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# South African Colliery Engineers Association

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**STRATEGY WORKSHOP**

9 - 11 February 2019

# *President's welcome*



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- President: Themes for the year
  - *Safety – remains the key purpose*
  - *Technology – remains the DNA of SACEA*
  - *Digitisation – becoming the new*
    - *Gap between operations and engineers*
  - *DMR engagement*
- Industry in general positive after SONA 2019 address
- Corruption remains a big challenge to country and industry
- DMR remains a critical catalyst in our business
  - *Relationship*
  - *Practicality of policy*
  - *Influence from SACEA vital*
- Young engineers needs our guidance and mentoring

# *SACEA Council 2019*



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## ***2019 COUNCIL***



- **COUNCIL: Mr M Hyra (President);  
Mrs A Prinsloo (1st Vice President); Mr A Bezuidenhout;  
Mr PE Mojalefa Mr LD Botha; Mr M Buthelezi; Mr J Coetzee;  
Mr D Christie; Mr J Diedericks; Mr L Delport; Mr H Lombard  
( 2<sup>nd</sup> Vice President); Mr F Moleleki; Mrs B Mtshengu;  
Mr JW Nel; Mr J Nkosi; Mr J Subermoney; Mr LD Turvey;  
Mr SWJ Van Wyk; Mr H Zwart; Mrs T Sunker;  
Mrs F du Preez**



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# ***External Environment***

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## *Review*



# Macro Economic Trends

IMF - 2018



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- Global growth will accelerate to the fastest pace in seven years as US tax cuts spur businesses to invest, the International Monetary Fund said, as reported by Bloomberg.
- The fund raised its forecast for world expansion to 3.9% this year and next, up 0.2 percentage points both years from its projection in October. That would be the fastest rate since 2011, when the world was bouncing back from the financial crisis
- **The IMF says the global recovery now under way is the broadest in seven years, with growth picking up last year in 120 countries accounting for three-quarters of world output.**
- The fund lifted its outlook for the euro zone to 2.2% growth in 2018, up 0.3 point from October. Japan will grow 1.2% in 2018, up 0.5 point, the IMF said
- China will expand at a 6.6% pace this year, up 0.1 point from October, according to the IMF. The fund left its 2018 forecast for India unchanged from three months ago, at 7.4%. As the UK works through Brexit, its growth was forecast at 1.5% in 2018 and again in 2019

## *The end-2017 View*

### Economic growth

(% unless otherwise indicated)

	2017	2018	2019
US GDP	2.2	2.3	2.4
OECD GDP	2.3	2.1	2.1
World GDP	3.0	2.9	2.9
World trade	4.6	4.3	4.0

Source: The Economist Intelligence Unit

## *The end-2018 View*

# ***Macro Economic Trends***

## ***IMF and SARB - 2019***



- The International Monetary Fund (IMF) forecast South Africa's economy to grow 1.4 percent in 2019 from 0.8 percent previously, as the lender painted a bleak picture of global growth.
- The IMF further expected South Africa's economy to grow by 1.7 percent in 2020. The Washington-based lender said the outlook for emerging markets and developing economies reflected the continued headwinds from weaker capital flows following higher US policy rates and exchange rate depreciations. "After two years of solid expansion, the world economy is growing more slowly than expected and risks are rising," said IMF managing director Christine Lagarde on the eve of the World Economic Forum in Davos, Switzerland.
- IMF put global growth at 3.5 percent for 2019 and 3.6 percent in 2020, 0.2 and 0.1 percentage points below October 2018's projections.
- The SA Reserve Bank (SARB) in January 2019 said the domestic growth outlook remained sluggish. The SARB now estimates growth in 2018 to have averaged 0.7 percent up from 0.6 percent in November 2018. The SARB growth forecast for 2019 is 1.7 percent, down from 1.9 percent; it is unchanged at 2 percent for 2020 and increases to 2.2 percent in 2021

# RSA Core Inflation rate



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SOURCE: TRADINGECONOMICS.COM | STATISTICS SOUTH AFRICA

# RSA Annual GDP Growth Rate



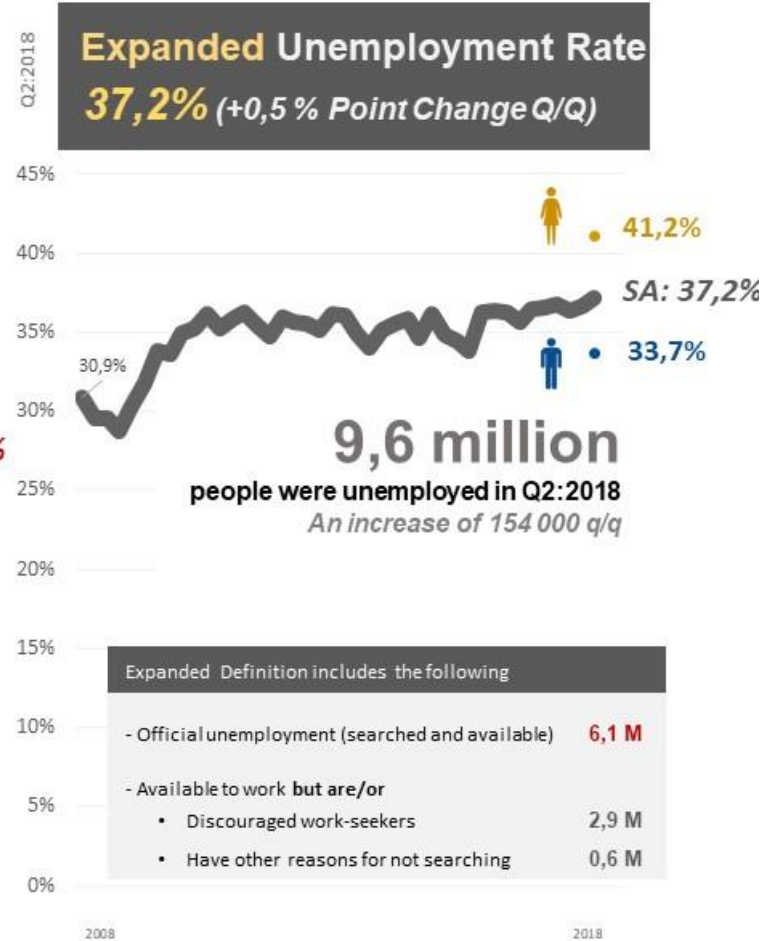
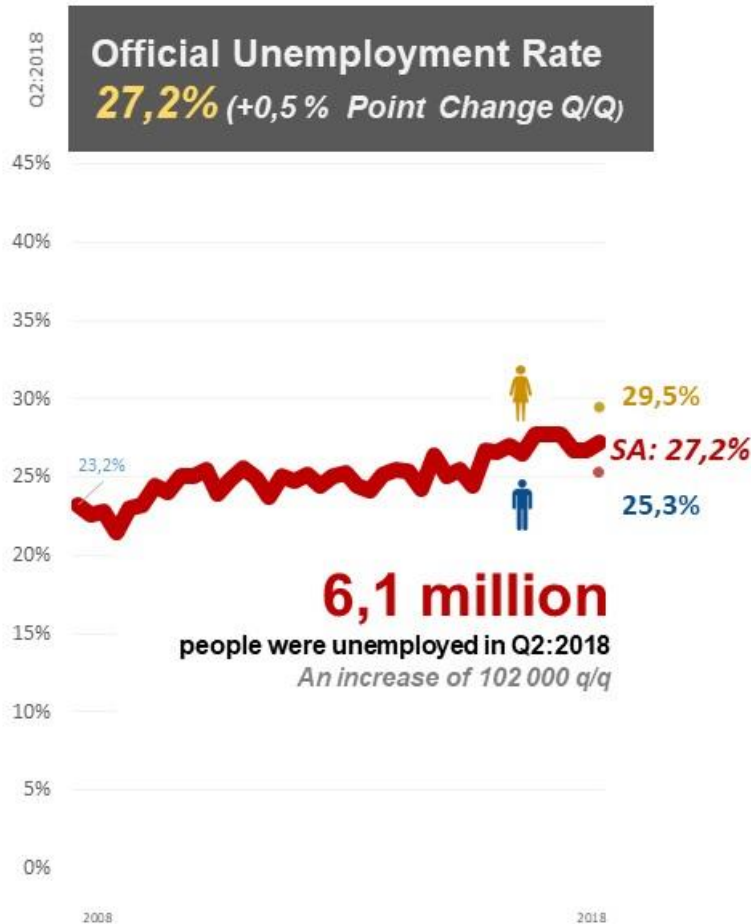
SOURCE: TRADINGECONOMICS.COM | STATISTICS SOUTH AFRICA



# RSA Unemployment



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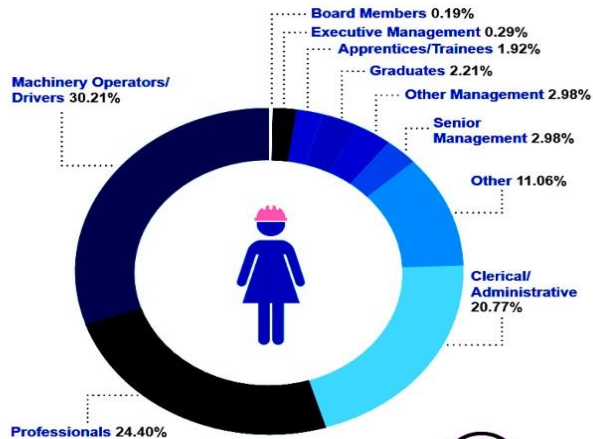
QLFS Q2:2018

what the stats say:

# Women in mining



## Women in Mining- Extracts from Mineral Council Workgroup



**63%**  
of companies surveyed provide **personal protective equipment** and clothing suitable for women

**72%**  
of companies surveyed offer **paid parental leave** in addition to the government schemes

**90%**  
of companies surveyed offer **flexible working arrangements** such as part-time work, flexible hours and home-based work.

**62%**  
of women in the mining industry have been employed in their current role for **1-5 years**

**71%**  
say **more should be done** to encourage women to consider a career in the mining industry

**93%**  
would **encourage other women** to work in the mining industry

(Source: NSW Women in Mining 2014: A Snapshot)

By @VickySidler



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### Challenges

- Safety
  - *Nightshift*
  - *Travelling*
  - *Sexual Harassment & Assault*
  - *Ablution Facilities*
- Physical Limitations
  - *Strength, Weight lifting & Stamina*
- Equipment
  - *PPE*

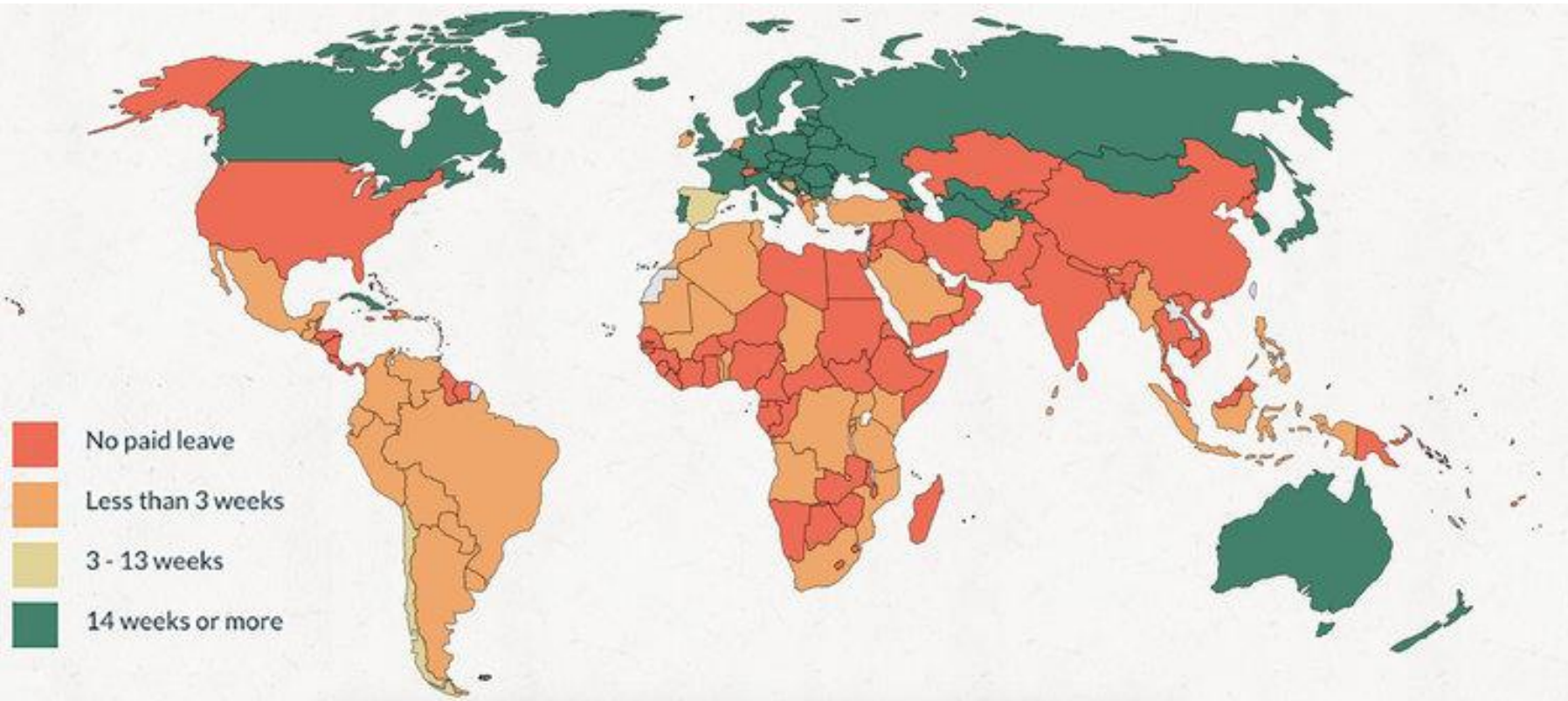
### Working Solutions

- Safety
  - *Illumination & Work areas & Ablution Facility implementation*
  - *Security @ Night*
  - *Awareness*
  - *“Work Buddies*
- Equipment
  - *PPE Workgroup*

# ***Paternity leave around the world***



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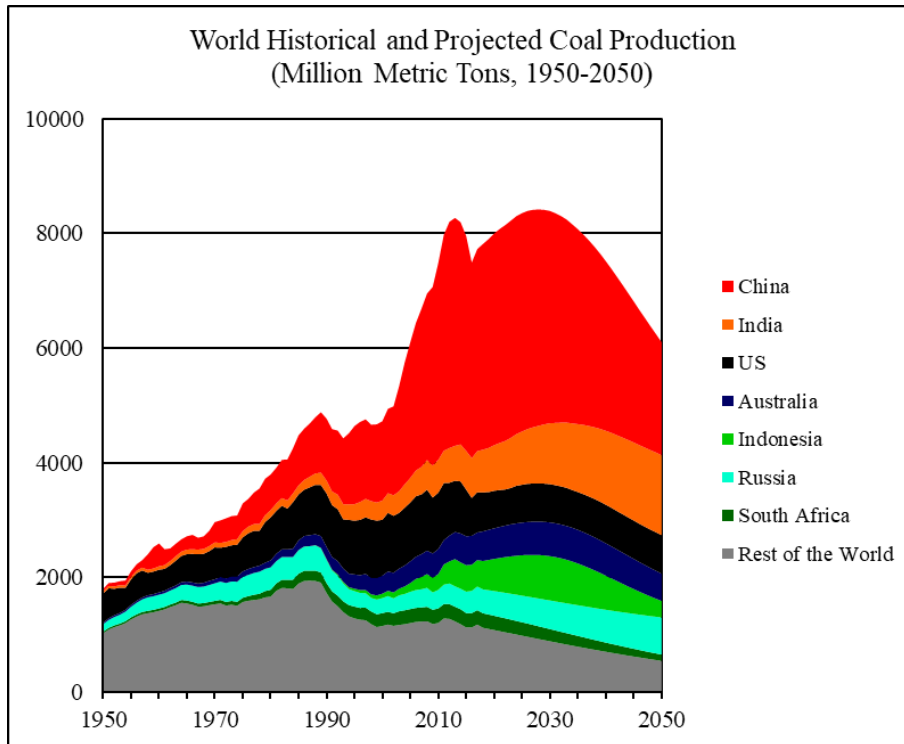


- In 2018 South Africa increased to 10 working days of paternity leave
- Australia is on 3 months of paternity leave

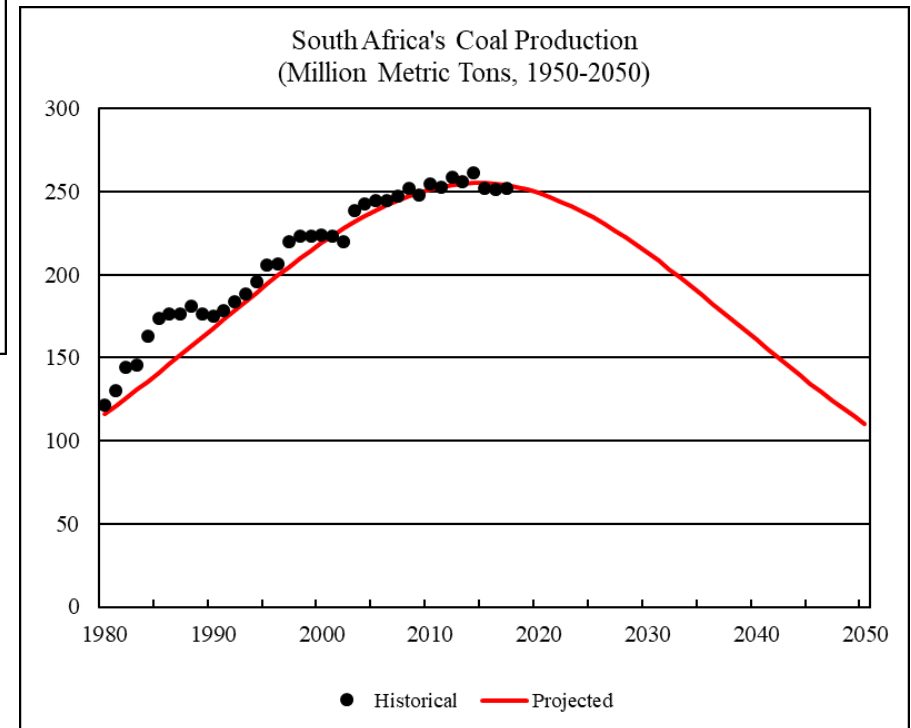
# Global Coal Mining



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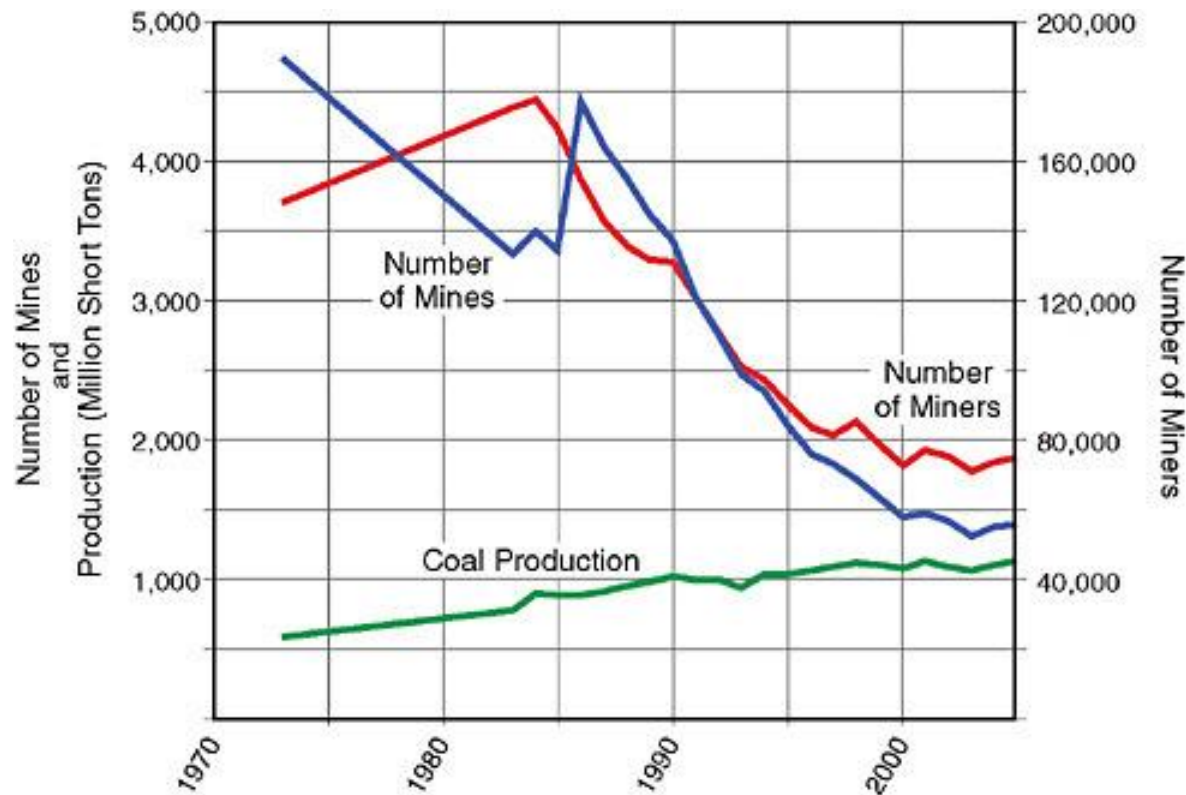


# RSA Coal Mining



# Coal Mining Trends in the USA


Number of coal mines, production tonnage, and miner employment in the U.S. coal industry.




# RSA – Eskom and Coal

## This is how much Eskom needs to survive

 **R350 billion** government guarantees, of which R275 billion has already been used

 The electricity utility will have a **R5 billion** cash gap by the end of the month

 By the end of March, Eskom will need financing totalling **R20 billion**

 Over the next four years Eskom will require **R60 billion** in financing per year

### Projected operating costs for 2018/19 year:

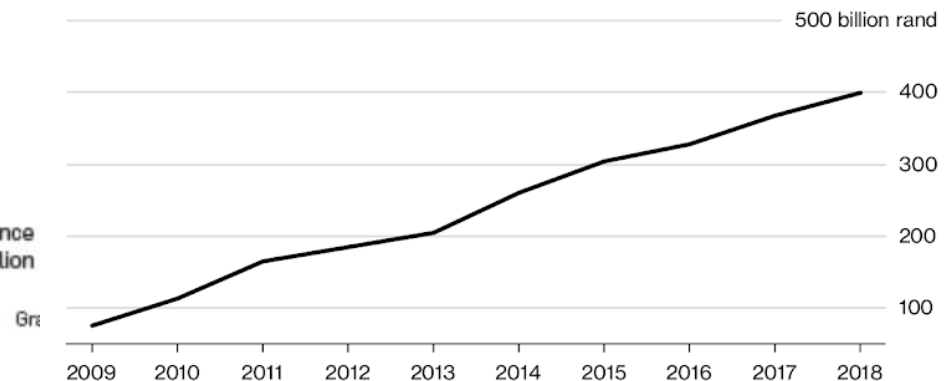


Source: Treasury, Mail & Guardian, department of public enterprises, Eskom

*Fixing Eskom is arguably President Cyril Ramaphosa's biggest challenge as he attempts to modernize South Africa, boost growth, provide jobs and overcome poverty*

### Debt Is Climbing

Total nears \$30 billion



Source: Data compiled by Bloomberg

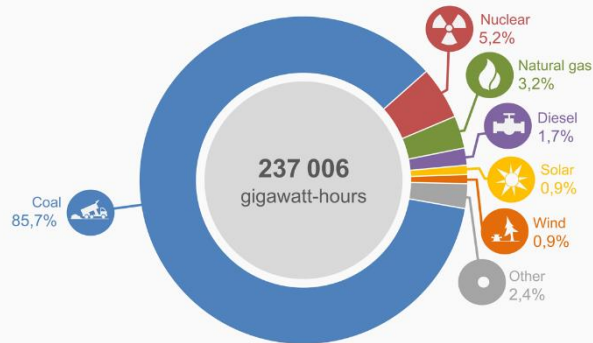
**Bloomberg**

# South Africa – Electricity Landscape



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Coal remains South Africa's dominant source of energy  
Total electricity generated by source, 2016



Excludes municipalities and enterprises that distribute liquefied petroleum gas (LPG) Source: Electricity, gas and water supply industry, 2016



THE SOUTH AFRICA I KNOW, THE HOPE

	Coal	Nuclear	Hydro	Storage (Pumped Storage)	PV	Wind	CSP	Gas / Diesel	Other (CoGen, Biomass, Landfill)	Embedded Generation
2018	39 126	1 860	2 196	2 912	1 474	1 980	300	3 830	499	Unknown
2019	2 155					244	300			200
2020	1 433				114	300				200
2021	1 433				300	818				200
2022	711				400					200
2023	500									200
2024	500									200
2025					670	200				200
2026					1 000	1 500		2 250		200
2027					1 000	1 600		1 200		200
2028					1 000	1 600		1 800		200
2029					1 000	1 600		2 850		200
2030			2 500		1 000	1 600				200
<b>TOTAL INSTALLED</b>	<b>33 847</b>	<b>1 860</b>	<b>4 696</b>	<b>2 912</b>	<b>7 958</b>	<b>11 442</b>	<b>600</b>	<b>11 930</b>	<b>499</b>	<b>2600</b>
<b>Installed Capacity Mix (%)</b>	<b>44.6</b>	<b>2.5</b>	<b>6.2</b>	<b>3.8</b>	<b>10.5</b>	<b>15.1</b>	<b>0.9</b>	<b>15.7</b>	<b>0.7</b>	

- Installed Capacity
- Committed / Already Contracted Capacity
- New Additional Capacity (IRP Update)
- Embedded Generation Capacity ( Generation for own use allocation)

# Carbon Tax implementation in RSA - 24 Nov'18

In its bid to tackle climate change, the South African government has thrown most of its weight behind setting a price on carbon emissions. The tabling of the Carbon Tax Bill in late November 2018 was the culmination of a fight that has lasted almost a decade.



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## CARBON TAX

An emission tax designed to get firms to internalize the negative externalities only imposed on society i.e. production of emission from factories using fossil fuels that contribute to extensive droughts, flooding and rising sea levels.

Effective carbon tax rate will be between **R6 - R48** /tCO<sub>2e</sub> once the tax free allowances are taken into account.

The tax will have no net impact on electricity prices until 2020.

**WHO WILL BE AFFECTED?**  
Industry | Business | Citizens

**SO WHAT?**  
The simulations suggest that the introduction of carbon tax would lead to estimated decrease in emissions in South Africa of...  
**13% TO 14.5% BY 2025**  
& **26% TO 33% BY 2035.**  
This will also lead to a reduction in local air pollution and restructuring of the SA economy to being less emissions intensive.

**WHY?**  
It is a cost effective instrument, as part of a package of measures, to nudge our economy onto a more sustainable growth path.

South Africa as a developing economy has ratified the Paris Agreement which requires sizable reductions in energy-greenhouse gas emissions in large emitters, including in developing economies.



**national treasury**

Department:  
National Treasury  
REPUBLIC OF SOUTH AFRICA



Secondly, as of December 31, 2022, the carbon tax - currently at R120 per tonne - will increase at a rate of inflation +2%.



# ***Safety – South Africa 2018***



- 2017 90 fatalities of which seventeen occurred in coal mining
- 2018 81 fatalities of which nine occurred in coal mining
- Three major events resulted in eighteen fatalities ( Kloof heat exhaustion, Driefontein seismic event and Phalaborwa conveyor fire )
- So far in 2019 1 x fatality recorded in coal mining
- Major concern – Gloria disaster / copper thieves

# Industry 4.0

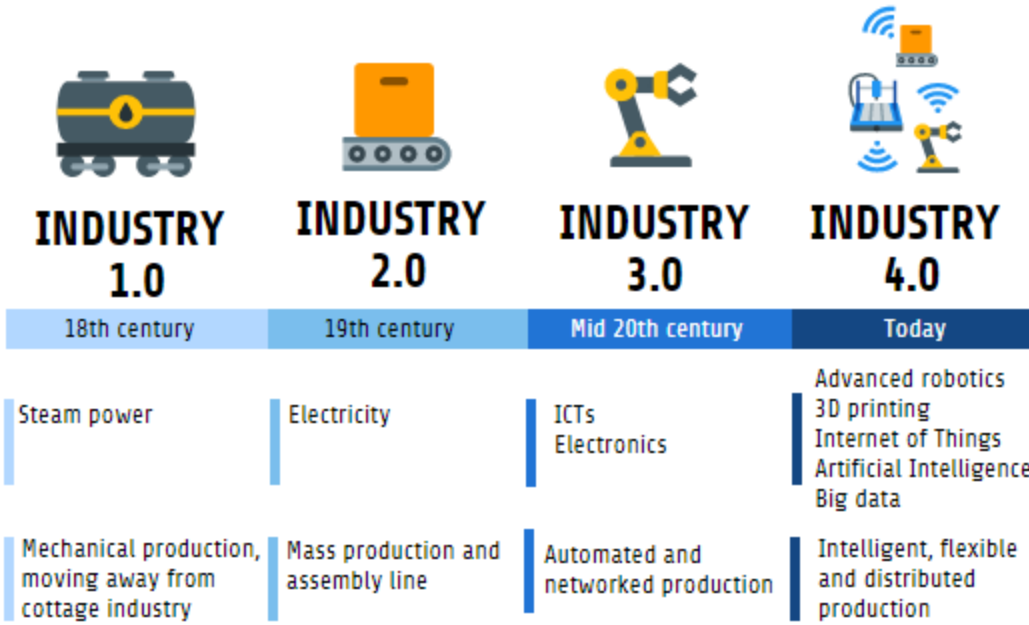
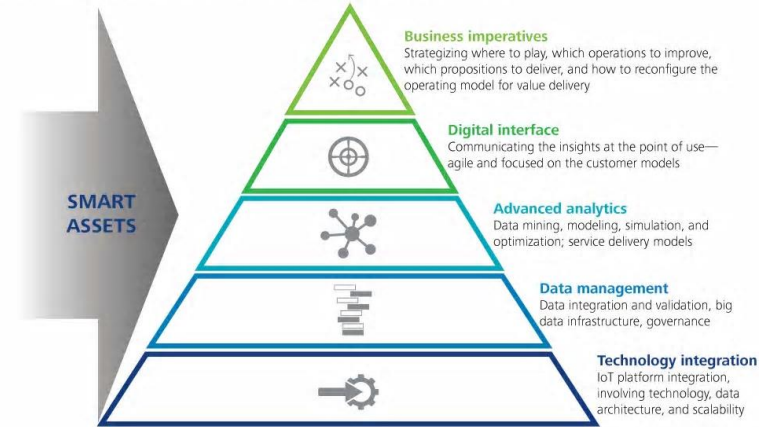
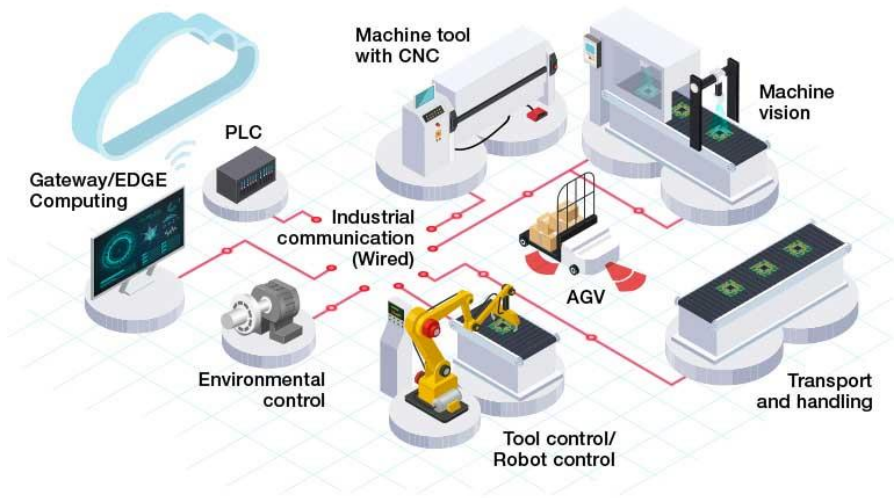


Figure 2. Solutions layer architecture and its key dimensions for Industry 4.0



Sources: Deloitte Services, LP.

Graphic: Deloitte University Press | DUPress.com

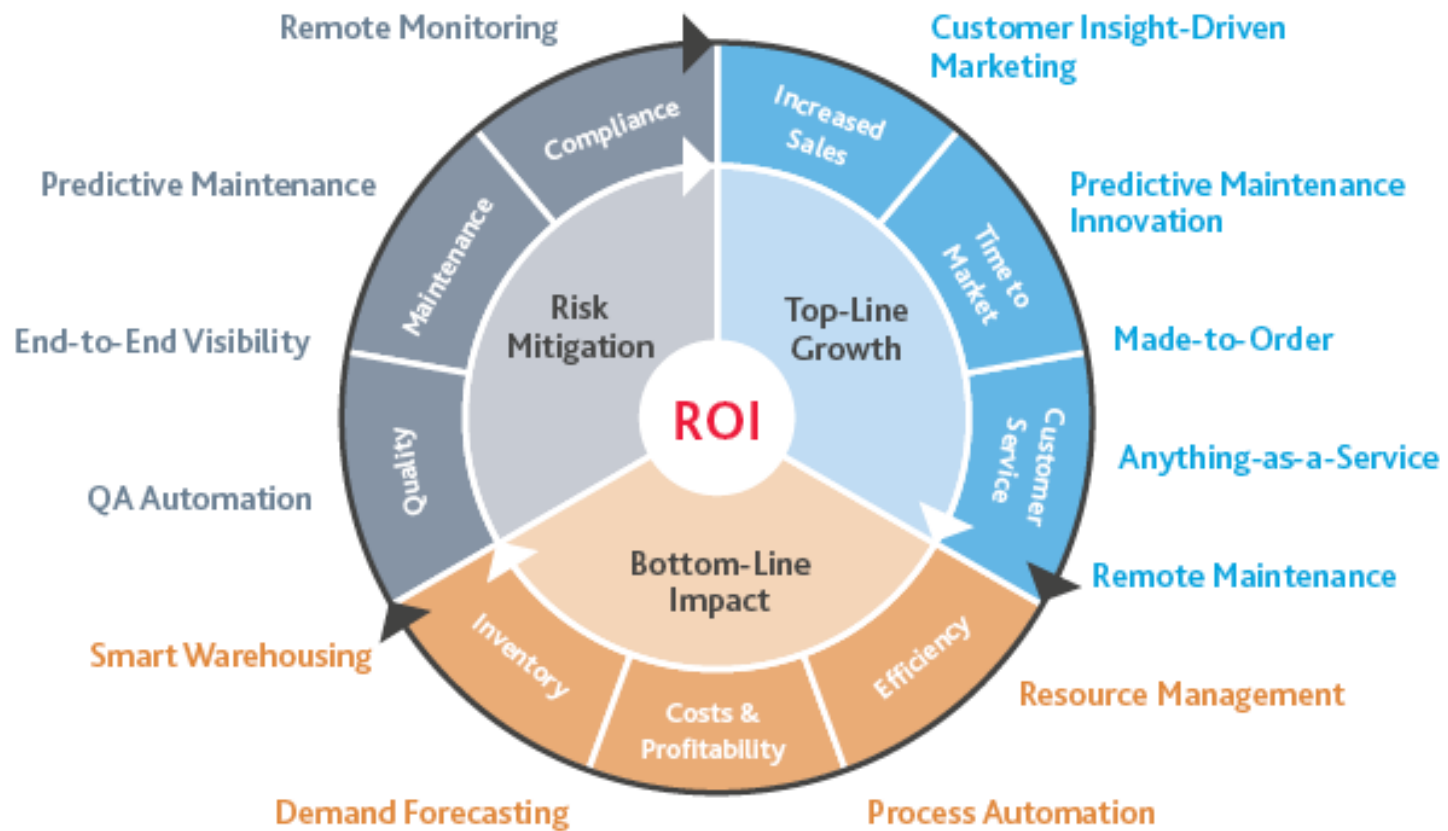


# Industry 4.0



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## INDUSTRY 4.0 VALUE CREATION



# Industry 4.0



CSC

## The Smart Mine EVOLUTION

CSC provides a wide range of technology and business solutions to natural resources companies like BHP Billiton, Rio Tinto, Woodside Petroleum, Chevron and Inpex. Our services include mine IT planning and execution, logistics, equipment tracking, information and technical data management, and remote communications.

To help these and other miners meet their business and financial goals, we combine industry-specific knowledge with technical insight and process expertise. We have a deep understanding of capital projects, geosciences data management, mine operations planning, plant operations, orebody modelling, fleet management, and stockpile control and accounting. We combine this industry knowledge with expertise in aligning IT priorities to business goals; implementing and optimising IT architectures and value chain optimisation, including supply chain management.

CSC is a Fortune 500 company recognised by over 150 analysts for the provision of enterprise outsourcing, application development, enterprise architecture services, complex systems integration, performance engineering, program and change management. These credentials are supported by ITIL and ISO accreditations and CSC's global Catalyst methodology which provides a common framework, language, and processes to deliver

consistent, efficient and high-quality services and solutions.

By partnering with CSC, you get access to our 98,000 staff operating in over 40 locations throughout the world and a rich heritage of supporting natural resources clients and their global operations. Contact us today at [csc.com/natural\\_resources](http://csc.com/natural_resources)

### FUTURE INSIGHTS

Insights from our experience can enhance future mine planning.

#### 1 REMOTE OPERATIONS CENTRE (ROC)

Our experience in command and control centres provides a competency to architect a 'network centric mine'. This approach supports the co-location of expertise to make better operational decisions through enhanced visibility and optimisation of people, equipment and assets.

#### 2 FUTURE WORKER

Our extensive research into smarter PPE has resulted in 'smart-glasses' and hands-free voice and video. Field-workers are linked to remote experts allowing visual work instructions to be displayed in real time. This will improve time-on-tools and lower head count on site.

#### 3 AUTOMATION

We deliver advanced automation solutions to industries such as defence, aviation and aerospace. Technologies such as Industrial Wireless, systems integration, fleet management, and Geospatial Information Systems can be used to support the complex automation of components throughout a mine site.

#### SAFETY

Our culture of safety is demonstrated by our accreditations in occupational health and safety. In mining, our Licence to Support certification enforces the safety of our field service and onsite personnel

#### WORKFORCE MANAGEMENT

Our integrated solution streamlines travel, site access and contractor management resulting in reduced compliance risk and increased efficiency

#### COMMUNICATIONS

As systems integrators, we provide telephony, wireless data and two-way radio communications that create a safe and informed environment

### ENABLING A SMART VALUE CHAIN

Decisions on your mine - during plan, build and operate - are all about optimising value and safety. Our combination of integrated solutions and services enable optimisation from the long term mine plan to the short term logistic schedule

### CAPITAL PROJECTS

CSC's role in end to end mine planning reduces capital investment and risk.

#### 4 MINING REFERENCE MODEL

Robust architectures and processes developed over 15 years combine the shared knowledge of our mining industry experts, who've designed and built fully integrated solutions in operations around the world. This helps us deliver capital projects quickly and brings discipline, ensuring all functional requirements are delivered and can support a standardised approach across multiple mines.

#### 5 PROVEN EXPERTISE

Our consultants have a wealth of experience working on major projects, in many geographies, with clients around the world. They provide engineering discipline to the delivery of ICT projects in a mining environment. Their operational expertise adds insight to mine planning with an eye on business process redesign and the entire mining value chain.

#### 6 OPERATIONAL SUSTAINABILITY

Our engineering approach combined with our experience, delivers sustainable system design that can evolve with the changing operational requirements over the life of the mine.

#### UNDERGROUND

Our Decline Traffic Information System uses RFID tags, readers and antennas to increase productivity and improve safety in a hostile environment

#### MAINTENANCE

Our material, repairs and overhaul capability allow us to enhance planning and operations, maximising equipment reliability, lifecycle and production throughput

#### MOBILITY

Our wide range of fully-integrated mobility services support the remote dispatch of work orders, tracking of fixed assets, mobile assets and people

#### REAL-TIME DECISION MAKING

We provide collaboration tools, accurate data and timely analytics to enhance decision support systems across the value chain

#### TRANSPORTATION AND SCHEDULING

Our integrated logistics capability can connect multiple systems to optimise product movements, rail/port operations, through to product delivery

### SOLUTION MODELS

Why choose CSC? We deliver flexibility, scale and in-depth knowledge of your industry.



**BROKERAGE**  
Balanced and objective advisory services from industry experts



**TURN-KEY**  
Highly efficient, industry-specific, standardised platforms that provide high value



**FIXED PRICE**  
Confidence in our ability to deliver on-time and on-budget



**A5-A-SERVICE**  
A mechanism for providing cost predictability and control



**RISK AND REWARD**  
Innovative solutions that will deliver value to your bottom line



**EXPERTISE**  
Combining industry-specific knowledge with technical insight and process expertise

CSC Proprietary

# *Reflection on 2018*

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# *Outlook for 2019*



South African Colliery Engineers Association



**"To be a professional, dynamic, value adding and influential body in our industry"**

# REFLECTION ON 2018 AND OUTLOOK ON 2019



## 2018 Highlights

- DMR engagements ✓
- Regional and user forums. ✓
- Safety workshops. ✓
- Technical Symposium. ✓
- Tripartite meetings. ✓
- CM&EE, OH&SPC, PDS, Standards and other COM and DMR / HSC initiatives ✓
- Fund raising initiatives. ✓

## Emerging issues

- Mine ownership changes and restructurings – membership impact
- Mining Indaba: Mosebenzi Zwane vs the mining Industry – ownership, employment equity targets (employee attraction between mines). SACEA diversity
- Labour unrests.
- Emergency preparedness underground.
- Community unrests/activism on the rise – on the rise. Social Labour Plan.
- Cell phones and PDS (whole legislation) – way forward

## 2018 Low lights

- Website upgrades. ✗
- Addressing competency challenges. ✗
- Learning and sharing of good practices across mining houses. COPs, SWP, etc. and implementation plan execution ✗
- Membership growth. ✗
- Women in council. ✗
- PPE standards. ✗

## Priorities

- Further improve DMR relationship and mutual respect
- Reduction of repeat accidents.
  - Machine to man (PDS, etc), Lifting and rigging, Conveyors.
- Continue building on previous years' successes.
- Membership growth – Small mines.
- Adopt a 20/80 principle. Achieve more with little.
- Participate in Regulatory / Legislative changes – **SHE**.
- Enhancing safety and productivity through innovation / technology.
- Mining automation / innovation to improve safety and production.
- Engineers legal responsibility in event of incident of personnel

# SACEA Coal Industry Scenarios



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## High Demand for Coal

### Scenario 2: "Cheap coal is in!"

- Low productivity
  - High CFC, low efficiency, high labour cosy
- High production cost
- CO2 penalties probable
- High infrastructure cost (RB not on time)
- Scarcity of water

### Scenario 1: "Booming Coal"

- Shortage of coal supply
- Acceptable coal pollution solutions – CCS, CO2
- Electron/electricity economy growing
- Clean energy commercialisation slow

## Low Profit Industry

## High Profit Industry

### Scenarios 3: "Coal not Sexy"

- Alternative energy sources found (shale gas)
- Hydro-Electricity from Moz, Congo
- Stringent environmental legislation
- Economic crises in RSA
- Affordable renewable energy
- Global depression
- Regulatory interference

### Scenario 4: "Coal Frustration"

- Over supply in coal industry
  - Old mines close, forced closures
  - Waterberg slow
- Change in mining methods – productivity up (tools, skills methods)
- Declining reserves
- Slow mining rights conversions
- Slow/no investment by mining houses

## Low Demand for Coal

# SACEA Coal Industry Scenarios (general indicators)



## High Coal Demand

- High economic activity increase energy demand
- High growth in electricity demand
- Energy alternatives do not meet demand
- Environmental solutions to coal pollution

2011

### Divergent paths 2018

- China/India highish demand
- Higher local demand for cheap good quality coal

2018

2018

2012

## Low Profit Industry

Low growth in the overall global economy < 3.5% p.a.  
Export  
Low coal price  
Domestic

2017  
Domestic

2017  
Export

2014

2013

## High Profit Industry

Strong average global growth >4%  
Drives higher growth and prices  
High coal price

2016

2015

## Weak Coal Demand

- Low economic growth decrease demand – globally and/or locally (also Eskom low demand)
- Energy alternatives commercially viable – decrease fossil fuel demand
- Environmental pressures decrease coal use

### Divergent paths 2017

- Export recovery faster
- Domestic demand increase slightly



# *Current Status/Issues in Coal Mining*



## *Long Term Outlook*

- Coal RSA horizon now 2050 for both local and export coal
- Coal industry depends on Eskom, Sasol and Arcelor Mittal in RSA
- Disruption event to coal industry will be gas discovery (e.g. Karoo or Outeniqua basin) or ‘cheap” IPP power
- CO2 / carbon tax may be industry “disabler”

# *Current Status/Issues in Coal Mining*



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## *Next 10 Years*

- *New Eskom structure will*
  - *Put more emphasis on better quality coal*
  - *Cost pressure on coal and delivery*
  - *Saving producer effect will cause power disruption*
- *Reserves left → difficult mining conditions → higher safety risk → cost challenge*
- *Increasing involvement of local communities (study South American mining model)*
  - *Level of education*
  - *Training and development challenge*
  - *Increase” local content”*
  - *Local execution of projects challenge*
  - *Local town development*
  - *Utilisation of approved resources*

# *Current Status/Issues in Coal Mining*



## *Next 10 Years*

- *Carbon law tax approved*
  - *Carbon footprint becomes part of engineering vocabulary*
  - *Carbon footprint per large equipment piece* → *intensity per running hour = productivity*
  - *Contradictory forces: Run 24 hours vs do everything in 8 hours*
  - *Management time increases*
- *Increased BBBEE requirements (cost/schedule/safety/quality)*
  - *Women business forums*
  - *Pressure to use level 4+ suppliers*
  - *Not enough suppliers in market - company development required*

# *Current Status/Issues in Coal Mining*



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## *Next 10 Years*

- *Lack of local investment*
  - *Slow /no job creation*
  - *Decline of services / businesses*
  - *Poverty increase*
  - *Crime increase → cable theft → risk on mines*
  
- *Onerous legislation on machinery / engineering / safety increasing*
  - *Iso 45000 – 2019 implementation*
  - *Air quality act*
  - *New machinery legislation*
  - *Consequences of incidents*
  - *GCC onerous risk*
  - *Engineering team increasing in numbers → highly skilled*

# *Current Status/Issues in Coal Mining*



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## *Next 10 Years*

- Role of the OEM is changing
  - *Required to meet bee levels to continue trading*
  - *May require “local company” to provide service/maintenance*

# *Current Status/Issues in Coal Mining*



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## *Short Term: Next 2-3 Years*

- Eskom changes → significant pressure on **cost and productivity**
  - *Capital funding not available for projects*
- Need for new contracts/management with **communities**
  - *Educate / train / develop*
  - *Job opportunities*
  - *Small business development*
  - *EMPLOYEE CARE i.e. Transport after hours*
  - *Employee assistance extended to families*
  - *EMPLOYEE ESSENTIAL SERVICES i.e.*
    - *Wi-fi*
    - *Social labour plan*
    - *Afterschool classes (math/ science)*

# *Current Status/Issues in Coal Mining*



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## *Short Term: Next 2-3 Years*

- Mining Charter Changes (charter 3)
  - *Women in Mining* – limited resource pool → competition
  - *Training facilities must provide for women in mining – intake strategy*
  - *Shift structures/facilities/services must provide for it*
  - *Family support to women in mining*
  - *Solutions BY women in mining FOR women in mining*
  
- Truly understanding **Digitisation/Industry 4**
  - *Short term benefits in efficiency/productivity/safety*
  - *Long term impact in employment/skills/learning*
  - *Align MQA with these requirements*

# *Current Status/Issues in Coal Mining*



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## *Short Term: Next 2-3 Years*

- Improve the world of the engineer
  - *Information overload*
  - *Legislative requirements*
  - *Burden of reports*
  - *Paper war*
  
- Continued strong relationship with the DMR
  - *Pragmatic approach to non-compliance*
  - *Focus on operations complying to own procedures*
    - *Moved from regulatory risk to compliance risk*
  - *Focus on sharing of best practices – what and how*
  - *Impact of digitisation on DMR*
    - *Acceptance of digital job cards*



# *Current Status/Issues in Coal Mining*



## *Short Term: Next 2-3 Years*

- GCC qualification and the structure going forward
  - *Work group currently developing the curriculum*
  - *Is SACEA actively involved*
  - *GCC registered as an MQA*
  - *Questions regarding assessing criteria*

# *Safety in Mining – Themes/focus for FY19*



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DYNAMIC  
VALUE ADDING

<b>Safety Theme/Focus</b>	<b>Company</b>	<b>Person</b>
Hand injuries (material handling)	Glencore	Jan D
Equipment catching fire (conveyor belts, machines)	Exxaro	Louis T Stompie
TMM accidents (traffic management)	Sasol	Schalk Hennie Louis T Bonthle
Lifting equipment	Exxaro	Stompie
Process to conduct investigations	Exxaro	Hennie
Safety leadership	Sasol	Louis B Mazwi Johannes
Quality/methodology of risk assessments (baseline, templates, standards)	MGC	Fefa

# *Current Status/Issues in Colliery Engineering (summary)*



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VALUE ADDING

*past 6 years....*

- Decreasing of coal prices
- Period of large replacement programmes
- New mining projects
- Changes in legislation
- Labour challenges
- Successful SACEA delivery
  - Safety challenges
  - Safety workshops
  - Conveyor belts
  - Coal mining fatalities down
  - 2013 milestones achieved
  - Technical symposiums
  - Nearly 100% membership growth

**2019**

*....future very different*

- Low coal prices and expected new norm:
  - Smaller engineering budgets
  - Sweating of assets
  - Less replacements
- **Increase productivity = cost x time = must add value**
  - Association memberships scrutinised for value
  - SACEA reposition for changing industry
- Higher focus on “made in RSA” to limit exposure to exchange rate
- Safety challenge remains top of the agenda
- **Stricter governance on proximity detection and collision avoidance**
- **New electrical regulations change industry**
- Productivity drive results in smaller workforce & shrinking membership
- RSA OEMs struggling for existence

# *Some thoughts from the session*



## **Current Status/Issues**

- Cost/ Capital pressure
- Prices - New Normal,
- Unrealistic demands
- Coal will remain relevant
  
- Labour, Skills, talent challenges
- High number of 189's
- Isolism
  
- Change in ownership,
- Increase smaller players,
- More mergers
  
- Difficult to comply,

## **Reaction to change...**

- Adopt to change
- Financial control to equal production control**
  
- Technology to play a bigger role**  
Maintenance strategies(rebuild for longer),**Autonomous operation, integrated safety**
  
- Further challenging capital/ cost (stay in business capital)
  
- Avoid the poor man's trap, balance  
Collaboration become more important
  
- Wider role for SACEA required**  
**SACEA needs to take ownership**

# *Discussion with the DMR*

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Collaboration for a better industry



South African Colliery Engineers Association



**"To be a professional, dynamic, value adding and influential body in our industry"**

# DMR Discussion – SACEA Feedback 2019

Formal relationship, with a common goal and specific priorities to achieve zero harm in the Coal Mining Industry



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DYNAMIC  
VALUE ADDING

## Feedback of focus/contribution by SACEA

- Meeting with DMR – 22 February tentative date led by Johannes, Ephraim, Fefa, Jerris, Marcin
- Conduct a SACEA Council meeting at one of the smaller mines – Fefa
  - *Special meeting inviting engineers from smaller mines to the meeting*
- Zero harm goal contribution for 2019
  - *Leading practice sharing*
    - *Hand injuries (material handling)*
    - *Equipment catching fire (conveyor belts, machines)*
    - *TMM accidents*
    - *Lifting equipment*
  - *Legal responsibilities, competencies and compliance of the Engineer*
  - *Upskilling of first-line supervisors*
  - *Support/attend RTF meetings*
- Enable the Safety Officer
  - *Reporting lines that empower*
  - *Engineer mandate to take decisions*

## Questions we have to DMR

1. Please provide the detail of engineers and GMs and contact details on smaller mines to SACEA to enable effective engagement by SACEA
  1. *Provide Fefa's detail to DMR to give to small mining houses*
2. DMR to encourage engineers in small mines to participate in SACEA/SACMA
3. What is the DMR's concern with Safety Officers? What is contributing to this? How can it be resolved?

# ***DMR Feedback 2019 (Ayanda)***



- PI will call SACEA/SACESHA/SACMA Presidents for meeting
- SACEA must assist in ensuring that engineers carry their legal duties
- SACEA must be a driver in the industry for engineering-based regulations – with a specific focus on small scale mines
- SACEA must be the driver of PDS implementation
- SACEA must develop systems to ensure that engineers enable safety officers to do their work/inspection
- DMR is willing to make sure that they engage with SACEA
- In our first DMR engagement we must prepare high level 2019 approach to enhance the goal to Zero Harm - How are we going to contribute in 2019 towards the goal of zero harm?
- How are we going to assist engineers in the mining houses to reduce accidents?
  - *Hand injuries (material handling)*
  - *Equipment catching fire (conveyor belts, machines)*
  - *Equipment overturning (open cast)*
  - *Lifting equipment*

# ***DMR –SACEA 2019 interaction Next Steps***



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1. To be concluded once DMR meeting takes place on 22 February 2019
2. Meeting postponed due DMR involvement in Gloria disaster rescue operation
3. Fefa and DMR team working on new DMR engagement schedule



# *Inputs from Company HOE's*

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# HOE's inputs - 2019



- **Value addition** of SACEA
- Increase SACEA **membership** – especially of young engineers
- Experience and **best practice sharing** (find ways within competition law to share).
- **Productivity** improvement
- New technology and **digitisation** (PDS implementation – engage OEM)
- Continue with the **DMR engagement** and value add
- **Industry 4.0**, data mining, value of information, real-time feedback of machinery
- Continue with **technical visits** – it adds value
- Work much closer with **AMRE** (hard rock association) – align on key issues like GCC etc.
- **SAFETY, SAFETY, SAFETY** – increase in fatal's a concern
- **Marketing** of what SACEA is doing

# HOE's Concerns - 2019



- Foreman competency – front line supervisors knowing all legislative and standard requirements (2.9.2 appointee) (User Groups, Dedicated SACEA workgroup)
  - *Coaching and skills development of the new*
  - *Refresher training of the experienced*
  - *Skills transfer*
  - *Workload management and resourcing – systems to support*
- Artisan technical skills (Involve CTC on Council)
  - *Skills transfer to new artisans*
  - *Fault finding skills*
  - *Ownership of artisans by first line supervisors*
  - *Upskilling in latest technology*
- Roles and responsibilities of Artisans, Foreman and Chief Foreman (Company Specific)
  - *Get levels of work right – who is doing what*
  - *Create time for learning and coaching*
  - *Appropriate culture*
  - *Coordination of resources*
  - *Agreed engineering structures/legal appointments*

# HOE's Concerns - 2019



- Control effectiveness (Best practice sharing)
  - *Knowing the real effective critical controls*
  - *Prevention of repeat incidents – failure of controls execution*
  - *Failure of implementation of controls*
  - *“Why do we have section 54’s when we have engineers” – stop unsafe work*
- Electronic licensing for the competency of operators (Best practice sharing)
  - *Electronic management of process*
  - *Simplify management of competencies*
- Community participation and involvement (Company specific)
  - *Capture from yesterdays work*
- Repeat incidents of the man-machine interface (TMM repeats) (OEM and SACEA)
  - *Why do we still have incidents?*
- Reliability and availability of machinery (User Groups)
  - *Quality and skills of maintenance (maintenance maturity)*
  - *Ability to plan and execute the plan*
  - *Unavailability of spares – spares management*
  - *Defect elimination – engineer out repetitive breakages. Predictive, RCA*
  - *Operation of machinery within limitations – impact of operating context, competency*

# HOE's Concerns - 2019



- Engineering thought leadership (Regional Meetings, Safety Workshop)
  - *Safety*
  - *Cause and consequence relationship of actions. Why are we doing certain things?*
  - *SACEA to initiate a HOE combined meeting (SACEA)*
- Identification and engineering out of inherent risks in equipment (OEM, User Groups)
  - *Pre-empt and proactive correction*
- Risk identification and engineering of controls. Normally gap in the gears below. (Sharing of Baseline Risk assessments of critical machinery. Dedicated SACEA workgroup)
  - *Baseline risk assessment*
  - *Control measures and procedure in place*
  - *Training on procedure and controls*
  - *Competency declaration*
  - *Compliance to procedure and controls*
- Contractor management (Company specific, Electronic Contractors Pack Management System, e.g. KBC)
  - *Ownership*
  - *Compliance*
  - *Equipment management*

# HOE's Concerns - 2019



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- Implementation of PDS on diesel equipment (Technical Symposium)
  - *LHD leading to most fatalities*
  - *Interface between PDS and PDI*
  - *Reliability of machines declining*
  - *Traffic management plan*
- Unpractical standards (Best practice sharing, Technical symposium)
  - *Pullwire*
  - *Electrical installation standards*
  - *Lock-out vs lock-off*
  - *Remote lock-out*

# ***SACEA in Reflection***

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Collaboration for a better industry



**South African Colliery Engineers Association**



**“To be a professional, dynamic, value adding and influential body in our industry”**

# *Scenario: Why will SACEA not exist in 3 years?*



- Fail to lead in Industry 4.0
- Neglecting the relationship with the DMR
- Not perceived to add value to industry
  - *Wrong topics*
  - *Not visible*
  - *Sharing of information / experience*
  - *Deliver on hoe/ general manager expectations*
- Footprint in the industry too small
  - *Not all mines*
  - *Not all engineering managers*
- Perceived as a cost burden by companies
  - *Cash flow*
- Continuous SACEA membership drive
  - *Take charge of engineers*
- Easy to get involved



# *Scenario: Why WILL SACEA exist in 3 years?*



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- Understand & represent the coal mining industry
- Quality not quantity
  - *Do what we say*
- The General Manager/HOE view SACEA as part of his business management
- Collective we can learn faster through sharing
  - *Leading innovation*
- Leaders in the “human” vs” machine” interface and behaviours
  - *Not just systems & rules*
  - *Understanding human behaviour and impact*
  - *Realising level/magnitude of work*
  - *Managing “everything” → information overload*
- Keep our strategic focus
- Influence to tri-partite
  - *Focus*
  - *Agenda*
- Bridge building to alliance partners
- Continued to sell our contribution

# ***SACEA Strategic Direction***

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**South African Colliery Engineers Association**

**"To be a professional, dynamic, value adding and influential body in our industry"**



# Vision



**SACEA**  
PROFESSIONAL  
DYNAMIC  
VALUE ADDING

**To be a professional, dynamic, value-adding and influential body in our industry**

- ❑ **Professional**
  - ❑ In behaviour, responsible, competent, respected, beyond repute, ethical,
- ❑ **Dynamic**
  - ❑ Adaptable, energetic, pro-active, flexible, challenging
- ❑ **Value-adding**
  - ❑ **To member and company, leader, participative, to industry, cost sensitive, innovative, standards settings/influence, best practice**
  - ❑ Respected, acknowledged, change initiators, recognized, consulting, networking, representative, Influence standards
- ❑ **Influential body**
  - ❑ Coal Mining Industry RSA, related Engineering fields
- ❑ **Industry**
  - ❑ **SACEA members and affiliated associations, Chamber of Mines, Government (incl DMR, ECSA, MQA, SANS etc.) labour force, suppliers, learning institutions and the respective Coal mine industry**
- ❑ **Our sphere of Influence**

# ***Mission*** *(Improvements)*



1. To actively influence the development and compliance to practical **safety, health, environmental and sustainable development legislation, leading practices and standards**
2. To **empower members** through effective interaction and to promote professionalism
3. To be the acknowledged **representative body for members and industry** in influencing policy formulation in decision making forums
4. To influence and lead the **technical maturity and sustainability** of the coal mining industry
5. To add significant **value to the Coal mining industry** through our competent members
6. To have **maximum impact in the Coal mining industry** through our association with other Professional Associations
7. To positively impact the quality and quantity of **technical skills development**

# Strategy 2010 - 2012

Where we want to be!

To be a professional, dynamic, value-adding and influential body in our industry

2010



2011



2012



**“Colliery Engineering is special** – visible and valued in Southern Africa”

**“Leverage the integrated solutions to influence responsible industry delivery**

**“Formalising and adopting integrated best practice solutions towards the coal engineering community**  
(Safety, standards, skills, GCC and forum focus)

Where we are

# Strategy 2013 – 2015

Where we want to be!

To be a professional, dynamic, value-adding and influential body in our industry



Where we are

# Strategy 2016 – 2018

Where we want to be!

To be a professional, dynamic, value-adding and influential body in our industry

Lessons learned from incidents, technology development, leadership practices

Leading practices sharing to achieve zero harm production

Enabler – digital media, forums, social platforms, technical visits

2018



2017



Agreed leading practices sharing through modern networking

Technical Symposium Theme

2016



Leading in challenging times through efficient and innovative best practices

Where we are

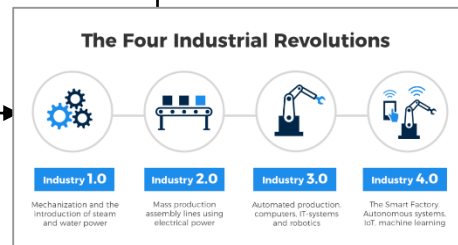
# Strategy 2019 – 2021

Where we want to be!

To be a professional, dynamic, value-adding and influential body in our industry



Next levels of productivity – turning the curve



Ready for Industry 4 – benefit and impact understood



2019

Safe production is PRIME – zero harm, always better!

Where we are



# Strategy 2019



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VALUE ADDING

*Safe production is PRIME – zero harm, always better!*

## ● *Productivity*

- Synergy of Production vs Safety
- Identification of barriers to productivity
- Meeting cost requirements from consumers
- Support the development of local OEMs

## ● *Leading practices sharing*

- Identification of relevant best practices
- Effective and rapid sharing of best practices
- Standardisation of best practices
- Lessons learned from incidents, technology development, leadership practices
- Modern networking, digital platforms

## ● *Digitization*

- Connectivity and infrastructure e.g. wifi
- Electronic work and jobcard methods
- Industry 4 application in coal mining
- Real-time and predictive safety and equipment management
- Skills development of the future Technician

# ***2019 Strategic Objectives***

Council high level Objectives & Performance!



**South African Colliery Engineers Association**



**“To be a professional, dynamic, value adding and influential body in our industry”**

# SACEA Strategic Objectives 2019

2019 – Do survey to measure membership value, and track participation - Annette

SACEA

Objective	Principles	Metric	Actual '18	Target '19
Membership	10% increase	Total Full Members Candidate Members (PIT/EIT) Affiliate Honorary Life Honorary Associate Retired	360 187 111 (+19?) 35 15 1 11	retain 370 193 137  <i>Focus on small mines</i>
SACEA Diversity	Council representative of membership	Co-opt 4 (22 max on council)	10 total, 4 women 20 Women SACEA	>12 diversity on Council >25 Women on SACEA
ECSA	SACEA program fully provides CPD compliance Drive to increase registering process	Full Members Council	members with voting rights = 51% 188 ECSA Registered Accredited to 2023	Retain VA Status (50% member, 50%+1 council)
Financial	Y-o-Y break even, OPEX for +1 year + delta shared cost Membership income = shared cost No audit findings	Cash Objective Acc Funds	Bank R104,033.89 Debtors R133,228.17 Investment R552,197.05 Total R823,591.08	Small surplus >R700,000
Nr. of Engagements	Calendar compliance	Safety w/s, Users Forums, Technical Symposium, Regional. Young Talent Forum	UG user group a challenge. Doing well in others	90% Compliance
Attendance nr.	5 off north Regional > 50, 3 off southern > 15, 2 of Limpopo >20, 2 off each ug/oc/plant User Groups >20, 10 off Council > 70%	Quality and Value add Timeous advertising Supported ito attendance	Plant, OC good, Region > 30 <b>U/G not good</b> Council ~ 13 <b>AGM not good</b> <b>Combined not good</b>	U/G >20, O/C >30 Regionals > 50, Plant > 40, PIT >30 Council > 15/22
Influence	Attend Chamber/Ind. bodies such as CM&EE. OH&SPC, MPAS, Tri-Partite, AMRE, SANS, SAFA	Legislation/Standards TMM/Electrical GCC work groups	General good <b>Do more about Tri-partite OC</b>	Good Relationship and influence
Cert Eng Qualification	Guaranteed grand-fathering Ensure safe mining industry and competency	Improved GCC pass rate > 20% ( <i>increase pool for coal industry</i> )	Plant > 23% Law > 45% GCC WS = 108 attendees	Coal >20%
Safety	Ensure safe mining industry via aligned/agreed standards	Sharing of safety info and best practices	PDS sharing to improve, Good safety workshop – <b>can do more</b> , Elect Regs in draft, <b>more involvement in EMRAC</b>	

# ***Roles and Responsibilities***

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Who is accountable for What?



**South African Colliery Engineers Association**



**"To be a professional, dynamic, value adding and influential body in our industry"**

# *Council Responsibilities: Forums*



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	<b>Chair</b>	<b>Vice-Chair</b>
SACEA Council	Marcin	Annette
Southern Region	*SACMA	*SACMA
Northern Region	Mazwi	Hennie
Limpopo Region	Darryl	Stompie
Under Ground User Group	Louis T	Tejal
Open Cast User Group	Bontle	Fefa
Plant User Group	Jan D	Jan C
Young Talent Forum	Francoise	Louis D
RTF – Underground RTF – Open Cast	Ephraim Bontle	Jerris Fefa

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# Council Responsibilities: Events



	Chair	Work Team
Safety Workshop	Louis B	DMR: Johannes DMR: Fefa  RTF: Ephraim/Jerris
Technical Symposium	Jerris	Sasol: Schalk Exxaro: Stompie Glencore: Jan Anglo: Annette SAEC: Johannes Seriti: Francoise Amre: Marcin  UG: Tejal OC: Bontle Plant: Jan Small Mines: Fefa Universities: Louis T

# *Council Responsibilities: Company Representatives*




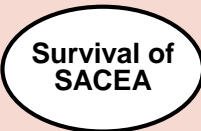





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	1 <sup>st</sup>	2 <sup>nd</sup>
Exxaro	Stompie	Hennie
Sasol	Schalk	Louis
Glencore	Jan D	-
Anglo American	Annette	Jan C
SAEC	Johannes	-
Seriti	Francoise	
Eyethu coal	Fefa	
Small Mines	Fefa	Marcin

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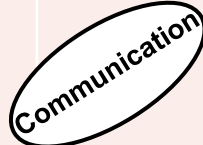





# Strategic Influence Thrusts Compelling us to action

Thrust`	Champion	FOCUS and DELIVERABLES for 2019
Collaborate with the DMR  DMR – Engineering Safety Engagement	<b>President &amp; Vice Johannes Mazwi/ (Jerris) Fefa/ Ephraim</b>	  <ol style="list-style-type: none"> <li>1. Info sharing on Section 54</li> <li>2. Understand DMR expectation</li> <li>3. Strong partnership with regional Principle Inspector and Senior Machinery inspectors - agreed priorities between SACEA and DMR (workshops)</li> <li>4. New regulation implementation – sharing of best practices, clarify issues, share knowledge (Conveyors, TMM, Fatigue, Electrical Regulations)</li> <li>5. Tripartite Forums (Regionals, Task teams)</li> </ol>
Support the industry milestones	Jerris - Underground Jan - OH & SPC Annette – PPE Women Derrick – MOSH	 <ol style="list-style-type: none"> <li>1. New changes: PPE for Women, Noise, Dust</li> <li>2. Participation in working groups (ensure early input)</li> <li>3. Participation in MRAC task teams</li> <li>4. PDS – Sharing of knowledge and leading practices, compliance issue</li> <li>5. MOSH adoption workshops &amp; standards</li> </ol>
Build and grow membership	Membership Lead Regional Chair <b>Company Reps</b>	 <ol style="list-style-type: none"> <li>1. Acquire database at DMR &amp; Contact smaller mines</li> <li>2. SACEA Data base update &amp; Contact members</li> <li>3. Real-time communication on key issues via e.g. WhatsApp</li> <li>4. Weekly communication on key incidents/news to Mining House</li> <li>5. Ensure that candidate members are converted to full members</li> <li>6. Engaging with EM's ito support</li> </ol>
Competency defining and development	Ephraim - GCC Francoise?- PIT & YTF Dave Gravett - CTC Stompie/Louis T - Leadership	  <ol style="list-style-type: none"> <li>1. MQA,CTC, GCC</li> <li>4. Develop competency tests</li> <li>5. Involvement of PITs in Young Talent Forums</li> <li>6. Submission of questions for papers</li> <li>7. Involvement in Annexure E review and findings</li> </ol>
Setting of specifications and standards	Henk/Aldine – SANS/SAFA Gerald/Schalk – BP & TMP	 <ol style="list-style-type: none"> <li>1. Update of SANS</li> <li>2. SAFA Feedback</li> <li>3. Develop Best practice Guidelines</li> <li>4. Traffic Management Plan</li> </ol>



# Strategic Influence Thrust Compelling us to action



Thrust		FOCUS and DELIVERABLES for 2018
HOE/EM that action SACEA solutions	<b>President, Vice &amp; Company Reps</b> 	<ol style="list-style-type: none"> <li>1. Clear rationale and contribution from SACEA in 2016 – focussed agenda</li> <li>2. Focus on HOE/EM and DMR issues – focussed agenda, clear KPI's</li> <li>3. Practices to measure productivity in Mines</li> <li>4. Eskom load shedding – ventilation and getting people safely out of mine</li> </ol>
Improve communication	Anette P/ Tejal/ <b>Louis T</b> – Website (Service Provider)	 <ol style="list-style-type: none"> <li>1. News letter</li> <li>2. Hymn Sheet</li> <li>3. Program Adverts</li> <li>4. Surveys</li> <li>5. Website &amp; Mobile App</li> </ol>
Knowledge sharing	<b>Louis D/Tejal/Francoise</b>	 <ol style="list-style-type: none"> <li>1. Safety collaboration platform(Drop Box)</li> <li>2. Linked In</li> <li>3. Best practice Library</li> </ol>
Technical, ECSA registration, CPD, safety programs	Jerris/Louis T – Tech Symp Aldine/Mazwi - ECSA User Groups Louis B/Schalk – Safety WS	 <ol style="list-style-type: none"> <li>1. Successful Safety Workshop</li> <li>2. DMR Safety Workshop</li> <li>3. Successful Technical Symposium</li> <li>4. Execute 2018 monthly themes via workshops, Forums, etc.</li> <li>5. ECSA VA influence and BE bill management</li> </ol>
Financial Sustainability of SACEA	<b>Louis B Stompie</b>	 <ol style="list-style-type: none"> <li>1. Risk of Mining Houses stopping support (cost pressures) – members pay</li> <li>2. Minimise time at events and maximise value</li> <li>3. Available cash &gt; R700,000</li> </ol>
Other Industry Influence Spheres Participate in legislation formulation	Aldine/Mazwi- ECSA Hennie/ Schalk – CM&EE/CoalTeach Jan D/Jan C – OH& SPC Henk/Johannes – SAFA/SANS Ephraim/Marcin - MPAS (GTC)	  <ol style="list-style-type: none"> <li>1. ECSA -VA status, CPD, registrations support, feedback</li> <li>2. CM&amp;EE – Influence in legislation</li> <li>3. OH&amp;SPC – Influence in legislation</li> <li>4. SAFA/SANS – Influence in stds</li> <li>5. MPAS – Influence in collective governance</li> <li>6. Sister associations to wit collaboration re-MOA GCC ECSA</li> </ol>

# *Communication Strategy*

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Selling the Value Proposition



South African Colliery Engineers Association



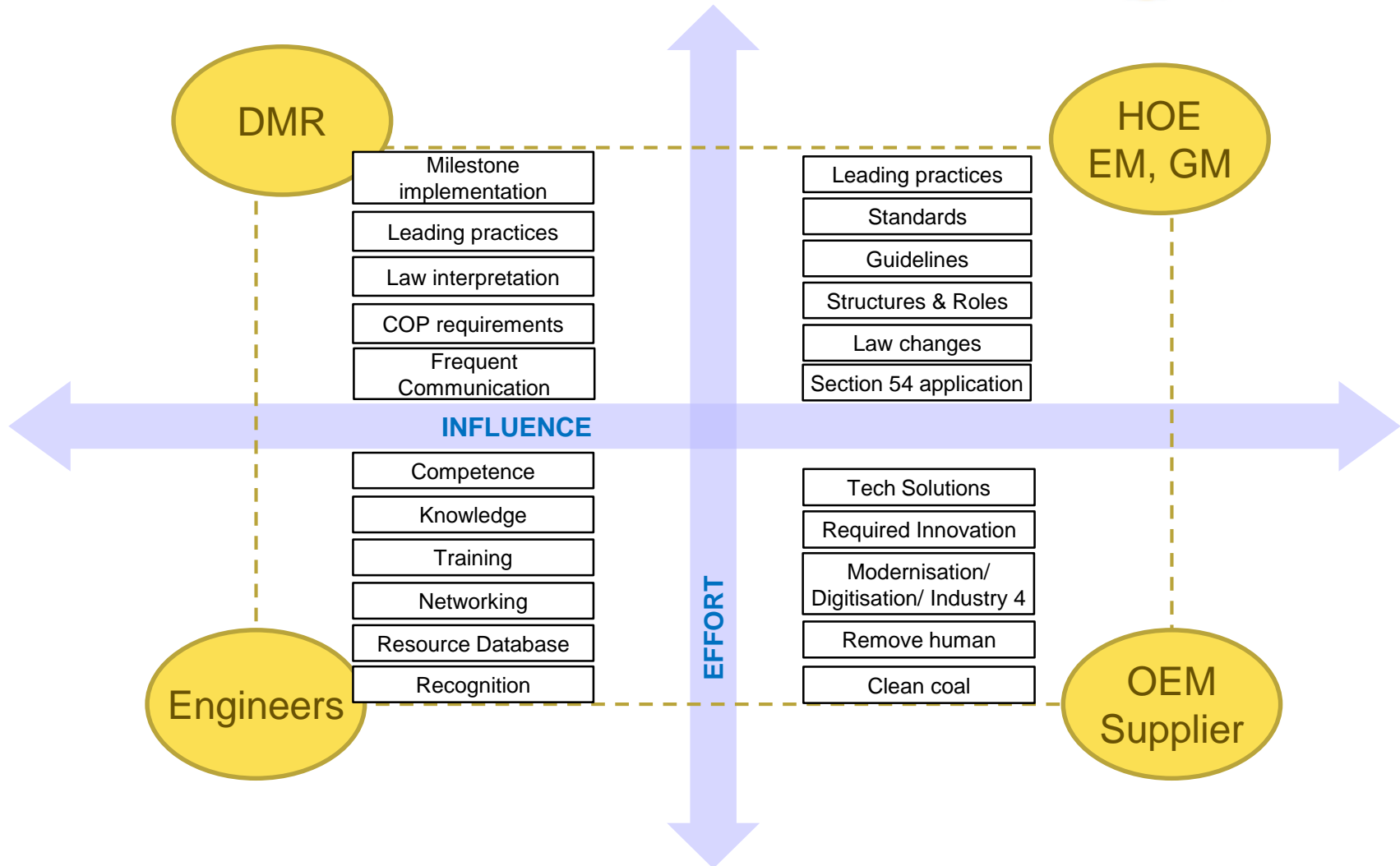
**"To be a professional, dynamic, value adding and influential body in our industry"**

# Strategic Relationship Diagram

The strategic themes highlighted per key stakeholder



**SACEA**  
PROFESSIONAL  
DYNAMIC  
VALUE ADDING



# *Membership Value – Communication Strategy*



## What are we getting right?

- Council WhatsApp group
- Communication hymn sheet
- Advertising and marketing around Safety Workshop and Technical Symposium
- DMR engagement

## Where did we fail?

1. Late notification of user group meetings
2. Sudden change of meeting dates and venues
3. No reminders to chairmen
4. Website not up to date, outdated. View and content not good
5. No newsletters in 2018
6. No feedback from industry forums
7. No blog on topical issues
8. Adherence to POPPI on data security
9. No webcast of forums
10. What is our website/ communication strategy
11. No clear accountabilities
12. Poor response/engagement from communication requests

# Membership Value – Communication Strategy



Decision approved on 10 February 2019

## Communication

- Website – New
- Facebook
- Instagram
- WhatsApp invites – Poster Invites (Council)
- WhatsApp group All (Admin only)
- WhatsApp Company Reps = Comms Rep (with Feedback)
- Emails notices via MPAS
- Email invites on diary for all
- “From the Council’s pen” electronic monthly newsletter
- Communication surveys
- Podcasts and video streaming(Louis T)
- Journalist to attend big meetings and write article

## Branding

- Clothing (formal/ informal)
- Member of the Month/Quarter (Postponed)
- Company of Month/Quarter (Postponed)
- Banners
- Member survey
- 1 Month in advance



# ***Membership Value – Communication Strategy***

*Closed website for all engineering content and membership detail*

## **What content should be on the Website?**

- Annual calendar and events
- Introduction to SACEA including strategy and annual report
- SACEA Council members and roles (face)
- Every presentation from a User Group, Regional Forum, Workshop, Technical Symposium
- Best Practices sharing
- Exam questions and answers and or links to original websites
- Links to industry websites
  - *Emerst*
- “Blog” on subjects for events
- Join SACEA – application
- Contact SACEA

## **Communication Pillars**

1. Fix and schedule annual calendar after strategy session and stick to it
2. Raymond to electronically schedule all meetings via outlook to all relevant SACEA members
3. Events promoted on all platforms
4. Use Regional Meetings to test live streaming platforms

# *Monthly content responsibility for "From the Council's pen" – event, commentary, news*

Submission on Council Meeting following the month of content



**SACEA**  
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DYNAMIC  
VALUE ADDING

<b>Month</b>	<b>Responsible content providers</b>
January'20	Tejal
February	President – incl strategy
March	Schalk
April	Schalk, Hennie
May	Schalk, Ephraim
June	Schalk, Jerris
July	Schalk, Annette
August	Schalk, Mazwi
September	Schalk, Fefa
October	Schalk, Stompie
November	Schalk, Johannes
December	Schalk, Jan D

# ***2019 Calendar and Topics***

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When & What we will do!



**South African Colliery Engineers Association**



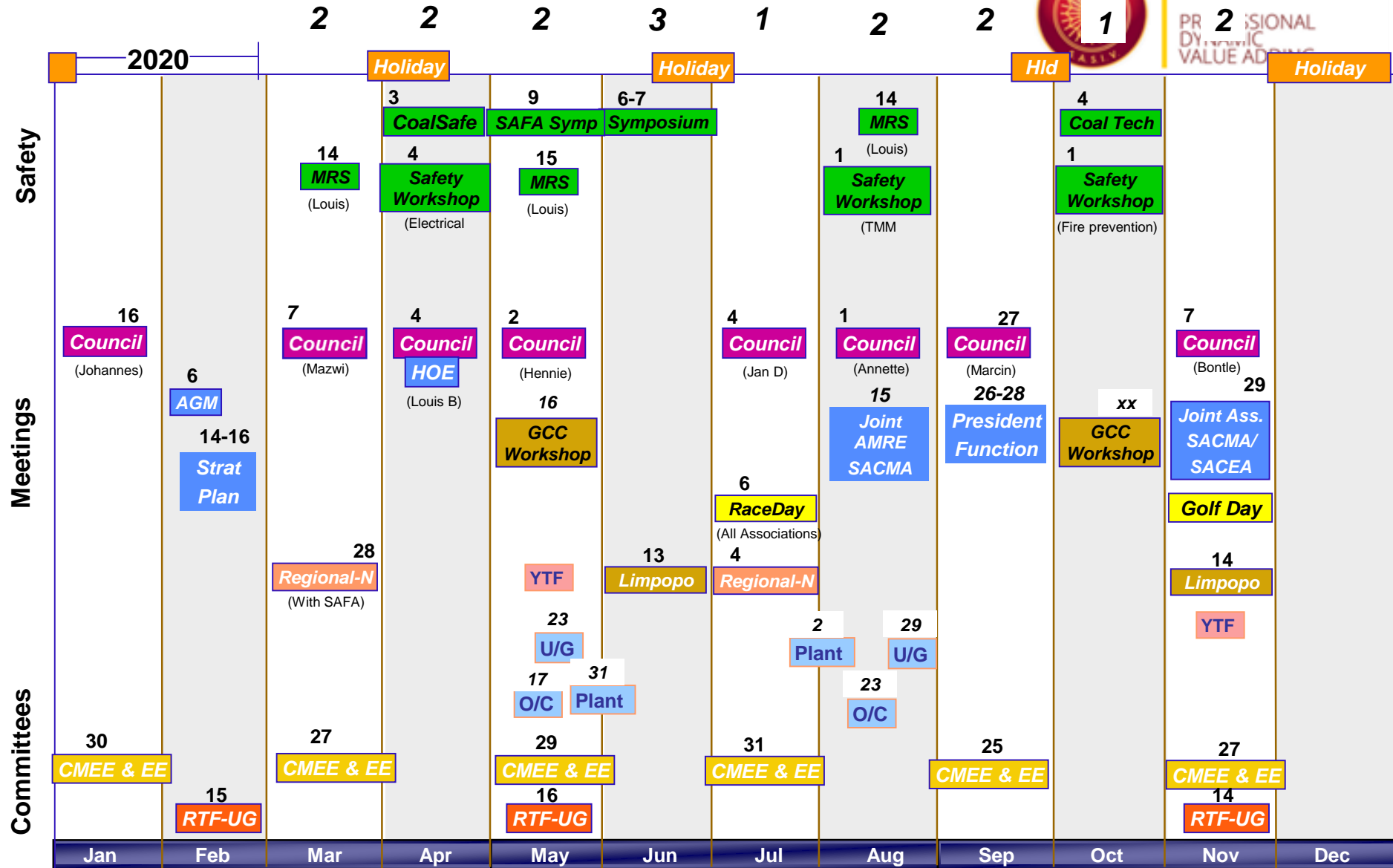
**“To be a professional, dynamic, value adding and influential body in our industry”**



# SACEA Business Cycle: 2019



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PROVISIONAL  
DYNAMIC  
VALUE ADDED



# SACEA Business Cycle: Monthly Communication Plan



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PROFESSIONAL  
DYNAMIC  
VALUE ADDING

2020

2019

Safety













Meetings

Committees

			Holiday			Holiday		Ho			Holiday
<b>Monthly Communication and Audience</b>											
Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE	Hymn sheet Council/HOE
Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen	Presidents Pen
AGM Advert	AGM Advert	Members Survey	GCC Workshop Advert	Tech Symp Advert		Joint Meeting Advert		Presidential Advert	Joint Meeting Advert	AGM Advert	AGM Advert
Strat Plan Advert		Regional Meeting Advert	YTF Advert	Limpopo Advert	SIMPOSIUM ADVERT	Safety Workshop Advert	Presidential Advert	Printed News Letter	Golf Day Advert		
		Safety Workshop Advert	Usergroup Adverts	Electronic News Letter	Race Day Advert	Usergroup Adverts	Members Survey	Safety Workshop Advert	YTF Advert		
		HOE Advert	RTF Adverts	Race Day Advert	Regional Advert	Presidential Advert		GCC Workshop	Limpopo Advert		
			Tech Symp Save the Date								
<b>Exam questions be submitted at the Council Meeting following the event above</b>											
			GCC Exam Question: Henk	GCC Exam Question: BBS-Aldine	GCC Exam Question: Jerris	GCC Exam Question: Louis D	GCC Exam Question: Jan	GCC Exam Question: Aldine	GCC Exam Question: BONTLE	GCC Exam Question: ANETTE	
				GCC Exam Question: SCHALK	GCC Exam Question: Gerald		GCC Exam Question: Marcin				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

# Topics for calendar 2019

## Technical - More with less Safety link to production

- Tyres 
- Gas and welding 
- PDS 
- Conveyor fire detection and COP 
- Dust and noise (older diesel engines) 
- Communication systems, cellphones (radio, WIFI) 
- Lifting and rigging 
- Rust and paint, structural integrity 
- LDV's (min requirements, risk assessments) 
- Electrical Reticulation compliance, cable theft 
- VFD's & Earthing 
- Equipment failure analyses & Best maintenance Practices coupled to production (integrated approach) 




## Safety

- Safety Learnings & Legislation 
- Section 54/55 repeats 
- Sharing between parties - incidents 
- Risk assessments & risk control 
- Critical Controls 





## Standards and Specifications

- SOP and COP (checklists) 
- Testing of people 
- SANS & Compliance 
- PPE industry standards (women) 

## Training and skills

- Training & Competence 
- Annexure E – GCC support 
- Leadership 

## Competencies

- FLS – Foreman qualification 
- Legal appointment training – 2.9.2 
- Compliance standards, DMR – SANS vs MHSA 
- Business partners support & Standards 

## Maintenance best practices

- Fitting 
- Electrical 
- Boilermaking 

# New Topics for calendar 2019

## Marketing & Growth

- Membership drive
  - Target – 25 increase
  - **Smaller mines** ✓
  - Affiliated conv ✓
  - Candidate conv
  - Honorary Life Membership
- Communication team
  - **Website & PowerPoint slide** ✓
  - Surveys – Culture of SACEA - Modernize ✓
  - Publications
    - Mechanical Engineer ✗
    - Mining review ✗
  - Multimedia platform
- Prestige recognition committee ✗
  - Event
  - Industry innovation
  - Best papers
- Golf day, Race Day, Presidential ✓

## Influence

- **DMR Engagement committee** ✓
  - Small mine list ✓
  - New regulations re: Fire COP, Etc, ✓
- **ECSA** ✗
  - Value
  - Council registering
- **CM&EE** ✓
  - SANS VS MHSA
- **OH&SPC** ✓

## Standards and Specifications

- SANS committee ✓
  - Certification flp/conveyors
  - Access
- Maintenance Good practices ✗
  - Business Partners support
  - Best maintenance Practices
- Conveyors Maintenance standards ✓
  - Testing of estops
  - Splicing etc.
- PPE standards ✗
  - Safety glasses
  - Boots
  - Gloves
- Transport standards ✗
- Fire COP stds ✓
- Electrical Stds ✓

## Safety

- Safety workshops ✓
  - Themes will flow from DMR engagement
  - Leadership in Safety
  - PDS
  - Section 54/55 repeats
- Safety Guidelines ✓
  - Stored Energy Document
  - Conveyors (Pull wires)
  - Rigging and Lifting











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# New Topics for calendar 2019





## Competency

- CTC
  - Coal value
    - Wiremans license 
    - Newer technology training 
    - Flameproofing refresher 
  - **Foreman Qualification**
- Leadership Competencies
  - Foreman coaching 
  - Engineers Coaching 
- GCC Exams 
- YTF 

## Innovation

- Innovation – mines of the future – the practical application
  - Drones 
  - Semi autonomous 
  - Visibility 
  - Augmented training 
  - PDS 
  - Cellphones 
- Productivity 
- Equipment life extension beyond design life 

## HOE & EM Alignment

- HOE/SACEA Council Meeting 
- Casual Get together 
- EM meeting feedback 
- President visit to HOE/EM per mining group 



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# ***Council Agenda – 2 .5 hours***

***Time: 13:30 – 16:00***

*Principles: 1 – Representatives of Forums will provide summary feedback 5 days before meeting to Raymond*

*Principle 2: - HPI Learnings distributed by respective Mining Houses to Raymond as it occur*



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## **General Council Meeting (165 minutes)**

1. Opening & Attendance (5 min)
2. Safety share (45 min)
3. Forums feedback (45 min)
  1. User Groups (UG/OC/Plant) (15 min)
  2. Regionals (North, South) (15 min)
  3. Specialist Forums and Committees (15 min)
4. Strategic Calendar Events and Progress (10 min)
5. Monthly Execution Plan (30 min)
6. Safety Review (10 min)
7. DMR Regulations and Feedback (10min)
8. Communication - monthly (15 min)
9. Membership and Finance (10 min)
10. \*\*Quarterly Scorecard Review (10 min)
11. Minutes (10 min)
12. Actions Arising from Previous Minutes (10 min)
13. Closure

# ***Council Accountabilities***

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Through Whom we will manage!



**South African Colliery Engineers Association**



**“To be a professional, dynamic, value adding and influential body in our industry”**

# SACEA – Role & Accountabilities 2018

## Drivers overview



Nr.	Photo	Name	Role	Mine
1		Marcin Hyra	President /MPAS/SACMA Council/HOE Engagement/Presidential Function/AGM Finance and Debt Mngt Chair /	Coal Mine Management Services
2		Annette Prinsloo	1 <sup>st</sup> Vice President /Communication 1 <sup>st</sup>	Anglo Operations (Pty)
				<b>ANGLO COMPANY REPRESENTATIVE</b>
3		Hendrik Lombard	2 <sup>nd</sup> Vice-President/ 2 <sup>nd</sup> Northern Regional/ 2 <sup>nd</sup> CM&EE/2 <sup>nd</sup> COALTECH/ Communication	Exxaro Coal (Pty) Limited
4		Ephraim Mojalefa	Past President/GCC/ Tripartite/DMR Mpumalanga/	Anglo Operations (Pty) Ltd
5		Louis Turvey	2 <sup>nd</sup> Underground User Forum/ Leadership Development/ Communication 3 <sup>rd</sup>	Exxaro Coal (Pty) Limited



# SACEA – Role & Accountabilities 2018

## Drivers overview



Nr.	Photo	Name	Role	Mine
6		Bontle Mtshengu	Open Cast Users Forum, RTF-OC	Exxaro Coal (Pty) Limited
7		Jan Coetzee	2 <sup>nd</sup> Plant Users Forum/ 1 <sup>st</sup> OH&SPC	Anglo Operations (Pty)
8		Jan Diedericks	Plant Users Forum/2 <sup>nd</sup> OH&SPC	<p><b>GLENCORE COMPANY REPRESENTATIVE</b></p> <p>Glencore Coal - Glencore Ops SA(Pty) Ltd</p>
9		Fefa Moleleki	Small Mines, 2 <sup>nd</sup> Open Cast Users Forum, RTF-OC, DMR	<p><b>SMALL MINES COMPANY REPRESENTATIVE</b></p>
10		Mazwi Buthelezi	Norther Region, DMR, Safety Workshop/ECSA	Sasol Mining (Pty) Ltd

# SACEA – Role & Accountabilities 2018

## Drivers overview



Nr.	Photo	Name	Role	Mine
11		Schalk Van Wyk	CM&EE/Technical Symposium/CoalTech/ Communication/ Best Practices/ Leadership Development	Sasol Mining (Pty) Ltd
12		Louis Delport	MRS /YTF 2 <sup>nd</sup>	Sasol Mining (Pty) Ltd
13		Stompie Nel	Finance & Debt Mngt. 2 <sup>nd</sup> Limpopo Region/ Leadership Development	<div style="background-color: #800000; color: yellow; padding: 5px; text-align: center;"> <b>EXXARO COMPANY REPRESENTATIVE</b> </div> Exxaro Coal (Pty) Ltd
14		Darryl Christie	Limpopo Regional/ DMR Limpopo	Exxaro Coal (Pty) Ltd
15		Louis Botha	Safety Workshop/Gold Day/ Leadership Development	<div style="background-color: #800000; color: yellow; padding: 5px; text-align: center;"> <b>SASOL COMPANY REPRESENTATIVE</b> </div> Sasol Mining (Pty) Ltd

# SACEA – Role & Accountabilities 2018

## Drivers overview



Nr.	Photo	Name	Role	Mine
16		Henk Zwart	SAFA/SANS chair/	Private member
17		Hendrik Lombard	2 <sup>nd</sup> Vice-President/ 2 <sup>nd</sup> Northern Regional/ 2 <sup>nd</sup> CM&EE/2 <sup>nd</sup> COALTECH/ Communication	Exxaro Coal (Pty) Limited
18		Jerris Subermoney	Technical Symposium/DMR engagement/ RTF	Sasol Mining
19		Aldine Bezuidenhout	ECSA/SANS/Electrical stds Committee chair/ Electricity Task Team (MHSC)	Sasol Mining (Pty) Ltd
20		Johannes Nkosi	DMR engagement/ Technical Symposium	<div style="background-color: #800000; color: #FFD700; padding: 5px; text-align: center;"><b>S32 COMPANY REPRESENTATIVE</b></div> South32 SA Coal Holdings (Pty) Ltd

# SACEA – Role & Accountabilities 2018

## Drivers overview



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Nr.	Photo	Name	Role	Mine
21		Tejal Sunker	Underground User Group/ 2 <sup>nd</sup> Communication/ Technical Symposium	Sasol Mining (Pty) Ltd
22		Francoise du Preez	YTF 1 <sup>st</sup> / Communication	Seriti

# ***QUESTIONS ?***



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