



# **BUSINESS PLATFORM PRESENTATIONS**

Underground Mining Platform – Orrie Fenn

26 June 2017

- **Organisational Context**
  - Structure, Service Offering, Client Base, Commodities
- Safety
- Strategic Themes
- Risks & Opportunities
- Prospects
- Key Projects





# THE WORLD'S LEADING FULL-SERVICE UNDERGROUND MINING CONTRACTOR

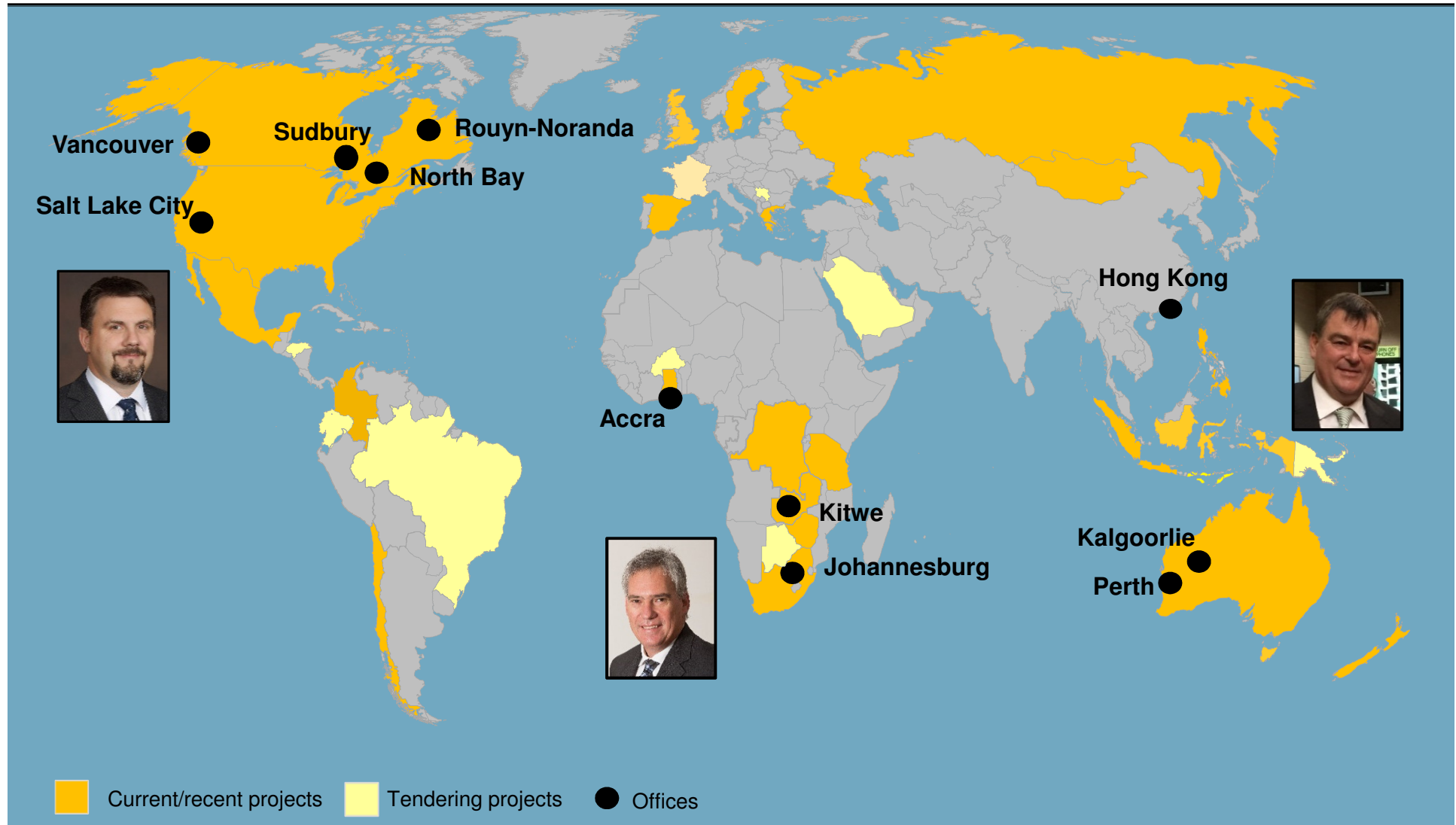
Entity	MRC <sup>1</sup>	RUCC	CCI <sup>2</sup>
Region	Africa	Australasia & Asia	Americas & Europe
Service Offering	Specialist Mine Engineering (concept/pre-feasibility/feasibility to final design)		
	Mine Development: Shaft sinking, development, construction, equipping & raise boring		
	Contract Mining		
Positioning - Differentiator	<ul style="list-style-type: none"> <li>• Africa's <b>leading</b> underground mining contractor</li> <li>• <b>Design-build</b> capability</li> <li>• World-class <b>training facility at Bentley Park (British Safety Council Accredited)</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Rapidly building track record</b> in mine development in <b>Australasia</b></li> <li>• Manufactures own <b>raise boring</b> machines <b>Strata 400 &amp; 960</b></li> <li>• Operates <b>largest raise-boring fleet</b> in Australasia</li> </ul>	<ul style="list-style-type: none"> <li>• The <b>largest underground mining contractor</b> in NA</li> <li>• Strong <b>Engineering</b> expertise</li> <li>• Excel at <b>client relationship</b> management '<i>negotiate rather than bid</i>' approach</li> </ul>

Note: <sup>1</sup>MRC=MRC SA & MRC Zambia. <sup>2</sup>CCI=Cem Canada (CC), Cem United States (CUSA), Cem Mexico (CM), Cem Sudamérica (CSA), Merit Consulting (provides project & construction management consulting to mine owners - surface related) & Cementation Above Ground (CemAG) provides EPC services for bulk material handling/processing to the surface mining/minerals industry.





## PLATFORM HAS A GLOBAL FOOTPRINT WITH STRONG LEADERSHIP & EXECUTIVE TEAMS



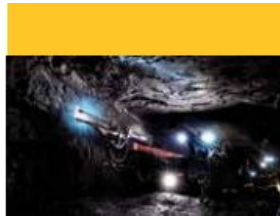




# PLATFORM ENTITIES HAVE STRONG BRANDS: EXCELLENT HARD ROCK UNDERGROUND MINING CONTRACTOR REPUTATION

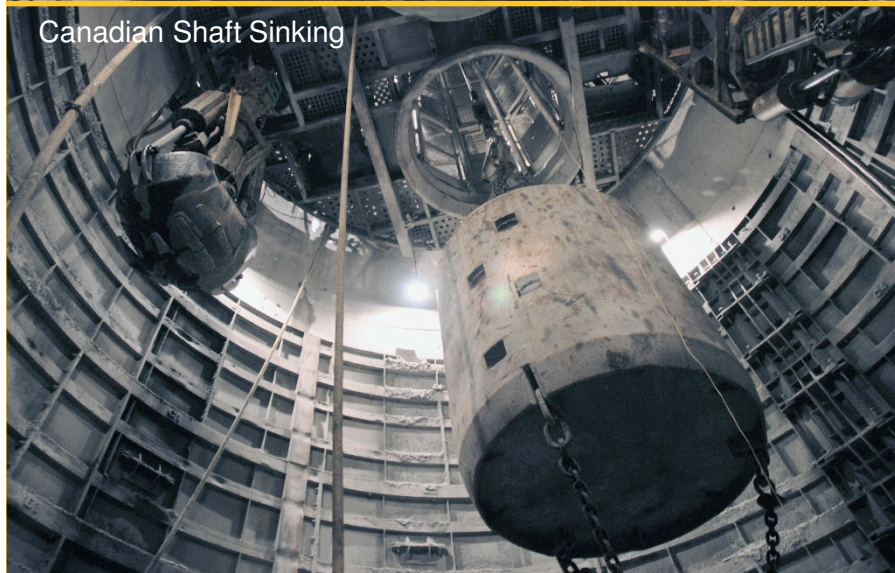


Murray & Roberts  
Cementation





## CEMENTATION'S RESUME INCLUDES SOME OF THE WORLD'S DEEPEST SHAFTS



- South Deep **world's** deepest single-drop shaft
- Kidd Mine **Canada's** deepest shaft



# TOP-TIER MINING CLIENTS ARE THE MAIN FOCUS

STRATEGY TO DEVELOP LIFE-OF-MINE  
RELATIONSHIPS WITH TOP TIER CLIENTS

**RioTinto**

Kennecott (USA) - 6\*  
Diavik (Canada) - 7  
Resolution (USA) - 11  
Oyu Tolgoi (Mongolia) - 5

**VALE**

Totten (Canada) - 10  
Lubambe (Zambia) - 5

**GOLD FIELDS**

South Deep (RSA) - 7  
Agnew (Australia) - 3  
St Ives (Australia) - 4

**DE BEERS**  
A DIAMOND IS FOREVER

Snap Lake (Canada) - 2  
Venetia (RSA) - 4

**GOLDCORP**

Hoyle Pond (Canada) - 6

**ANGLOGOLD ASHANTI**

Sunrise Dam (Australia)  
Moab (RSA)

**GLENCORE**  
**xstrata**

Mufulira (Zambia) - 5  
Synclinorium (Zambia) - 5  
George Fischer (Australia)  
Fraser (Canada)

**bhpbilliton**

Wessels (RSA) - 7  
Kutala (RSA) - 5  
Resolution (USA) - 11

**IMPALA**  
PLATINUM

Impala 20# Infrastructure  
(RSA) - 3

**ANGLO**  
COAL

Vlaklaagte (RSA) - 8  
Kriel (RSA) - 8

**PT FREEPORT**  
INDONESIA

Freeport (Indonesia) - 7

**NEWMONT**

Waihi (New Zealand) - 2

Mid-tier clients Lundin (USA), Saracen & Dacian Gold (Australia), Compass Minerals (Canada), Northam (RSA) will account for ~35% of FY18 revenue

**DACIAN**  
GOLD

**Compass**  
Minerals

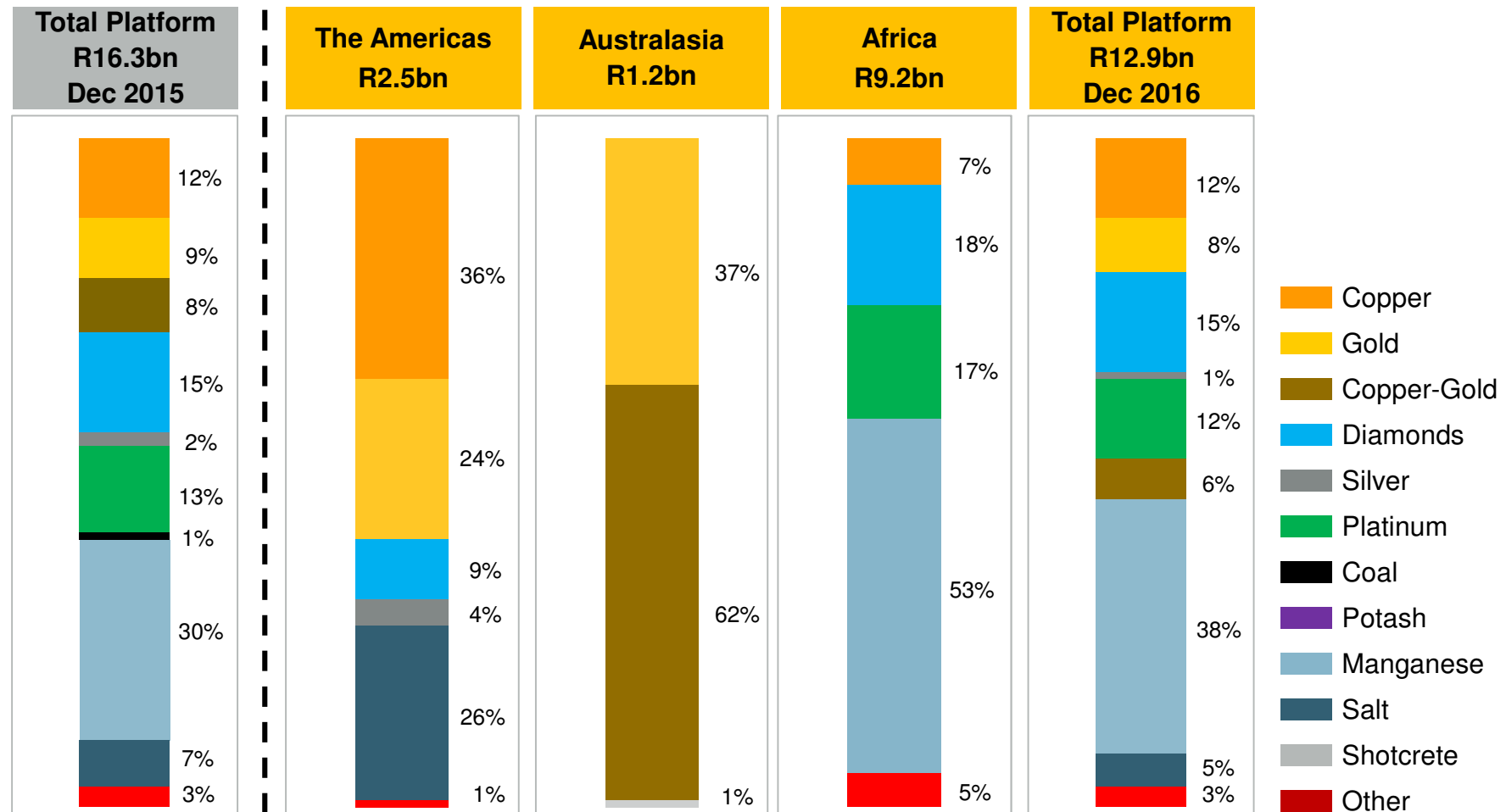
**Saracen**

**NORTHAM**  
PLATINUM LIMITED

**lundin**  
**mining**




## MOST KEY COMMODITIES REPRESENTED IN PLATFORM'S PORTFOLIO



Good spread of commodities in order book: Manganese represented by the Kalagadi project



- Organisational Context
- **Safety**
  - Lead & Lag Indicators
- Strategic Themes
- Risks & Opportunities
- Prospects
- Key Projects



**WE DELIVER MINES. SAFELY.**

With our expanded capabilities, the Cementation group of companies offers a seamless, one contractor approach to your capital project.

Let's talk about the best way to execute your project.

**Cementation** **MERIT** **Cementation AG**  
cementation.com meritconsultants.net cementationag.com

Mine Development & Construction • Shaft Sinking • Raise Boring • Feasibility & Design Engineering  
Contract Mining • Process Facilities Construction • Project & Construction Management • Material Handling



- Platform's mantra: *'We Deliver Mines - Safely'*
- Fully support Group's HSE framework & Stop.Think. Act 24/7
  - Focus on **lead indicators** & **critical controls** (MAP)
- MRC **19 months** fatality-free
  - MRCSA (85% of workforce) **32 months fatality-free**: CCI 28 months fatality-free
- Platform FY17 LTIFR & TRCR = 1.4 (FY16 = 2.2) & 7.5 (FY16 = 11.7)
  - Compares very favorably with **industry benchmarks worldwide**
- **Significant reduction** in Level 4/5 incidents (3 YTD) & **FRCP violations** (5 YTD)
- **230 team members** will be injured in FY17 (3.5% of workforce or ~1:30); **52% First Aid**
- All entities **OHSAS 18001 accredited**
- Many projects worldwide delivering **best-in-class safety performances** (LTI-free days)
  - Eagle (1274), Lucky Friday (2710), Goderich (840), Venetia Decline (1266), Karari (870)



- Organisational Context
- Safety
- Strategic Themes
  - Growth, Operational Excellence, Innovation
- Risks & Opportunities
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Diavik Canada

## PLATFORM GROWTH ORGANIC-DRIVEN: SELECTIVE BOLT-ON ACQUISITIONS CONSIDERED



### MRC

- Drive focused African strategy via targeted client engagement & selective local partnerships
- Further develop Rapid Access Development capability
- Enhance/hone Trackless Mechanised Mining skills/ability

### RUCC

- Continue to consolidate, promote & expand mine development service offering
- Maximise high-margin raise boring work irrespective of location
- Further develop Asia Pacific Rim market
- Secure additional long-term base load in (large) block caving project(s)

### CCI

- Increase North America (Canada) market penetration
- Build an engineering-driven (client engagement) sustainable international strategy
- Develop & grow CemAG & Merit capabilities to exploit improved market conditions
- Grow South American market through strategic partnerships

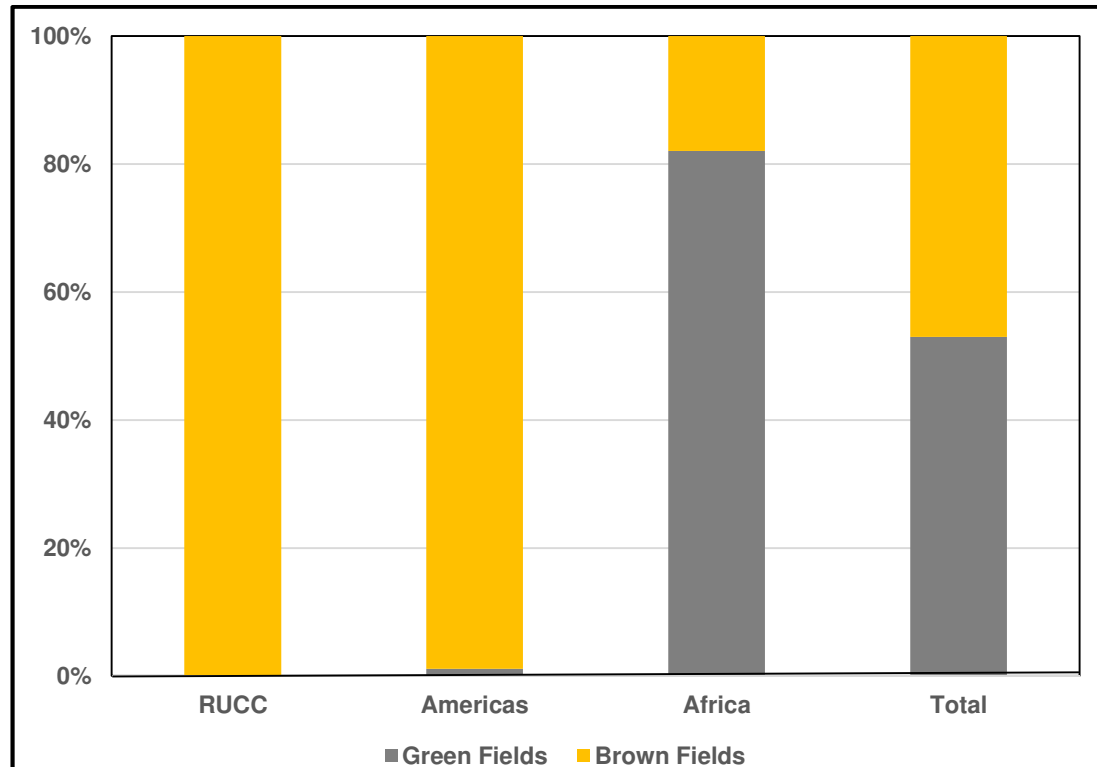
Significant organic growth opportunities exist in all key regions where UMP is currently active

Operational excellence a prerequisite to maximise margins: **No loss making projects in FY17**

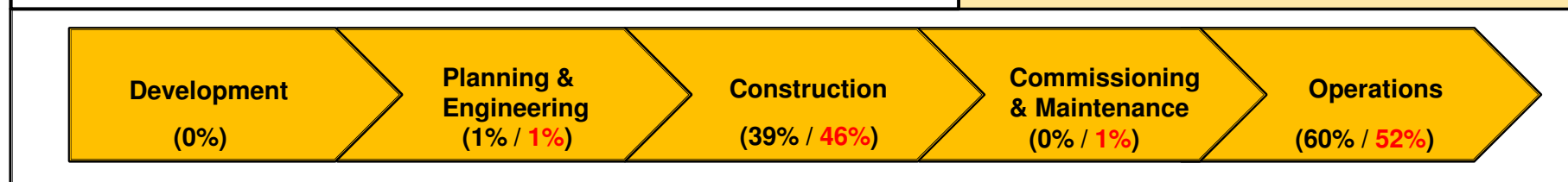
Operations segment (contract mining) of value chain to generate >50% of platform revenue by FY19



## GROWING ACTIVITY IN OPERATIONS SEGMENT: DEMAND STILL UNDERPINNED BY BROWNFIELD PROJECTS

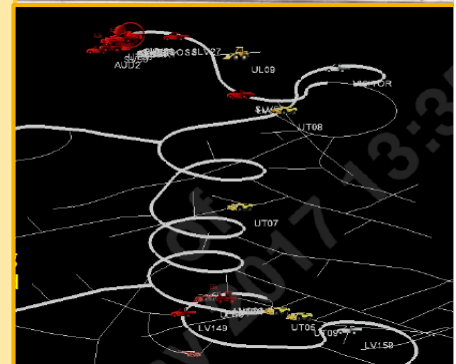
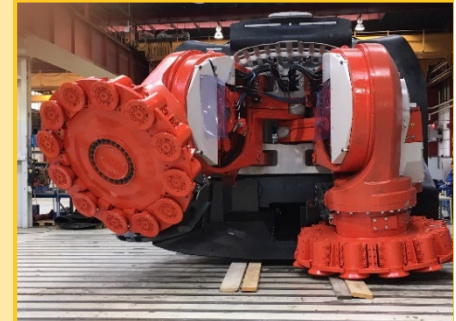


- Operations (contract mining) = 60% of order book (March 2017)
- Projects include Booyssendal, EPL2, Kalagadi (MRC), Eagle (CUSA), Diavik (CC), Karari & Dacian (RUCC)
- ~33% of FY17E revenue will be generated by Operations segment
- Objective to secure further contract mining work (e.g. Booyssendal Central, & Karari) to provide a solid annuity income stream
- Kalagadi recognised as a Greenfield project & is included in order book



Opportunities in the 'Development' segment are considered as & when they arise

- Virtual reality 3D modelling tools & visualisation techniques as part of the design process
- Slurry-based injection hoisting system for muck/rock transport
  - Joint winner of Goldcorp's global innovation competition (March 2017)
- Minetec ether-based network of wireless data communications for equipment/personnel tracking, production scheduling & safety compliance installed at Karari
  - Top 4 Mining Innovation Finalist at AUSTMINE 2017
- Autonomous LHD loading & point to point laser guidance, & automated production drilling through shift change (Karari)
- Testing world's first Cabolter simulator (Freeport)
- MRC exploring application of hard rock road headers under development by OEM's for rapid access development
- Continuous monitoring of raise boring cutter temperatures & rotation during operation
  - Trial planned for July 2017



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Risks	Opportunities
<ul style="list-style-type: none"> <li>Commodity upturn stalls &amp; <b>demand tapers off</b></li> <li>Lack of skills impacts the platform's &amp; the clients' ability to deliver projects under <b>strong organic growth scenario</b></li> <li>Mining companies revisiting capital &amp; operating spend &amp; <b>opting for owner-mining route</b></li> <li><b>Failure to secure</b> (large) Near &amp; Category 1 Orders</li> <li>A poor safety record <b>detrimentally influences</b> chances of project awards</li> <li>Ramifications of new MPRDA &amp; Mining Charter on <b>ongoing/future investment by mining sector in South Africa</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Leverage synergies</b> between platform entities (including Merit Consulting &amp; CemAG) to <b>increase service offering</b> to clients worldwide</li> <li>Organic growth opportunities <b>in all key regions</b> in which platform is active</li> <li>Oyu Tolgoi offers <b>exciting prospects</b> for the GCR Mongolia joint venture for <b>both surface &amp; underground works</b></li> <li>Potential opportunity to <b>increase presence in Indonesia</b> (Grasberg)</li> <li>Innovation &amp; application of technology to <b>differentiate service offering</b></li> <li>Potential to <b>expand contract mining</b> contribution to <b>increase annuity income stream</b></li> </ul>



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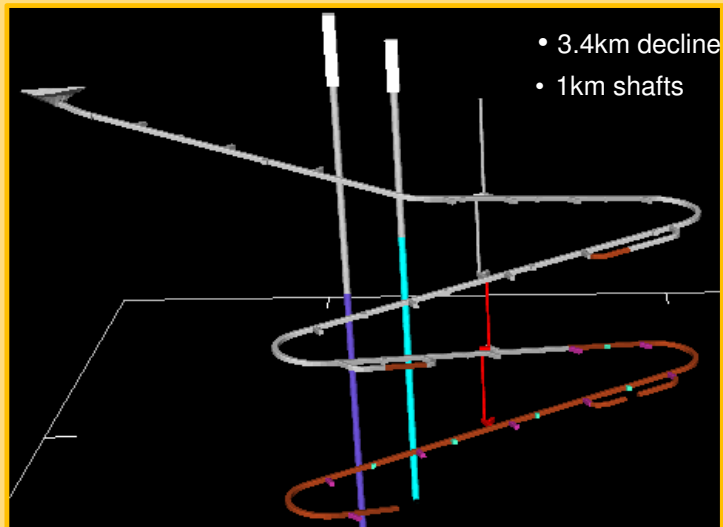
## ORDER BOOK HAS IMPROVED & SHORT TO MEDIUM TERM ORGANIC GROWTH PROSPECTS REMAIN EXCITING

<b>MRC</b> ~R9.3bn	<ul style="list-style-type: none"> <li>• <b>Near orders</b> include Venetia &amp; Mufulira</li> <li>• <b>Key targets</b> include Bokoni, Mponeng, Platreef, Swartberg, Munali, Booyssendal, Wesizwe</li> <li>• Good progress made by Kalagadi &amp; project <b>could commence shortly*</b></li> </ul>
<b>CCI</b> ~R3.1bn	<ul style="list-style-type: none"> <li>• <b>Near orders</b> Kennecott, Cargill &amp; Eagle East</li> <li>• <b>Key targets</b> include Vale CCM, IC Potash, Oxbow &amp; Onaping Depth</li> <li>• Increasing <b>engineering-led international opportunities (outside Americas)</b></li> </ul>
<b>RUCC</b> ~R3.0bn	<ul style="list-style-type: none"> <li>• Mt. Morgans awarded (~\$200m) over 3 years + <b>2 one year options to extend</b>  - 40km decline &amp; lateral development, 5km boxhole boring, 423km production drilling</li> <li>• Saracen's Karari/Deep South/Whirling Dervish <b>tendered June 2017</b></li> <li>• Work awarded at <b>Oyu Tolgoi</b> to GCR JV (potential \$350m pipeline for JV)</li> <li>• Large hole raiseboring &amp; shaft sinking prospects <b>looking bright</b></li> </ul>

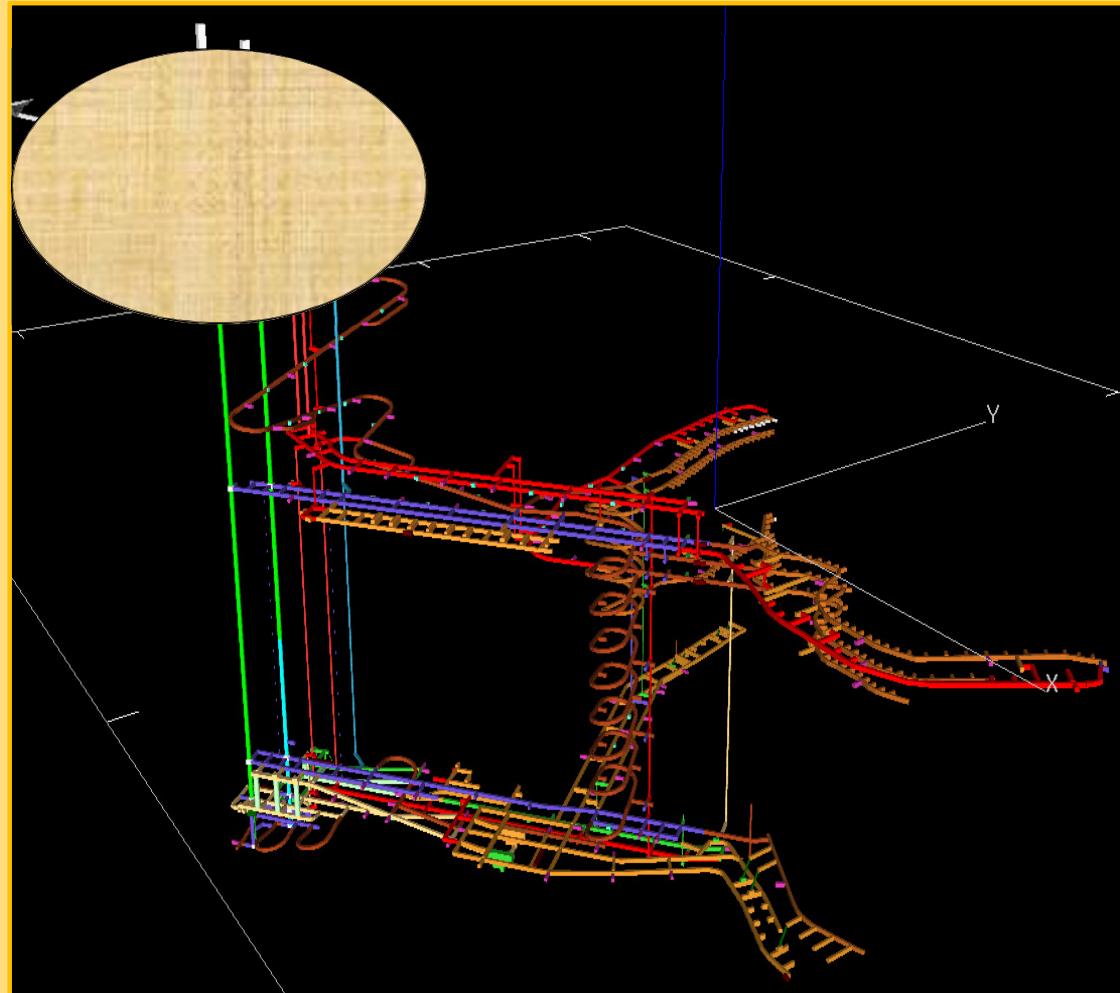
June 2015	June 2016	April 2017	Growing platform pipeline opportunities of ~R80bn & a strong order book indicates promising signs of market recovery (in most key commodities): <b>Platform well positioned to exploit upturn in the commodity cycle</b>
R16.7bn	R14.3bn	R15.4bn	

## SIGNIFICANT DEVELOPMENT WORK OPPORTUNITY AT VENETIA ON COMPLETION OF MAIN SHAFTS

**Shafts & Decline Progress to Date**



**Proposed Underground Development For Block Cave**





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  - Goderich, Freeport, Booyseendal

Freeport

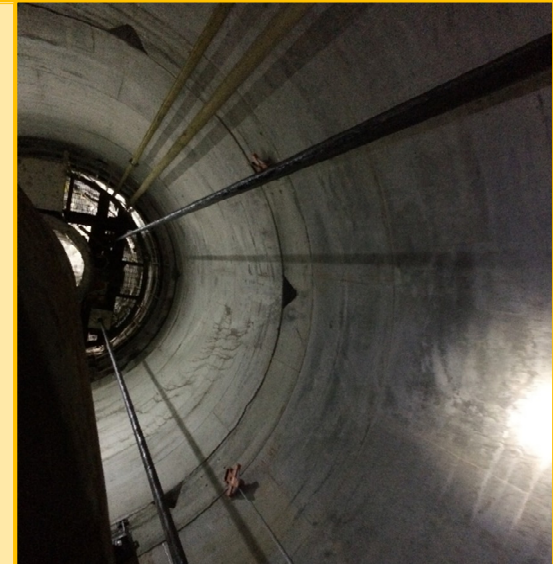






## GODERICH DEMONSTRATES CEMENTATION CANADA'S (CC) DESIGN & ENGINEERING CAPABILITIES

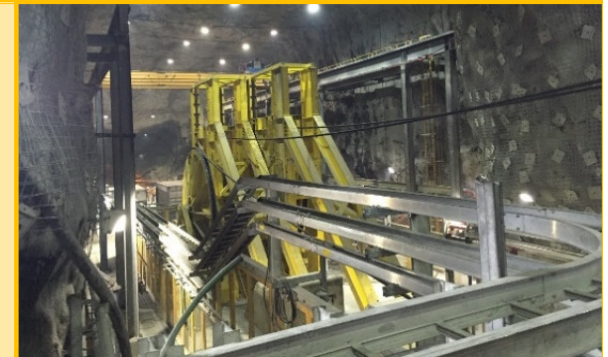
- Goderich biggest underground salt mine in the world
- Situated 550m under Lake Huron (Ontario)
- Compass Minerals put the project out to tender with a prescribed methodology
- Selected CC as the EPC contractor to design/construct two headframes & design/replace linings in two existing shafts
- CC proposed an alternate approach to de-risk the project
- Liner design in water bearing zone consisted of 45t steel cylinders (6m x 4.4m) lowered & welded in place to create a water tight seal
- Unique design solution eliminated blasting impact reducing substantially the risk of any uncontrolled water inflows
- One reportable safety incident in 29 months to date
- Strong Owner-Contractor relationship leading to scope growth with potential for more (Goderich & other mines)





## RUCC'S FULL RANGE OF SERVICES ON SHOW AT GRASBERG

- Freeport-McMoRan's Grasberg mine (Indonesia)
  - World's largest gold mine & third largest copper mine
- RUCC current contract tenure 2011-2020
  - Cost reimbursable contract
- Scope has steadily grown since Jan 2011
  - Initial entry via raiseboring; then shaft design/construction with CC
- RUCC's scope of work includes:
  - Raiseboring, shaft operation
  - Underground construction, rehabilitation, ground support
  - Cablebolting (15 rigs - 2.6m metres of cable); thread bar (1.6m)
  - Shotcrete (173k m<sup>3</sup>), split sets/resin bolts (214k), mesh (18k sheets)
- Team members 656
  - RUCC particularly successful in training/upskilling local labour
- 2 LTI's in four years





- Northam Platinum Booysendal mine (Mpumalanga)
  - 105moz PGM resource; UG2 & Merensky ore bodies
- Mechanised board & pillar mine utilising low profile TMM
  - Mining fleet 169 (52 LHDs + 23 Drill Rigs + 27 Bolters)
- Production UG2 200kt/month & Merensky 25kt/month
  - 185k ounces (steady state) reached in FY17
  - Steady sustainable output over past 12 months
  - UG 2 deepening to yield additional 30koz/year
- 3 chairlifts 2000m in total (capacity 900 people/hr), footwall decline belt 2150m, 14 strike belts >5600m
- MRC team 1900 strong (across all disciplines)
- First blast of Central mine declines 20 May 2017
  - 14 month development prior to stoping commencement
- Seven year relationship with the client
- LTIFR = 0.8 & TRCR = 5.7 (YTD)

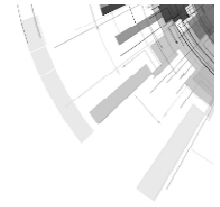








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