Korea outlined its goal of producing 6.2 million fuel cell electric vehicles and rolling out at least 1200 refilling stations by 2040
- Australia published plans to become a major producer and exporter of hydrogen, describing hydrogen as a potential 'game changer' for local industry, and
- China continues to push towards using hydrogen as a fuel. Shanghai recently re-classified hydrogen to allow existing fuel stations to supply it alongside other fuels

## **AREAS OF POSITIVE DEMAND FOR PGMS**

#### ...longer term Short to medium term... Fuel cell Growth in heavy Electrification Hydrogen duty & stricter installations through fuel cell economy emissions vehicles growing **Platinum** Global Substitution into **Jewellery Jewellery** economic gasoline growth in India growth driving growth in China catalysts industrial growth Light duty Stricter Decarbonisation Expanding Palladium & vehicle growth demand from emissions through hybrid in gasoline & Rhodium legislation vehicles transport sector hybrid Global Industrial New **Other PGMs** Clean chemistry economic demand growing applications growth

## **3E PRIMARY SUPPLY TO REMAIN STABLE**



**Current production outlook** 

## stable

between 2020 to 2030

**Probable projects** 

# replace depleting supply

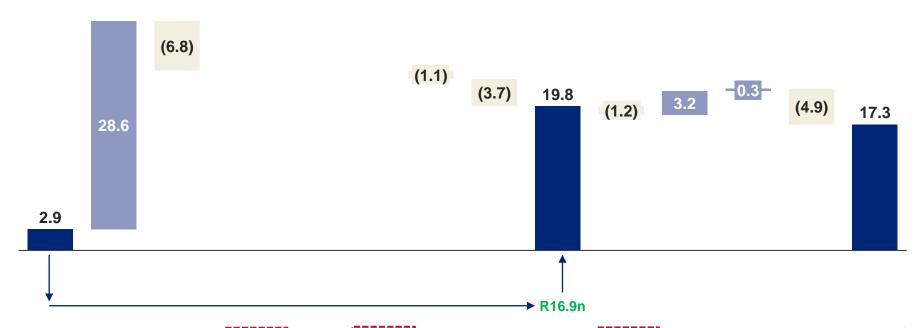
Processing capacity, water, mine economics & Eskom likely to

# constrain further expansions

## **EARNINGS SENSITIVITIES**

Sensitivity analysis - 2019	Sensitivity analysis - 2019								
Commodity / Currency	31 December spot	Average realised	EBITDA (Rm)						
Platinum (\$/oz)	959	861	2,086						
Palladium (\$/oz)	1,909	1,518	3,211						
Rhodium (\$/oz)	6,060	3,808	1,192						
Gold (\$/oz)	1,523	1,396	211						
Nickel (\$/ton)	14,137	14,050	317						
Copper (\$/ton)	6,188	5,949	97						
Chrome (\$/ton)	128	121	137						
South African rand	14.13	14.50	7,668						

## **NET CASH FLOW BY MINE**



Operation	Net cash December 2018	Cash from operations	SIB and waste capital	100% Operating free cashflow	Economic interest adjustment <sup>(26)</sup>	Economic free cashflow <sup>(16)</sup>	Project capital	Cash tax and net interest paid	Free cash flow	Investment in associates, funding & other <sup>(27)</sup>		Net proceeds on asset sales	Dividend	Net cash Dec 2019
Mogalakwena		14,087	(4,129)	9,959		9,959	(225)		9,733					
Amandelbult		4,097	(681)	3,416	(114)	3,302	(724)		2,691					
Unki		1,562	(318)	1,244		1,244	(53)		1,190					
Mototolo		1,801	(444)	1,356		1,356	(724)		632	(184)				
Joint Ventures		3,935	(490)	3,445		3,445	(74)		3,371					
3rd Parties		4,191	(280)	3,910	(3,487)	423	23		3,933					
Other (28)		(1,051)	(472)	(1,523)	(85)	(1,608)	630	(3,731)	(4,624)	(997)	3,220	343	(4,921)	-
	2,890	28,622	(6,815)	21,807	(3,686)	18,121	(1,148)	(3,731)	16,927	(1,181)	3,220	343	(4,921)	17,278

## **COST BREAKDOWN**

Costs reflective of AAP Own mined and Joint Venture share of production and costs at operations. Excludes all purchase of concentrate costs and volume, overhead and marketing expenses.

2019	Cost base (Rbn)	Volume %	PGMs (koz)	Labour	Contractors	Materials	Utilities	Sundries
Opencast Mining	3.4	41%	1,245	26%	14%	68%	3%	-11%
Conventional Mining	9.7	32%	965	54%	3%	18%	7%	18%
Mechanised Mining	6.2	27%	801	40%	8%	34%	6%	12%
Concentrating	6.2			15%	0%	38%	21%	26%
Processing	7.7			25%	1%	26%	29%	19%
Total	33.1	100%	3,011	34%	4%	32%	14%	16%

2018	Cost base (Rbn)	Volume %	PGMs (koz)	Labour	Contractors	Materials	Utilities	Sundries
Opencast Mining	5.0	40%	1,170	17%	6%	44%	2%	32%
Conventional Mining	8.9	35%	1,007	56%	6%	18%	7%	13%
Mechanised Mining	4.9	25%	717	41%	11%	30%	6%	11%
Concentrating	5.7			14%	0%	38%	20%	28%
Processing	7.0			24%	1%	26%	28%	21%
Total	31.5	100%	2,895	33%	5%	29%	13%	20%

Non ZAR – 10% of total costs

- 100% at Unki
- c. 25% at Mogalakwena
- Diesel 3% of total mined cash operating costs
- Diesel 12% of Mogalakwena cash operating cost

## **ALL-IN SUSTAINING COST (AISC)**

		Mogalakwena	Amandelbult	Unki	Mototolo	JV mined	Total mined	Total POC	Company (ex-trading)
	Costs (US\$ million)								
	Cash operating costs	686	801	162	163	332	2,144	1,696	4,146
	Other costs and marketing	135	130	49	24	42	381	36	432
	Capitalised waste costs	142	-	-	-	-	142	-	142
	Sustaining capital	149	47	22	33	29	279	24	336
а	Total Cost	1,112	979	233	220	403	2,946	1,756	5,057
	Total revenue excluding platinum revenu	ue (US\$ million)							
	PGMs excluding platinum	1,113	693	184	204	411	2,605	1,230	3,835
	Base metals, chrome and other	222	107	41	7	10	387	(131)	573
b	Total revenue ex. platinum	1,335	800	225	211	420	2,991	1,100	4,408
c = a - b	All-in sustaining costs	(223)	179	8	8	(17)	(22)	656	649
d	Platinum ounces sold (000)	519	458	92	115	217	1,402	814	2,215
$e = c \div d \times 1,000$	US\$ AISC per platinum ounce sold	(429)	390	88	73	(80)	(15)	806	293
	Average Pt price achieved (\$)	861	861	861	861	861	861	861	861
	Marketing adjustment ~	(29)	(23)	(28)	(23)	(24)	(26)	(22)	-
	Realised \$ cash margin/Pt ounce sold	1,320	494	802	811	965	903	76	568

<sup>~</sup> Not consolidated in economic free cash flow

## **RAND BASKET PRICE**

		Mogalakwena	Amandelbult	Unki	Mototolo	JV mined	POC/Other	Company (ex-trading) <sup>(29)</sup>
	Net sales revenue (US\$ million)							
	from platinum	447	395	79	100	187	697	1,905
	from palladium	877	329	126	111	222	644	2,309
	from rhodium	136	301	35	74	154	442	1,142
	base metals & other	323	177	64	26	44	255	888
a	Total revenue	1,782	1,202	304	311	608	2,038	6,243
	Sales volume (000 ounces)							
b	platinum ounces sold	519	458	92	115	217	814	2,215
	other PGMs sold	703	409	113	127	250	817	2,419
С	Total PGMs sold	1,222	866	205	242	468	1,631	4,634
$d = a \div b \times 1,000$	US\$ basket per platinum ounce	3,433	2,624	3,316	2,691	2,794	2,505	2,819
$e = a \div c \times 1,000$	US\$ basket per PGM ounce	1,459	1,387	1,483	1,284	1,299	1,249	1,347
f	US Dollar/ZAR exchange rate	14.50	14.50	14.50	14.50	14.50	14.50	14.50
g = d x f	Rand basket per platinum ounce	49,782	38,052	48,083	39,023	40,518	36,321	40,862
h = e x f	Rand basket per PGM ounce	21,152	20,110	21,511	18,621	18,832	18,119	19,534

## **SIMPLIFIED EBITDA**

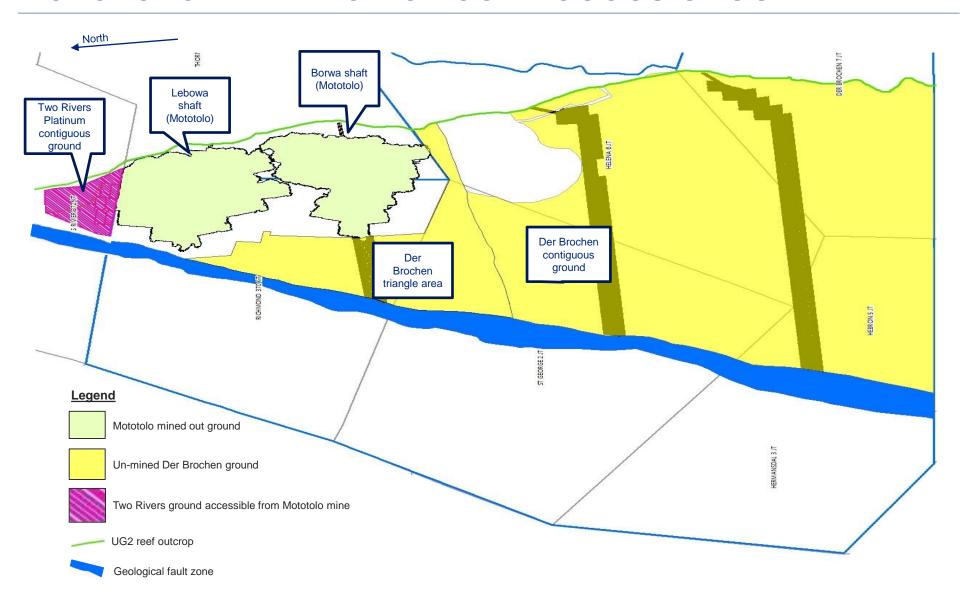
(R million)		Mogalakwena	Amandelbult	Unki	Mototolo	JV mined	Mining	POC/Toll	Company
c = a x b	Net revenue	25,845	17,424	4,403	4,506	8,812	60,989	30,708	91,697
a	Rand basket per platinum ounce	49,782	38,052	48,083	39,023	40,518	43,515	37,746	40,862
b	Platinum ounces sold (000 ounces)	519	458	92	115	217	1,402	814	2,215
f = d x e	Cash operating costs	9,940	10,810	2,364	2,361	4,810	30,285	25,222	56,515
d	Cash operating cost /Pt oz (M&C)	19,208	24,923	26,437	21,078	23,378	22,294		
d	Purchase of concentrate /Pt oz (M&C)							37,509	
е	Pt oz produced (M&C) (000 ounces)	517	454	89	112	206	1,378	672	2,051
g	Other costs	1,530	1,482	519	188	423	4,605	1,094	5,479
	Other cost	589	870	499	20	94	4,310	1,094	3,626
	Royalties	941	612	19	168	329	2,104		2,104
	Marketing & Development						-		788
h = f + g	Total cost	11,470	12,293	2,882	2,549	5,233	34,890	26,316	61,994
i = c - h	EBITDA	14,375	5,132	1,520	1,956	3,579	26,099	4,392	29,703
j=i/c x 100	EBITDA margin	55.6%	29.5%	34.5%	43.4%	40.6%	43.0%	14.3%	32.4%

<sup>\*</sup> POC includes R0.4bn of toll EBITDA

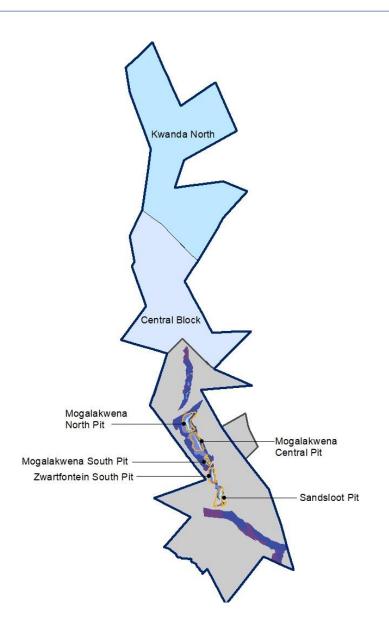
<sup>~</sup> Unit cost excludes once off costs

<sup>^</sup> Amandelbult unit cost excludes 20koz of purchased ore

## **MOTOTOLO – ADDITION OF CONTIGUOUS GROUND**



# MOGALAKWENA – ADDITION OF KWANDA NORTH & CENTRAL BLOCK



- Anglo American Platinum completed the acquisition of Kwanda North and Central Block prospecting rights on 27 August 2019
- These prospecting rights are adjacent to and have been incorporated into the Mogalakwena mining right
- This effectively doubled the area of Mogalakwena's mining right on the Northern Limb
- The incorporated prospecting rights are, pending further exploration and evaluation work, categorised as mineralisation and do not impact on the 2019 reported Mineral Resources

### **FOOT NOTES**

- (1) ESG stands for environmental, social and governance
- Sustainalytics is a global leader in ESG and Corporate Governance research and ratings. Over the last 25 years, they have brought together leading ESG research and client servicing professionals. Today, Sustainalytics supports hundreds of the world's foremost investors who incorporate ESG and corporate governance insights into their investment processes.
- (3) ROCE stands for return on capital employed
- (4) Total recordable case injury frequency rate (TRCFR) is a measure of the rate of all injuries requiring treatment above first aid per 1,000,000 hours worked
- (5) TB incidence rate is defined as the incidence of TB per 100,000 people
- (6) UNAIDS Target by 2020 is 90% of all people living with HIV will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy, and 90% of all people receiving antiretroviral therapy will have viral suppression.
- (7) Level 4-5 environmental incidents are defined as high or major impact to the receiving environment, and have high or major sensitivity to the impact. Anglo American has redefined its environmental incidents scale with levels 4 and 5 incidents now classified as high and major significant incidents (previously defined as level 3 to 5)
- (8) Potable water intensity is defined as cubic meters of potable water used per tonne milled (m³/t milled)
- (9) New operations include Unki smelter which was constructed in September 2018 and the acquisition of Mototolo mine which was acquired in November 2018
- (10) GHG stands for Green House Gas and emissions are defined as Total CO<sub>2</sub> equivalent emissions (tonnes per CO<sub>2</sub> equivalebnt metric.
- (11) CSI is community social investment
- (12) Donated 270 hectares of land to the Rustenburg community in a land handover in March 2019, with the support of the Government of South Africa.
- (13) Refined production defined to exclude 4E production previously POC
- (14) AISC stands for all-in sustaining costs: defined as cash operating costs, overhead costs, other income and expenses, all sustaining capital expenditure, capitalised waste stripping and allocated marketing and market development costs net of revenue from all metals other than platinum
- (15) EBITDA stands for earnings before interest, tax, depreciation and amortisation
- (16) Economic free cash flow represents AAPs economic share of operating free cash flow after adjusting for minority interests for subsidiaries/ joint ventures and includes associate's share of profit or loss
- (17) WIP stands for work-in-progress
- (18) Free cash flow is defined as cash flow from operations, less capital, less project capital, less cash tax and net interest paid
- (19) Source: Johnson Matthey
- (20) Source: Johnson Matthey, Company analysis
- (21) Source: Johnson Matthey, Platinum Guild International, Company analysis
- (22) Source: LMC Automotive
- (23) Source: Johnson Matthey, LMC Automotive, Company analysis
- (24) Source: Johnson Matthey, Bloomberg, Company analysis
- (25) Source: Johnson Matthey, SNL, Company analysis
- (26) Economic interest adjustment is an adjustment to exclude minority share of operating free cash flow for subsidiaries / joint ventures and include associate's share of profit or loss
- (27) Investment in associates, funding and other: Includes, Bokoni funding, Kwanda North and Central Block prospecting rights acquisition, Mototolo deferred consideration and the IFRS 16 leases
- (28) Other: includes market and market development costs, restructuring, working capital movements not allocated to each individual asset
- (29) Company excludes tolling