WHAT IS THE
OUTLOOK FOR THE
MINING INDUSTRY
INTERNATIONALLY?
# Investment Attractiveness Index

<table>
<thead>
<tr>
<th>2017 Rank</th>
<th>Location</th>
<th>2016 Rank</th>
<th>2017 Score</th>
<th>Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Finland</td>
<td>5</td>
<td>89.0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Saskatchewan (CA)</td>
<td>1</td>
<td>87.2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>NEVADA (US)</td>
<td>4</td>
<td>85.5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rep. of Ireland</td>
<td>9</td>
<td>84.4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Western Australia</td>
<td>3</td>
<td>83.6</td>
<td></td>
</tr>
</tbody>
</table>

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
## Policy Perception Index

<table>
<thead>
<tr>
<th>2017 Rank</th>
<th>Location</th>
<th>2016 Rank</th>
<th>2017 Score</th>
<th>Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rep. of Ireland</td>
<td>1</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Finland</td>
<td>4</td>
<td>98.8</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Saskatchewan (CA)</td>
<td>2</td>
<td>91.8</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sweden</td>
<td>3</td>
<td>91.1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>NEVADA (US)</td>
<td>5</td>
<td>90.5</td>
<td></td>
</tr>
</tbody>
</table>

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
Best Practices Mineral Potential Index

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis

<table>
<thead>
<tr>
<th>2017 Rank</th>
<th>Location</th>
<th>2016 Rank</th>
<th>2017 Score</th>
<th>Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indonesia</td>
<td>48</td>
<td>84.8</td>
<td>▲▲</td>
</tr>
<tr>
<td>2</td>
<td>Saskatchewan (CA)</td>
<td>3</td>
<td>84.1</td>
<td>▲▲</td>
</tr>
<tr>
<td>3</td>
<td>Queensland (AU)</td>
<td>4</td>
<td>83.7</td>
<td>▲▲</td>
</tr>
<tr>
<td>4</td>
<td>Western Australia</td>
<td>1</td>
<td>83.6</td>
<td>▼▲</td>
</tr>
<tr>
<td>5</td>
<td>Alaska (US)</td>
<td>15</td>
<td>83.3</td>
<td>▲▲</td>
</tr>
<tr>
<td>8</td>
<td>NEVADA (US)</td>
<td>8</td>
<td>82.1</td>
<td>▲▲</td>
</tr>
</tbody>
</table>

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
## Regional Median Investment Attractiveness

<table>
<thead>
<tr>
<th>Region</th>
<th>Median Attractiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin American and Caribbean</td>
<td>51.3</td>
</tr>
<tr>
<td>Africa</td>
<td>56.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>58.6</td>
</tr>
<tr>
<td>Asia</td>
<td>60.7</td>
</tr>
<tr>
<td>Oceania</td>
<td>63.9</td>
</tr>
<tr>
<td>Europe</td>
<td>67.2</td>
</tr>
<tr>
<td>United States</td>
<td>70.1</td>
</tr>
<tr>
<td>Australia</td>
<td>70.5</td>
</tr>
<tr>
<td>Canada</td>
<td>74.3</td>
</tr>
</tbody>
</table>

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
Regional Median Investment Attractiveness Growth

Source: Fraser Institute Survey of Mining Companies (2016 vs. 2017) and Applied Analysis
Regional Median Policy Perception Index

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
Regional Median Policy Perception Index Growth

Source: Fraser Institute Survey of Mining Companies (2016 vs. 2017) and Applied Analysis
WHAT IS THE OUTLOOK FOR THE MINING INDUSTRY NATIONALLY?
National Economy

2018 Annual Survey

- Right Direction: 75.0%
- Wrong Direction: 17.9%
- Refused/No Answer: 7.1%

“Right Direction” Prior Year Comparison

- 2017: 80.9%
- 2018: 75.0%

Source: NvMA 2018 Survey
Investment Attractiveness Index
United States

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis

Median: 70.1
Investment Attractiveness Index Growth
United States

- Wyoming: -22.5%
- California: -16.2%
- Idaho: -13.8%
- New Mexico: -11.5%
- Montana: -7.4%
- Minnesota: -7.1%
- Arizona: -4.5%
- Utah: -3.9%
- Nevada: -2.3%
- Alaska: 0.6%
- Michigan: 1.7%
- Washington: 2.7%
- Colorado: 3.7%

Source: Fraser Institute Survey of Mining Companies (2016 vs 2017) and Applied Analysis
Policy Perception Index

United States

California: 59.6
Montana: 66.1
Washington: 69.7
Colorado: 74.9
Minnesota: 76.8
Alaska: 76.9
New Mexico: 82.6
Idaho: 84.5
Arizona: 85.3
Utah: 86.7
Wyoming: 87.6
Michigan: 89.2
Nevada: 90.5

Median: 82.6

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
Policy Perception Index Growth
United States

Source: Fraser Institute Survey of Mining Companies (2016 vs 2017) and Applied Analysis
Best Practices Mineral Potential Index
United States

Median: 65.8

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
Best Practices Mineral Potential Growth

United States

-37.8% -26.7% -21.1% -19.3% -10.9% -7.5% -5.7% -5.7% -3.4% 1.7% 4.5% 4.8% 8.5%

Source: Fraser Institute Survey of Mining Companies (2016 vs 2017) and Applied Analysis
WHAT IS THE OUTLOOK FOR THE MINING INDUSTRY IN NEVADA?
Business Environment in Nevada
Past 12 Months

- Much Better: 25.0%
- Somewhat Better: 42.9%
- About The Same: 32.1%
- Somewhat Worse: 0.0%
- Much Worse: 0.0%

Source: NvMA 2018 Survey
State Business Tax Climate

Nevada has the 5th Best Business Tax Climate in the U.S.

Source: Tax Foundation
Business Environment in Nevada
Next 12 Months

- Much Better: 17.9%
- Somewhat Better: 46.4%
- About The Same: 35.7%
- Somewhat Worse: 0.0%
- Much Worse: 0.0%

Source: NvMA 2018 Survey
Areas in Nevada that Mining Companies Encourage the Most Investments

- Security: 64.2%
- Availability of Labor/Skills: 50.9%
- Uncertainty Concerning the Administration, Interpretation and Enforcement of Existing Regulations: 49.1%
- Political Stability: 45.5%
- Quality of Infrastructure: 44.6%

Source: Fraser Institute Survey of Mining Companies (2017) and Applied Analysis
ARE COMMODITY PRICES GOING TO INCREASE?
## Commodity Price

### Next 12 Months

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>INCREASE</th>
<th>STAY ABOUT THE SAME</th>
<th>DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>70%</td>
<td>25%</td>
<td>5%</td>
</tr>
<tr>
<td>Gold</td>
<td>45%</td>
<td>50%</td>
<td>5%</td>
</tr>
<tr>
<td>Silver</td>
<td>45%</td>
<td>50%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: NvMA 2018 Survey
# Price Change Over the Past Year

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>AUGUST 2018</th>
<th>AUGUST 2017</th>
<th>INCREASE</th>
<th>DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (per Pound)</td>
<td>$2.75</td>
<td>$3.08</td>
<td>70%</td>
<td>5%</td>
</tr>
<tr>
<td>Gold (per Troy Oz.)</td>
<td>$1,197</td>
<td>$1,312</td>
<td>45%</td>
<td>5%</td>
</tr>
<tr>
<td>Silver (per Troy Oz.)</td>
<td>$14.67</td>
<td>$17.88</td>
<td>45%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: London Metal Exchange; London Bullion Market Association; NvMA 2018 Survey
Price of Copper
USD per Pound

Peak to Present:
-$1.17 (-29.9%)

Source: London Metal Exchange
Price of Copper
Next 12 Months

Source: London Metal Exchange; NvMA 2018 Survey
Price of Gold
USD per Troy Ounce

Peak to Present: -$698 (-36.8%)

Source: London Bullion Market Association
Price of Gold
Next 12 Months

Source: London Bullion Market Association; NvMA 2018 Survey
Price of Silver
USD per Troy Ounce

Peak to Present:
-$34.04 (-69.9%)

Source: London Bullion Market Association
Price of Silver

Next 12 Months

Source: London Bullion Market Association; NvMA 2018 Survey
HOW STABLE IS MINING PRODUCTION IN NEVADA?
Nevada Mining Operations

104
Active Operations
In 2017

Source: Nevada Department of Taxation
Nevada Mining Operations

$8.1B
Gross Proceeds of Minerals in 2017

Source: Nevada Department of Taxation
Nevada Mining Operations

+9.1%
Annual Gross Proceeds Growth From 2016 to 2017

Source: Nevada Department of Taxation
Nevada GDP Growth by Sector
2007-2017 Compound Annual Growth Rate

All Industries Total: +1.7%

Source: United States Bureau of Economic Analysis
Mineral Production
Past 12 Months

11% Increased
22% Decreased
67% Remained About the Same

Source: NvMA 2018 Survey
Nevada GDP Growth by Sector
2016-2017 Compound Annual Growth Rate

All Industries Total: +5.5%

Source: United States Bureau of Economic Analysis
Mineral Production
Next 12 Months

- Increase: 22%
- Decrease: 11%
- Remain About the Same: 67%

Source: NvMA 2018 Survey
Mining Gross Domestic Product (In Billions)
Nevada

Source: United States Bureau of Economic Analysis
Mining GDP Share of All Industry Total

Nevada

Source: United States Bureau of Economic Analysis
Business Revenues or Sales
Past 12 Months

Increased: 46.4%
Decreased: 21.4%
Remained About the Same: 25.0%
Refused/No Answer: 7.1%

Source: NvMA 2018 Survey
Business Revenues or Sales
Next 12 Months

- Increase: 53.6%
- Decrease: 0.0%
- Stay About the Same: 42.9%
- Refused/No Answer: 3.6%

Source: NvMA 2018 Survey
WHAT IS THE OUTLOOK FOR MINING EMPLOYMENT IN NEVADA?
Nevada Employment

Annual Employment

Year-over-Year Growth

Source: U.S. Bureau of Labor Statistics
Employment Growth by Sector
Nevada | Prior Year vs. Present

- Construction: 7,108
- Trade, Transportation & Utilities: 6,617
- Manufacturing: 6,142
- Education & Health Services: 6,025
- Government: 5,667
- Professional & Business Services: 2,917
- Leisure & Hospitality: 2,575
- Financial Activities: 1,725
- Other Services: 1,325
- Mining & Logging: 408
- Information: 8

Net Growth: +40,517

Source: U.S. Bureau of Labor Statistics
Employment Growth by Sector
Nevada | Prior Year vs. Present

<table>
<thead>
<tr>
<th>Sector</th>
<th>Net Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>13.5%</td>
</tr>
<tr>
<td>Construction</td>
<td>8.8%</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>4.6%</td>
</tr>
<tr>
<td>Government</td>
<td>3.6%</td>
</tr>
<tr>
<td>Other Services</td>
<td>3.2%</td>
</tr>
<tr>
<td>Mining &amp; Logging</td>
<td>2.9%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>2.7%</td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>2.7%</td>
</tr>
<tr>
<td>Professional &amp; Business Services</td>
<td>1.6%</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>0.7%</td>
</tr>
<tr>
<td>Information</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Net Growth Rate: +3.1%

Source: U.S. Bureau of Labor Statistics
Nevada Mining Employment

Annual Employment

Year-over-Year Growth

Source: U.S. Bureau of Labor Statistics
Mining Employment Share by Age

- 16 to 19 years: 0.6%
- 20 to 24 years: 5.6%
- 25 to 34 years: 25.7%
- 35 to 44 years: 23.0%
- 45 to 54 years: 23.9%
- 55 to 64 years: 19.9%
- 65 years and over: 1.5%

Source: NvMA 2018 Survey
HOW MUCH DOES THE MINING INDUSTRY PAY IN TAXES TO NEVADA?
## Ten Highest Assessed Taxpayers 2017-2018

<table>
<thead>
<tr>
<th>RANK</th>
<th>TAXPAYER NAME</th>
<th>TOTAL (IN MILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MGM Resorts International</td>
<td>$3,730</td>
</tr>
<tr>
<td>2</td>
<td>NV Energy (1,4)</td>
<td>$2,515</td>
</tr>
<tr>
<td>3</td>
<td>Caesars Entertainment Corporation</td>
<td>$2,052</td>
</tr>
<tr>
<td>4</td>
<td>Las Vegas Sands Corporation</td>
<td>$963</td>
</tr>
<tr>
<td>5</td>
<td>Wynn Resorts Limited</td>
<td>$935</td>
</tr>
<tr>
<td>6</td>
<td>NEWMONT MINING (3,4)</td>
<td>$837</td>
</tr>
<tr>
<td>7</td>
<td>Station Casinos Incorporated</td>
<td>$739</td>
</tr>
<tr>
<td>8</td>
<td>BARRICK MINING (2.4)</td>
<td>$542</td>
</tr>
<tr>
<td>8</td>
<td>Boyd Gaming Corporation</td>
<td>$485</td>
</tr>
<tr>
<td>10</td>
<td>Ruby Pipeline LLC</td>
<td>$458</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>$13,255</strong></td>
</tr>
</tbody>
</table>

*Source: Nevada Department of Taxation*
Roll Assessed Value by Class
2016-2017

Source: Nevada Department of Taxation
Net Proceeds of Minerals Taxes Paid By Nevada Mining Industry, Including Royalty Recipients

Source: Nevada Department of Taxation
Share of Net Proceeds Tax Generated by Specific Minerals (2017)

- Gold/Silver: 93.3%
- Geothermal: 1.2%
- Gypsum: 0.1%
- Oil: 0.2%
- Other: 2.3%

Total Net Proceeds Tax Generated: $155 M

Source: Nevada Department of Taxation (Operators and Royalties Combined)
Share of Net Proceeds Tax Generated by Specific Minerals (2017)

$145 \text{ M}

Net Proceeds Tax Generated by Gold/Silver

Gold/Silver 93.3%

Source: Nevada Department of Taxation (Operators and Royalties Combined)
Net Proceeds Tax Generated by County
2017 | In Millions

Lander: $1,319.35
Humboldt: $418.10
Elko: $350.04
Eureka: $291.90
Nye: $244.42
White Pine: $191.74
Pershing: $41.85
Esmeralda: $27.60
Churchill: $20.89
Clark: $11.09
Mineral: $3.65
Lyon: $3.00
Storey: $0.93
Washoe: $0.91
Douglas: $0.00
Lincoln: $0.00
Carson City: $0.00

Source: Nevada Department of Taxation
Net Proceeds Tax Generated by County
2017 | In Millions

<table>
<thead>
<tr>
<th>County</th>
<th>Net Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lander</td>
<td>$1,319.35</td>
</tr>
<tr>
<td>Humbolt</td>
<td>$418.10</td>
</tr>
<tr>
<td>Elko</td>
<td>$350.04</td>
</tr>
</tbody>
</table>

71.4% of Total Net Proceeds Tax Generated by Top 3 Counties

Source: Nevada Department of Taxation
Total Estimated Major Taxes Paid by Nevada Mining

Source: NVMA Member Survey; Natural Resource Industry Institute (2008 – 2010), NV Dept of Taxation and Industry Surveys

Note: Historical figures may be adjusted to reflect the latest available information.
WHAT ARE THE IMPACTS OF MINING IN NEVADA?

Direct: 11,200
Indirect: 10,285
Induced: 11,492

Total Jobs Supported by Nevada Mining Industry Operations: 32,976

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis
Employment Impacts for Nevada Mining Industry Operations

Total Jobs Supported by Nevada Mining Industry Operations: 32,976

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis

$1.3 B Direct

$0.8 B Indirect

$0.5 B Induced

Total Labor Income Supported by Nevada Mining Industry Operations

$2.6 B

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis
Wage/Salary Impacts for Nevada Mining Industry Operations

Total Labor Income Supported by Nevada Mining Industry Operations

$2.6B

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis

- Direct: $3.6 B
- Indirect: $1.4 B
- Induced: $1.0 B

Total GDP Supported by Nevada Mining Industry Operations: $6.0 B

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis
Value-Added Impacts for Nevada Mining Industry Operations

$6.2 B
$6.8 B
$7.3 B
$6.0 B
$5.9 B
$6.1 B
$6.0 B


Total GDP Supported by Nevada Mining Industry Operations

$6.0B

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis

Total Economic Output Generated by Nevada Mining Industry Operations

$12.4B

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis
Economic Output for Nevada Mining Industry Operations

Total Economic Output Generated by Nevada Mining Industry Operations

$12.4B

Source: U.S. Bureau of Labor Statistics; Nevada Department of Taxation; IMPLAN; Applied Analysis
BEYOND THE ECONOMICS, WHAT ARE THE INDUSTRY CONTRIBUTIONS?
Charitable Gifts Donated
Calendar Year 2017

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary Donations to Non-Profit/Charitable Organizations</td>
<td>$3.0M</td>
</tr>
<tr>
<td>Educational Scholarships</td>
<td>$2.0M</td>
</tr>
<tr>
<td>Other Giving to Higher Educational Institutions</td>
<td>$1.4M</td>
</tr>
<tr>
<td>Contributions to Capital Improvement Projects in the Local Community</td>
<td>$1.5M</td>
</tr>
<tr>
<td>Other</td>
<td>$1.8M</td>
</tr>
</tbody>
</table>

Source: NvMA 2018 Survey
Total Charitable Gifts Donated
Calendar Year 2017

$9.7 M
Donated

Source: NvMA 2018 Survey
Volunteer Hours Donated
Calendar Year 2017

3,020
Hours Donated

Source: NvMA 2018 Survey
HOW WILL NEW LAWS AND REGULATIONS IMPACT THE MINING INDUSTRY?
Public Lands Withdrawals/Restricted Access for Exploration

Source: NvMA 2018 Survey
Public Lands Withdrawals/Restricted Access for Mineral Development

- No Risk: 0.0%
- Somewhat Low Risk: 24.0%
- Moderate Risk: 36.0%
- Somewhat High Risk: 20.0%
- Very High Or Significant Risk: 12.0%

Source: NvMA 2018 Survey
Exploitation of Environmental Law/Regulations

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Risk</td>
<td>0.0%</td>
</tr>
<tr>
<td>Somewhat Low Risk</td>
<td>24.0%</td>
</tr>
<tr>
<td>Moderate Risk</td>
<td>36.0%</td>
</tr>
<tr>
<td>Somewhat High Risk</td>
<td>12.0%</td>
</tr>
<tr>
<td>Very High Or Significant Risk</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

Source: NvMA 2018 Survey
Monetary Policies (Impact on Inflation/Gold Prices)

- No Risk: 4.0%
- Somewhat Low Risk: 16.0%
- Moderate Risk: 36.0%
- Somewhat High Risk: 24.0%
- Very High Or Significant Risk: 16.0%

Source: NvMA 2018 Survey
Access to Capital and/or Financing for Operations

- No Risk: 4.0%
- Somewhat Low Risk: 28.0%
- Moderate Risk: 28.0%
- Somewhat High Risk: 20.0%
- Very High Or Significant Risk: 16.0%

Source: NvMA 2018 Survey
Cost of Equipment and/or Capital Purchases

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Risk</td>
<td>20.0%</td>
</tr>
<tr>
<td>Somewhat Low Risk</td>
<td>28.0%</td>
</tr>
<tr>
<td>Moderate Risk</td>
<td>28.0%</td>
</tr>
<tr>
<td>Somewhat High Risk</td>
<td>28.0%</td>
</tr>
<tr>
<td>Very High Or Significant Risk</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

Source: NvMA 2018 Survey
Tax Cuts & Jobs Act

- Statutory rate reduction
- Percentage depletion retained
- Repeal of corporate AMT, retention of individual AMT
- Increase in bonus depreciation
- Limit net interest expense deduction
HOW WILL CHANGES IN THE ENERGY INDUSTRY IMPACT THE MINING INDUSTRY?
Energy

- Uncertainty around Question 3 and Question 6
- Increased shareholder and general public scrutiny of energy sources and uses
- Record-low solar PPAs being signed
- New storage technologies help assure reliability/redundancy
Climate Change Impact on Energy Usage/Demand

- No Risk: 4.0%
- Somewhat Low Risk: 28.0%
- Moderate Risk: 16.0%
- Somewhat High Risk: 44.0%
- Very High Or Significant Risk: 4.0%

Source: NvMA 2018 Survey
HOW WILL TECHNOLOGY IMPACT THE MINING INDUSTRY?
THE CHALLENGE OF THE FOURTH INDUSTRIAL REVOLUTION
In an industry such as mining where improving efficiency and productivity is crucial to profitability, even small improvements in yields, speed and efficiency can make an extraordinary impact.

Source: Forbes, 9/7/2018
“...already been using autonomous haul trucks that can carry 350 tons and operate totally independently since 2008. These trucks have impacted the company’s bottom line by reducing fuel use by 13 percent and are safer to operate.”

Source: Forbes; Business Insider
“This legislation establishes Nevada as a leader in embracing self-driving vehicles and puts the people of Nevada at the forefront for the opportunity to realize the many benefits of self-driving vehicles.”

- General Motors, 6/19/2017
Automation: It’s REAL and It’s Coming

**NOT A FAD**
Every sector is experiencing or will experience real disruption

**MINING JOBS**
Up to 50% of mining jobs are ripe for automation

**DATA COLLECTION & ANALYSIS**
In addition to physical work can be automated
Largest Companies by Market Cap

2001
1. GE
2. Microsoft
3. EXXON
4. Citi
5. Walmart

2006
1. EXXON
2. GE
3. Total
4. Microsoft
5. Citi

2011
1. EXXON
2. Apple
3. PetroChina
4. Shell
5. Citi

2016
1. Apple
2. Alphabet
3. Microsoft
4. Amazon
5. Facebook

2018
1. Apple
2. Amazon
3. Microsoft
4. Alphabet
5. Facebook
How Are You Thinking About Digital Integration?

• From mine to customer, thousands of digital integrations coming
  • IoT
  • Blockchain
  • Artificial Intelligence
  • Automation
How Are You Thinking About Digital Integration?

• Increase operational productivity
• Better maintain assets
• Enhance employee safety
Barriers to Innovation

- Risk Aversion
- Short-Term Shareholder Value
- Cash Flow
- Regulatory Restrictions
HOW WILL POLITICAL CHANGES IMPACT THE MINING INDUSTRY?
Houses of State Government Transitioning in 2018

**Governor**
- **Up for Election**

**Senate**
- **2017 Session**
  - 11 Seats up for Election

**Assembly**
- **2017 Session**
  - All 42 Seats up for Election
2nd Longest Expansion in U.S. History

Economists have predicted nine out of the last five recessions?

Source: Wall Street Journal Survey of Economists Conducted May 4-8, 2018, 5/10/18
Consumer Confidence

Source: The Conference Board
2018 MINING INDUSTRY ISSUES AND OPPORTUNITIES